



## Medical Marijuana Dispensary License Application

Department of Health, Office of Health Care Assurance

[Home \(/mmjdisp/index.html\)](#)
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[#3385](#)

Criteria 1. Ability to operate a business, including but not limited to education, knowledge, and experience

Criteria 2. Plan for operating a medical marijuana dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing location

Criteria 3. Proof of financial stability and access to financial resources

Criteria 4. Ability to comply with the security requirements of this chapter and section 329D-7, HRS

Criteria 5. Capacity to meet the needs of qualifying patients

Criteria 6. Ability to comply with criminal background check requirements pursuant to this chapter and sections 329D-7, 329D-12, and 846-2.7, HRS

Criteria 7. Ability to comply with the requirements in this chapter and chapters 329 and 329D, HRS, for inventory tracking, security, and dispensing limits for qualifying patients

Criteria 8. Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products

Criteria 9. Ability to conduct or contract for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 329D-7 and 329D-8, HRS

Criteria 10. Ability to comply with requirements for packaging, labeling, and chain of custody of products

Criteria 11. A plan for secure disposal of marijuana and manufactured marijuana products

Criteria 12. Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS

Criteria 13. No history of having a business license revoked.

Total Merit Criteria Points Awarded to Applicant

### HELPFUL INFORMATION FOR FILLING OUT THIS FORM:

1. You can save your work on this form by checking the 'Save my progress and resume later' box and then clicking the 'Save form and resume later' button :  
**IMPORTANT:** Remember to do this every time you leave your application or you will lose the information you have entered.
2. To keep your information secure, remember to log out of your application each time you finish working on it.
3. Use a current version of Google Chrome or Firefox browser when completing this form.
4. Save the form every 20 minutes to avoid timing out. When entering information in a spreadsheet, save and exit the form first.
5. Do not include single or double quote marks ( ' or " ) or more than one period ( . ) in your document names.

### INSTRUCTIONS FOR THE MEDICAL MARIJUANA DISPENSARY LICENSE APPLICATION

Before applying for a medical marijuana dispensary license, applicants must acknowledge that they have read the statute and administrative rules on medical marijuana and be redirected to the statute and administrative rules.

Hawaii Revised Statute (HRS) 329D

✓ I acknowledge that I have read [Chapter 329D, HRS \(http://health.hawaii.gov/content/blogs.dir/93/files/2015/12/2015-329D-HRS.pdf\)](http://health.hawaii.gov/content/blogs.dir/93/files/2015/12/2015-329D-HRS.pdf), and I am aware of the ap

Hawaii Administrative Rules (HAR) Chapter 11-850

✓ I acknowledge that I have read [HAR, Chapter 11-850 \(http://health.hawaii.gov/content/blogs.dir/93/files/2015/12/Dispensary-Rules-Chapter-11-850-signed-by-](http://health.hawaii.gov/content/blogs.dir/93/files/2015/12/Dispensary-Rules-Chapter-11-850-signed-by-) licensing requirements.

Disclaimer:

✓ I understand that the use and possession of marijuana is illegal under federal law, Chapters 329 and 329D, HRS.

**MINIMUM REQUIREMENTS**

All individual applicants and applying entities must meet the requirements listed below or the application will not be accepted. Applicants must attach proof sections.

**INDIVIDUAL APPLICANT**

- \* Individual applicant shall be at least 21 years old.
- \* Shall be a legal resident of the State of Hawaii for at least five (5) uninterrupted years immediately preceding the date of the license application.
- \* Shall not have any felony convictions or any other disqualifying background history.
- \* Shall be authorized by the applying entity to submit an application for a dispensary license, and act as the primary point of contact with the department.

**APPLYING ENTITY**

- \* The applying entity must be organized under the laws of the State of Hawaii.
- \* Have a Hawaii tax identification number.
- \* Have a Department of Commerce and Consumer Affairs Business Registration Division number and suffix.
- \* Have a federal employer identification number.
- \* Not be less than fifty-one percent held by Hawaii legal residents or entities wholly controlled by Hawaii legal residents who have been legal residents for not less than ninety days immediately preceding the date of application was submitted.
- \* Have financial resources under its control of not less than \$1,000,000 for each license applied for, plus not less than \$100,000 for each retail dispensing location. Bank statements or escrow accounts, and those financial resources shall have been under the control of the applying entity for not less than ninety days immediately preceding the date of application.
- \* Be composed of owners, principals, or members, each of whom is not less than twenty-one years of age and has no felony convictions or any other disqualifying background history.

**APPLICATION FEE**

The license application fee of \$5,000 by certified check or cashier's check payable to the State of Hawaii, Department of Health, is part of the minimum requirements for Medical Marijuana Dispensary Licensing, Room 337, 601 Kamokila Blvd., Kapolei, HI 96707 or be postmarked by 4:30 pm Hawaii Standard Time on the last day of the month.

Please note the application number on the check. This is found in the heading of the email confirmation you receive upon submittal, and is also visible where the application is submitted.

**NOTE: ALL QUESTIONS MUST BE ANSWERED TO SUBMIT YOUR APPLICATION UNLESS OTHERWISE INDICATED.**

**SECTION A: APPLICATION FOR COUNTY**

**NOTE:** An applicant may apply for a license for more than one county, but may only receive one license. Indicating here that you are applying for a license for more than one county; separate applications must be submitted. The applicant and applying entity must complete a separate application with all required information and refundable application fee of \$5,000 for each application. The financial resources required (\$1,000,000 plus not less than \$100,000 for each retail dispensing location) can only apply toward one license, if granted.

1. For which county are you requesting a license? City & County of Honolulu
2. Are you also applying for a dispensary license in another county? No
- 2a. If YES, what other county or counties are you applying for a license?  
(NOTE: A separate application and check will be required for each county.)

**SECTION B: INDIVIDUAL APPLICANT INFORMATION****GENERAL INFORMATION**

3. Legal Name of Applicant Mr Thomas James Wong

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**4. Upload Proof of Legal Name of Applicant**

Scan and submit a certified copy of AT LEAST ONE (1) of the following:

- \* Certified copy of a birth certificate or marriage certificate filed with a state office of vital statistics or equivalent agency in the individual's state of birth or marriage;
- \* Valid, unexpired U.S. passport [inside cover and first page only] or U.S. passport card;
- \* Consular report of birth abroad Form FS-240, DS-1350 or FS-545 issued by the U.S. Department of State;
- \* Valid, unexpired permanent resident card (Form I-551) issued by the Department of Homeland Security (DHS) or the U.S. Citizenship and Immigration Services (USCIS);
- \* Unexpired employment authorization document issued by the DHS, Form I-766 or Form I-688B;
- \* Unexpired foreign passport with the following: a valid, unexpired U.S. visa affixed, and an approved I-94 form documenting the applicant's most recent admittance into the United States or a DHS admittance stamp on the passport;
- \* Certified copy of the Certificate of Naturalization issued by DHS, Form N-550 or Form N-570;
- \* Certificate of citizenship, Form N-560 or Form N-561, issued by DHS;
- \* Court-issued, certified copy of a divorce decree;
- \* Certified copy of a legal change of name order

5. Date of Birth (must be at least 21 years old)

**6. Upload Proof of Date of Birth of Applicant**

Scan and submit a certified copy of AT LEAST ONE (1) of the following:

- \* Certified copy of a birth certificate or marriage certificate filed with a state office of vital statistics or equivalent agency in the individual's state of birth or marriage;
- \* Valid, unexpired U.S. passport [inside cover and first page only] or U.S. passport card;
- \* Consular report of birth abroad Form FS-240, DS-1350 or FS-545 issued by the U.S. Department of State;
- \* Valid, unexpired permanent resident card (Form I-551) issued by the Department of Homeland Security (DHS) or the U.S. Citizenship and Immigration Services (USCIS);
- \* Unexpired employment authorization document issued by the DHS, Form I-766 or Form I-688B;
- \* Unexpired foreign passport with the following: a valid, unexpired U.S. visa affixed, and an approved I-94 form documenting the applicant's most recent admittance into the United States or a DHS admittance stamp on the passport;
- \* Certificate of naturalization issued by DHS, Form N-550 or Form N-570;
- \* Certificate of citizenship, Form N-560 or Form N-561, issued by DHS;
- \* Valid, unexpired driver's license or government issued photo identification card.

7. Social Security No. or Identifier No. (last 4 digits only):

8. Applicant's Address

9. Daytime Phone No.

10. Fax No.

11. Email

**CRIMINAL HISTORY INFORMATION**

12. Has the individual applicant ever been convicted of a felony? If YES, STOP, you are not an eligible applicant.

13. Has the individual applicant ever been convicted of a crime?

13a. If YES, please describe (e.g., conviction, date, disposition, etc.)

14. Has the individual applicant ever been arrested?

14a. If YES, please describe (e.g., date, disposition, etc.)

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Obtain a Criminal History Report

Copy the Validation code from an eCrim report for the individual applicant generated by the Hawaii Criminal Justice Data Center no earlier than December 12, 2015 at 8:00 a.m. (Hawaii-Aleutian Standard Time).

Visit [eCrim.ehawaii.gov \(https://ecrim.ehawaii.gov/ahewa/\)](https://ecrim.ehawaii.gov/ahewa/) to obtain the eCrim report.

15. Enter the eCrim Validation Code here:

16. NOTICE: Pursuant to Chapter 329D HRS and Chapter 11-850 HAR, applicants are required to provide consent to a background check, including fingerprinting, to be conducted by the Department of Health or its designee.

☒ I consent

Further information and instructions will be provided on <http://health.hawaii.gov/medicalmarijuana/>. If the information and instructions are not yet posted, please check the website often.

RESIDENCY INFORMATION 17. Is the Applicant a legal resident of the State of Hawaii for at least five years? If NO, STOP, you are not an eligible applicant. Yes

18. Upload Proof of Hawaii Residency:

Scan and submit AT LEAST ONE (1) of the following source documents as proof of Hawaii state residency for at least five years:

- \* State of Hawaii tax return Form N-11 without schedules, worksheets, or attachments, and redacted to remove all financial information and all but the last four digits of the individual's social security number;
- \* Evidence of voter registration;
- \* Ownership, lease, or rental documents for place of primary domicile;
- \* Billing statements including utility bills; or
- \* Vehicle registration.

19. Authorized to Act on Behalf of Applying Entity

Scan and submit evidence of the authority of the individual to act on behalf of the applying entity, and supporting documentation (e.g. corporate resolution, bylaws, articles of incorporation):

SECTION C: APPLYING ENTITY INFORMATION

20. Name of Applying Entity

Aloha Green Holdings Inc.

21. Applying Entity's Business Address

449 Kapahulu Street STE 209  
Honolulu, Hawaii 96815  
United States

22. Entity Phone #

23. Entity Email

24. Entity Fax #

25. Is the applying entity organized under the laws of the State of Hawaii? If the answer is 'NO', STOP, you are not an eligible applicant.

Yes

26. Upload Applying Entity Incorporation or Business Status Documentation:

Upload a certified copy of applying entity's incorporation documents in the State of Hawaii.

Visit [Hawaii Business Express \(https://hbe.ehawaii.gov/documents/search.html\)](https://hbe.ehawaii.gov/documents/search.html) for available documents.

27. Provide the entity's Hawaii Department of Commerce & Consumer Affairs Business Registration Division Number & Suffix (file number).

Visit [Hawaii Business Express - Business Name Search \(https://hbe.ehawaii.gov/documents/search.html\)](https://hbe.ehawaii.gov/documents/search.html) to locate your entity's file number.

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28. Upload a copy of the entity's Certificate of Good Standing from the Department of Commerce and Consumer Affairs.

29. Hawaii Tax Identification Number:

Provide the number along with a copy of the State of Hawaii Tax Identification Number (see question immediately below).

Visit [Tax ID Search \(https://dotax.ehawaii.gov/tls/app\)](https://dotax.ehawaii.gov/tls/app) for this information.

30. Upload a copy of the entity's State of Hawaii Tax Identification document.

31. Federal Employer Identification Number: Provide the Federal Employer Identification Number.

32. Upload a copy of the entity's Federal Employer Identification Number document.

#### OWNER(S), PRINCIPAL(S), & MEMBER(S) INFORMATION

33. Enter the total number of Owner(s), Principal(s), and Member(s) of the applying entity here: 1

34. Upload Owner, Principal, and Member Information Spreadsheet

**INSTRUCTIONS:** Download the EXCEL spreadsheet below, enter the following information in the format required, and upload it to attach it to your application.

Information to be provided:

1) List of Owners, Principals, and Members of the Applying Entity

For each Owner, Principal, and Member of the Applying Entity:

- A) Name, Address, Phone number, and Email Address
- B) Each individual's percent interest in the company
- C) State of primary residence
- D) Number of years each person has lived in Hawaii (the most recent, uninterrupted number of years that the person has been a resident), and
- E) A criminal background check for each Owner, Principal, and Member.

Copy the validation code from an eCrim report for the individual generated by the Hawaii Criminal Justice Data Center no earlier than December 12, 2015 at 8:00 a.m. (Hawaii-Aleutian Standard Time).

Visit [eCrim.ehawaii.gov \(https://ecrim.ehawaii.gov/ahewa/\)](https://ecrim.ehawaii.gov/ahewa/) to obtain the eCrim report.

Please include a signed statement by each Owner, Principal, or Member certifying that the information is complete and accurate. Upload the signed statements in the following question (35.)

2) Other Businesses Holding an Interest

If there are businesses that hold an interest in the company, list the business names and percent interest on a separate tab on the spreadsheet.

[Download Owner Principal Member Information Spreadsheet \(/mmjdisp/templates/Owner\\_Principal\\_Member\\_Report.xls\)](#)

35. Upload Proof of Name, Date of Birth, and Residency for each Officer, Principal, or Member listed on the spreadsheet

1) Proof of Legal Name of Each Owner, Principal, and Member:

Scan and submit a certified copy of AT LEAST ONE (1) of the following:

- \* Certified copy of a birth certificate or marriage certificate filed with a state office of vital statistics or equivalent agency in the individual's state of birth or marriage;
- \* Valid, unexpired U.S. passport [inside cover and first page only] or U.S. passport card;
- \* Consular report of birth abroad Form FS-240, DS-1350 or FS-545 issued by the U.S. Department of State;
- \* Valid, unexpired permanent resident card (Form I-551) issued by the Department of Homeland Security (DHS) or the U.S. Citizenship and Immigration Services (USCIS);
- \* Unexpired employment authorization document issued by the DHS, Form I-766 or Form I-688B;
- \* Unexpired foreign passport with the following: a valid, unexpired U.S. visa affixed, and an approved I-94 form documenting the applicant's most recent admittance into the United States or a DHS admittance stamp on the passport;
- \* Certificate of naturalization issued by DHS, Form N-550 or Form N-570;
- \* Certificate of citizenship, Form N-560 or Form N-561, issued by DHS;
- \* Court-issued, certified copy of a divorce decree;
- \* Certified copy of a legal change of name order;

2) Proof of Date of Birth

Scan and submit a certified copy of AT LEAST ONE (1) of the following:

- \* Certified copy of a birth certificate or marriage certificate filed with a state office of vital statistics or equivalent agency in the individual's state of birth or marriage;
- \* Valid, unexpired U.S. passport [inside cover and first page only] or U.S. passport card;
- \* Consular report of birth abroad Form FS-240, DS-1350 or FS-545 issued by the U.S. Department of State;
- \* Valid, unexpired permanent resident card (Form I-551) issued by the Department of Homeland Security (DHS) or the U.S. Citizenship and Immigration Services (USCIS);
- \* Unexpired employment authorization document issued by the DHS, Form I-766 or Form I-688B;
- \* Unexpired foreign passport with the following: a valid, unexpired U.S. visa affixed, and an approved I-94 form documenting the applicant's most recent admittance into the United States or a DHS admittance stamp on the passport;
- \* Certificate of naturalization issued by DHS, Form N-550 or Form N-570;
- \* Certificate of citizenship, Form N-560 or Form N-561, issued by DHS;
- \* Valid, unexpired driver's license or government issued photo identification card.

3) Proof of Hawaii Residency:

Scan and submit AT LEAST ONE (1) of the following source documents as proof of Hawaii state residency for at least five years:

- \* State of Hawaii tax return Form N-11 without schedules, worksheets, or attachments, and redacted to remove all financial information and all but the last four digits of the individual's social security number;
- \* Evidence of voter registration;
- \* Ownership, lease, or rental documents for place of primary domicile;
- \* Billing statements including utility bills; or
- \* Vehicle registration.

Document size limit is 2 MB. Up to 10 documents may be attached.

SECTION D: FINANCIAL INFORMATION

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**36. FINANCIAL RESOURCES GENERAL INFORMATION**

INSTRUCTIONS: Download the EXCEL spreadsheet below, enter the following information in the format required, and upload it to attach it to your application.

Information to be provided:

1) Financial Resources the applying entity has under its control. List each financial resource, amount of the resource (round to nearest dollar, no cents), and verifying information (account type, account number, account name, name of financial institution, applicant contact information) as shown on the spreadsheet

2) Date Resource/Dollar amount under the applying entity's control

[Download Financial Resources General Information Spreadsheet \(/mmjdisp/templates/Financial\\_Resources\\_General.xls\)](#)

Upload the completed Financial Resources General Information Spreadsheet

**37. Upload Financial Resources General Information Supporting Source Documents**

Upload supporting source documents, i.e. bank statements, escrow account information, balance sheets etc. Supporting source documents for Financial Resources General Information must be provided as proof of the financial resources.

Document size limit is 10 MB. Up to 5 documents may be attached.

**38. FINANCIAL RESOURCES -  
RETAIL DISPENSING LOCATION INFORMATION**

INSTRUCTIONS: Download the EXCEL spreadsheet below, enter the following information in the format required, and upload it to attach it to your application.

Data to be provided:

1) Financial Resources the applying entity has under its control for each retail dispensing location allowed (2 locations maximum)

2) Dollar Amount (total aggregate for each retail dispensing location shall be not less than \$100,000, or \$200,000 for 2 locations)

3) Date Resource/Dollar amount under the applying entity's control (resources have been under the Applying Entity's control for not less than 90 days)

[Download Financial Resources - Retail Dispensing Location Information Spreadsheet \(/mmjdisp/templates/Financial\\_Resources\\_Retail\\_Dispensing\\_Location.xls\)](#)

Upload the completed Financial Resources - Retail Dispensing Location Information Spreadsheet

**39. Upload Retail Dispensary Location Supporting Source Documents**

Upload supporting source documents, i.e. bank statements, escrow account information, balance sheets etc. Supporting source documents for retail dispensary locations must be provided as proof of the financial resources.

Document size limit is 10 MB. Up to 5 documents may be attached.

**SECTION E: MERIT INFORMATION - OPTIONAL**

Responses for each criteria shall be no longer than specified for each criteria, double spaced, font size no smaller than 12, and margins no less than 1 inch

- (1) Ability to operate a business, including but not limited to education, knowledge, and experience with:
- (A) Regulated industries;
  - (B) Agriculture or horticulture;
  - (C) Commercial manufacturing;
  - (D) Pharmaceutical companies;
  - (E) Operating or working in a medical marijuana dispensary business;
  - (F) Creating and implementing a business plan, including a timeline for opening a business;
  - (G) Creating and implementing a financial plan;
  - (H) Retail sales;
  - (I) Secure inventory tracking and control;
  - (J) Protecting confidential customer information;
  - (K) Owning or managing a business that required twenty four hour security monitoring; and
  - (L) Any other experience the applicant considers relevant;

Response to (1) shall be no longer than five (5) pages.

Upload Response to (1)

- (2) Plan for operating a medical marijuana dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing location;

Response to (2) shall be no longer than five (5) pages.

Upload Response to (2)

- (3) Proof of financial stability and access to financial resources, including but not limited to:

- (A) Legal sources of finances immediately available to begin operating a dispensary;
- (B) A summary of financial statements in businesses previously or currently owned or operated by the applicant;
- (C) A financial plan for operating a medical marijuana dispensary in Hawaii;
- (D) Good credit history; and
- (E) History of bankruptcy by the applicant or entities owned or operated by the applicant;

Response to (3) shall be no longer than five (5) pages.

Upload Response to (3)

- (4) Ability to comply with the security requirements of Chapter 11-850 and Section 329D-7, HRS;

Response to (4) shall be no longer than five (5) pages.

Upload Response to (4)

- (5) Capacity to meet the needs of qualifying patients, including but not limited to:

- (A) Educating patients on how marijuana can be used to assist patients with debilitating medical conditions and about the marijuana and manufactured marijuana products that will be available in the applicant's retail dispensing locations;
- (B) Producing and maintaining a supply of marijuana that is sufficient to meet the needs of qualifying patients;
- (C) Providing safe, accessible retail dispensing locations; and
- (D) Measuring and improving customer satisfaction;

Response to (5) shall be no longer than five (5) pages.

Upload Response to (5)

- (6) Ability to comply with criminal background check requirements pursuant to Chapter 11-850 and Sections 329D-7, 329D-12, and 846-2.7, HRS;

Response to (6) shall be no longer than three (3) pages.

Upload Response to (6)

(7) Ability to comply with the requirements in Chapter 11-850 and Sections 329 and 329D, HRS, for inventory tracking, security, and dispensing limits for qualifying patients;

Response to (7) shall be no longer than five (5) pages.

Upload Response to (7)

(8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products;

Response to (8) shall be no longer than three (3) pages.

Upload Response to (8)

(9) Ability to conduct or contract for certified laboratory testing on marijuana and manufactured marijuana products pursuant to Chapter 11-850 and Sections 329D-7 and 329D-8, HRS;

Response to (9) shall be no longer than three (3) pages.

Upload Response to (9)

(10) Ability to comply with requirements for packaging, labeling, and chain of custody of products;

Response to (10) shall be no longer than three (3) pages.

Upload Response to (10)

(11) A plan for secure disposal of marijuana and manufactured marijuana products;

Response to (11) shall be no longer than five (5) pages.

Upload Response to (11)

(12) Ability to ensure product safety, in accordance with Chapter 11-850 and Sections 329D-8, 329D-10, 329D-11, HRS.

Response to (12) shall be no longer than five (5) pages.

Upload Response to (12)

(13) No history of having a business license revoked.

Response to (13) shall be no longer than three (3) pages.

Upload Response to (13)

#### SECTION F: CERTIFICATION AND SUBMITTAL

##### Certification

☒ I hereby certify under penalty of law that the information submitted as part of this application is true and correct.

By checking the box above and entering the individual applicant's name below, the applicant has electronically signed this application.

Applicant Name

Mr Thomas James Wong

If you have previously submitted an application and this is a revision, enter the unique entry number(s) of your previous submission(s) here.

User ID

45862354

User Email

Entry Info

Date Created

28 Jan 2016 - 11:57:55 PM

Date Updated

IP Address



## 1) Ability to operate a business

The AGH team is comprised of professionals and leaders in their field, (see **Appendix 1(a) - Application Team Member Summary**), chosen to fulfill all ability criteria set out by the DOH (see **Appendix 1(b) - Aloha Green Team Ability Matrix for ability breakdown**). AGH is fortunate to be advised by two master MMJ growers from Canada and the U.S. (see **Appendix 1(d) - Resumes of Aloha Green Team**).

A) Regulated industries: **Dr. Gregg T. Kokame:** is a nationally acclaimed physician, surgeon, and retina specialist. Dr. Kokame works as a Clinical Prof. in the Dept. of Surgery, Ophthalmology at the University of Hawaii (UH), and the Medical Director of The Retina Center, and President of The Eye Surgery Center (Hawaii). Dr. Kokame is extensively published and a speaker at over 170 events. **Dr. Troy Tanji:** is a surgeon specializing in glaucoma, serving as the Assistant Clinical Prof. at UH Dept. of Surgery, Ophthalmology. **James H.Q. Lee:** has 34 years experience as an attorney and CPA. James has owned and operated 3 breweries in Honolulu (Sam Choy's Big Aloha, Aloha Beer, and Hoku Brewery) and worked closely with the Hawaii Liquor Commission and the Alcohol and Tobacco Tax and Trade Bureau (TTB). James provided regulatory advice as a Regent to the UH and Vice Chair for the Research Corporation UH. **Dr. Kenneth Sumida:** is a leading oncologist and Director of Medical Education, Kuakini Medical Center; Assoc. Prof. of Medicine at the UH, and Assoc. Clinical Prof. in the Clinical and Translational Research Program at the UH Cancer Center where he is a Principal Investigator of national research groups. **William Cao:** has 8 years experience as the lead attorney for a regulated optometry company with over 1500 employees and sales in excess of \$200 million, and for a publically traded company. **Tai Y. Cheng:** has 7 years experience as an attorney and 3 years as an executive for a regulated forestry manufacturing business. Tai provides regulatory and legal advice in the MMJ industry. **Michael Lee:** acted as Director of Operations for Hoku Brewing Company, a local craft brewery. **Dr. Chin Nyeen Lee:** is a well-recognized international agricultural expert and prof. at UH, who consults and works with the Hawaii Dept. of Agriculture on food and livestock safety. Dr. Lee drafted the agricultural trade protocols for Thailand, S. Korea and the Philippines. **Dr. Andrea Lau:** is a psychologist and health care provider with experience



## 1) Ability to operate a business

with drug addiction counselling and education to at-risk student groups. **Wayne Wills:** has over 29 years of law enforcement, investigative and senior managerial experience; and recently retired as the Special Agent in Charge (SAC) of U.S. Immigration and Customs Enforcement (ICE), Homeland Security Investigations (HIS) Hawaii. Wayne is an expert in criminal investigations, and threat assessments/management, with narcotics experience. **Brian Ruden:** is a Colorado attorney with MMJ experience since 2010. Brian is the owner of 5 MMJ dispensaries and 4 MMJ grows in Colorado operating under the names Tree of Wellness, Starbuds, Altermeds, and Herbal Alternatives. Brian was an early entrant to the MMJ industry and operates in compliance with State and local regulations.

B) Agriculture or horticulture: **Dr. Chin Nyeen Lee:** is a UH specialist in the Dept. of Human Nutrition, Food and Animal Sciences, with 27 years Hawaiian experience in agriculture, farming, livestock, hydroponics, and aquaponics. Dr. Lee was the first Executive Director of Hawaii Agribusiness Development Corp.; and has knowledge of the growing microclimates on Oahu. Dr. Lee helped establish several farms on Oahu following the demise of sugar in the mid-90's. **Brian Ruden:** is a master grower and owner of [REDACTED] grows spanning 20,000 sq. ft. with a total [REDACTED] in Colorado. Brian has grown indoor, outdoor, in organic soil, peat-based non-nutritive mediums, coco coir, rockwool, aeroponics, and Nutrient Film Technique (NFT). Brian has used ebb and flow tables, drain to waste drip, hand watering, and Deep Water Culture (DWC). Brian has grown using Sea of Green (SOG), Screen of Green (SCRoG), and plant staking methods. Brian's MMJ is consistently considered the highest quality in Colorado. Brian was awarded the High Times Cannabis Cup 2015 for Best Sativa (among 600 entrants). Brian's team yields over 2 lbs. of MMJ per light. Brian operates the first 100% LED light MMJ grow in the U.S using 30% of the electricity of a traditional grow. **Chris Mayerson:** is a master grower and co-founder of [REDACTED] in Canada, with 55,000 sq. ft. and [REDACTED]. Chris has grown using SOG, SCRoG, NFT, and DWC techniques; and experienced in every type of horticultural lighting system available for MMJ. **Dr. Kiva Ferraro:** is an award winning plant biology researcher. Kiva has a PhD in plant biochemistry, with



## 1) Ability to operate a business

have experience advising MMJ clients on the laws and regulations for operating a MMJ dispensary business.

F) Creating and implementing a business plan/ and timeline: **James H.Q. Lee:** is a CPA with success as a law firm managing partner, owner of 9 restaurants and 3 brew pubs with annual gross revenues of \$1M to \$8M each. James personally created and implemented business plans including designing concepts, creating budgets and proformas, setting timelines, managing contractors, hiring management, front house & backhouse staff, creating operations manual, procuring necessary licenses/permits, planning and evaluating dry runs, and opening. All restaurant opened by James opened on schedule. **Brian Ruden:** is founder of the Starbuds dispensary franchise with 6 locations in Colorado. Brian wrote the business plan for Starbuds, prepared the license applications, and built out dispensaries and grows on time and on budget.

**Dr. Gregg T. Kokame:** wrote the business plan for his successful retina clinical practice. Dr. Kokame built his practice to 6 offices on 3 islands and developed the largest Eye Surgery Center in the State of Hawaii.

G) Creating and implementing a financial plan: **James H.Q. Lee:** is a CPA with experience in preparing, reviewing, implementing and auditing a financial plan for his businesses. Further, as Chair of the UH Audit Committee, he oversaw the UH budget and the 10 campus departments. **Michael Lee:** is a financial analyst with experience maintaining and monitoring a system of audit and control points, including working at the Hawaii State Capitol analyzing budgets for the House and Legislature. **Tai Cheng** and **William Cao** both have MBAs with accounting and finance concentrations. Will has experience as an investment banker.

H) Retail sales: **Brian Ruden:** is a MMJ owner operator and franchisor of Starbuds name. Brian's retail stores serve over 500,000 patient visits per year. **James H.Q. Lee:** opened a grocery store in Kapahulu while attending UH. Aloha Market carried prepared food, stocked ~500 items and the coldest beer in town. It competed successfully with supermarkets at the time. James continued his retail experience at restaurants that had a line of merchandise and take away baked goods. James created a line of Hee Hing mooncakes selling over 20,000 annually for more than 30 consecutive years.



## 1) Ability to operate a business

experience in horticulture, hydroponic plant production, controlled environment optimization, chemical extraction, plant physiology, nutritional modification, HPLC mass spectrometry testing, and greenhouses.

C) Commercial manufacturing: **James H.Q. Lee:** oversaw the production and distribution of Big Aloha Beer and Aloha Beer to various restaurants and hotels. James also managed the production and distribution of Sam Choy's dressing/sauces in Hawaii and the West Coast. **Brian Ruden:** harvests over [REDACTED] dried marijuana and [REDACTED] MIP annually. **Chris Mayerson:** harvests between [REDACTED] dried MMJ annually. **William Cao:** has management experience in the commercial manufacturing of eyeglass lens. **Tai Cheng:** has experience in the commercial manufacture of dissolving pulp. **Dr. Chin Nyeen Lee:** has experience advising commercial livestock and agriculture businesses.

D) Pharmaceutical companies: **Dr. Gregg T. Kokame:** is on advisory boards for well-known pharmaceutical companies such as [REDACTED]

[REDACTED] Dr. Kokame served as designer and investigator in Phase I, II and III clinical trials. Dr. Kokame works with pharmaceuticals on drug pricing, development and buying opportunities. **Dr. Kiva Ferraro:** worked in pharmaceutical R&D creating FDA-approved medical diagnostic reagents and medical devices. Currently, Kiva is working on extraction of therapeutic antibodies produced by genetically engineered tobacco plants for human medicine. **Derick Cheng:** is a licensed pharmacist with over 40-years experience dispensing drugs in a clinical and retail pharmacy. Derick has manufactured compound topical creams and ointments for pharmaceutical use.

E) MMJ dispensary experience: **Brian Ruden:** is owner and operator of over 8,000 sq. ft. of retail MMJ dispensary space. Brian employs approximately 150 people in his MMJ businesses. Brian's Boulder location has the strictest regulations in Colorado, including zero outside odor and a 100% renewable energy requirement. Brian achieves both with carbon filters to scrub the exhaust air and electricity from Wind Source to meet the renewable energy requirement. **Chris Mayerson:** is Co-Founder and Chief Cultivator of [REDACTED] in Canada. Chris heads a team of 30 growers. **Tai Cheng** and **William Cao**



## 1) Ability to operate a business

I) Secure inventory tracking and control: **Wayne Wills:** served as Acting Executive Director of the Office of Assets and Facilities Management at ICE Washington, D.C., responsible for management and security for over [REDACTED]. As SAC of ICE/HSI, Wayne led a workforce to protect the nation by reviewing and approving operational plans, physical, and information security plans. **Brian Ruden:** is experienced with using Metrc and BioTrack POS (Biotrack System) in his production and dispensary (see **Appendix 1(c) – BioTrack Inventory Control**). **Chris Mayerson:** uses Biotrack for production and product inventory. Chris uses Biotrack everyday and is solely responsible for inventory tracking.

J) Protecting confidential customer information: AGH has strong understanding of HIPPA among its 3 doctors (**Dr. Kokame, Dr. Tanji, Dr. Sumida**), its pharmacist (**Derick**), and its patient counsellor (**Dr. Lau**). AGH's four attorneys (**James, Brian, Tai and William**) are well versed in HIPPA and client confidentiality. The confidential attorney-client relationship is fundamental to the legal system. **Brian Ruden:** protects patient information throughout his MMJ businesses without incident. **Wayne Wills:** provided oversight to investigations including financial crimes, IP rights, human/narcotics smuggling, cyber-crimes, child pornography, and document and benefit fraud. Wayne held a [REDACTED] Clearance and will implement security protocols and procedures to protect patient information for AGH.

K) 24-hour security monitoring: **James H.Q. Lee** and **Michael Lee** required 24-hour monitoring of their brewery operations in accordance with TTB regulations. **Brian Ruden** and **Chris Mayerson** use 24-hour security monitoring for all their production centers and dispensaries. **Wayne Wills:** was responsible for the status and security of all ICE/HSI offices, and personnel in 3 offices in the Pacific theater. Wayne reviewed internal controls focusing on loss prevention and fraud waste and abuse; evaluated requirements for the deployment of physical security measures to protect the workforce and to prevent, deter and/or track "insider threats". Wayne understands the threats on island for AGH and will prepare a plan to prevent operational disruptions and initiate continuity of operations when necessary. **Derick Cheng:** is experienced with 24-hour monitoring to deter theft from his pharmacies.





## 1) Ability to operate a business

### Appendix List

Title	Page
1(a) – Application Team Member Summary .....	7
1(b) – Application Team Ability Matrix .....	8
1(c) – BioTrack Inventory Control .....	9
1(d) – Resumes for Application Team Members .....	10



## 1) Ability to operate a business

### Appendix 1(a) - Application Team Member Summary

Name	Role	Email
To be announced	CEO	
To be announced	COO	
James H.Q. Lee, Esq, MBA	Chief Compliance/General Counsel	[REDACTED]
Wayne K. Wills	Law Enforcement & Security Executive Consultant	[REDACTED]
Brian Ruden, Esq.	Head of Cultivating	[REDACTED]
Christopher Mayerson	Canadian MMJ Production Consultant	[REDACTED]
Dr. Chin Nyeon Lee	Executive Consultant on Agriculture	[REDACTED]
Michael Lee	Head of Dispensing	[REDACTED]
Dr. Kiva Ferraro	Director of Product Safety & Quality Control	[REDACTED]
Dr. Andrea Lau	Addiction Prevention & Patient Counsellor	[REDACTED]
Derick Y.H. Cheng	Pharmaceutical Consultant	[REDACTED]
Steven D. Wong	Architect Consultant	[REDACTED]
Dr. Gregg Kokame, MD	Medical Advisory Board Member/Director	[REDACTED]
Dr. Kenneth Sumida, MD	Medical Advisory Board Member/Director	[REDACTED]
Dr. Troy Tanji, MD	Medical Advisory Board Member/Director	[REDACTED]
William Cao, Esq, MBA	MMJ Advisor/Director	[REDACTED]
Tai Y. Cheng, Esq. MBA	MMJ Advisor/Director	[REDACTED]
Thomas James Wong	Individual Applicant	[REDACTED]



# 1) Ability to operate a business

## Appendix 1(b) - Application Team Ability Matrix

Ability to Operate a Business Criterion	Aloha Green License Application Team Members															
	Steven D. Wong	Chris Mayerson	Dr. Troy Tanji	Dr. Kenneth Sumida	Dr. Gregg Kokame	Dr. Chin Nyeon Lee	Derick Cheng	Dr. Andrea Lau	Dr. Kiva Ferraro	Tai Y. Cheng	William Cao	Michael Lee	Brian Ruden	Wayne K. Wills	James H.Q. Lee	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		✓				✓			✓				✓			
		✓				✓					✓	✓	✓		✓	
		✓			✓		✓		✓							
		✓								✓	✓		✓			
											✓	✓	✓			
											✓	✓	✓			
		✓					✓							✓		
								✓						✓		
					✓			✓	✓		✓			✓	✓	✓
	Born or Raised in Hawaii	✓		✓	✓	✓							✓		✓	✓

## 1) Ability to operate a business

### Appendix 1(c) - BioTrack Inventory Control

The BioTrackTHC System (BioTrack System) issues a globally unique, nonrepeating 16-digit identification number to each plant. At every stage in the product lifecycle where something needs to be differentiated, the System issues a new "child" identifier (e.g., separating flower from stems during the harvest process, separating edible batches that are going to different dispensaries, the creation of new clones or seeds from a mother plant, etc.). The System issues the identifier to prevent accidental or intentional identifier duplication by the user, and the 16-digit identifier ensure scalability and longevity—the System could generate 1,000,000 identification numbers per second and it would not run out of unique identifiers for over 317 years.

Every identifier is associated with a quantity that is measured in either discrete units or a weight depending on the item's classification; for example, plants, seeds, and infused edibles are measured in discrete units, whereas, bulk flower and stems are measured in continuous weight. This creates an unbroken audit chain. Select any identification number and both the State and the registered organization can backwards trace the medical cannabis product's lineage all the way back to the plant from which it came, and also forwards trace every gram to where it is still in inventory, where it has been dispensed, to whom it was dispensed, and where it was destroyed.

As an example, if 100 grams were harvested from plant 98765: in this case, 2 grams were consumed by the testing laboratory, 8 grams were dispensed to patient Smith, 15 grams were dispensed to patient Jones, 55 grams are still in inventory, and 20 grams have been destroyed.

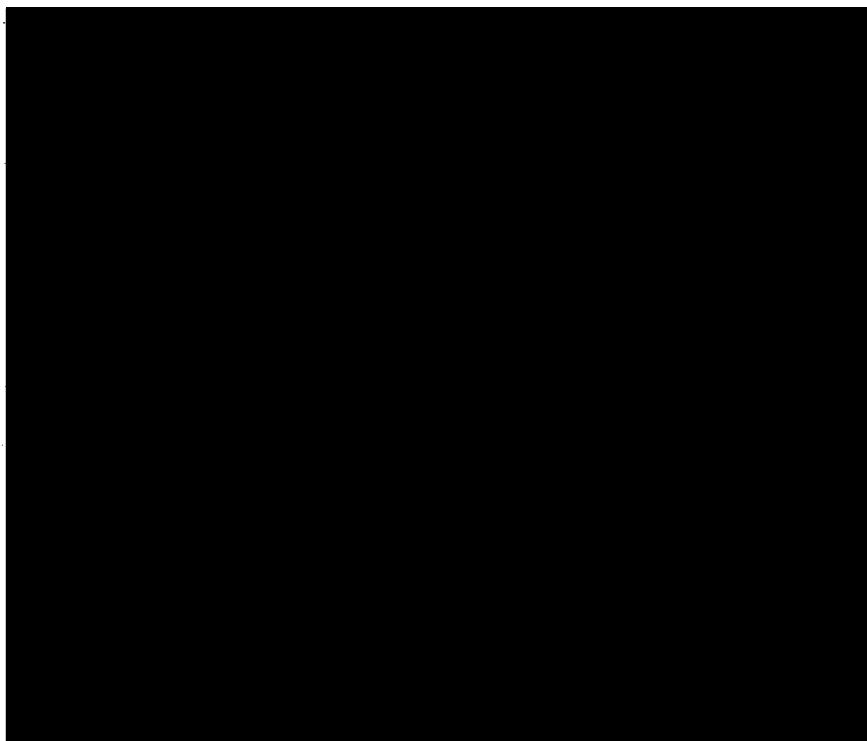


## 1) Ability to operate a business

### Appendix 1(d) - Resumes for Application Team Members

Sorted Alphabetically by Last Name

- William Cao
- Derick Y.H. Cheng
- Tai Y. Cheng
- Dr. Kiva Ferraro
- Dr. Gregg Kokame
- Dr. Andrea Lau
- Dr. Chin Nyeon Lee
- James H.Q. Lee
- Michael Lee
- Chris Mayerson
- Brian Ruden
- Dr. Kenneth Sumida
- Dr. Troy Tanji
- Wayne K. Wills
- Steven D. Wong





# **WILLIAM CAO, ESQ.**

Mobile: [REDACTED]

Email: [REDACTED]

Address: [REDACTED]

## **CURRICULUM VITAE**

### **ONLINE PROFILE**

<http://haskayne.ucalgary.ca/alumni/alumni-spotlight/2015>

<https://www.linkedin.com/in/williamcao403>

### **HIGHLIGHTS**

- Regulated industry and commercial manufacturing experience as chief lawyer for optometric company that manufactured glasses and provide eye health services.
- Experience providing legal and business advice to clients operating under Canadian medical marijuana regulations;
- MBA and Finance graduate with experience writing business plans and financial plans;
- Head regional lawyer for Tim Hortons, an international coffee and donut chain, that operated 24 hour retail locations;

### **EXPERIENCE**

#### **2015 – present Pacific Rim Law Corporation**

*Lawyer*

- Provided legal and regulatory advice to medical marijuana license applicants under the Health Canada Marijuana for Medical Purposes Regulations (MMPR) program.
- Assisted in the preparation of MMPR license submissions including reviewing and drafting related standard operating procedures that cover facility equipment, cultivation, dispensary operations, product testing, security, sanitation and environmental conditions.

#### **2013 – 2015 FYidoctors**

*Lawyer*

- Head lawyer responsible for the consolidation and operations of a national chain of optometric clinics with over 190 corporate locations, \$200 million in sales and 1500 employees.
- Provided practical advice on a variety of legal issues for the executive team and medical staff.
- Drafted and implemented operating policies and guidelines for employees and contractors.
- Led the acquisition of a large 70 location optometry chain in the province of Quebec and assisted with the related \$125 million acquisition financing.
- Negotiated contracts for the relocation of 46,000 square-foot manufacturing facility and 10,000 square-foot head office.
- Managed leases, property management and renovation construction for all corporate locations.
- Acquired an Aeroplan customer loyalty program to be the exclusive provider in the Canadian optical industry.
- Developed a joint venture with VSP, the largest eye health benefits insurance provider in the USA, to be their Canadian optometric partner.
- Worked with cross-functional teams, including Operations, Marketing, Finance and Accounting, to identify risks and develop solutions to drive the success of FYidoctors.
- Supervised internal legal team and external legal counsel to effectively manage a variety of legal matters including: litigation, dispute resolution, employment, marketing, and real estate.

**2010 – 2013 Tim Hortons**

*Lawyer*

- Led the Western Canada Legal team as part of the Real Estate Development group responsible for building new Tim Hortons restaurants across Western Canada.
- Negotiated and drafted agreements for the purchase or lease of property to build over 100 new stores and renovate over 200 existing stores.
- Helped review, develop and implement policies related to franchise operations and real estate construction and risk management and managed franchising agreements and litigation files.
- Provided a wide range of legal advice regarding business and property management issues for over 800 locations across Western Canada. This included matters ranging from termination and disciplinary actions of employees and franchisees to managing disputes with landlords and construction contractors.

**2007 – 2010 Shea Nerland Calnan LLP**

*Lawyer*

- Assisted with multi-million dollar commercial real estate transactions for clients.
- Drafted and executed agreements of purchase, sale, and leasing transactions.
- Negotiated share and asset purchase transactions and provided support on litigation matters.

**2007 Alberta Energy and Utility Board**

*Student-at-Law*

- Researched regulatory, administrative and employment law issues.
- Conducted direct examinations at a hearing before the Energy and Utility Board.
- Assisted in the reorganization of the Energy and Utility Board.

**2005–2007 Import/Export Trading**

*Trader*

- Developed international relationships with buyers and suppliers which led to sales.
- Carried out market research and opportunity analysis.
- Sourced suppliers and buyers of construction and agricultural products.

**2000–2001 UBS Warburg**

*Analyst, Corporate Finance*

- Created and presented business proposals to senior management at publicly traded companies.
- Identified and analyzed merger and acquisition opportunities in oil and gas industry.
- Performed financial analysis, financial modeling and due diligence on oil and gas companies.

**EDUCATION**

**2002–2006 University of Calgary**

**FACULTY OF LAW**

- Graduated with Bachelor of Laws degree (2006)

**HASKAYNE SCHOOL OF BUSINESS**

- Graduated with Masters of Business Administration degree (2006)
- Completed European Business School Certificate (2004)

**1996–2000 University of Calgary**

**HASKAYNE SCHOOL OF BUSINESS**

Graduated with Bachelor of Commerce in Finance degree

# DERICK Y.H. CHENG

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## PHARMACY AND MEDICAL EXPERIENCE

**PACIFIC RIM LAW CORPORATION**, Vancouver, Canada  
*Health Sciences Consultant*

January 2014 - present

- Provides medicine and pharmaceutical consultancy for pharmaceutical and bio-technology start-up clients

**CORNING DRUGS LTD.**, Vancouver, Canada  
*Owner/Manager & Head Pharmacist*  
*Pharmacist (part-time)*

January 1973 – October 2013  
October 2013 - present

- Owned and operated a chain of four independent community pharmacies under the Corning Drugs and Maple Pharmacies brand names in Greater Vancouver area.
- Worked with medical professionals to understand the precise nature and intensity of ailments the patient is suffering from and preparation of a detailed medication plan based on the analysis.
- Interacted with the patients and their families to explain to them the finer aspects of the medication plan and expected results.
- Responsibilities include inventory control, staff management, security management, program management, patient intake process, and MSP financial assistance program.
- Experience include drafting and executing a business plan for a retail business in Honolulu; coordinating with local real estate advisors, landlords, suppliers, local community stakeholders, and municipal and state departments for a food-related business; and working with local Hawaiian farmers and artists.

**LONDON DRUGS LTD.**, Vancouver, Canada  
*Pharmacist*  
*Manager of Pharmacy*  
*Store Operations Manager*

September 1970 – February 1971  
March 1971 – December 1971  
January 1972 – January 1973

- London Drugs is a chain of 78 Canadian retail stores with headquarters in Richmond, British Columbia. Its primary focus is on pharmaceuticals, electronics, housewares and cosmetics, with a limited selection of grocery items.
- Coordinated the dispensing of medication and the day-to-day operations of the pharmacy department.
- Experience includes researching the relative merits and demands of medicines for ailments; and the effects of combination of medicines to provide the best results for patient health.

**VANCOUVER GENERAL HOSPITAL**, Vancouver, Canada  
*Clinical Pharmacist*

July 1969 – June 1970

- Vancouver General Hospital is a medical facility located in Vancouver, British Columbia. It is the largest facility in the Vancouver Hospital and Health Sciences Centre group of medical facilities.
- Completed work experience for a Masters in Clinical Pharmacy with experience providing patient care with collaborating physicians and/or health systems. Performed a full range of medication decision-making functions as part of the patient's health care team.

## EDUCATION

**MCGILL UNIVERSITY**, Montreal, Canada  
*Bachelors of Science*  
*Honors/Activities:*

September 1962 – June 1966

One of a handful of international students admitted to study at one of Canada's most prestigious universities.  
Completed science degree as new immigration from Hong Kong.

**UNIVERSITY OF BRITISH COLUMBIA**, Vancouver, Canada  
*Doctor of Pharmacy (PharmD)*

September 1966 – June 1969

## **LICENSES AND LANGUAGES**

- British Columbia College of Pharmacists (1966)
- Fluent – English, Cantonese, Mandarin

## **VOLUNTEER WORK AND INTERESTS**

- Awarded Queen Elizabeth II Diamond Jubilee Medal for outstanding community service and philanthropy, 2012
- Chairman, *Vancouver Chinese Cultural Centre*, Vancouver, Canada, 1991 to 2010
- President & CEO, *Chinatown Merchants Association*, Vancouver, Canada, 1989 to 2010
- Committee Chair, *City of Vancouver – Chinatown Historical Planning*, Vancouver, Canada
- Advisor, BC Premier Chinese Advisory Committee, 1996 - 2002
- Board Director, *BC Pavilion Corporation*, Vancouver, Canada, 2000 to 2001
- President, *Better Business Bureau of BC*, Vancouver, Canada
- Commissioner, *BC Gaming Commission*, Vancouver, Canada
- Arbitrator, *BC Property Assessment Appeal Board*, Vancouver, Canada
- Hobbies include cooking, travelling, dragon boat racing, soccer, golf, basketball, squash and tennis

# TAI Y. CHENG, J.D., MBA, LL.M.

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## HIGHLIGHTS

- Experience providing legal and business strategy advice to clients operating under the Canadian medical marijuana legislative framework;
- Entrepreneurial experience writing business plans and starting a new retail business in Honolulu, Hawaii;
- Experience advising on regulatory matters and corporate governance issues with a focus on developing North American natural resources in the regulated industries of forestry and energy;
- Executive management experience in commercial manufacturing with the largest dissolving pulp mill in Western Canada; and a major global viscose staple producer located in China;
- Team player with experience working in cross functional cross border teams supporting new projects;
- Practicing attorney with top tier law firm training and experience and practice qualifications in Canada and United Kingdom.

## BUSINESS EXPERIENCE

**ONO BAKING COMPANY LLC DBA KULA & KŌ, Honolulu, USA**  
*Co-Founder & Corporate Secretary*

January 2014 – present

- Kula & Kō is an exciting new business providing made-in-Hawaii omiyage baked goods with the freshest local ingredients. The first retail store is scheduled to open in Waikiki in April 2016.
- Provides legal, strategy and regulatory advice on a broad range of issues for a new business start-up in Honolulu.
- Experience include drafting and executing a business plan for a retail business in Honolulu; coordinating with local real estate advisors, landlords, suppliers, local community stakeholders, and municipal and state departments for a food-related business; and working with local Hawaiian farmers and artists.

**PACIFIC RIM LAW CORPORATION, Vancouver, Canada**  
*Shareholder & Principal Attorney*

October 2013 – present

- Pacific Rim Law is a full-service law firm providing legal advice for small-to-medium sized businesses.
- Provides legal and regulatory advice to MMJ start-up producers under the current Health Canada legislation titled *Marihuana for Medical Purposes Regulations* (MMPR); and the previous *Marihuana Medical Access Regulations* (MMAR).
- Experience includes advising and reviewing on MMPR license application submissions and related standard operating procedures that cover facility equipment, cultivation, dispensary operations, product testing, security, sanitation and environmental conditions.

## MANUFACTURING EXPERIENCE

**NEUCEL SPECIALTY CELLULOSE LTD., Vancouver, Canada**  
*Vice President, Community & Government Affairs*

January 2013 – December 2015

- Neucel is the only commercial manufacturer of specialty cellulose products in Western Canada. Neucel is one of the largest employers on Vancouver Island with over 400 full-time employees. Neucel's mill in Port Alice, BC can produce up to 500 tonnes of dissolving pulp per day from raw logs.
- Provided public relations, government relations, and First Nations communications, as well as legal advice on a broad range of issues related to Neucel's dissolving pulp mill located in Port Alice, BC. In 2011, the Fulida Group acquired Neucel in the largest private Chinese acquisition of a BC company.
- Responsibilities include drafting and negotiating various agreements, including employment, supply, and pulp and fibre purchase/sales agreements; communicating with local union (Unifor Local 514); advising human resources on union grievances and employment issues; successfully negotiating a 5-year labour agreement; promoting responsible corporate governance; providing defense in administrative and regulatory litigation; and maintaining relationships and communicating with key stakeholders, including the local First Nations.



**FULIDA (CANADA) HOLDINGS LTD.,** Vancouver, Canada  
*General Counsel and Vice President*

June 2012 – December 2015

- Fulida is the Canadian subsidiary of Fulida Group Holding Co., an integrated manufacturing business in the areas of rayon staple, weaving, printing and dyeing, thermal electricity, garment, real estate and others. Fulida is the third largest chemical textile manufacturing company in the World and the largest in China.
- Acted as the local representative for Fulida Group in the development and assessment of all North American investment opportunities, including those in the areas of forestry, oil/gas and LNG.
- Responsibilities include maintaining corporate minute books; preparing regulatory filings; providing shareholder reports; and identifying, reviewing and addressing natural resources mergers and acquisition opportunities in Canada and Northwest United States.
- Experience includes drafting and negotiating various agreements, including confidentiality and non-disclosure agreements, letters of intent, purchase and sale agreements, escrow agreements, indemnity agreements, and project development agreements.

## **LEGAL EXPERIENCE**

**BORDEN LADNER GERVAIS LLP,** Vancouver, Canada  
*Corporate/Financial Services Associate*  
*Articling Student*  
*Summer Student*

January 2009 – June 2012  
October 2006 – September 2007  
Summer 2005

- Advised clients in connection with the formation and structuring of public and private securities offerings, public infrastructure projects, mergers and acquisitions, bankruptcy/insolvency, intellectual property, privacy issues, and cross-border transactions.
- Responsibilities included drafting, reviewing and negotiating merger agreements, share purchase agreements, shareholder agreements, limited partnership agreements, public-private partnership project agreements, and offering memoranda.
- During my 2013 sabbatical in China, I supported the foundation for BLG's recently opened Beijing marketing office.

**LINKLATERS LLP,** London, England  
*Corporate Associate*

October 2007 – November 2008

- Represented U.S. and foreign banks, hedge funds, institutional investors, trade companies and other corporate clients in connection with domestic and cross border credit facilities, private placements and project finance, leveraged finance and structured finance transactions.
- Responsibilities include drafting and negotiating various agreements/instruments, including credit agreements, guarantees, security/pledge agreements, offtake agreements, purchase/sale agreements, commitment documents and term sheets, indentures, offering circulars, private placement memoranda, legal opinions, corporate documents and other ancillary agreements and closing documents.

## **EDUCATION**

**PEKING UNIVERSITY,** Beijing, China  
*Masters of Law in Chinese Law*  
*Honors/Activities:*

September 2011 – August 2013

Completed LL.M. at China's most prestigious university with specialization in Chinese Foreign Investment.  
Master Thesis Title, "East to West: a Comparison of Canadian and Chinese Foreign Direct Investment Laws – A Comparative Analysis and Case Study of the CNOOC/Nexen Acquisition".  
Part-Time Editor, *ChinaLawInfo.com* (PKULAW.cn)

**UNIVERSITY OF CALGARY,** Calgary, Canada  
*Juris Doctor & Masters of Business Administration*  
*Honors/Activities:*

September 2002 – May 2006

Top 5% Haskayne Business School (four years) Joint JD/MBA program  
Top 20% of graduating law school class  
Co-Editor-in Chief, *Alberta Law Review*  
Awarded, 1<sup>st</sup> place memorial, 3<sup>rd</sup> place team, *Phillip C. Jessup International Moot Court Competition*  
Awarded, 3<sup>rd</sup> place team, 7<sup>th</sup> individually, *Canadian Corporate Securities Moot Court Competition*

Awarded, *A.L. Barron, Q.C. Prize in Labor Law for Highest Course Grade*  
Awarded, *Canada Law Games Fasken Martineau Award*  
*Alberta Heritage Scholarship Recipient*  
*John Labatt Limited Scholarship Recipient*  
*Frederick and Marguerite Hulme Scholarship Recipient*

**OXFORD UNIVERSITY, Oxford, England**

International Comparative Intellectual Property Law Program

June 2003 – September 2003

*Honors/Activities:* Completed four international and comparative intellectual property law courses  
Awarded, *Macleod Dixon LLP International Studentship Award*

**MOUNT ALLISON UNIVERSITY, Sackville, Canada**

Bachelor of Commerce, Neuro-psychology and Organizational Behavior

September 1998 – May 2002

*Honors/Activities:* *First Class Honors* (top 5% equivalent)  
Honors Thesis, *"What Happened in Walkerton? A Tragedy Made Sense"*.  
Awarded, *Henry D. Larson Memorial Prize*  
Awarded, *Mount Allison Outstanding Leadership Award*  
Awarded, *President's Leadership Certificate*

**ADMISSIONS AND LANGUAGES**

- England and Wales (2008); British Columbia (2007)
- Fluent – English, Cantonese
- Intermediate – Mandarin

**VOLUNTEER WORK AND INTERESTS**

- Member of Advisory Council, *Resource Works*, Vancouver, Canada, April 2014 to present
- Executive Board Member, *Vancouver Bar Association*, Vancouver, Canada, January 2010 to December 2012
- Executive Board Member, *Kids Up Front Foundation*, Vancouver, Canada March 2009 to September 2011
- Chair, *Chinese Cultural Center Fundraising Committee*, Vancouver, Canada, July 2006 – September 2007
- Trustee, *Dr. Sun Yat-Sen Classical Chinese Garden Society*, Vancouver, Canada, June 2005 – September 2007
- Hobbies include cooking, travelling, dragon boat racing, soccer, golf, basketball, squash and tennis

For more information, see my LinkedIn profile: [ca.linkedin.com/in/taiycheng](https://ca.linkedin.com/in/taiycheng)

## Kiva Ferraro, Ph.D.

[REDACTED]  
[REDACTED]  
[REDACTED]

Experienced plant biology researcher. Leadership experience in both industry and academia. Experienced oral and written communicator.

### EDUCATION

**Doctor of Philosophy, Science** (plant biochemistry)

2008 – 2014 University of Calgary (Calgary, AB)

**Bachelors of Science** with combined honours in biochemistry, immunology and microbiology

1999-2003 Dalhousie University (Halifax, NS)

### TECHNICAL EXPERTISE

Hydroponic plant production and controlled environment optimization; DNA/RNA isolation and manipulation; PCR and qRT-PCR; chemical analysis using High-Pressure Liquid Chromatography and HPLC-tandem mass spectrometry; plant tissue dissection and chemical extraction

### RESEARCH INTERESTS

Plant physiology, controlled environment plant production, vascular plant genetics and biochemistry, recombinant protein production in plants using transient transgenics.

### WORK EXPERIENCE

**Manager, Upstream Process Development** (2016-present) PlantForm Corp. (Guelph, ON). Design, oversee and execute research with the goal of increasing the yield of therapeutic antibodies produced by transient expression in *Nicotiana benthamiana* (a relative of tobacco). The research incorporates physiological and molecular biology approaches, such as controlled environment optimization, nutritional modification and genetic engineering. Direct a technician and work in collaboration with a technical team. Routinely report progress to and discuss project planning with upper and executive management.

- Led conversion of existing greenhouse production from soil pots to a high-capacity hydroponics.
- Part of a multi-disciplinary team evaluating designs for a pilot scale production facility.

**Post-doctoral fellow** (2014-2016), University of Guelph (Guelph, ON). Conducted a research project in collaboration with an industrial partner aimed at improving the yield of therapeutic antibodies produced by transient expression in *N. benthamiana* through enhanced plant growth by optimizing controlled environmental conditions and by the use of genetic engineering.

**Research Scientist** (2007-08), Diagnostic Chemicals Limited (currently Sekisui Diagnostics, Charlottetown, PE). Responsible for designing and conducting research to improve accuracy, linearity and/or shelf-life of medical diagnostic reagents. Recorded and reported results, in accordance with ISO standards, for US Food and Drug Administration submissions. Directed and worked as a team with a technician.

- Increased linearity and shelf-life for blood carbon dioxide reagent.

**Research Technician** (2006-07), Diagnostic Chemicals Limited (currently Sekisui Diagnostics, Charlottetown, PE). Provided technical assistance for development and improvement of medical diagnostic reagents.

### **OTHER SKILLS**

- Strong background in a variety of software programs including: Windows, Microsoft Office, Adobe Photoshop/Illustrator/InDesign, SnapGene and Endnote. Experience with SigmaPlot, Vector NTI and GraphPad Prism.
- Outstanding organization and time-management skills. Directed undergraduate student research. Served as President of the Biological Sciences Graduate Student Association where I chaired meetings, managed and oversaw annual budget, coordinated members in planning and executing events, and participated in departmental committees and meetings.
- Exceptional written and oral communication skills. Presented both posters and talks at scientific conferences and meetings, served as a contributing writer for The Gauntlet (University of Calgary's Student Newspaper)

### **STRENGTHS**

- Highly autonomous yet able to work very well as part of an interdisciplinary team.
- Quick learner; able to rapidly adapt to new projects and work environments. Keen to learn new skills and techniques.
- Strong work ethic and ability to multi-task.
- Excellent technical and analytical skills in biochemistry and plant biology.

### **AWARDS**

(worth over \$160,000 to date)

- Mitacs Elevate – Post-doctoral fellowship (2014-2016)
- Queen Elizabeth II Scholarship – Doctoral (2013)
- Alberta Society of Professional Biologists Award (2012)
- Queen Elizabeth II Scholarship – Doctoral (2010)
- Alberta Graduate Student Scholarship (2009)
- Dean Entrance Scholarship (2009) – Doctoral transfer

- Queen Elizabeth II Scholarship (2009) - Masters
- Queen Elizabeth II Scholarship (2008) - Masters
- Dalhousie University Entrance Scholarship (2001)

#### PEER-REVIEWED WORK

Ferraro, K., Jin, A. L., Nguyen, T. D., Reinecke, D. M., Ozga, J. A., & Ro, D. K. (2014). **Characterization of proanthocyanidin metabolism in pea (*Pisum sativum*) seeds.** BMC plant biology, 14(1), 238.

#### CONFERENCE PRESENTATIONS

- 2012      **Banff Conference on Plant Metabolism (Banff, Alberta):**  
Proanthocyanidin biosynthesis in *Pisum sativum* (Contributed talk, international conference)
- 2011      **Phytochemical Society of North America (Kona, Hawaii):**  
*Pisum sativum*: a novel bioinformatics platform to study proanthocyanidin biosynthesis (Poster session, international conference)
- 2010      **Banff Conference on Plant Metabolism (Banff, Alberta):**  
Characterization of *Pisum sativum* anthocyanidin reductase and development of a systems biology platform to study proanthocyanidin biosynthesis (Poster session, international conference)
- 2009      **Physical Activity and Nutrition for Diabetes in Alberta (PANDA) Conference (Edmonton, Alberta):** Delving into Nature's Pharmacy: Proanthocyanidins and Genomics in Pea Seed Coats (Contributed talk, provincial conference)
- 2009      **University of Calgary Graduate Student Conference: Today's Ideas Tomorrow's Innovators (Calgary, Alberta):** Proanthocyanidin Biosynthesis in Pea: Potential Nutraceuticals in a Crop Species (Poster session, institutional conference)

References available upon request.

**GREGG T. KOKAME, M.D.**  
**CURRICULUM VITAE**

**A. PERSONAL INFORMATION**

Date of Birth  
Place of Birth  
Marital Status  
Home Address

Business Addresses

Office Phones

**B. EDUCATION**

**College**

**Pomona College**, Claremont, CA,  
Bachelor of Arts, Zoology, 1978

Honors: Magna Cum Laude, Phi Beta Kappa

**Medical School**

**UCLA School of Medicine**, Los Angeles, CA

Doctor of Medicine, 1982

Honors: Alpha Omega Alpha

**Internship**

**Cedars-Sinai Medical Center**, Beverly Hills, CA

Internship in Internal Medicine, 1982-1983

Honors: Highest Clinical Standing

**Residency**

**Jules Stein Eye Institute**

UCLA School of Medicine

Residency in Ophthalmology, 1984 - 1987

**Fellowship**

**Bascom Palmer Eye Institute**

University of Miami School of Medicine

Fellowship in Vitreoretinal Diseases and Surgery, 1987 - 1988

**Sabbatical**

**Moorfields Eye Hospital**, London England, July 2000-August 2000  
(Alan C. Bird, M.D. and Zdenek Gregor, M.D.)

**Management  
Degree**

**USC Marshall School of Business**, Los Angeles, CA  
Master of Medical Management, May 2005

## **Honors and Awards:**

Phi Beta Kappa, 1978  
Magna Cum Laude, 1978  
Alpha Omega Alpha, 1982  
Who's Who Among Rising Young Americans, 1992  
Best Paper Award, Vitreous Society Aspen 1994  
Outstanding Young Men of America, 1998  
Achievement Honor Award, American Academy of Ophthalmology, 1999  
Life Member of the National Registry of Who's Who Published in 1999 Edition  
Honor Award, Vitreous Society 2001  
Rhett Bucklers Video Award (Emmy for Vitreous Society), Surgical Maneuvers Category, Vitreous Society Puerto Rico 2001  
Best Paper of Section on Primary Rhegmatogenous Retinal Detachment, Vitreous Society Puerto Rico 2001  
Macular Society Research Grant 2002 – Mills and Margaret Cox Foundation – for the study of clinical characteristics of Asian macular degeneration  
Senior Honor Award, American Society of Retina Specialists 2003  
Who's Who in America 2003- 2005 biography publication of distinguished individuals in America  
Who's Who in American Education, 7<sup>th</sup> Edition  
American Academy of Ophthalmology's Secretariat Award 2008  
Best Doctors in America 1998 – present  
Hawaii Ophthalmological Society 2011 Recognition for Support of Ophthalmic Research in Hawaii  
Who's Who in America, Education Edition 2011  
Marquis Who's Who 2004 – 2014 10 year Award  
Senior Achievement Award, American Academy of Ophthalmology 2014

## **C. PROFESSIONAL BACKGROUND**

### **Academic Appointment**

Clinical Professor  
Division of Ophthalmology  
Department of Surgery  
University of Hawaii School of Medicine  
July 1, 2005 – present

Associate Clinical Professor  
Division of Ophthalmology  
Department of Surgery  
University of Hawaii School of Medicine  
April 16, 1997 – 2005

Assistant Clinical Professor

Division of Ophthalmology  
Department of Surgery  
University of Hawaii School of Medicine  
December 15, 1989 - 1997

#### Hospital Appointments

Medical Director  
The Retina Center at Pali Momi  
Pali Momi Medical Center  
1993 - present

Board Member  
Pali Momi Foundation Board  
2011 - present

Board Member  
Kapi'olani Health Foundation Board  
2007 - 2011

Member, Ambulatory Care Committee  
Pali Momi Medical Center  
1993 - 1997

Assistant Chairman  
Department of Ophthalmology  
Kuakini Medical Center  
1994 - 1996

Chairman  
Department of Ophthalmology  
Kuakini Medical Center  
1996 - 1998

#### Hospital Affiliations

Pali Momi Medical Center - Active  
Queen's Medical Center - Courtesy  
Kuakini Medical Center - Courtesy  
Tripler Army Medical Center - Courtesy  
Straub Medical Center - Courtesy  
Kaiser Moanalua Medical Center - Courtesy

#### Certification & Licensure



1983 National Board Certification (#261476)  
 1983 Hawaii Medical License (MD - 4780)  
 1983 Drug Enforcement Administration (#AK2390158)  
 1984 California Medical License (#G52418)  
 1988 American Board of Ophthalmology

#### Advisory Boards

Pfizer Ophthalmics  
 Genentech, Inc  
 Quark Pharmaceuticals  
 Alcon Laboratories  
 Allergan  
 Regeneron Pharmaceuticals  
 Alimera  
 Santen  
 Zeiss  
 Bayer

#### **D. PROFESSIONAL ORGANIZATION/SOCIETY MEMBERSHIPS**

##### National

Alpha Omega Alpha	1982 - present
American Medical Association	1985 - present
American Academy of Ophthalmology, Fellow	1985 - present
Vitreous Society	1990 - present
Retina Society	1996 - present
Macula Society	1998 - present
American Ophthalmological Society	2014 - present

##### Regional

Hawaii Ophthalmological Society	1989 - present
Western Retina Study Club	1992 - present
Study Club for Ophthalmic Research in Hawaii (Co-Founder and President)	1995 - present
Hawaii Medical Association	1989 - 2009
Honolulu County Medical Association	1989 - 2009

#### **E. CONSULTANTSHIPS**

##### National

Reviewer, American Journal of Ophthalmology 1994 - present

Reviewer, Ophthalmology, 1995 - present  
 Reviewer, Ophthalmic Surgery Lasers and Imaging, 1998 - present  
 Reviewer, Archives of Ophthalmology, 2000 – present  
 Reviewer, Retina, 2001 – present  
 Reviewer, Journal of Cataract and Refractive Surgery, 2002 – present  
 Reviewer, British Journal of Ophthalmology, 2002 – present  
 Reviewer, Japanese Journal of Ophthalmology, 2010 – present  
 Reviewer, Eye Reports, 2011 – present  
 Reviewer, Investigative Ophthalmology and Visual Science, 2011 – present  
 Reviewer, Ophthalmologica, 2014 – present  
 Reviewer, Eye, 2015 - present  
 Editorial Board, The Open Ophthalmology Journal 2008 – present

#### Regional

Consultant in Ophthalmology, Queen Emma Clinic, Internal Medicine Residency,  
 University of Hawaii School of Medicine, 1989 - 2013  
 Consultant, Vitreoretinal Service, Tripler Army Medical Center, Department of  
 Ophthalmology, 1994 – 2015

## F. RESEARCH & PUBLICATIONS

### National Multi-Centered Research

1. Principal Investigator, Multi-center Trial of Vitrectomy for Prevention of Macular Hole, Honolulu Center - The Retina Center at Pali Momi; Coordinating Center - Illinois Retina Associates, S.C., Chicago, Illinois.
2. Principal Investigator, Multi-center Trial of Vitrectomy for Full Thickness Macular Holes, Honolulu Center - The Retina Center at Pali Momi; Coordinating Center - UCSD Shiley Eye Center, San Diego, California.
3. Principal Investigator, Vitrase (Hyaluronidase) Study for Intravitreal Injection for Treatment of Vitreous Hemorrhage, Honolulu Center; Industry-Sponsored Study.
4. Principal Investigator, Protein Kinase C Inhibitor Study for Diabetic Retinopathy, Honolulu Center, Industry-Sponsored Study.
5. Participant, Certified Subretinal Surgeon, Submacular Surgery Trial (SST) for Age-Related Macular Degeneration, Hawaii Research Center for the SST, Honolulu, Hawaii; Coordinating Center - Wilmer Eye Institute, Baltimore, Maryland; Sponsoring Institute - National Eye Institute, National Institutes of Health.
6. Co-Investigator, Verteporfin for Age-Related Macular Degeneration Trial (VAM), Honolulu Center; Industry-Sponsored Study.
7. Participant, Certified Examiner, STOP ROP study, Honolulu Center - Kapiolani Medical Center for Women and Children; Coordinating Center - National Eye Institute.
8. Principal Investigator, rhuFab V2 Phase I/IIb study for Predominantly Classic or Recurrent CNV secondary to AMD, Hawaii Center, Industry-Sponsored Study.

9. Principal Investigator, rhuFab V2 Phase III study for Minimally Classic CNV secondary to AMD, Hawaii Center, Industry-Sponsored Study.
10. Principal Investigator, Laser Photocoagulation for Diabetic Retinopathy, Diabetic Retinopathy Clinical Research Network, Hawaii Center, Jaeb Center for Health Research.
11. Principal Investigator, Triamcinolone Acetonide vs. Laser Photocoagulation for Diabetic Retinopathy, Diabetic Retinopathy Clinical Research Network, Hawaii Center, Jaeb Center for Health Research.
12. Principal Investigator, Triamcinolone Acetonide plus Visudyne Phase II study for Occult Subfoveal and Minimally Classic Subfoveal CNV Secondary to AMD, Hawaii Center, Industry-Sponsored Study.
13. Principal Investigator, Evaluation of Vitrectomy study for Diabetic Macular Edema, Diabetic Retinopathy Clinical Research Network, Hawaii Center, Jaeb Center for Health Research
14. Principal Investigator, Phase III Open-Label Extension Study to Evaluate the Safety and Tolerability of ranibizumab in subjects with subfoveal CNV secondary to AMD who have previously completed the treatment phase of a Genentech-Sponsored ranibizumab study, Hawaii Center, Industry-Sponsored Study (HORIZON).
15. Principal Investigator, Phase IV, Randomized, Active Controlled, Double-Masked study comparing the safety and efficacy of Intravitreal Macugen® given every 6 weeks plus sham PDT vs Macugen® given every 6 weeks plus Visudyne® PDT in subjects with predominantly classic subfoveal CNV secondary to AMD, Hawaii Center, Industry-Sponsored Study.
16. Principal Investigator, Phase II/III Randomized, Double-Masked study comparing the safety and efficacy of intravitreal Macugen® given as often as every 6 weeks for 3 years, to Sham Injections in subjects with DME involving the center of the macula, Hawaii Center, Industry-Sponsored Study.
17. Principal Investigator, Phase IIIb, Multicenter Study to Evaluate the Safety and Tolerability of ranibizumab in Naïve and Previously Treated Subjects with Choroidal Neovascularization (CNV) Secondary to Age-Related Macular Degeneration (AMD), Hawaii Center, Industry-Sponsored Study. (SAILOR)
18. Principal Investigator, Phase II Bevacizumab for Diabetic Macular Edema, Diabetic Retinopathy Clinical Research Network, Hawaii Center, Jaeb Center for Health Research
19. Principal Investigator, Phase I Ranibizumab for Polypoidal Choroidal Vasculopathy (PEARL Trial), Investigator Sponsored Trial. Funding and medication provided by a research grant from Genentech, Inc.
20. Sub-Investigator, A 24-Month Randomized, Double-Masked, Controlled, Multicenter, Phase IIIB Study Assessing Safety and Efficacy of Verteporfin (Visudyne®) PDT Administered in Conjunction with Ranibizumab (Lucentis™) Versus Ranibizumab (Lucentis™) Monotherapy in Patients with Subfoveal Choroidal Neovascularization Secondary to Age-Related Macular Degeneration, Hawaii Center, Industry-Sponsored Study (DENALI).
21. Principal Investigator, Phase III, Double-Masked, Multicenter, Randomized, Sham-Controlled Study of the Efficacy and Safety of Ranibizumab Injection in Subjects

- with Clinically Significant Macular Edema with Center Involvement Secondary to Diabetes Mellitus. Hawaii Center, Industry-Sponsored Study (RISE).
22. Principal Investigator, Asian AMD Gene Study. Sponsored by a grant from the Hawaii Community Foundation.
  23. Principal Investigator, A Randomized, Double-Masked, Active Controlled Phase III Study of the Efficacy, Safety and Tolerability of Repeated Doses of Intravitreal VEGF Trap in Subjects with Neovascular Age-Related Macular Degeneration. Hawaii Center, Industry-Sponsored Study (VIEW1)
  24. Sub-Investigator, A 52-Week, Masked, Multicenter, Randomized, Controlled Trial (with Up to 13 weeks Additional Follow-Up) to Assess the Safety and Efficacy of 700ug Dexamethasone Posterior Segment Drug Delivery System (DEX PS DDS) Applicator System in Combination with Laser Photocoagulation Compared with Laser Photocoagulation Alone in the Treatment of Subjects with Diffuse Diabetic Macular Edema (DME), Hawaii Center, Industry-Sponsored Study (POSURDEX)
  25. Principal Investigator, COBALT Study, A Phase III, randomized, double-masked, parallel-assignment study of intravitreal bevasiranib sodium, administered every 8 or 12 weeks as maintenance therapy following three injections of Lucentis compared with Lucentis monotherapy every 4 weeks in patients with Exudative Age-Related Macular Degeneration (AMD), Industry-Sponsored Study
  26. Principal Investigator, DEGAS study, A Phase II Prospective, Randomized, Multi-Center, Dose Ranging, Comparator Study Evaluating the Efficacy and Safety fo PF-04523655 Versus Laser in subjects with Diabetic Macular Edema, Industry-Sponsored Study
  27. Principal Investigator, QUARK Study, A Phase I Open-Label, Dose Escalation Trial of REDD14NP Delivered by a Single Intravitreal Injection to Patients with Choroidal Neovascularization (CNV) Secondary to Exudative Age-Related Macular Degeneration, Industry Sponsored Study
  28. Principal Investigator, PEARL2 Study, A Phase II Open Label, Investigator Sponsored Trial Evaluating High Dose Ranibizumab (2.0mg) in patients with Polypoidal Choroidal Vasculopathy (PCV) with Exudation and Bleeding, Investigator Sponsored study
  29. Principal Investigator, A Phase III, Double-Masked, Multicenter, Randomized, Active Treatment-Controlled Study of the Efficacy and Safety of 0.5mg and 2.0 mg ranibizumab administered monthly or on an as-needed basis (PRN) in patients with subfoveal neovascular age-related macular degeneration, Industry Sponsored Study (HARBOR)
  30. Principal Investigator, DIAMOND Study, A Phase III, Randomized, Double-Masked, Placebo-Controlled, Dose-Ranging Clinical Study to Assess the Safety and Efficacy of Subconjunctival Injections of Sirolimus in Patients with Diabetic Macular Edema Secondary to Diabetic Retinopathy, Industry Sponsored Study.
  31. Primary Investigator, Time-Domain vs Spectral Domain OCT-Comparison Study, Diabetic Clinical Research Network.
  32. Sub-Investigator, Multicenter, Randomized, Double-Masked, Placebo-Controlled, Dose-Escalation, Multiple-Dose Study of the Safety, Tolerability, Pharmacokinetics,

- and Pharmacodynamics of ACU-4429 in Subjects with Dry Age-Related Macular Degeneration (Geographic Atrophy), Industry Sponsored Study
33. Primary Investigator, A Double-Masked, Randomized, Active-Controlled, Phase 3 Study of the Efficacy and Safety of Intravitreal Administration of VEGF Trap-Eye in Patients with Diabetic Macular Edema, Industry Sponsored Study
  34. Primary Investigator, A Randomized, Multi-Centered, Phase II Study of the Safety, Tolerability, and Bioactivity of Repeated Intravitreal Injections of iCo-007 as Monotherapy or in Combination with Ranibizumab of Laser Photocoagulation in the Treatment of Diabetic Macular Edema with Involvement of the Foveal Center (iDEAL Study).
  35. Primary Investigator, Chroma Trial, Lampalizumab versus Sham for Geographic Atrophy and Dry AMD
  36. Primary Investigator, PALM Trial, Darpin for Diabetic Macular Edema.
  37. Sub-Investigator, ORBIT study, Jetrete for Vitreomacular Traction.

## **Publications**

1. Heckenlively JR, Kokame GT. Pigmented Paravenous Retinochoroidal Atrophy. Doc. Ophthalmol. Proc. Series 1984; 40: 235 - 241.
2. Kokame GT, Heckenlively JR. Clinical Findings in Pigmented Paravenous Retinochoroidal Atrophy (PPRCA). Invest. Ophthalmol. Vis. Sci. 1987; 28: 120.
3. Kokame GT, Groth M, Lewis H, Holland GN, Straatsma BR. Leukocyte Aggregation and Complement Activation in Retinopathy of Acute Pancreatitis. Invest. Ophthalmol. Vis. Sci. 1988; 29: 178.
4. Lewis ML, Culbertson, WW, Post JD, Miller D, Kokame GT, Dix RD. Herpes Simplex Type I - a cause of the acute retinal necrosis syndrome. Ophthalmology 1989; 96: 875 - 878.
5. Kokame GT, Flynn HW, Blankenship GW. Posterior chamber intraocular lens implantation during diabetic pars plana vitrectomy. Ophthalmology 1989; 96: 603 - 610.
6. Blankenship GW, Flynn HW, Kokame GT. Posterior Chamber Lens Insertion During Pars Plana Lensectomy and Vitrectomy for Complications of Proliferative Diabetic Retinopathy. Am. J. Ophthalmol. 1989; 108: 1 - 5.
7. Kokame GT, Flynn HW, Blankenship GW. Letter to Editor (reply). Pars Plana Vitrectomy and Posterior Chamber Intraocular Lens Implantation in Diabetic Patients. Ophthalmology 1989; 96: 1679 - 1680.
8. Freeman WR. Vitrectomy Surgery for Full-thickness Macular Holes. Am J Ophthalmol 1993; 116: 233 - 235. (Kokame GT - Principal Investigator, Honolulu Center).

9. Kokame GT, Ing MR. Intraocular Gas and Low-altitude Air Flight. *Retina* 1994; 14: 356 - 358.
10. de Bustros S, The Vitrectomy for Prevention of Macular Hole Study Group. Vitrectomy for prevention of macular holes. Results of a randomized multicenter clinical trial. *Ophthalmology* 1994; 101: 1055 - 1060. (Kokame GT - Principal Investigator, Honolulu Center).
11. Kokame GT. Letter to Editor. Recurrence of Macular Holes. *Ophthalmology* 1995; 102:172-173.
12. Kokame GT. Letter to Editor. Ultrasound of Macular Holes. *Ophthalmology* 1995; 102: 366.
13. Kokame GT. Early Stage of Macular Hole in a Severely Myopic Eye. *Am J Ophthalmol* 1995; 119: 240 - 242.
14. Kokame GT. Clinical Correlation of Ultrasonographic Findings in Macular Holes. *Am J Ophthalmol* 1995; 119: 441 - 451.
15. Kokame GT, de Bustros S, The Vitrectomy for Prevention of Macular Hole Study Group. Visual acuity as a prognostic indicator in stage I macular holes. *Am J Ophthalmol* 1995; 120: 112 - 114.
16. Kokame GT. Letter to Editor. Fluorescein Angiographic Findings in Intrapapillary and Peripapillary Subretinal Hemorrhage. *Ophthalmology* 1995; 102: 1003 - 1004.
17. Kokame GT. Clinical Correlation of Ultrasonographic Findings in Macular Holes. Author reply. *Am J Ophthalmol* 1995; 120: 548 - 549.
18. Kokame GT. Letter to Editor. Reappraisal of Biomicroscopic Classification of Stages of Development of a Macular Hole. *Am J Ophthalmol* 1995; 120: 808 - 809.
19. Kim JW, Freeman WR, El-Haig W, Maguire AM, Arevalo JF, Azen SP, The Vitrectomy for Macular Hole Study Group. Baseline characteristics, natural history and risk factors to progression in eyes with stage II macular hole. Results from a randomized prospective clinical trial. *Ophthalmology* 1995; 102: 1818 - 1827. (Kokame GT - Principal Investigator, Honolulu Center).
20. Kokame GT. Macular Hole Surgery for Chronic Macular Holes. *Retina* 1996; 16: 75 - 78.
21. Cohen SM, Kokame GT, Gass JDM. Paraproteinemias Associated with Serous Retinal Detachments of the Retinal Pigment Epithelium and Neurosensory Retina. *Retina* 1996; 16: 467 - 473.

22. Kim JK, Freeman WR, Azen SP, El-Haig W, Klein DJ, Bailey IL, The Vitrectomy for Macular Hole Study Group. Prospective Randomized Trial of Surgery versus Observation for Stage II Macular Holes. *Am J Ophthalmol* 1996; 121: 605 - 614. (Kokame GT - Principal Investigator, Honolulu Center).
23. Freeman WR, Jung KW, Azen SP, El-Haig W, Mishell D, Bailey IL, The Vitrectomy for Macular Hole Study Group. Vitrectomy for the treatment of full-thickness stage III or IV macular holes: results of a randomized clinical trial. *Arch Ophthalmol* 1997; 115: 11-21. (Kokame GT - Principal Investigator, Honolulu Center).
24. Kokame GT. Letter to Editor. Ultrastructural Features of Tissue Removed During Idiopathic Macular Hole Surgery. *Am J Ophthalmol* 1997; 123: 425 -426.
25. Freeman WR, Banker AS, Azen AP, de Bustros S, The Vitrectomy for Macular Hole Study Group. Author Reply. Retinal Pigment Epithelial Changes Following Macular Hole Surgery. *Arch Ophthalmol* 1997; 115: 1214 - 1215. (Kokame GT - Principal Investigator, Honolulu Center).
26. Banker AS, Freeman WR, Kim JW, Munguia D, Azen SP, The Vitrectomy for Macular Hole Study Group. Vision-threatening complications of surgery for full-thickness macular holes. *Ophthalmology* 1997; 104: 1442 - 1452. (Kokame GT - Principal Investigator, Honolulu Center).
27. Kokame GT. Vitrectomy for Macular Hole. The Randomized Clinical Trials. In: Macular Hole. Pathogenesis, Diagnosis and Treatment. Madreperla SA, McCuen BW, eds. Boston: Butterworth-H, Heinemann, 1999: 115-124.
28. Lim JI, Kokame GT, Douglas J. Multiple Evanescent White Dot Syndrome in Older Patients. *Am J Ophthalmol* 1999; 127: 725 - 728.
29. The STOP-ROP Multicenter Study Group. Supplemental therapeutic oxygen for prethreshold retinopathy of prematurity (STOP-ROP), A Randomized, Controlled Trial. I: Primary Outcomes. *Pediatrics* 2000; 105(2): 295 - 310 (Kokame GT - investigator and examiner, Honolulu Center).
30. Kokame GT. Macular Traction Associated with a Premacular Circular Dehiscence of the Detached Posterior Vitreous Cortex. *VitreoTech* 2000; 5(1): 1, 4-5.
31. Kokame GT. Vitreous Hemorrhage Following Intravitreal Tissue Plasminogen Activator (t-PA) and Pneumatic Displacement of Subretinal Hemorrhage. *Am J Ophthal* 2000; 129(4): 546 - 547.
32. Cheng L, Freeman WR, Ozerdem U, Song M, Azen SP, The Vitrectomy for Macular Hole Study Group. Prevalence, correlates, and natural history of epiretinal membranes

- surrounding idiopathic macular holes. *Ophthalmology* 2000; 107: 853 - 859 (Kokame GT - Principal Investigator, Honolulu Center).
33. Kokame GT. Editorial. Visual Field Defects After Vitrectomy with Fluid-Air Exchange. *Am J Ophthalmol* 2000; 130: 653 - 654.
  34. Kokame GT, Atebara NH, Bennett MD. Modified Technique of Haptic Externalization for Scleral Fixation of Dislocated Posterior Chamber Implants. *Am J Ophthalmol* 2001; 131: 129 - 131.
  35. Kokame GT. Letter to Editor. Visual Field Defects After Macular Hole Surgery. *Br J Ophthalmol* 2001; 85:121.
  36. Kokame GT, de Leon MDL, Tanji T. Serous Retinal Detachment and Cystoid Macular Edema in Hypotony Maculopathy. *Am J Ophthalmol* 2001; 131: 384 - 386.
  37. Kokame GT. Macular Hole Pathogenesis and Management: A new era of understanding. In: *Proceedings 17th Congress of the Asia-Pacific Academy of Ophthalmology*. Mosman Comm., Inc., Manila, Philippines, 2001: 938 - 945.
  38. Kokame GT, McCauley MB. Spontaneous Reopening of a Spontaneously Closed Macular Hole. *Am J Ophthalmol* 2002;133: 280-282.
  39. Kokame GT. Management Options for Stage I Macular Holes. *Am J Ophthalmol* 2002;133:276-278.
  40. Kokame GT. Diagnostic and Therapeutic Challenges (HR McDonald, Editor) (Epiretinal Membrane in a Young Child). *Retina* 2002;22:208-212.
  41. Freund KB, Ciardella AP, Yannuzzi L, Kokame GT, Pece A, Goldbaum M, Orlock D. Peripapillary Detachment in Pathologic Myopia. *Arch Ophthalmol* 2003; 121: 197 – 204.
  42. Kokame GT, Germar G. Brief Report. Successful Management of Intruded Hydrogel Buckle with Buckle Removal, Scleral Patch Graft, and Vitrectomy. *Retina* 2003;23:536-537.
  43. Javellana JA, Drouilhet JH, Kokame GT, Chee P, Wong B. Retinal Capillary Angioma in Familial Exudative Vitreoretinopathy treated with Photodynamic Therapy. *Am J Ophthalmol* 2004;137:780-782.
  44. Kokame, GT. Letter to Editor. Comparison of Silicone Oil Gas Tamponade in the Treatment of Idiopathic Full-Thickness Macular Hole. *Ophthalmology* 2004;111:851-852.
  45. Kokame, GT, Yamamoto I, Drouilhet JD, Kishi S, Tamura A. Intrapapillary Hemorrhage with Adjacent Peripapillary Subretinal Hemorrhage. *Ophthalmology* 2004; 111: 926 – 930.



46. Kokame, GT, Yamamoto I, Mandel H. Scleral Fixation of Dislocated Posterior Chamber Intraocular Lens by Temporary Haptic Externalization Through a Clear Corneal Incision. *J Cataract Refract Surg* 2004;30:1049-1056.
47. Gross J, Kokame GT, Weinberg D. In-The-Bag Intraocular Lens Dislocation. *Am J Ophthalmol* 2004;137:630-635.
48. Kokame GT, Gross J, Weinberg D, In-The-Bag IOL Study Group. Author Reply. In-The-Bag Intraocular Lens Dislocation. *Am J Ophthalmol* 2005; 139: 953 - 954.
49. Kokame GT, Yamaoka S. Subretinal Surgery for Peripapillary Subretinal Neovascular Membranes. *Retina* 2005; 25: 564-569.
50. Kokame, GT. Newly Recognized Serous Macular Detachment in Retinal Vascular Disease. *Retina* 2006; 26: 493-494.
51. Heier JS, Boyer DS, Ciulla TA, Ferrone PJ, Jumper JM, Gentile RC, Kotlovker D, Chung CY, Kim RY, FOCUS Study Group. Ranibizumab combined with verteporfin photodynamic therapy in neovascular age-related macular degeneration: year 1 results of the FOCUS Study. *Arch Ophthalmol*. 2006 Nov; 124 (11):1532-42.
52. Kokame GT, Tokuhara K, Surgical Management of Lamellar Macular Hole. *Ophthalmic Surg Lasers Imaging* 2007; 38: 61-63.
53. Chan CK, Meyer CH, Gross JG, Abraham P, Nuthi AS, Kokame GT, Rauser ME. Retinal Pigment Epithelial Tears After Intravitreal Bevacizumab Injection for Neovascular Age-related Macular Degeneration. *Retina*. 2007 Jun;27(5):541-551.
54. Diabetic Clinical Research Network. A Phase II Randomized Clinical Trial of Intravitreal Bevacizumab for Diabetic Macular Edema. *Ophthalmology* 2007; 114:1860-1867.
55. Diabetic Clinical Research Network. A Randomized Trial Comparing Intravitreal Triamcinolone and focal/grid photocoagulation for diabetic macular edema. *Ophthalmology* 2008; 115: 1447-1449.
56. Browning DJ, Glassman AR, Aiello LP, Bressler NJM, Bressler SB, Danis EP, Davis MD, Ferris FL, Huang SS, Kaiser PK, Kollman C, Sadda S, Scott IU, Qin H; Diabetic Retinopathy Clinical Research Network. Optical Coherence Tomography Measurements and Analysis Methods in Optical Coherence Tomography Studies of Diabetic Macular Edema. *Ophthalmology* 2008; 115: 1366-1371
57. Dinc UA, Yenerel NM, Gorgun E, Yetik H, Kokame GT, Lim JL. Diagnostic and Therapeutic Challenges. *Retina* 2009; 275 – 279.

58. Kokame, GT, Drouilhet JH. Successful Combined Photodynamic and Intravitreal Avastin Therapy for Subfoveal Choroidal Neovascularization in a Child. *Retinal Cases and Brief Reports*. 2009; 3:89-92.
59. Suñer IJ, Kokame GT, Yu E, Ward J, Dolan C, Bressler NM. Responsiveness of NEI VFQ-25 to changes in visual acuity in neovascular AMD: validation studies from two phase 3 clinical trials. *Invest Ophthalmol Vis Sci*. 2009; 50: 3629 – 3635.
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61. Chan CK, Abraham P, Meye CH, Kokame GT, Kaiser PK, Rauser ME, Gross JG, Nuthi AS, Lin SG, Daher NS. Optical coherence tomography-measured retinal pigment epithelial detachment height as a predictor for retinal pigment epithelial tears associated with intravitreal bevacizumab injections. *Retina* 2010; 30(2) 203 – 211.
62. Kokame GT, Yeung L, Lai JC. Continuous anti-VEGF treatment with ranibizumab for polypoidal choroidal vasculopathy: 6-month results. *Br. J of Ophthalmol*. 2010 Mar; 94 (3): 297-301. *Epub 2009 Sep 1*
63. Yeung L, Kokame GT, Brod RD, Lightman DA, Lai JC. Pneumatic Retinopexy for retinal detachment associated with severe choroidal detachment. *Retina*. 2011 Jan;31(1):87-92. *Accepted for publication March 2010*.
64. Diabetic Retinopathy Clinical Research Network Writing Committee on behalf of the DRCR.net. Vitrectomy outcomes in eyes with diabetic macular edema and vitreomacular traction. *Ophthalmology* 117(6): 1087 – 1093.
65. Chan CK, Abraham P, Meyer CH, Kokame GT, Kaiser PK, Rauser ME, Gross JG, Nuthi AS, Lin SG, Daher, NS. Optical coherence tomography-measured pigment epithelial detachment height as a predictor for retinal pigment epithelial tears associated with intravitreal bevacizumab injections. *Retina*. 2010 Feb;30(2):203-11.
66. Wong RW, Kokame GT, Mahmoud TH, Mieler WF, Tornambe PE, McDonald HR. Complications associated with clear corneal cataract wounds during Vitrectomy. *Retina*. 2010 Jun;30(6):850-5.
67. Bui AT, Rosen BS, Roe RH, Kokame GT. Diagnostic and therapeutic challenges. *Retina*. 2010 Nov-Dec; 30(10):1744-8.
68. Kokame GT. The science and art of managing retinal disease. *Expert Rev Ophthalmol* 6(1) 25-27 (2011).

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73. Kokame GT. Polypoidal choroidal vasculopathy – A type I polypoidal subretinal neovascopathy. *The Open Ophthalmology Journal* 2013; 7:82 – 84.
74. Chhablani J, Kokame GT. Diagnostic and therapeutic challenges. *Retina* 2014; 34(7): 1485 – 1486.
75. Kokame GT, Han DP. Combining Cataract Surgery and Posterior Vitrectomy. In Han DP. *Cataract Surgery and Retinal Disease. Optimizing Visual Outcome*. November 2013. Bryn Mawr, Wayne, PA, pp. 55 – 60.
76. Kokame GT. Posteriorly dislocated intraocular lenses. In. Han DP. *Cataract Surgery and Retinal Disease. Optimizing Visual Outcome*. November 2013. Bryn Mawr, Wayne, PA, pp. 55 – 60.
77. Lim JI, Glassman AR, Aiello LP, Chakravarthy U, Flaxel CJ, Spaide RF, Macula Society CSC Collaborative Study Group (Kokame GT – investigator). *Ophthalmology* 2014; 121(5): 1073 – 1078.
78. Kokame GT. Prospective evaluation of subretinal location in polypoidal choroidal vasculopathy (PCV) and response of exudative and hemorrhagic PCV to high dose anti-angiogenic therapy (An American Ophthalmological Society Thesis). *Trans Am Ophthalmol Soc* 2014; 112: 74 – 93.
79. Pereira FB, Veloso CE, Nehemy MB, Kokame GT. Characterization of neovascular macular degeneration in Brazilian patients. *Ophthalmologica* 2015; in press.

80. Kokame GT, Yanagihara R, Hirai K. Polypoidal Choroidal Vasculopathy - Imaging by Indocyanine Green Angiography and En Face Optical Coherence Tomography. JAMA Ophthalmology 2015: in press.

#### **Non-Peer Reviewed Publications**

1. Kokame GT. Lens Abnormalities and Intraocular Lens Complications. VitreoTech 2002; 7(2): 2, 3.
2. Kokame GT. Management of Early Stages of Macular Holes, Ocular Surgery News 2002; 20(20):116-117.
3. Kokame, GT. "Managing Dislocated IOLs." Cataract and Refractive Surgery Today. August 2005: 67-69.
4. Kokame GT. Controversies in Care. Does Surgery for Lamellar Macular Holes Offer Distinct Gains? (Michael Colucciello editor) Retinal Physician. April 2012; 9: 20 – 23.
5. Koh AHC, Kokame GT, Spaide RF. Update on polypoidal choroidal vasculopathy. EyeNet. December 2012
6. Sarraf D, Kokame GT. Laser video ICG angiography and SD-OCT for the diagnosis of PCV and AMD. Retina Today. Sept 2013.

#### **G. MAJOR MEETING PRESENTATIONS & INVITED LECTURESHIPS**

##### **Major Meeting Presentations**

1. 3/21/87 Spectrum & etiology of retinopathy in acute pancreatitis - Role of complement-induced leukoaggregation. **Annual Residents & Fellows Research Meeting. Jules Stein Eye Institute.** Los Angeles, California.
2. 5/4/87 Clinical findings in pigmented paravenous retinochoroidal atrophy. **Association of Research in Vision & Ophthalmology (ARVO).** Annual Meeting. Sarasota, Florida.
3. 5/3/88 Complement activation and leukocyte aggregation in retinopathy of acute pancreatitis. **Association of Research in Vision & Ophthalmology (ARVO).** Annual Meeting. Sarasota, Florida.
4. 6/10/88 Combined extracapsular cataract extraction, posterior chamber IOL insertion, and pars plana vitrectomy. **24th Annual Residents & Fellows Days. Bascom Palmer Eye Institute.** Miami, Florida.
5. 10/8/88 Posterior chamber IOL insertion during combined cataract removal & diabetic vitrectomy. **American Academy of Ophthalmology.** Annual Meeting. Las Vegas, Nevada.

6. 4/7/89 Combined cataract extraction, posterior chamber IOL placement, and pars plana vitrectomy in diabetic eyes. **Annual Postgraduate Seminar - Retina. Jules Stein Eye Institute.** Century City, California.
7. 4/20/89 Current medical and surgical management of endophthalmitis. **Hawaii Ophthalmological Society.** Honolulu, Hawaii.
8. 7/16/90 Unilateral solar retinopathy associated with an Adie's pupil. **Western Association for Vitreoretinal Education.** Annual Meeting. Paia, Hawaii.
9. 7/17/90 Idiopathic retinitis and stellate maculopathy. **Western Association for Vitreoretinal Education.** Annual Meeting. Paia, Hawaii
10. 7/18/90 Combined cataract extraction, posterior chamber IOL placement and pars plana vitrectomy. **Western Association for Vitreoretinal Education.** Annual Meeting. Paia, Hawaii
11. 10/12/90 Age related macular degeneration. **134th Annual Scientific Meeting. Hawaii Medical Association.** Honolulu, Hawaii.
12. 1/23/91 Low altitude air travel and intraocular gas. **Vitreous Society.** Annual Meeting. Kona, Hawaii.
13. 3/18/91 Multifocal chorioretinopathies. **Invited Lecture. Prime Time Retinal Lecture Series. California-Pacific Medical Center.** San Francisco, California.
14. 3/21/91 Macular hole and premacular hole vitrectomy surgery. **Hawaii Ophthalmological Society.**
15. 6/22/91 Low altitude air travel and intraocular gas. **27th Annual Residents & Fellows Days. Bascom Palmer Eye Institute.** Miami, Florida.
16. 9/23/91 Suture fixation of posterior chamber implants during vitrectomy surgical management of subluxated and dislocated cataracts. **Vitreous Society.** Annual Meeting. Paris, France.
17. 2/18/92 Suture fixation of posterior chamber implants during vitrectomy surgical management of subluxated and dislocated cataracts. **Western Retina Study Club.** Annual Meeting. Lihue, Hawaii.
18. 2/18/92 Idiopathic exudative retinitis & stellate maculopathy. **Western Retina Study Club.** Annual Meeting. Lihue, Kauai.
19. 7/21/92 Current medical and surgical management of endophthalmitis. **Western Association for Vitreoretinal Education.** Paia, Hawaii.
20. 7/22/92 The benefit of ultrasonography in evaluating macular holes. **Western Association for Vitreoretinal Education.** Paia, Hawaii.
21. 7/22/92 Volcano maculopathy - preretinal hemorrhage and traction associated with retinal microaneurysms. **Western Association for Vitreoretinal Education.** Paia, Hawaii.
22. 10/14/92 Clinical correlation of ultrasonographic findings in macular holes. **Vitreous Society.** Annual Meeting. Laguna Niguel, California.
23. 11/11/92 Pars plana microsurgical management of lenticular and IOL complications. **Course Director. American Academy of Ophthalmology Course 561.** Dallas, Texas.
24. 4/18/93 Fluorescein Angiography Conference. **Jules Stein Eye Institute.** Los Angeles, California.
25. 4/19/93 Multifocal Chorioretinopathies. Grand Rounds Visiting Professor Lecture. **Jules Stein Eye Institute.** Los Angeles, California.

26. 7/20/93 Late recurrence of macular holes following closure with vitrectomy surgery. **Western Association for Vitreoretinal Education.** Annual Meeting. Paia, Hawaii.
27. 7/20/93 Clinical correlation of ultrasonographic findings in macular holes. Part of ultrasound symposium. **Western Association for Vitreoretinal Education.** Annual Meeting. Paia, Hawaii.
28. 7/21/93 Central serous like picture associated with cryoglobulinemia. **Western Association for Vitreoretinal Education.** Annual Meeting. Paia, Hawaii.
29. 7/21/93 Retinal pigment epithelial detachments associated with pseudotumor. **Western Association for Vitreoretinal Education.** Annual Meeting. Paia, Hawaii.
30. 8/19/93 Pars plana microsurgical management of lenticular and IOL complications. **Hawaii Ophthalmological Society.**
31. 11/16/93 Clinical correlation of ultrasonographic findings in macular holes. **American Academy of Ophthalmology.** Annual Meeting. Chicago, Illinois.
32. 11/16/93 Pars plana microsurgical management of lenticular and IOL complications. **Course Director. American Academy of Ophthalmology Course 254.** Annual Meeting. Chicago, Illinois.
33. 7/25/94 Use of autologous serum as an adjunct in macular hole surgery. **Western Association for Vitreoretinal Education.** Annual Meeting. Paia, Hawaii.
34. 7/25/94 Early stage of myopic macular hole. **Western Association for Vitreoretinal Education.** Annual Meeting. Paia, Hawaii.
35. 7/26/94 Differential diagnosis of yellow foveal lesions. **Western Association for Vitreoretinal Education.** Annual Meeting. Paia, Hawaii.
36. 8/17/94 Macular traction syndromes associated with dehiscence in posterior hyaloid. **Vitreous Society.** Annual Meeting. Aspen, Colorado.
37. 11/2/94 Diabetes 2000 Course on diabetic retinopathy. Course faculty. **American Academy of Ophthalmology Course HO-470.** Annual Meeting. San Francisco, California.
38. 11/3/94 Pars plana microsurgical management of lenticular and IOL complications. **Course Director. American Academy of Ophthalmology Course 650.** Annual Meeting. San Francisco, California.
39. 4/20/95 Update on macular hole pathogenesis and surgery. **Hawaii Ophthalmological Society.**
40. 6/17/95 Macular traction syndromes associated with dehiscence in the posterior hyaloid. **31st Annual Residents and Fellows Days. Bascom Palmer Eye Institute.** Miami, Florida.
41. 8/15/95 Clinical, ultrasonographic and intraoperative findings in macular holes in high myopic eyes. **Vitreous Society.** Annual Meeting. London, England.
42. 4/12/96 Diabetes and Cataract. **Invited Lecture. Jules Stein Eye Institute - Annual Postgraduate Seminar and Jules Stein Lecture.** Vitreoretinal Diseases and Surgery. **Jules Stein Eye Institute.** UCLA School of Medicine. Los Angeles, California.
43. 7/1/96 - 7/4/96 Academic Program Chairman. An International Vitreoretinal Symposium. **Western Association for Vitreoretinal Education WAVE 96 Meeting.** Kea Lani Resort and Villas. Wailea, Maui, Hawaii.
44. 7/1/96 Diabetes and Cataract. **Western Association for Vitreoretinal Education.** Annual Meeting. Wailea, Maui.

45. 7/1/96 Macular hole surgery in highly myopic eyes. **Western Association for Vitreoretinal Education**. Annual Meeting. Wailea, Maui.
46. 7/3/96 Idiopathic polypoidal choroidal vasculopathy in an oriental patient. **Western Association for Vitreoretinal Education**. Annual Meeting. Wailea, Maui.
47. 7/4/96 Practical considerations and introduction to use of non-contact wide angle viewing. **Western Association for Vitreoretinal Education**. Wide Angle Viewing course. Wailea, Maui.
48. 3/6/97 Update on Macular Hole Surgery. Bi-annual Meeting. **Asia Pacific Academy of Ophthalmology**. Katmandu, Nepal.
49. 3/6/97 Macular Diseases and Surgery Course. Course Director. **Asia Pacific Academy of Ophthalmology**. Katmandu, Nepal.
50. 9/20/97 A temporal approach to subretinal surgery in left eyes. **Vitreous Society**. Annual Meeting. New Orleans, Louisiana.
51. 10/28/97 Diabetes 2000 Workshop on Diabetic Retinopathy. **American Academy of Ophthalmology Course HO-623**. San Francisco, California.
52. 7/7/98 Stage I Macular Holes - An update on management options. **Vitreous Society**. Annual Meeting. Alaska.
53. 9/25/98 Early Stages of Macular Holes in Highly Myopic Eyes - Clinical, Ultrasonographic and Surgical Findings. **Retina Society**. Annual Meeting. Washington D.C.
54. 11/10/98 Diabetes 2000 Workshop on Diabetic Retinopathy. **American Academy of Ophthalmology Course HO-812**. Annual Meeting. New Orleans, Louisiana.
55. 11/10/98 Management options for stage I or impending macular holes. **American Academy of Ophthalmology Poster 277**. Annual Meeting. New Orleans, Louisiana.
56. 2/25/99 Macular traction associated with circular dehiscence in the detached posterior vitreous cortex. **Macula Society**. Annual Meeting. San Diego, California.
57. 3/8/99 Macular Holes - A New Era of Understanding in Pathogenesis, and Management. Symposium Lecture. Bi-annual Meeting. **Asia-Pacific Academy of Ophthalmology**. Manila, Philippines.
58. 5/20/99 Macular Holes - A New Era of Understanding of Pathogenesis and Management. **Hawaii Ophthalmological Society**. Honolulu, Hawaii.
59. 9/23/99 Macular Hole Surgery - Update (Overview). **Retinal Education for Accessing Current Techniques (REACT) Meeting**. Kyoto, Japan.
60. 9/23/99 Subretinal Surgery - The Subretinal Surgery Trials (SST). **Retinal Education for Accessing Current Techniques (REACT) Meeting**. Kyoto, Japan.
61. 9/25/99 Pars Plana Microsurgical Management of Dislocated Lens Implants. **Advanced Vitreous Surgery Course in Kyoto**. Kyoto, Japan.
62. 9/25/99 Myopic Macular Holes - Early Stages, Pathogenesis and Treatment. **Advanced Vitreous Surgery Course in Kyoto**. Kyoto, Japan.
63. 9/25/99 Macular Traction Associated with a Circular Dehiscence in the Detached Posterior Vitreous Cortex. **Advanced Vitreous Surgery Course in Kyoto**. Kyoto, Japan.
64. 9/25/99 Management Options for Stage I or Impending Macular Holes. **Advanced Vitreous Surgery Course in Kyoto**. Kyoto, Japan.
65. 9/25/99 Submacular Surgery Trials (SST) for Age-Related Macular Degeneration (AMD). **Advanced Vitreous Surgery Course in Kyoto**. Kyoto, Japan.

99. 2/23/01 Panel Discussion/Macular hole & epiretinal membrane (Robert Foster, J. Donald M. Gass, Mark W. Johnson, Gregg T. Kokame, Robert Morris, Homayoun Tabandeh) **40<sup>th</sup> Anniversary of Bascom Palmer Celebratory Scientific Meeting.** Miami, Florida.
100. 4/17/02 Supplemental indirect laser to reduce post diabetic vitrectomy complications. **Invited Lecture. Retinal Education for Assessing Current Techniques.** Sydney, Australia.
101. 4/17/02 Comparison of macular hole surgery results with epiretinal membrane peeling versus internal limiting membrane removal. **Invited Lecture. Retinal Education for Assessing Current Techniques.** Sydney, Australia.
102. 6/12/02 Spontaneous reopening of a spontaneously closed macular hole. Fluorescein Angiography Conference. **Macula Society 25<sup>th</sup> Annual Meeting.** Barcelona, Spain.
103. 6/12/02 Supplemental indirect laser to reduce to reduce post-vitrectomy diabetic complications. **Macula Society 25<sup>th</sup> Annual Meeting.** Barcelona, Spain.
104. 9/28/02 Intrapapillary Hemorrhage with Adjacent Peripapillary Subretinal Hemorrhage. Fluorescein Angiography Case. **Retina Congress 2002 The Combined Meeting. The Vitreous Society 20<sup>th</sup> Annual Meeting and Retina Society 35<sup>th</sup> Annual Meeting.** San Francisco, California. (Kokame, Yamamoto).
105. 9/29/02 Combined Cataract Surgery and Vitrectomy: A Comparison of Phacoemulsification to Pars Plana Lensectomy Approach in Eyes Requiring Combined Surgery. **Retina Congress 2002 The Combined Meeting. The Vitreous Society 20<sup>th</sup> Annual Meeting and Retina Society 35<sup>th</sup> Annual Meeting.** San Francisco, California. (Kokame, de Leon)
106. 10/1/02 Pars plana microsurgical management of lenticular and IOL complications. Instructional Course. **Retina Congress 2002 The Combined Meeting. The Vitreous Society 20<sup>th</sup> Annual Meeting and Retina Society 35<sup>th</sup> Annual Meeting.** San Francisco, California.
107. 10/22/02 Diabetes 2002: Course on Diabetic Retinopathy Wet Lab. Instructor. **American Academy of Ophthalmology.** Course HO-471. San Francisco, CA.
108. 6/5/03 In-the-bag IOL dislocations-a new and increasingly prevalent presentation-a multi-center study. **Retinal Education for Assessing Current Techniques.** Majorca, Spain.
109. 6/5/03 Management of dislocated IOLs by temporary externalization of haptic through a clear corneal incision-an outcome study of consecutive surgical series. **Retinal Education for Assessing Current Techniques.** Majorca, Spain.
110. 6/30/03 Scleral Fixation of Dislocated Posterior Chamber Implants by Temporary Haptic Externalization through a Clear Corneal Incision-An Outcome Study. **Western Association for Vitreoretinal Education.** Bi-annual meeting. Wailea, Hawaii.
111. 7/1/03 In-the-Bag IOL Dislocations. **Western Association for Vitreoretinal Education.** Bi-annual meeting. Wailea, Hawaii.
112. 7/1/03 Retinal Infiltrates in a Patient with Systemic Leukemia in Remission. **Western Association for Vitreoretinal Education.** Bi-annual meeting. Wailea, Hawaii.
113. 7/1/03 Photodynamic Therapy for Asian AMD. **Western Association for Vitreoretinal Education.** Bi-annual meeting. Wailea, Hawaii.
114. 7/1/03 Peripapillary Detachment in Pathologic Myopia. **Western Association for Vitreoretinal Education.** Bi-annual meeting. Wailea, Hawaii.



115. 9/19/03 Spontaneous Reopening of a Spontaneously Closed Macular Hole. **The Retina Society**. Annual Meeting. Chicago, IL.
116. 9/20/03 Scleral Fixation of Dislocated Posterior Chamber Implants by Temporary Haptic Externalization through a Clear Corneal Incision-An Outcome Study. **The Retina Society**. Annual Meeting. Chicago, IL.
117. 9/20/03 Moderator-Retinal Pharmacology Session, **The Retina Society**. Annual Meeting. Chicago, IL.
118. 11/18/03 Diabetes 2003: Course on Diabetic Retinopathy Wet Lab. Instructor. **American Academy of Ophthalmology**. Course LAB366B. Anaheim, CA.
119. 2/25/04 Serous Retinal Detachment Associated with Nodular RPE Lesion. Fluorescein Angiography Conference. **Macula Society 27<sup>th</sup> Annual Meeting**. Las Vegas, Nevada.
120. 2/25/04 Moderator. Fluorescein Angiography Conference. **Macula Society 27<sup>th</sup> Annual Meeting**. Las Vegas, Nevada.
121. 2/26/04 Intrapapillary Hemorrhage and Adjacent Peripapillary Subretinal Hemorrhage (IHAPSH). **Macula Society 27<sup>th</sup> Annual Meeting**. Las Vegas, Nevada.
122. 2/24/05 Clinical Characteristics of Exudative Age Related Macula Degeneration in Asian Patients and Response to Photodynamic Therapy. **Macula Society 28<sup>th</sup> Annual Meeting**. Key Biscayne, Florida.
123. 2/24/05 Peripapillary Subretinal Neovascular Membrane in Elderly Patient - Management Dilemma. **Macula Society 28<sup>th</sup> Annual Meeting**. Key Biscayne, Florida.
124. 7/1/05 Subretinal Surgery for Peripapillary Subretinal Neovascular Membranes **Aegean Retina 9<sup>th</sup> Annual Meeting**. Crete, Greece.
125. 9/18/05 PANEL: Changing Strategies in the Management of Neovascular Age-Related Macular Degeneration **2005 Annual Meeting of the Retina Society**. Hotel Del Coronado, Coronado, California
126. 10/17/05 Clinical Characteristics of Exudative Age-Related Macular Degeneration in Asian Patients. **American Academy of Ophthalmology**. Annual Meeting. Chicago, IL.
127. 10/17/05 Management of Dislocated Lens Fragments, IOL, and Endocapsular Rings: Comprehensive Review, Pearls, and Controversies **2005 Academy of Ophthalmology**. Annual Meeting. Chicago, IL.
128. 10/17/05 Diabetes 2005: Workshop on Diabetic Retinopathy **2005 Academy of Ophthalmology**. Annual Meeting. Chicago, IL.
129. 3/7/06 Macugen Therapy for Exudative Macular Degeneration and Diabetic Retinopathy **34<sup>th</sup> Annual Retinal Detachment Society Meeting**. Annual Meeting. Snowmass, CO.
130. 3/7/06 AMD Treatment Expert Panel: Allen C. Ho, MD, Gregg T. Kokame, MD, MMM, Carl D. Regillo, MD, Robert Avery, MD, Mark W. Johnson, MD. **34<sup>th</sup> Annual Retinal Detachment Society Meeting**. Annual Meeting. Snowmass, CO.
131. 3/8/06 Dislocated IOLs: New Presentations and New Techniques in Management. **34<sup>th</sup> Annual Retinal Detachment Society Meeting**. Annual Meeting. Snowmass, CO.
132. 11/13/06 Diabetes 2006: Course of Diabetic Retinopathy Wet Lab. Instructor. **American Academy of Ophthalmology**. Course LAB342A. Las Vegas, NV.
133. 11/13/06 Retinal Pigment Epithelial Tears Following Intraocular Bevacizumab (Avastin) Injections for Neovascular AMD. **American Academy of Ophthalmology**. Annual Meeting. Las Vegas, NV.

- 134.11/14/06 Management of Dislocated Lens Fragments, IOLs, and Placement of Capsular Tension Rings: Comprehensive Review, Controversies, and Pearls. **American Academy of Ophthalmology**. Annual Meeting. Las Vegas, NV.
- 135.9/29/07 Successful Combined Photodynamic Therapy and Intravitreal Avastin Therapy for Subfoveal Choroidal Neovascularization in a Child. **2007 Annual Meeting of the Retina Society**. Annual Meeting. Boston, MA.
- 136.9/30/07 NEI VFQ-25 in the Marina Trial. **2007 Annual Meeting of the Retina Society**. Annual Meeting. Boston, MA.
- 137.11/12/07 Diabetes 2007: Course of Diabetic Retinopathy Wet Lab. Instructor. **American Academy of Ophthalmology**. Course LAB371A. New Orleans, Louisiana.
- 138.11/13/07 Management of Dislocated Lens Fragments, IOLs, and Placement of Capsular Tension Rings: Comprehensive Review, Controversies, and Pearls. **American Academy of Ophthalmology**. Annual Meeting. New Orleans, Louisiana.
- 139.6/29/08 Ranibizumab Monotherapy for PCV. **World Ophthalmology Congress 2008. Bi-Annual Meeting**. Hong Kong, China.
- 140.7/1/08 Cataract Surgical Complications: New Presentations and New Techniques in Management from a Vitreoretinal Surgical Perspective. **World Ophthalmology Congress Meeting**. Annual Meeting. Hong Kong, China.
- 141.7/1/08 Micro-incision Vitreous Surgery (MIVS) Utilizing 23 Gauge and 25 Gauge Instruments and Sutureless Viewing Systems. **World Ophthalmology Congress Meeting**. Annual Meeting. Kong Kong, China.
- 142.11/8/08 Management of Dislocated Lens Fragments, IOLs, and Placement of Capsular Tension Rings: Comprehensive Review, Controversies, and Pearls. **American Academy of Ophthalmology**. Annual Meeting. Atlanta, GA.
- 143.11/9/08 OCT-measured Pigment Epithelial Detachment Height and Volume Index are Reliable Predictors for Retinal Pigment Epithelial Rip Associated with Intravitreal Bevacizumab (Avastin) Injections. Poster. **American Academy of Ophthalmology**. Annual Meeting. Atlanta, GA.
- 144.11/10/08 Diabetes 2008: Course on Diabetic Retinopathy Wet Lab. Instructor. **American Academy of Ophthalmology**. Course LAB191A. Atlanta, GA.
- 145.2/27/10 Fluorescein Angiographic Findings in PEARL Study of Ranibizumab Therapy for PCV – Importance of ICG Angiography Due to Therapeutic Response Differences between PCV and AMD **Macula Society 33<sup>rd</sup> Annual Meeting**. Tucson, Arizona.
- 146.7/4/10 Continuous monthly ranibizumab therapy for exudative and hemorrhage complication of polypoidal choroidal vasculopathy – the PEARL trial results **Mediterranean Retina Meeting**. Istanbul, Turkey.
- 147.7/4/10 Pneumatic Retinopexy in management of retinal detachment associated with hypotony, choroidal detachment and uveitis. **Mediterranean Retina Meeting**. Istanbul, Turkey.
- 148.9/25/10 Fluorescein angiographic findings in PEARL study of ranibizumab therapy for PCV – importance of ICG angiography due to therapeutic response differences between PCV and Age-related macular degeneration. Annual Meeting. **Retina Society**. San Francisco, California.
- 149.10/16/10 AMD Expert Conference. Sheraton Chicago Hotel and Towers. **American Academy of Ophthalmology**. Chicago, Illinois

150. 5/29/11 Continuous monthly anti-VEGF therapy with ranibizumab 0.5 mg for Active Polypoidal Choroidal Vasculopathy – Long Term Results. **EURETINA**. Annual Meeting. London, England.
151. 8/5/11 Optic nerve pit with serous detachment. Midwest Ocular Angiography Conference. Papagayo, Costa Rica.
152. 10/24/11 Lai T, Kokame GT, Koh A, Lee WK. Diagnosis and Treatment of Polypoidal Choroidal Vasculopathy. **American Academy of Ophthalmology** Course 445. Orlando, Florida.
153. 10/24/11 Agarwal A, Ip MS, Kokame GT, Thompson JT. Retina, Vitreous Original Papers, Panel Discussant. **American Academy of Ophthalmology** Annual Meeting. Orlando, Florida.
154. 2/6/12 Continuous Monthly Anti-VEGF Therapy with Ranibizumab for Active Polypoidal Choroidal Vasculopathy: Long Term Results. **World Ophthalmology Congress 2012, Bi-Annual Meeting**. Abu Dhabi, UAE.
155. 2/20/12 VEGF-TRAP for Diabetic Macular Edema. A Symposium Organized by Retina Society, **World Ophthalmology Congress 2012, Bi-Annual Meeting**. Abu Dhabi, UAE
156. 2/28/13 Early vs delayed 15 –letter responders to ranibizumab treatment in year 1 of the HARBOR study. Annual Meeting. **Macula Society**, St. Regis Monarch Beach, Dana Point, California.
157. 6/14/13 The 11<sup>th</sup> Thomas H. Pettit Lecture. Polypoidal choroidal vasculopathy. A subretinal neovascular process. Jules Stein Eye Institute Clinical and Research Seminar. UCLA Department of Ophthalmology Association Meeting.
158. 8/2/13 CNS and Intraocular Lymphoma. Midwest Ocular Angiography Conference. Saint Andrews, United Kingdom, Scotland, England.
159. 9/29/13 The Complete 6 month Results: High-dose (2.0 mg ranibizumab) continuous monthly treatment for polypoidal choroidal vasculopathy with exudation and/or bleeding. Annual Meeting. **Retina Society**. Beverly Hills, California.
160. 4/3/14 AAO Session: Age Related Macular Degeneration 2014. Polypoidal Choroidal Vasculopathy. **World Ophthalmology Congress 2014**. Bi-Annual Meeting, Tokyo, Japan.
161. 4/4/14 Retina Society Session: Retinal Surgical Dilemmas: A Video Program – My Best Buckle Complication Surgical Management Video – Miragel Buckle Intrusion Video. **World Ophthalmology Congress 2014**. Bi-Annual Meeting, Tokyo, Japan.
162. 8/12/14 Location of PCV Vessels by ICG-Correlated OCT and Response to High Dose Ranibizumab. Annual Meeting **American Society of Retina Specialists**, San Diego, California
163. 8/12/14 Comparison of monthly treatment of 2.0 mg ranibizumab versus 1.0 mg ranibizumab for polypoidal choroidal vasculopathy (co-author with Raymond Wee MD). Annual Meeting **American Society of Retina Specialists**, San Diego, California
164. 9/12/14 APVRS Symposium: The role of anti-VEGF in the treatment of Polypoidal Choroidal Vasculopathy. **Euretina**, Annual Meeting. London, England.
165. 12/12/14 En Face OCT Findings in Polypoidal Choroidal Vasculopathy. Second International Congress on En Face OCT and OCT Angiography. Rome, Italy.
166. 1/19/15 Insights on the role of PDT in retina practice. Retina 2015. Maui, Hawaii.

167. 2/25/15 Polypoidal Choroidal Vasculopathy – Is it choroidal? **Macula Society.** Annual Meeting. Scottsdale, Arizona.
168. 2/28/15 Aflibercept for Exudative and Hemorrhagic Complications of Polypoidal Choroidal Vasculopathy – Prospective Six-month Results of EPIC Study. **Macula Society.** Annual Meeting. Scottsdale, Arizona.
169. 7/19/15 En Face OCT Findings in Polypoidal Choroidal Vasculopathy. American Society of Retina Specialists. Annual Meeting. Vienna, Austria.
170. 8/2/15 Epiretinal Prosthesis for Retinitis Pigmentosa. Macular Surgery Symposium. Asia Pacific Vitreoretinal Society. Sydney, Australia.

### **Invited Lectureships**

1. 3/18/91 Multifocal Chorioretinopathies. Prime Time Retina Lecture Series. California Pacific Medical Center. San Francisco, CA
2. 4/19/93 Multifocal Chorioretinopathies. Grand Rounds Visiting Professor Lecture. Jules Stein Eye Institute. UCLA School of Medicine. Los Angeles, CA
3. 4/12/96 Diabetes and Cataract. Jules Stein Eye Institute. Annual Postgraduate Seminar and Jules Stein Lecture. Jules Stein Eye Institute. UCLA School of Medicine. Los Angeles, CA
4. 3/6/97 Update on Macular Hole Surgery. Invited Lecturer. Asia Pacific Academy of Ophthalmology. Katmandu, Nepal.
5. 3/9/99 Macular Hole Pathogenesis and Surgery - A New Era of Understanding. Invited Symposium Lecturer. Asia Pacific Academy of Ophthalmology, Manila, Philippines
6. 9/24/99 Macular hole surgery - Update (overview). Invited Symposium Lecturer. Retinal Education for Assessing Current Techniques. Kyoto, Japan.
7. 9/24/99 Subretinal surgery - The Subretinal Surgery Trials (SST). Invited Symposium Lecturer. Retinal Education for Assessing Current Techniques. Kyoto, Japan.
8. 9/25/99 Pars plana microsurgical management of dislocated lens implants. Invited Lecturer. Advanced Vitreous Surgery Course in Kyoto (Professor Yasuo Tano, Course Director). Kyoto, Japan.
9. 9/25/99 Myopic macular holes - early stages, pathogenesis and treatment. Invited Lecturer. Advanced Vitreous Surgery Course in Kyoto (Professor Yasuo Tano, Course Director), Kyoto, Japan.
10. 9/25/99 Macular traction associated with a circular dehiscence in the posterior hyaloid. Invited Lecturer. Advanced Vitreous Surgery Course in Kyoto (Professor Yasuo Tano, coordinator), Kyoto, Japan.
11. 9/25/99 Management options for stage I or impending macular holes. Invited lecturer. Advanced Vitreous Surgery Course in Kyoto (Professor Yasuo Tano, coordinator), Kyoto, Japan.
12. 9/25/99 Submacular Surgery Trials (SST) for Age-Related Macular Degeneration (AMD). Invited Lecturer. Advanced Vitreous Surgery Course in Kyoto (Professor Yasuo Tano, coordinator), Kyoto, Japan.
13. 7/10/00 Vitreomacular Traction Problems - Macular Holes - A new era of understanding of pathogenesis and management; Macular traction associated with a circular dehiscence of

- the posterior hyaloid; Visual field defects after pars plana vitrectomy with fluid-air exchange. Invited Lecturer. Grand Rounds. Moorfields Eye Hospital. London, England.
14. 8/30/00 Dislocated implant management - a new technique. Invited Lecturer. Retinal Education for Accessing Current Techniques. Monte Carlo, Monaco.
  15. 8/30/00 Combined cataract and vitrectomy surgery - pars plana fragmentation or phacoemulsification. Invited Lecturer. Retinal Education for Accessing Current Techniques. Monte Carlo, Monaco.
  16. 8/31/00 Macular traction associated with circular dehiscence in the posterior hyaloid. Invited Lecturer. Retinal Education for Accessing Current Techniques. Monte Carlo, Monaco.
  17. 9/29/00 Macular Holes - A new era of understanding of pathogenesis, and management. Invited Lecturer. Grand Rounds. Kyorin University School of Medicine, Tokyo, Japan.
  18. 3/20/01 Photodynamic therapy for choroidal neovascularization. Invited Retinal Symposium Lecturer. Asia Pacific Academy of Ophthalmology Bi-Annual Meeting. Taipei, Taiwan
  19. 3/31/01 Practical consideration of photodynamic therapy for subfoveal choroidal neovascularization. Invited Retinal Symposium Lecturer. Department of Ophthalmology Training Course. Queen's Medical Center. Honolulu, Hawaii.
  20. 6/28/01 Management options for early stages (stage I) of acutely symptomatic macular holes. Invited Lecture. Retinal Education for Assessing Current Techniques. Kailua-Kona, Hawaii.
  21. 6/29/01 Laser treatment and minimized eye movement for retinal detachment repair. Invited Lecture. Retinal Education for Assessing Current Techniques. Kailua-Kona, Hawaii
  22. 10/19/01 Macular Degeneration – A common cause of blindness. Invited Lecturer. 145<sup>th</sup> Annual Meeting. Hawaii Medical Association. Kauai, Hawaii.
  23. 11/12/01 Complicated Retinal Detachment. “Breakfast with the Experts” Instructor Expert. Invited Presentation. American Academy of Ophthalmology. New Orleans, Louisiana.
  24. 4/17/02 Supplemental Indirect laser to reduce post diabetic vitrectomy complications. Invited Lecture. Retinal Education for Assessing Current Techniques. Sydney, Australia.
  25. 4/17/02 Comparison of macular hole surgery results with epiretinal membrane peeling versus internal limiting membrane removal. Invited Lecture. Retinal Education for Assessing Current Techniques. Sydney, Australia.
  26. 4/26/03 Dislocated Intraocular Lens Implants-New Presentations and New Techniques in Management. 2003 Jules Stein Eye Institute Annual Postgraduate Seminar Honoring Drs. Straatsma, Foos, Byer, and Krieger, UCLA School of Medicine, Los Angeles, California.
  27. 6/05/06 Antiangiogenesis: New Frontiers in the Treatment. 2005 Annual Meeting of the Philippine Academy of Ophthalmology, Manila, Philippines
  28. 6/05/06 Macular Degeneration: Clinical Characteristics in Asian Patients, 2005 Annual Meeting of the Philippine Academy, Manila, Philippines.
  29. 6/05/06 Macular Degeneration: Combination Therapies (PDT with intravitreal steroids or x-VEGF agents). 2005 Annual Meeting of the Philippine Academy, Manila, Philippines.
  30. 6/05/06 Macular Degeneration: Photodynamic Therapy Results in Asian Patients. 2005 Annual Meeting of the Philippine Academy, Manila, Philippines
  31. 09/8/06 Subretinal surgery in the era of anti-angiogenesis – Is there an indication in elderly patients? 2—7, Hotel Chlosterhof, Stein AM Rhein, Switzerland.

32. 2/9/2008 Management of Complications after Cataract Surgery, Recent Advances in Retina, USC Doheny Eye Institute, USA.
33. 06/29/08 Microincisional Vitreous Surgery. Special Symposium. World Ophthalmology Congress. Hong Kong.
34. 06/29/08 Microincisional Vitreous Surgery. Special Symposium. World Ophthalmology Congress. Hong Kong.
35. 09/24/09 - 09/25/09 Combined Anterior and Posterior Segment Surgery. Invited Lecturer. Advanced Vitreous Surgery Course. Tokyo, Japan
36. 09/24/09 - 09/25/09 Management of Globe Rupture due to Hydrogel Buckle Intrusion Invited Lecturer. Advanced Vitreous Surgery Course. Tokyo, Japan
37. 09/24/09 - 09/25/09 Update of Surgery for Macular Hole and Lamellar Macular Hole – 20 years of research. Invited Lecturer. Advanced Vitreous Surgery Course. Tokyo, Japan
38. 09/24/09 - 09/25/09 PEARL Study - Ranibizumab in the Management of Polypoidal Choroidal Vasculopathy Invited Lecturer. Advanced Vitreous Surgery Course. Tokyo, Japan
39. 09/24/09 - 09/25/09 Posterior Segment Approach to Anterior Segment Surgical Complications Invited Lecturer. Advanced Vitreous Surgery Course. Tokyo, Japan
40. 09/24/09 – 09/25/09 Peripapillary Subretinal Neovascularization - An indication for subretinal surgery in the era of antiangiogenesis - Long Term Visual Results and Comparison to Antiangiogenic Therapy
41. 09/24/09 – 09/25/09 Memory of Great Vitreoretinal Leaders - Professors Tano and Hida. Invited Lecturer. Advanced Vitreous Surgery Course. Tokyo, Japan
42. 11/13/09 PEARL Study: Continuous monthly ranibizumab injections for Polypoidal Choroidal Vasculopathy with Active Exudation or Bleeding. Invited Speaker. Congress of the Asia Pacific Vitreo-Retina Society. Taipei, Taiwan.
43. 3/7/11 VEGF Trap Update. Invited Lecture. Aspen Retinal Detachment Society. Aspen, Colorado.
44. 3/9/11 Vitreoretinal Management of Anterior Segment Surgical Complications. Invited Lecture. Aspen Retinal Detachment Society. Aspen, Colorado.
45. 2/4/12 Sustained Release Drug Delivery Devices for RVO. Invited Lecture. Bascom Palmer Eye Institute 50<sup>th</sup> Anniversary Scientific Meeting. Miami, Florida.
46. 2/20/12 VEGF-TRAP for Diabetic Macular Edema. A Symposium Organized by Retina Society, **World Ophthalmology Congress 2012, Bi-Annual Meeting**. Abu Dhabi, UAE
47. 10/6/12. Aflibercept in the treatment of exudative macular degeneration. Invited Lecture. Dubrovnik Ophthalmology Academy. Dubrovnik, Croatia.
48. 6/14/13 The 11<sup>th</sup> Thomas H. Pettit Lecture. Polypoidal choroidal vasculopathy. A subretinal neovascular process. Jules Stein Eye Institute Clinical and Research Seminar. UCLA Department of Ophthalmology Association Meeting.
49. 4/3/14 AAO Session: Age Related Macular Degeneration 2014. Polypoidal Choroidal Vasculopathy. World Ophthalmology Congress 2014. Bi-Annual Meeting, Tokyo, Japan.
50. 4/4/14 Retina Society Session: Retinal Surgical Dilemmas: A Video Program – My Best Buckle Complication Surgical Management Video – Miragel Buckle Intrusion Video. World Ophthalmology Congress 2014, Bi-Annual Meeting, Tokyo, Japan.
50. 9/12/14 APVRS Symposium: The role of anti-VEGF in the treatment of Polypoidal Choroidal Vasculopathy. Euretina Annual Meeting. London, England.

## H. LECTURES & PRESENTATIONS

1. 10/17/85 Retinopathy in thrombotic thrombocytopenic purpura. Formal case presentation & discussion. Grand Rounds. Jules Stein Eye Institute.
2. 12/2/85 Isolated abducens nerve palsy in young patients. Formal case presentation & discussion. Grand Rounds. Jules Stein Eye Institute.
3. 1/17/85 Automated perimetry in perspective. Basic Science Course. Jules Stein Eye Institute.
4. 2/27/85 Posterior corneal bands and corectopia - manifestations of posterior polymorphous dystrophy. Formal case presentation & discussion. Grand Rounds. Jules Stein Eye Institute.
5. 3/30/85 Stargardt's dystrophy and fundus flavimaculatus. Formal case presentation & discussion. Grand Rounds. Jules Stein Eye Institute.
6. 9/12/85 Clinical meeting coordinator. Los Angeles Eye Society. Case presentations & discussion on glaucoma. Jules Stein Eye Institute.
7. 10/16/85 Dystrophies of the posterior cornea. Basic Science Course. Jules Stein Eye Institute.
8. 10/23/85 Acute macular neuroretinopathy. Formal case presentation & discussion. Grand Rounds. Jules Stein Eye Institute.
9. 3/14/86 Metastatic choroidal tumor from breast carcinoma. Formal case presentation & discussion. Grand Rounds. Jules Stein Eye Institute.
10. 12/10/86 Presiding Chief Resident. Clinical Conference. Jules Stein Eye Institute. Dural carotid-cavernous fistula. Formal case presentation & discussion. Grand Rounds. Jules Stein Eye Institute.
11. 2/11/87 Presiding Chief Resident. Clinical Conference. Jules Stein Eye Institute. Pattern dystrophy of the retinal pigment epithelium. Formal case presentation & discussion. Grand Rounds. Jules Stein Eye Institute.
12. 4/1/87 Presiding Chief Resident. Clinical Conference. Jules Stein Eye Institute. Vitreoretinal surgical techniques in the management of a dislocated lens. Grand Rounds. Jules Stein Eye Institute.
13. 6/3/87 Presiding Chief Resident. Clinical Conference. Jules Stein Eye Institute. Orbital Cellulitis - a multi disciplinary perspective with case presentation. Grand Rounds. Jules Stein Eye Institute.
14. 9/10/87 A theoretical basis for the rational use of long acting gases in vitreoretinal surgery. Lecture - Grand Rounds. Bascom Palmer Eye Institute.
15. 11/22/88 Indications for vitrectomy. Department of Ophthalmology Meeting. Queen's Medical Center. Honolulu, Hawaii.
16. 1/19/89 Multifocal chorioretinopathies I. Fluorescein angiography conference. Straub Clinic & Hospital. Honolulu, Hawaii.
17. 2/7/89 Choroidal melanoma. Department of Ophthalmology Meeting. Kuakini Medical Center. Honolulu, Hawaii.
18. 2/16/89 Multifocal chorioretinopathies II. Fluorescein angiography conference. Straub Clinic & Hospital. Honolulu, Hawaii.

55. 02/22/06 Fluorescein Angiography/Retinal Case Conference: Inner Lamellar Macular Hole. 29<sup>th</sup> Annual Meeting of the Macula Society, Four Seasons Aviara, North San Diego, California.
56. 02/24/06 Anatomic Outcomes from the Marina Study of Ranibizumab (Lucentis) for Minimally Classic or Occult Neovascular Age-Related Macular Degeneration. 29<sup>th</sup> Annual Meeting of The Macula Society, Four Seasons Aviara, North San Diego, California.
57. 04/27/06 Inner Lamellar Macular Hole: An Interesting Case S.C.O.R.H., Halekulani Hotel, Honolulu, Hawaii.
58. 4/27/06 Phase III Studies of ranibizumab in Neovascular Age-Related Macular Degeneration. S.C.O.R.H, Halekulani Hotel, Honolulu, Hawaii.
59. 05/21/06 Basic Retinal Surgery. The 22<sup>nd</sup> Annual Hawaii Ophthalmologic Society Spring Update, Halekulani Hotel, Honolulu, Hawaii.
60. 06/05/06 Antiangiogenesis: New Frontiers in the Treatment. 2005 Annual Meeting of the Philippine Academy of Ophthalmology, EDSA Shangri-la, Manila, Phillipines.
61. 06/05/06 Macular Degeneration: Clinical Characteristics in Asian Patients, 2005 Annual Meeting of the Philippine Academy of Ophthalmology, EDSA Shangri-la, Manila, Phillipines.
62. 06/05/06 Macular Degeneration: Photodynamic Therapy Results in Asian Patients. 2005 Annual Meeting of the Philippine Academy of Ophthalmology, EDSA Shangri-la, Manila, Phillipines.
63. 06/05/06 Macular Degeneration: Antiangiogenic Therapies. 2005 Annual Meeting of the Philippine Academy of Ophthalmology, EDSA Shangri-la, Manila, Phillipines.
64. 06/05/06 Macular Degeneration: Combination Therapies (PDT with intravitreal steroids or x-VEGF agents). 2005 Annual Meeting of the Philippine Academy of Ophthalmology, ESDA Shangri-la, Manila, Phillipines.
65. 7/27/06 Combined PDT/Anti-VEGF Therapy for AMD. S.C.O.R.H, Halekulani Hotel, Honolulu, Hawaii.
66. 7/27/06 Serous Detachment in Retinal Vascular Diseases. S.C.O.R.H., Halekulani Hotel, Honolulu, Hawaii.
67. 9/10/06 Poster Session: Clinical Characteristics of Exudative Age Related Macular Degeneration in Asian Patients. Annual Meeting of the American Society of Retinal Specialists in conjunction with the 6<sup>th</sup> Annual EVRS. Cannes, France.
68. 9/11/06 Subretinal Surgery for Peripapillary Subretinal Neovascular Membranes (SRNVMS). Annual Meeting of the American Society of Retinal Specialists in conjunction with the 6<sup>th</sup> Annual EVRS. Cannes, France.
69. 9/11/06 Fluorescein Angiography Session: Inner Lamellar Macular Holes. Annual Meeting of the American Society of Retinal Specialists in conjunction with the 6<sup>th</sup> Annual EVRS. Cannes, France.
70. 9/11/06 Film Festival Submission: Repositioning of Dislocated In-The-Bag Intraocular Lens. Annual Meeting of the American Society of Retinal Specialists in conjunction with the 6<sup>th</sup> Annual EVRS. Cannes, France.
71. 9/11/076 Moderator: Session IV: Imaging and AMD Presiding Officer: Giovanni Staurenghi, MD Chair: Claude Boscher, MD Moderator: Gregg T. Kokame, MD.



72. 01/11/07 Evolving Paradigms and Partnerships: Modern Management of Diabetic Retinopathy. ACCLEMED CME Educational Program. Halekulani Hotel, Honolulu, Hawaii.
73. 01/23/07 Evolving Paradigms and Partnerships: modern Management of Diabetic Retinopathy. ACCLEMED CME Educational Program. Westin Portland Hotel, Portland, Oregon.
74. 05/03/07 RISE: ranibizumab for Diabetic Macular Edema. S.C.O.R.H., Halekulani Hotel, Honolulu, Hawaii.
75. 10/20/07 1<sup>st</sup> Annual Retinal Update: For the Comprehensive Ophthalmologist and Physician: What this means to you and your patient. Halekulani Hotel, Honolulu, Hawaii.
76. 02/09/08 Management of Complications after Cataract Surgery, Recent Advances in Retina. USC Doheny Eye Institute, California.
77. 06/29/08 Ranibizumab Monotherapy for Polypoidal Choroidal Vasculopathy, World Ophthalmology Congress, Hong Kong.
78. 7/1/2008 Cataract Complication: New Presentations and New Techniques in Management from a Vitreoretinal Surgical Perspective, World Ophthalmology Congress Annual Meeting, Hong Kong.
79. 09/24/09 - 09/25/09 Invited Lecturer. Advanced Vitreous Surgery Course. Tokyo, Japan
  - 1) Combined Anterior and Posterior Segment Surgery
  - 2) Management of Globe Rupture due to Hydrogel Buckle Intrusion
  - 3) Update of Surgery for Macular Hole and Lamellar Macular Hole
  - 4) PEARL Study - Ranibizumab in the Management of Polypoidal Choroidal Vasculopathy
  - 5) Posterior Segment Approach to Anterior Segment Surgical Complications
  - 6) Peripapillary Subretinal Neovascularization - An indication for subretinal surgery in the era of antiangiogenesis - Long Term Visual Results and Comparison to Antiangiogenic Therapy
  - 7) Memory of Great Vitreoretinal Leaders - Professors Tano and Hida
80. 10/4/09 6 month Results: PEARL Trial. Continuous Monthly Ranibizumab for Polypoidal Choroidal Vasculopathy, Retina Congress, New York, NY.
81. 10/22/09 20 years of Research into Macular Hole – From New Indication to Standard of Care Surgery. Gass Fellowship Society. San Francisco, CA.
82. 11/13/09 6 month Results: PEARL Trial. Continuous Monthly Ranibizumab for Polypoidal Choroidal Vasculopathy, PEARL Trial. APVRS Congress, Taipei, Taiwan.
83. 2/27/10 Fluorescein Angiographic Findings in PEARL Study of Ranibizumab Therapy for PCV – Importance of ICG Angiography Due to Therapeutic Differences between PCV and AMD, Annual Meeting of the Macula Society, Tuscon, Arizona.
84. 5/27/11 Continuous Monthly Anti-VEGF Therapy with Ranibizumab for active polypoidal choroidal vasculopathy, long-term results. 11<sup>th</sup> EURETINA Congress, London, UK.
85. 8/6/11 Serous Macular Detachment in Teenage Patient with Optic Pit. Midwest Ocular Angiography Conference. Costa Rica.
86. 10/24/11 Panelist, Retina Vitreous Original Papers AAO 2011, Orlando, Florida (John Thompson, Anita Agarwal, Michael Ip, Co-Panelists)

87. 6/14/12 PEARL 2 High dose Ranibizumab Ranibizumab for Hemorrhage and Exudation Associated with Polypoidal Choroidal Vasculopathy. Macula Society. Annual Meeting. Jerusalem Israel.
88. 8/28/12 PEARL 2 High dose Ranibizumab for Exudative Macular Degeneration. American Society of Retinal Specialists. Las Vegas, Nevada.

## **I. MEETINGS & COURSES**

1. April 12 - 13, 1985 16th Jules Stein Lecture and Annual Seminar. Glaucoma - Current concepts in diagnosis and management. Jules Stein Eye Institute. UCLA School of Medicine. Century City Hotel. Century City, California.
2. October 2- 3, 1985 American Academy of Ophthalmology. Annual Meeting. San Francisco, California.
3. October 12, 1985 Phacoemulsification and related procedures. Jules Stein Eye Institute. UCLA School of Medicine.
4. December 12 - 14, 1995 17th Annual Estelle Doheny Eye Foundation Meeting. Retina. Doheny Eye Institute. University of Southern California School of Medicine.
5. October 3, 1985 Indirect ophthalmoscopic interpretation of fundus disease. American Academy of Ophthalmology Course 713.
6. November 8 - 9, 1985 Diagnostic Ophthalmic Ultrasonography Workshop & Standardized Echography Method. Jules Stein Eye Institute. UCLA School of Medicine.
7. January 17 - 18, 1986 Advanced vitrectomy workshop. Jules Stein Eye Institute. UCLA School of Medicine.
8. February 7 - 8, 1986 Neodymium - YAG Laser Course. Jules Stein Eye Institute. UCLA School of Medicine.
9. Feb 28 - March 1, 1986 Fluorescein Angiography Techniques & Interpretation. Jules Stein Eye Institute. UCLA School of Medicine.
10. April 25 - 26, 1986 17th Jules Stein Lecture & Seminar. Diseases & Surgery of the Anterior Segment. Jules Stein Eye Institute. UCLA School of Medicine. Century City Hotel. Century City, California.
11. November 9 - 13, 1986 American Academy of Ophthalmology. Annual Meeting. New Orleans, Louisiana.
12. November 10, 1986 Advanced surgery and management for the vitreoretinal surgeon. American Academy of Ophthalmology Course 108.
13. November 11, 1986 Surgical management of the injured globe. American Academy of Ophthalmology, Course 348.
14. November 11, 1986 Management of acute trauma to the orbit and adnexa. American Academy of Ophthalmology Course 348.
15. November 13, 1986 Surgery of retinal detachment. American Academy of Ophthalmology Course 708.
16. February 27 - 28, 1987 Medical Retina Workshop. Jules Stein Eye Institute. UCLA School of Medicine.

17. April 10 - 11, 1987 18th Jules Stein Lecture & Annual Seminar. Advances in Neuro-ophthalmology. Jules Stein Eye Institute. UCLA School of Medicine. Century City Hotel. Century City, California.
18. May 15, 1987 Ocular tumors. Doheny Eye Institute. University of Southern California School of Medicine.
19. November 11- 12, 1987 American Academy of Ophthalmology. Annual Meeting. Dallas, Texas.
20. January 25 - 26, 1988 Problem oriented approach to vitreous surgery. Bascom Palmer Eye Institute. University of Miami School of Medicine. Biscayne Bay Marriott Hotel. Miami, Florida.
21. June 25, 1988 A clinical day on cryotherapy in retinopathy of prematurity. Impact on the care of premature infants in Florida. Bascom Palmer Eye Institute. University of Miami School of Medicine. Miami, Florida.
22. September 9 - 10, 1988 California Association of Ophthalmology. Annual Meeting. Monterey, California.
23. September 9, 1988 Fundus photography & fluorescein angiography course. California Association of Ophthalmology. Annual Meeting. Monterey, California.
24. November 5 - 9, 1988 American Academy of Ophthalmology. Annual Meeting. Las Vegas, Nevada.
25. November 10, 1988 Rare, unusual and/or instructive medical retina cases. American Academy of Ophthalmology Course 336.
26. April 7 - 8, 1989 20th Jules Stein Lecture & Annual Seminar. Retinal and choroidal diseases. Jules Stein Eye Institute. UCLA School of Medicine. Century City Hotel. Century City, California.
27. December 6 - 9, 1989 The Vitreous Society. Annual Meeting. Orlando, Florida.
28. July 16 - 19, 1990 Western Association for Vitreoretinal Education. Annual Meeting. Paia, Hawaii.
29. October 28 - November 1, 1990 American Academy of Ophthalmology. Annual Meeting. Atlanta, Georgia.
30. October 29, 1990 Applications & techniques of post vitrectomy gas-fluid exchange. American Academy of Ophthalmology Course 156.
31. October 31, 1990 Rare, unusual, interesting and/or instructive medical retina cases. American Academy of Ophthalmology Course 429.
32. October 31, 1990 Pars plana vitrectomy in the management of macular diseases. American Academy of Ophthalmology Course 555.
33. November 1, 1990 Use of silicone oil in vitreoretinal surgery - Advanced concepts. American Academy of Ophthalmology Course 636.
34. January 20 - 24, 1991 Vitreous Society. Annual Meeting. Kona, Hawaii.
35. June 21 - 22, 1991 27th Annual Residents Days. Bascom Palmer Eye Institute. Miami, Florida.
36. July 8 - 10, 1991 Western Association for Vitreoretinal Education. Annual Meeting. Paia, Hawaii.
37. September 23 - 26, 1991 Vitreous Society. Annual Meeting. Paris, France.

38. October 11 - 12, 1991 Medical and surgical retina in the 1990's. Jules Stein Eye Institute & Doheny Eye Institute. Beverly Hills, California.
39. October 13 - 16, 1991 American Academy of Ophthalmology. Annual Meeting. Anaheim, California.
40. October 14, 1991 Retinal photocoagulation using binocular indirect ophthalmoscopic laser delivery systems. American Academy of Ophthalmology Course 154.
41. October 15, 1991 Rare, unusual, interesting and/or instructive medical retina cases. American Academy of Ophthalmology Course 231.
42. October 15, 1991 Surgical Management of Uveitis. American Academy of Ophthalmology Course 356.
43. October 16, 1991 Pathobiology of the Vitreous and its Role in Retinal Disease. American Academy of Ophthalmology Course 422.
44. February 18 - 19, 1992 Western Retina Study Club. Annual Meeting. Lihue, Kauai, Hawaii.
45. July 21 - 24, 1992 Western Association for Vitreoretinal Education. Annual Meeting. Paia, Hawaii.
46. October 18 - 21, 1992 Vitreous Society. Annual Meeting. Laguna Niguel, California.
47. November 8 - 12, 1992 American Academy of Ophthalmology. Annual Meeting. Dallas, Texas.
48. November 14 - 18, 1993 American Academy of Ophthalmology. Annual Meeting. Chicago, Illinois.
49. August 14 - 18, 1994 Vitreous Society. Annual Meeting. Aspen, Colorado.
50. August 16, 1994 Management of PVR Course. Annual Meeting. The Vitreous Society. Aspen, Colorado.
51. October 28 - 29, 1994 Vitreoretinal interfaces. Pre-Academy Retina Meeting. San Francisco, California.
52. Oct. 30 - Nov. 3, 1994 American Academy of Ophthalmology. Annual Meeting. San Francisco, California.
53. February 3 - 6, 1995 The 14th Annual Squaw Valley Retinal Symposium. The Resort at Squaw Creek. Lake Tahoe, California.
54. February 12 - 13, 1995 The Hawaii Ophthalmological Society. Annual Meeting. Honolulu, Hawaii.
55. June 16 - 17, 1995 31st Annual Residents Days. Bascom Palmer Eye Institute, Biltmore Hotel, Coral Gables, Florida.
56. August 13 - 17, 1995 The Vitreous Society. Annual Meeting. London, England.
57. August 14, 1995 Subretinal Surgery Course. The Vitreous Society Annual Meeting. London, England.
58. Oct 29 - Nov 2, 1995 American Academy of Ophthalmology. Annual Meeting. Atlanta, Georgia.
59. July 1 - 4, 1996 Western Association for Vitreoretinal Education. Annual Meeting. Wailea, Hawaii.
60. March 2 - 6, 1997 Asia Pacific Academy of Ophthalmology. Bi-annual meeting. Kathmandu, Nepal.

61. Sept 18 - 21, 1997 The Vitreous Society. Annual Meeting. New Orleans, Louisiana.
62. October 26 - 29, 1997 American Academy of Ophthalmology. Annual Meeting. San Francisco, California.
63. July 5 - 12, 1998 The Vitreous Society. Annual Meeting. Alaska.
64. Sept 24 - 27, 1998 The Retina Society. Annual Meeting. Washington D.C.
65. November 8 - 11, 1998 American Academy of Ophthalmology. Annual Meeting. New Orleans, Louisiana.
66. November 10, 1998 Mystery retina: Interactive discussion of challenging cases. American Academy of Ophthalmology Course 562.
67. November 11, 1998 Concepts and applications of photodynamic therapy for Choroidal Neovascularization in Age-related maculopathy. American Academy of Ophthalmology Course 744.
68. November 11, 1998 Choroidal neovascularization (CNV): Case presentation and management workshop. American Academy of Ophthalmology Course 787.
69. January 7 - 8, 1999 SST Training Meeting for New Clinical Personnel. Baltimore, Maryland.
70. February 24-27, 1999 The Macula Society. Annual Meeting. San Diego, California.
71. March 7 - 10, 1999 Asia-Pacific Academy of Ophthalmology. Annual Meeting. Manila, Philippines.
72. July 1999 Western Association for Vitreoretinal Education, Wailea, Maui, Hawaii.
73. September 22-23, 1999 REACT (Retinal Education for Accessing Current Techniques) Meeting. Kyoto, Japan.
74. September 24-26, 1999 Advanced Vitreous Surgery Course in Kyoto. Kyoto, Japan.
75. October 24 - 27, 1999 American Academy of Ophthalmology. Annual Meeting. Orlando, Florida.
76. October 26, 1999 Computer Graphics. American Academy of Ophthalmology Course SL-576.
77. October 27, 1999 Vitreoretinal Surgery: Videotape Case Presentations and Discussion. American Academy of Ophthalmology Course 792.
78. December 1 - 4, 1999 The Retina Society. Annual Meeting. Wailea, Maui, Hawaii.
79. Aug 30 - Sep. 1, 2000 REACT (Retinal Education for Assessing Current Techniques) meeting, Monte Carlo.
80. Oct 22 - 25, 2000 American Academy of Ophthalmology. Annual Meeting. Dallas, Texas.
81. Nov 30 - Dec. 3, 2000 The Retina Society. Annual Meeting. Coral Gables, Florida.
82. March 1-3, 2001 Macula Society. Annual Meeting. Scottsdale, Arizona.
83. March 10-13, 2001 Asia Pacific Academy of Ophthalmology. Bi-annual Meeting. Taipei, Taiwan.
84. July 28 - 29, 2001 Retinal Education for Assessing Current Techniques. Kailua-Kona, Hawaii
85. July 1-3, 2001 Western Association for Vitreoretinal Education. Bi-annual meeting. Wailea, Hawaii.
86. Nov 11 - 14, 2001 American Academy of Ophthalmology. Annual Meeting. New

- Orleans, Louisiana
87. Nov 26 – 30, 2001 Vitreous Society. Annual Meeting. New Orleans, Louisiana.
  88. Feb 16 - 23, 2002 Bascom Palmer 40<sup>th</sup> Anniversary Celebratory Scientific Meeting. Miami, Florida.
  89. April 15 - 20, 2002 Retinal Education for Assessing Current Techniques. Sydney, Australia.
  90. June 12 - 15, 2002 Macula Society 25<sup>th</sup> Annual Meeting. Barcelona, Spain.
  91. Sept. 28 – Oct. 2, 2002 Retina Congress the Combined Meeting. The Vitreous Society 20<sup>th</sup> and Retina Society 35<sup>th</sup> Annual Meeting. San Francisco, California.
  92. April 26, 2003 Jules Stein Institute Annual Postgraduate Seminar. UCLA School of Medicine, Los Angeles, California.
  93. June 5, 2003 Retinal Education for Assessing Current Techniques. Majorca, Spain.
  94. June 5, 2003 Retinal Education for Assessing Current Techniques. Majorca, Spain.
  95. Jun 30 - Jul 1, 2003 Western Association for Vitreoretinal Education. Bi-Annual meeting. Wailea, Hawaii.
  96. Sep 18 - Sep. 21, 2003 The Retina Society. Annual Meeting. Chicago, Illinois.
  97. Feb 23 – Feb 26, 2004 Macula Society 27<sup>th</sup> Annual Meeting. Las Vegas, Nevada.
  98. Feb 23 – Feb 26, 2005 Macula Society 28<sup>th</sup> Annual Meeting. Key Biscayne, Florida.
  99. Jul 1 – Jul 3, 2005 Aegean Retina IX Annual Meeting. Crete, Greece.
  100. August 26, 2005 Genentech: Retinal Experts Meeting. San Francisco, California.
  101. Sep 15 – Sep 18, 2005 The Retina Society. Annual Meeting. Coronado, California.
  102. Oct 15- Oct 18, 2005 Academy of Ophthalmology. Annual Meeting. Chicago, Illinois.
  103. Feb 22 – Feb 25, 2006 Macula Society 29<sup>th</sup> Annual Meeting. North San Diego, California.
  104. Mar 5 – Mar 9, 2006 34<sup>th</sup> Annual Aspen Retinal Detachment Meeting. Snowmass, Colorado.
  105. March 5, 2006 Genentech: Retinal Experts Meeting. Snowmass, Colorado.
  106. Jun 5 – Jun 10, 2006 2005 Annual Meeting of the Phillipine Academy of Ophthalmology. Manila, Phillipines.
  107. Sep 7, 2006 Retina Education for Assessing Current Techniques. Schaffhausen, Switzerland.
  108. Sep 9 – Sep 13, 2006 Cannes Retinal Film Festival - 24th Annual Meeting of the American Society of Retinal Specialists in conjunction with the 6<sup>th</sup> Annual European VitreoRetinal Specialists. Cannes, France.
  109. Nov 11– Nov 14, 2006 Academy of Ophthalmology. Annual Meeting. Las Vegas, Nevada.
  110. Sep 27-30, 2007 Annual Meeting of the Retina Society. Boston, MA.
  111. October 20, 2007 1<sup>st</sup> Annual Retinal Update: For the Comprehensive Ophthalmologist and Physician. Honolulu, HI
  112. June 28 – July 2, 2008 World Ophthalmology Congress. Hong Kong, China.
  113. Nov 8 – Nov 12, 2008 American Academy of Ophthalmology Annual Meeting. Atlanta, Georgia.

114. Mar 1-5, 2009 27<sup>th</sup> Annual Aspen Retinal Detachment Society Meeting, Snowmass, Colorado.
115. Oct 9, 2009 Retina Congress, New York, NY.
116. Oct 24-27, 2009 American Academy of Ophthalmology Annual Meeting. San Francisco, California.
117. Nov 12-13, 2009 4<sup>th</sup> APVRS Congress, Taipei, Taiwan.
118. Feb 24-27, 2010 Macula Society 33<sup>rd</sup> Annual Meeting. Tucson, Arizona.
119. Jul 2-4, 2010 Mediterranean Retina Meeting. Istanbul, Turkey.
120. Sep 23-26, 2010 Annual Meeting of the Retina Society, San Francisco, California.
121. Oct 16- 19, 2010 Academy of Ophthalmology. Annual Meeting. Chicago, Illinois.
122. Nov 19-21, 2010 5<sup>th</sup> APVRS Congress, Marina Bay Sands Convention Centre, Singapore.
123. Mar 5-9, 2011 29<sup>th</sup> Annual Aspen Retinal Detachment Society Meeting, Snowmass, Colorado.
124. Feb 12, 2011 Bascom Palmer Eye Institute, Angiogenesis, Exudation and Degeneration Meeting 2011, Miami, Florida
125. May 26-29, 2011 11<sup>th</sup> EURETINA Congress, Queen Elizabeth II Conference Centre, London, UK.
126. Aug 3-6, 2011 Midwest Ocular Angiography Conference. Annual Meeting. Costa Rica
127. Nov 10-13, 2011 American Academy of Ophthalmology. Annual Meeting. Orlando, Florida
128. Feb 2-4, 2012 Speaker, Bascom Palmer 50<sup>th</sup> Anniversary Scientific Meeting, Miami, FL.
129. Feb 16-20, 2012 World Ophthalmology Congress 2012, Abu Dhabi, UAE
130. Feb 16, 2012 Chairperson, Retina Free Papers, World Ophthalmology Congress 2012, Abu Dhabi, UAE
131. June 11-15, 2012 Macula Society Annual Meeting, Jerusalem, Israel
132. Aug 25 - 29, 2012 Proctor, American Society of Retina Specialists Annual Meeting, Las Vegas, Nevada
133. Oct 9 - 11, 2012 Dubrovnik Ophthalmology Academy, Dubrovnik, Croatia
134. August 8, 2014 Cole Eye Institute Imaging Summit, San Diego, California
134. Feb 25 – 28, 2015 Macula Society, Scottsdale, Arizona.

## ANDREA LAU, PsyD

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### EDUCATION:

- 2009-2013 **Alliant International University, Hong Kong**  
*Doctor of Psychology in Clinical Psychology*  
Graduated: June 2013
- 2009-2011 **University of Hong Kong, Hong Kong**  
*Masters of Education, Emphasis: Inclusive & Special Education*  
Graduated: November 2011
- 2008 **Fudan University, Shanghai, China**  
*Chinese Language Program*  
Completed: December 2008 (Summer and Fall courses)
- 2006-2008 **University of Southern California, Los Angeles, CA**  
*Masters of Social Work, Emphasis: Families & Children*  
Graduated: May 2008
- 2002-2006 **University of Southern California, Los Angeles, CA**  
*Bachelor of Science: Business Administration*  
Graduated: May 2006

### CLINICAL EXPERIENCE:

#### **University of British Columbia Counseling Services, Vancouver, BC: August 2014 – August 2015**

##### *Postdoctoral Fellow*

- Provided short term, evidence-based, culturally sensitive individual therapy to diverse university students
- Co-facilitated cognitive-behavioral therapy groups for mood, stress, and anxiety management
- Provided walk-in crisis intervention and initial consultations
- Consulted with associated medical and mental health practitioners
- Conducted outreach through presentations and participation in events centered on health and wellness promotion for the campus community
- Conducted assessments and provided feedback on substance use and disordered eating
- Developed and delivered psycho-educational workshops on topics including ADHD, Imposter Syndrome, etc.
- Engaged in regular supervision with senior psychologists regarding individual and group therapy, and assessment
- Received ongoing training on effective integration of evidence-based therapeutic approaches

#### **Mother's Choice, Hong Kong: June 2013 - Present**

##### *Clinical Psychologist*

- Developed a service quality framework to ensure quality and holistic service delivery
- Provided supervision, consultations, and coaching to frontline case workers
- Managed knowledge sharing platforms for professional enhancement
- Provided psychoeducational presentations and workshops to staff and volunteers
- Conducted clinical assessments and reports
- Provided training to Mother's Choice partner agency in Nanning, China
- Initiated the procedures and organized service delivery as the agency's first clinical psychologist



**Hong Kong Society for the Protection of Children, Hong Kong: January – December 2012**

*PsyD Intern*

- Responsible for leading, reviewing and treating cases that were complex
- Conducted over 270 individual, family, and group therapy sessions with children (aged 8-12) and single parents coming from diverse backgrounds, most of them facing symptoms of abandonment, loss and childhood trauma
- Provided consultations and professional support to social workers and staff

**Mother's Choice, Hong Kong: January – December 2011**

*PsyD Intern*

- Rotated between Child Care Home (CCH), Small Group Home (SGH), and Foster Care (FC)
- Provided play, individual and group therapy to children and adolescents aged 4-18 with diverse backgrounds
- Worked closely and collaborated with social workers, foster parents, house parents, and staff to provide a consistent individualized plan for clients in FC and SGH
- Worked closely and collaborated with the occupational therapist, physiotherapist, and speech therapist to provide an integrative plan and support for the clients in CCH
- Led monthly talks to staff, foster parents, and volunteers in ADHD, Separation & Loss, Down's Syndrome, Anger Management, Addictive Behaviors, Attachment, and Behavioral Management

**SSNA Lau Pun Cheung School, Hong Kong: January – December 2010**

*PsyD Practicum*

- Served as a school counselor for children with a variety of special needs
- Worked closely with the school social workers, teachers, and parents to come up with an individual action plan

**Methodist Center, Hong Kong: August – September 2010**

*PsyD Summer Practicum*

- Provided anger management regulation therapy to a group of adolescent boys

**Christian Action, Hong Kong: August – November, 2009**

*Registered Social Worker*

- 4 month contract to fulfill the duties of a social worker on sick leave
- Provided counseling and a wide range of assistance to ethnic minorities
- Played a critical role in the new center set up – including outreach and marketing

**Foothill Family Service, El Monte, California: Fall 2007 – Spring 2008**

*MSW Intern*

- Served as a school counselor of Garvey Unified School District
- Co-coordinator for a Chinese parenting group

**Asian Pacific Women's Center, Los Angeles, California: Fall 2006 – Spring 2007**

*MSW Practicum*

- Completed 40-hour domestic violence training hosted by the Center for the Pacific Asian Family
- Compiled a manual of resources/directions for case management for future interns
- Served as a school counselor for Alhambra Unified School District
- Initiated collaboration with Monterey Park Police Department

**COMPLETED RESEARCH:**

Lau, A. (2013). *Opinions of Adoptive Parents in Hong Kong Regarding Adoption Disclosure to the Child: A Study of Hong Kong Chinese Participants*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI No. 3568180)

## CURRICULUM VITAE

### Chin Nyeon Lee

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### EDUCATION

University of Wisconsin-Madison	Ph.D. Dairy Science, 1984 Major concentration: Reproductive physiology Minor concentration: International Development/Marketing (Agriculture Econ.)
University of Wisconsin-Madison	M.S. Dairy Science, 1981 Major concentration: Reproductive Physiology
Iowa State University, Ames	B.S. Animal Sciences, 1979
Universiti Putra Malaysia, Serdang Diploma, 1976 (formerly Universiti Pertanian Malaysia) Major concentration: Animal Health and Production	

### PROFESSIONAL EXPERIENCE

Specialist	Human Nutrition, Food and Animal Sciences University of Hawaii at Manoa	July, 2005 - present
Interim Oahu County Administrator	Cooperative Extension Service University of Hawaii at Manoa (performing tasks in Jan. 2004)	March, 2004 - June, 2005
Specialist	Human Nutrition, Food and Animal Sciences University of Hawaii at Manoa	Aug. 1998 - March, 2004
Associate Specialist	Dept. of Animal Sciences University of Hawaii at Manoa	July, 1996 - July, 1998
Executive Director	Agribusiness Development Corporation (ADC), State of Hawaii [started tasks on March, 1995 prior to formal "hire" in July]	July, 1995 - June, 1996
Director of Marketing (Asia) (LWOP from UH)	World Wide Sires, Inc. Visalia, CA	January, 1993 - December, 1994
Associate Specialist	Dept. of Animal Sciences University of Hawaii at Manoa	1990 - 1992
Assistant Specialist	Dept. of Animal Sciences University of Hawaii at Manoa	1986 - 1990

### Abstracts presented at meetings

- Li, Q., Ishimoto, J., Yoshioka, J.L., Lee, C.N., and Li, Y. 2015. *Antimicrobial activity of lactic acid bacteria isolated from fermented taro skins against Salmonella Typhimurium and Listeria monocytogenes*. Journal of Food Protection Supplement 78:260.
- Thorne, M., G. Fukumoto, Y.S. Kim, C.N. Lee, M. Stevenson and M. Abran. 2015. Grazing management for tropical grass-finish beef production. Society for Range Management Conf., Sacramento, CA. Abst. 369, p 120.
- Yamada, N., P. Hillman, S. Willard and C.N. Lee. 2014. *Behavioral activities of Jerseys and Holsteins in high temperature and humid environment*. 16<sup>th</sup> Asian Australian Animal Production Congress. Yogyakarta, Indonesia. Nov. 10-14; D584; p214.
- Yoshioka, J.L., J. Ishimoto, Li Yong and C.N. Lee. 2014. *Presence of lactic acid bacteria in fermented taro peel*. 16<sup>th</sup> Asian Australian Animal Production Congress, Yogyakarta, Indonesia, Nov. 10-14; B584, p176.
- Sy, T.L., T. Richards, C.N. Lee, J.D. Onaga, J. Coetzee, M. Stock and A.M. Stokes. 2014. *Evaluation of long haul shipping stress for beef calves transported from Hawaii to the contiguous United States*. FASEB Exp. Bio. Conf., San Diego, CA. 28(1):703.7.
- Yang, F., A.M. Parkhurst, C.N. Lee, T.M. Brown-Brandl and P.E. Hillman. 2014. *Using functional data analysis to evaluate effect of shade on body temperature of feedlot heifers during environmental heat stress*. 26<sup>th</sup> Conf. in Applied Statistic in Agriculture, Kansas, USA (April 27-29<sup>th</sup>).
- Godfrey, R.W., W.D. Preston, A.M. Hogg, S. Joseph, L. LaPlace, P.E. Hillman, K.G. Gebremedhin, C.N. Lee and R.J. Collier. 2014. *Evaluating the impact of breed, hair coat and pregnancy on sweating rate of hair sheep ewes in the tropics*. (Southern Sec. AnSci. Meeting, Dallas, TX. Feb. 1-4).
- Godfrey, R.W., W.D. Preston, A.M. Hogg, S. Joseph, L. LaPlace, P.E. Hillman, K.G. Gebremedhin, C.N. Lee and R.J. Collier. 2014. *Evaluating the impact of breed and pregnancy on body temperature of hair sheep ewes in the tropics*. (Southern Sec. AnSci. Meeting, Dallas, TX. Feb. 1-4).
- Yang, F., A.M. Parkhurst, S. Zhang, C.N. Lee, T.M. Brown-Brandl, K.G. Gebremedhin, P.E. Hillman. 2013. *Comparison of analytic and Bayesian approaches for characterizing thermal hysteresis in cattle using algebraic and geometric distances*. Agr. Statistic Conf., Manhattan, Kansas. April.
- Sy, T.L., K.G. Gebremedhin, J.E. Larson, J. Davis, and C.N. Lee. 2012. *Developing a novel method to cooling dairy cattle*. 15th AAAP Animal Sci. Congress, Bangkok, Thailand, Nov. MSO243-43.
- Yang, F., A.M. Parkhurst, S. Zhang, K.G. Gebremedhin, P.E. Hillman and C.N. Lee. 2012. *A comparison of analytic and bayesian approaches for characterization of thermal hysteresis in cattle using algebraic and geometric distances*. Agr. Statistics Conf. Kansas. (April 29-May 1).

- Godfrey, R.W., A.J. Weis, P.E. Hillman, K.G. Gebremedhin, C.N. Lee and R.J. Collier. 2012. *Evaluation of body temperature and sweating rate of Senepol and crossbred heifers in the tropics*. Joint meeting of ASAS/ADSA, AZ.
- Godfrey, R.W., A.J. Weis, P.E. Hillman, K.G. Gebremedhin, C.N. Lee and R.J. Collier. 2012. *Evaluation of body temperature and sweating rate of Senepol cows in the tropics*. Joint meeting of ASAS/ADSA, AZ.
- Gebremedhin, K.G., C.N. Lee, J.E. Larson and J. Davis. 2012. *Cooling cows: the udder way*. ASABE Annual Mtg. July. Dallas, TX.
- Tamaru\*, Clyde, S., Bradley Fox, Kathleen McGovern-Hopkins, RuthEllen Klinger-Bowen, Harry Ako, Jim Hollyer, Theodore Radovich, Jari Sugano, Samir Kahnal, Yong-Soo Kim, and C.N. Lee. 2011. *Aquaponic research, education and outreach: how the aquaculture extension program of the College of Tropical Agriculture and human Resources is addressing the challenges and opportunities of this emerging food producing technology in Hawaii and the Pacific region*. The 5th National Aquaculture Extension Conference: Navigating change with innovation, technology and partnerships. Memphis, TN. June 2011.
- Yarlagadda, S., C.N. Lee, Y.S. Kim, Jinzeng Yang and W.Y.Ho. 2011. *Effects of transgenic myostatin depression on reproductive parameters and placental superoxide dismutases in mice*. J. Anim. Sci. 89, E-Suppl. 1/J.Dairy Sci. 94, E-Suppl. 1:274.
- Binverse, J.A., J. D. Davis, K. G. Gebremedhin, C.N. Lee and J.E. Larson. 2011. *Alternative cooling of dairy cows by wetting the udder*. J. Anim. Sci. 89, E-Suppl. 1/J.Dairy Sci. 94, E-Suppl. 1:102.
- Pan, D., C.N. Lee, M.H. Rostagno and S.D. Eicher. 2011. *Dam heat load effects neonatal calves' bacterial levels innate immunity*. J. Anim. Sci. 89, E-Suppl. 1/J.Dairy Sci. 94, E-Suppl. 1:744.
- W.Y. Haq, H.C. Kang, S.K. Kang, J.A. Park, Y.J. Choi, C.N. Lee, Y.S. Kim. 2011. Soluble expression of porcine myostatin propeptide in an *Escherichia coli* expression system. Asian Congress on Biotechnology. Shanghai, China (May 11-15) # G1353.
- Gebremedhin, K.G., C.N. Lee, P.E. Hillman and R.J. Collier. 2010. *Physiological responses of dairy cows during extended solar exposure*. 2010 ASABE Annual International Meeting, paper No. 10095, Pittsburgh, Pennsylvania, June 20 – 23, 2010.
- Liang, Bixia, A.M. Parkhurst, C.N. Lee, K.G. Gebremedhin, P.E. Hillman and R.J. Collier. 2009. *Using time series to study dynamics of sweating rates of Holstein cows exposed to initial and prolonged solar heat stress*. Conference on Applied Statistic in Agriculture, Kansas State University, April 19-21.
- Bojanczyk, K.S., K.G. Gebremedhin, C.N. Lee and C. C. Chase Jr. 2009. *Physical and optical properties of cattle hair coat*. ASABE Paper No. 097419, St. Joseph, MI, presented at the 2009 ASABE Annual International Meeting Grand Sierra Resort and Casino, Reno, Nevada, June 21 – June 24.
- Li, S., K.G. Gebremedhin, C. N. Lee, R. J. Collier. 2009. *Evaluation of thermal stress indices for cattle*. ASABE Paper No. 096003, St. Joseph, MI, presented at the 2009 ASABE Annual International Meeting Grand Sierra Resort and Casino, Reno, Nevada, June 21-24.

- He, H., Dong, J., Lee, C. N., and Li, Y. 2009. *Microbial diversity of raw milk from pasture-based, open lot, and freestall feeding systems*. Institute of Food Technologists Annual Meeting, paper 023-08. Anaheim, CA.
- Liang, Bixia, A.M. Parkhurst, C.N. Lee, K.G. Gebremedhin, P.E. Hillman and R.J. Collier. 2009. *Using time series to study dynamics of sweating rates of Holstein cows exposed to initial and prolonged solar heat stress*. Conference on Applied Statistic in Agriculture, Kansas State University, April 19-21.
- Gebremedhin, K.G., P.E. Hillman, C.N. Lee, R.J. Collier, S.T Willard, J. Arthington, and T.M. Brown-Brandl. 2008. *Sweating rates of dairy and feedlot cows under stressful thermal environments*. ASABE Paper No. 084752, St. Joseph, MI. Presented at the ASBE Annual International Meeting, Providence, RI, June 29 – July 2, pp. 29.
- Gebremedhin, K.G., P.E. Hillman, C.N. Lee, R.J. Collier, S.T Willard, J. Arthington, and T.M. Brown-Brandl. 2008. *Sweating rates of dairy and feedlot cows under stressful thermal environments*. Proceedings of the Eighth International Livestock Environment Symposium, September 1-5, 2008, Iguassu, Brazil, pp.10.
- Aiha, N. A.M. Parkhurst, C.N. Lee and P.E. Hillman. 2008. *Nonlinear mixed models to evaluate effects of environment conditions, hair coat and anchor length on body temperature during afternoon milking of Holstein cows in Hawaii*. Midwest Conf. of Ag. Statisticians.
- Soojin Jun, Hongfei Hu, JY Shim, GW Pak, Chin N. Lee and Yong Li. *Pulsed ohmic heating for milk pasteurization*. 2008. IFT Annual Meeting and Food Expo. New Orleans, LA 095-02
- He, Hongfei, Jin Dong, C.N. Lee and Yong Li. *Molecular characterization of spoilage-related bacteria in pasteurized milk during refrigeration by PCR and DGGE*. 2008. IFT Annual Meeting and Food Expo. New Orleans, LA 010-01
- Kim, Y.S., A. Ong, N. Bobbili, M. DuPonte, G.K. Fukumoto and C.N. Lee. 2007. *Evaluation of meat tenderness of forage-finished cattle produced in Hawaii and factors affecting the tenderness*. Human Nutrition, Food and Animal Sciences, University of Hawaii at Manoa, ASAS Annual Meeting, San Antonio, TX. August 2007.
- C.N. Lee and P.E. Hillman. 2007. *Thermal responses of Holstein Dairy Cows on pastures with high solar loads and high winds*. Proc.: 6<sup>th</sup> International Dairy Housing Conference. Eds. J. Zolovich, B. Holmes, J. Harner. ASABE/ASAE Pub. #701P0507e.
- Gebremedhin, K.G., P.E. Hillman, C.N. Lee and R.J. Collier. 2007. *Sweating rates dairy cows under shade and sunny environments*. ASAE Proc. ASABE Annual Meeting, MN. June 2007 Pub.# 074083
- C.N. Lee. 2006. *Heat stress in beef cattle: knowledge and applications in the tropics*. In Proc. of: The Veterinary Assoc. of Malaysia 18<sup>th</sup> Conf., Kuala Lumpur, Malaysia. Aug. 25-27, 2007.
- Lee, C.N., R.B. Valencia-Gila, G. Porter, R. Pattnik, R.S. Yost and C.I. Evenson. 2006. *A multidisciplinary approach to address nutrient management in large dairy operations or a confined animal feeding operation (CAFO)*. J. Dairy Sci. 89 (Suppl. 1)p.186.

Lee, C.N., P. Hillman, R. Collier and K. Gebremedhin. 2006. *Physiological responses of Holstein cows (white or black hair coat) under different solar loads: An environmental chamber study*. J. Dairy Sci. 89(Suppl. 1)p.212.

Ravi K. Putluru, Y.S. Kim and C.N. Lee. 2005. *Differential expression of superoxide dismutases (SODs) in bovine corpus luteum during estrous cycle and pregnancy*. J. Dairy Sci. 88(Suppl. 1)p.119.

Lee, C.N. and N. Keala. 2005. *Evaluation of cooling systems to improve lactating Holstein cows comfort in the sub-tropics*. J. Dairy Sci. 88(Suppl.1)p.43.

Lee, C.N. and M. Watson. 2005. *Environmental effects of immunoglobulins (IgG, IgM) in dairy cattle and subsequent calf development in the sub-tropics*. J. Dairy Sci. 88(Suppl. 1)p.302.

Hillman, P.E., K.G. Gebremedhin, T.M. Brown-Brandl and C.N. Lee. 2005. *Thermal analysis and behavioral activity of heifers in shade or sunlight*. Livestock Environmnet VII, Proceedings of the Seventh International Symposium, May 18-20, 2005, Beijing China. ASAE Pub. #701P0205 (p151-161).

Hillman, P.E., C.N. Lee and S.T. Willard. 2005. *Thermoregulatory responses associated with lying and standing in heat-stressed dairy cows*. Trans. ASAE 48(2):795-801.

Zhou, M., A.M. Parkhurst, P.E. Hillman and C.N. Lee. 2005. *Body temperatures of heat stressed recumbent cows under two different cooling processes*. Proc. 17<sup>th</sup> Annual Kansas State University Conf. on Applied Statistics in Agriculture, Kansas State University, Manhattan, KS.

Dong, Liangjie, P.Y. Yang and C.N. Lee. 2004. *Biological treatment and reuse of dairy wastewater*. American Farm Bureau Fed. Jan. 9<sup>th</sup>. HNL.

Dong, Liangjie, P.Y. Yang, P.S. Leung and C.N. Lee. 2003. *Evaluation of potential dairy farm wastewater treatment and reuse systems in the tropics*. The ninth Int'l Symposium on Animal, Agricultural and Food Processing Wastes (ISAAFPW 2003), Durham, NC.

Hillman, P., C.N. Lee and S. Willard. 2003. *Thermal responses of dairy cows to heat stress with and without freestall cooling*. ASAE Annual Int'l Meeting, Las Vegas, NV. #034036

Hillman, P., S. Willard, C.N. Lee and A.D. Kennedy. 2003. *Efficacy of a vaginal temperature logger to record body temperature of dairy cows*. ASAE Annual Int'l Meeting, Las Vegas, NV. #034011

C.N. Lee, K.S. Baek and A. Parkhurst. 2003. *Hair coat color may influence longevity of Holstein cattle in the tropics*. J.Dairy Sci. 86 [Suppl. 1]p.17.

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Hillman, P. and C.N. Lee. 2002. *Field test of a new cooling system for dairy cows in a freestall facility*. ASAE/CIGR XV<sup>th</sup> World Congress. # 024065.

J.M. DeJarnette, R.W. Shepard, M.T. Kaproth, N.A. Michael, J.C. Dalton, G.M. Goodell and

C.N. Lee. 2002. *Effects of sequential insemination number after batch-thaw on conception rates of cryopreserved bovine semen: a review*. NAAB Conf. (paper published as part of proceedings.)

D.T. Harauchi, J.R. Carpenter, R.J. Early and C.N. Lee. 2001. *Evaluation of nutrient composition and in vitro digestibility of alfalfa and/or tropical grasses grown for ruminants in Hawaii and harvested as round bale silages*. J. Dairy Sci. 84(Suppl.1) p.155.

C.N. Lee and K.S. Baek. 2001. *An evaluation of different types of commercial fans with or without misters in cooling high producing cows in the summer months in the sub-tropics*. J. Dairy Sci. 84(Suppl.1) p.74.

P.E. Hillman, C.N. Lee, J.R. Carpenter, K.S. Baek and A. Parkhurst. 2001. *Impact of hair coat color on thermoregulation of dairy cows to direct sunlight*. ASAE Annual Meeting, paper # 014031.

K.S. Baek, C.N. Lee, and B.S. Jeon. 2001. *Effect of hair coat color of Holstein cow and type of fans on heat stress in dairy in Hawaii*. Korean Soc. of Animal Production Proceedings, Seoul, Korea.

K.S. Baek, Y.S. Kim and C.N. Lee. 2001. *Comparison of total protein, DNA and RNA contents in corpus luteum of various stages of the estrous cycle and pregnancy*. Korean Soc. of Animal Production Proceedings, Seoul, Korea.

K.S. Baek, C.N. Lee and Y.S. Kim. 2001. *The site of administration of PGF2a and the subsequent pregnancy rates*. Korean Soc. of Animal Production Proceedings, Seoul, Korea.

C.N. Lee, G.K. Fukumoto and G.M. Toyama. 1998. *A chemical free method for controlling flies in dairies*. J. Dairy Sci. 81(Suppl. 1):99.

H.A. Rachunyo, D.L. Vincent, J.R. Carpenter, R.J. Early, C.N. Lee and K.S. Ledgerwood. 1997. *Effects of season and feeding of 15 and 30% whole cottonseed on conception rates, plasma estradiol and progesterone, blood parameters and body condition of dairy cows*. J. Dairy Sci. 80(Suppl. 1):142.

C.N. Lee, T.Z. Huang and A.B. Sagayaga. 1997. *Conception rates in dairy cattle were affected by the number of semen straws thawed for breeding*. J. Dairy Sci. 80(Suppl. 1):151.

J.R. Carpenter, C.N. Lee and R.Y. Niino-DuPonte. 1994. *Evaluation of alkaline hydrogen peroxide treated sugarcane bagasse as a substitute for alfalfa in lactating dairy cattle diets*. J. Dairy Sci. 77(Suppl.1):336.

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C.N. Lee, J.R. Carpenter, S. Speilman, R. Niino-DuPonte and K. Ledgerwood. 1991. *Supplementation of Dairy Complex in a lactating ration for dairy cows in the subtropics*. J. Dairy Sci. 74(Suppl. 1):191.

C.N. Lee, D.L. Vincent, C.W. Weems, R.J. Early and K. Ledgerwood. 1991. *Chemical constituents of allantoic and amniotic fluid of 30 days old bovine embryos under shade or no shade environment*. Bio. Reprod. 44(Suppl. 1):173.

J.R. Carpenter, C.N. Lee and R.Y. Niino-DuPonte. 1991. *Evaluation of Green Panicum hay when fed as the sole roughage or in combination with alfalfa hay to lactating dairy cows in the subtropics*. J. Dairy Sci. 74(Suppl. 1):221.

K. Miller-Patrick, D. Vincent, C.N. Lee, K. Ledgerwood, D. Ashimine, K. Nusser, Y. Tanaka, Y. Weems and \*C.W. Weems. 1991. *Effects of the purine biosynthesis pathway inhibitors Azaserine (AZA), Hadacin (HAD), and Mycophenolic Acid (MA) on corpus luteum (CL) function in non-pregnant ewes*. Biol. of Reprod. 44(suppl. 1):112.

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- D. Vincent, K. Gemmer, M. Thamtharan, C. Lee and C. Weems. 1988. *Response of corpora lutea to challenge with prostaglandin F2a during midpregnancy in sheep*. J. Anim. Sci. 66. (Suppl. 1):427.
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#### **Publications of Research Papers**

Pan, D., C.N. Lee, M.H. Rostagno and S.D. Eicher. 2015. *Pre-natal head load affects bacterial levels and innate immunity in neonatal calves*. J. Dairy Sci. (submitted).

C.N. Lee, K.S. Baek and A. Parkhurst. 2015. *The impact of hair coat color on longevity of Holsteins cows in the tropics*. J. Anim. Sc and Tech. (submitted)

Putluru, R.K., Y.S. Kim and C.N. Lee. *Differential expression of superoxide dismutase (Sods) in bovine corpus luteum during estrous cycle and pregnancy*. Pacific Agriculture and Natural Resources (submitted, 2015)

Lee, C.N., K.G. Gebremedhin, A. Parkhurst and P.E. Hillman. 2015. *Placement of temperature probe in bovine vagina for continuous measurement of core-body temperature*. Int'l J. of Biometry. 59(9): 1201-1205.

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### **Extension and Extension Research Articles**

#### ***I. Hawaii Institute Tropical Agriculture and Human Resources (HITAHR) Research Series.***

(HITAHR Research Series had been discontinued.)

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Huang, T.Z., C.N. Lee and J.R. Carpenter. 1996. *Supplementation of vitamins A & D, Vitamin E, or Vitamin E-selenium on conception rate of dairy cattle in Hawai'i: I. Effects in a dairy herd fed levels of these nutrients exceeding National Research Council requirements.* HITAHR Res. Series #076

C.N. Lee, D.L. Vincent, C.W. Weems, K. Ledgerwood and W. Toma. 1994. *Endocrine profiles of lactating dairy cows in shade and no-shade environments in Hawai'i.* HITAHR Res. Series #070.

C.N. Lee, K.D. Nusser, C.W. Weems, D.L. Vincent, Y.S. Weems and Y. Tanaka. 1990. *Gonadotropin releasing hormone (GnRH) administered at breeding affects corpus luteum function.* HITAHR Res. Series #064.

C.N. Lee and G.M. Toyama. 1989. *Nutritional quality of cow dung as a factor in ovipositional selectivity exhibited by Musca sorbens Wiedemann (Diptera: Muscidae)*. HITAHR Res. Series #063.

C.N. Lee, Y. Tanaka, C.W. Weems and D.L. Vincent. 1989. *Using gonadotropin releasing hormone (GnRH) to improve dairy cattle conception rates in the tropics*. HITAHR Res. Series #061

**II. College of Tropical Agriculture and Human Resources (CTHAR) Extension Research Publication Series.** (CTAHR Ext. Res. series had been replaced by CTAHR Ext. Publication)

C.N. Lee and Michael W. DuPonte. 1996. *Survey of consumers purchasing milk in Hawai'i county*. CTAHR Ext. Res. Series (In Press, submitted since 1995. Not printed due to lack of funds) [This is the work that lead to the creation of the "Island Fresh label" for locally produced product.; milk was the first product to carry this logo.]

G.M. Tomita, R.M. Nakamura, J.R. Carpenter and C.N. Lee. 1990. *Incidence of bovine mastitis in Hawaii*. Res. Ext. Series #116.

**III. Extension publications (various forms of CTAHR extension publications)**

C.N. Lee, G. K. Fukumoto, M.S. Thorne, M.H. Stevenson, Y.s. Kim, M. Nakahata and R. Ogoshi. 2015. Sugarcane crosses as potential forages for ruminants: Nutrient compositions were influenced by season and time of harvest. (in press)

Yoshioka, J.L., J. Ishimoto, Y. Li and C.N. Lee. 2015. Microbial population in fermented cooked taro skins. CTAHR Extension Pub. SA-16, April, 2015.  
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/SA-16.pdf>

L. Woody, J. Ishimoto, YongLi and C.N. Lee. 2014. Potential cause of diarrhea in piglets at weaning in Hawai'i. CTAHR Extension Pub., LM-27, Sept. 2014.  
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Fox, B.K., C.S. Tamaru, R. Klinger-Bowen, K. McGovern-Hopkins, H. Ako, M. Hori, M. Hotta, M. Lee, L. Bright, T. Radovich, A. Pant, A. Ahmad, V. Daley, C.N. Lee, J. Sugano, J. Uyeda, K-H Wang, J. Tavares, J. Hollyer, L. Castro, J. M. Fonseca, and M. Jay-Russell. 2013. Toward Lower-Cost, More Reliable, Pacific-Friendly Aquaponic Systems. Secretariat of the Pacific Community Aquaculture Expert Consultation: Aquaponics for the Pacific Islands Region: Review of Opportunities and Constraints. 23-27 September 2013, Rarotonga, Cook Islands.

C.N. Lee, D. Chang, A. Poon, C. Tamaru, B. Fox and T. Radovich. 2012. Worm castings stimulate germination in aquaponic system. Hānai'Ai.  
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<http://www.ctahr.hawaii.edu/sustainag/news/>

Tamaru, C.S., B. Fox, M. Lee, K. McGovern-Hopkins, R.E. Klinger-Bowen, H. Ako, C.N. Lee, K. Samir, J. Sugano and T. Radovich. 2011. Challenges and opportunities for aquaponics in the college of Tropical Agriculture and Human Resources. Hanai'ai Newsletter, Feb. 2011.

C.N. Lee and G. Fukumoto. 2010. Guidelines for Livestock Waste (Nutrient) Management, State of Hawaii. [The work was performed in collaboration with Dept. of Health State of Hawaii (DOH), EPA-Region 9, USDA-NRCS, Glen Fukumoto, CES CTAHR, Maui Soil and Water Conservation District and stake holders. This document, 145 pages, provide information on CAFOs and AFOs compliance and existing state and county regulations. I was the project leader for coordination, guidelines and publication. Info. is now available online at the DOH site.]  
[http://health.hawaii.gov/wastewater/files/2013/06/livestock\\_appendix.pdf](http://health.hawaii.gov/wastewater/files/2013/06/livestock_appendix.pdf)

C.N. Lee and G. Fukumoto . 2010. Guidelines for livestock nutrient management. [The brochure is a condense version of the CAFO/AFO rules and pertinent web sites for references done in collaboration with state and federal agencies.]  
<http://health.hawaii.gov/wastewater/files/2013/06/livestock.pdf>

Yarlagadda, S. and C.N. Lee. 2008. Utilizing wheat mill run for dairy calf and heifer feed. Cooperative Extension Service, CTAHR , University of Hawaii-Manoa. LM-19.

C.N. Lee. 2007. Issues related to Hawaii's dairy industry: A review and assessment of some of articles in the Milk Act-Hawai'i Revised Statutes Chapter 157. (Prepared for the State of Hawai'i Dept. of Agriculture). <http://hdoa.hawaii.gov/wp-content/uploads/2013/01/Appendix-B-Dairy.pdf>, accessed 11/27/2014,

C.N. Lee. 2007. The dairy producers response to House Concurrent Resolution (HCR) 170, S.D. 1. (submitted to Hawaii Dept. of Agriculture for the 2008 legislative session.);  
<http://hdoa.hawaii.gov/wp-content/uploads/2013/01/Appendix-B-Dairy-2.pdf>, accessed 11/27/2014.

C.N. Lee and H.C. "Skip" Bittenbender. 2007. Hawaii 2050: Agriculture. Pub.: Hawai'i 2050 "Ua mau ke ea o ka 'aina i ka pono" (The life of the land is perpetuated in righteousness) Hawaii 2050 Sustainability Task Force, Chair: Sen. R. Kokubun, Hawaii State Legislature, HI. P83-91.

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Yarlagadda, S. and C.N. Lee. 2007. Utilizing wheat millings for dairy calves and heifer feed. Proc.: Mealani Forage Field Day. eds. M.S. Thorne and J.Cox. p. 6-10.

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Glen K. Fukumoto and CN. Lee. 2003. Stargrass for Forage. Livestock Management; LM-6.

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- Glen K. Fukumoto and C.N. Lee. 2003. Signal Grass for Forage: Livestock Management; LM-3.
- C.N. Lee. 2001. Agricultural Lands: Hopes and dreams unfulfilled. In Proceedings: Hawaii Nutrient Management Education Plan. Edited by L. Ching and M.W. DuPont.
- L.Y.T. Ching, M.W. DuPont, G.K. Fukumoto, K.E. Gooding, A.F. Kawabata, C.N. Lee and J.S. Powley. 2001. Livestock nutrient management pocket record book by CTAHR project team: Producer nutrient record book.
- G.K. Fukumoto, M.W. DuPont, L.Y.T. Ching, K.E. Gooding, A.F. Kawabata, C.N. Lee and J. Powley. 2000. Survey of livestock operations in Hawaii.
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- G.K. Fukumoto, G., C.N. Lee and M.W. DuPont. 1997. Animal waste management: Effluent application in crop production systems. Hawai'i Water Quality Conference; Nov. 20-21. Honolulu.
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- C.N. Lee. 1989. *Dairy heifer show rules-Commercial div*. In: Hawaii State Farm Bureau - State Farm Fair Bureau - State Farm Fair Livestock Show.
- B.A. Buckley and C.N. Lee. 1989. *General rules and regulations, Commercial Show, Hawaii State Farm Fair Livestock*. In: Hawaii State Farm Bureau - State Farm Fair Livestock Show.
- C.N. Lee. 1988. *Environmental effects on Nutrition*. Hawaii Dairy Newsletter. vol. 3. no. 1.
- B.A. Buckley, C.N. Lee, G. Fukumoto, J. Powley, J.C. Nolan and J.R. Carpenter. 1988. *On ranch of preweaning mineral supplementation and it's effect on calf growth*. Proceedings: Mealani Beef Cattle Field Day. Nov. 11-12.



Y. Tanaka, C.N. Lee, B.A. Buckley, C.W. Weems and D.L. Vincent. 1988. *The use of norgestomet implants to induce puberty in beef heifers*. Proceedings: Mealani Beef Cattle Field Day. Nov. 11-12.

B.A. Buckley and C.N. Lee. 1987. *Dairy goat contests and rules*. In: Hawaii State 4-H Livestock Show book. Cooperative Ext. Service, CTAHR, UH-Manoa. p. 20

C.N. Lee. 1987. *Dairy heifer project: Requirements, Contests and Rules (revision)*. In: Hawaii State 4-H Livestock Show book. Cooperative Ext. Service, CTAHR, UH-Manoa. p.14.

***IV. Newsletter for dairy producers (copies are in the Hamilton Library; discontinued following the downsize of the dairies.)***

C.N. Lee. 1997. *Budget cut is fashionable*. Hawai'i Dairy Newsletter, vol.5:1.

C.N. Lee. 1996. *Combating high feed prices*. Hawai'i Dairy Newsletter, vol. 4:4.

C.N. Lee. 1996. *What I learned from the first international tropical dairy symposium*. Hawai'i Dairy Newsletter, vol. 4:3.

C.N. Lee. 1996. *Hawaii's top producers*. Hawai'i Dairy Newsletter, vol. 4:2

C.N. Lee. 1996. *Improving milk quality by executing the correct milking routine*. Hawai'i Dairy Newsletter, vol. 4:1.

C.N. Lee. 1995. *The dairy industry ASEAN countries*. Hawai'i Dairy Newsletter, vol.3:3.

C.N. Lee. 1995. *The dairy industry of Japan, Korea and Taiwan*. Hawai'i Dairy Newsletter, vol.3:2.

C.N. Lee. 1995. *Changes in the dairy genetic base*. Hawai'i Dairy Newsletter, vol.3:1.

J. Guevara and C.N. Lee. 1987. *Heritability for milk production*. Hawaii Dairy Newsletter. vol. 2. no. 3.

C.N. Lee. 1987. *Environmental effects on forages*. Hawaii Dairy Newsletter. vol. 2. no.2.

C.N. Lee. 1987. *Bovine somatotropin*. Hawaii Dairy Newsletter. vol. 2. no. 1.

C.N. Lee. 1986. *Goal setting and Task performance*. Hawaii Dairy Newsletter. vol. 1. no. 5.

C.N. Lee. 1986. *Milk marketing concepts*. Hawaii Dairy Newsletter. vol. 1. no. 4.

C.N. Lee. 1986. *The four P's of marketing*. Hawaii Dairy Newsletter. vol. 1. no. 3.

C.N. Lee. 1986. *Ovarian cystic disease*. Hawaii Dairy Newsletter. vol. 1. no. 2.

C.N. Lee. 1986. *The use of hormones to improve reproduction*. Hawaii Dairy Newsletter. vol. 1. no. 1.

***VI. Recent Extension Talks at conferences/Extension Meetings.***

Maui Cattlemen's Forage Field Day – Sept. 9, 2014. Evaluation and selection of sugarcane germplasm for potential cattle forage, HC and S, Maui. G.Fukumoto and C.N. Lee.

Hawaii Cattlemen's Council Annual Meeting. - Nov. 16, 2013. Kona, Hawaii.

"Study of shipping of beef cattle from Hawaii to the US mainland"  
(talk given by Dr. Stokes and graduate students as I had planned a seminar for the undergraduates working with me that day.)

Tropical Pasture and Livestock Management Conf. - June 3-8, 2013. Tinian, Commonwealth of Northern Marianas Island

"Environment as it relates to beef production."

Hawaii Cattlemen Meeting with CTAHR - Aug. 3rd, 2012, Waiamea, Hawaii.

"Heat stress: Research work with beef cattle."

League of Women Voter Annual Meeting - May, 2012.

"Land Use Policy and How It Affects Hawaii's Future."

Tropical Pasture and Livestock Management Conf. - Sept. 18-23, Maui, Hawaii.

"Stress and reproduction in cattle."

Dept. HNFAS Graduate Seminar, Spring 2013.

"A Multi-Facet Extension Effort: Satewide and Long Term Implication."

***VII. Misc. workshops and training.***

Hydroponic Training at the Next Step at Kakaako (Homeless Shelter) 2010  
<http://www.ctahr.hawaii.edu/site/News.aspx?yr=2010>

Aquaponic training at the following sites:

- a) Cedar Church Kalihi, 2010-2011
- b) Next Step Shelter, 2010 - 2012
- c) Helemano Plantation, 2011

Aquaponics in the City workshop along with Community College and State Hospital, Windward.  
July, 2010.

**VIII. Graduate Students Mentoring (thesis title followed after student name and the year completed).**

**A. Keliikui.** (started Jan. 2015)

**T.L. Sy.** 2015. Evaluation of long-haul shipping stress for beef calves transported from Hawaii to Washington or California and their ability to recover. (co-advising with Dr. A. Stokes). MS. AnSci.

**N. Yamada.** 2014. Physiological responses of Jerseys and Holsteins in high temperature and humid environment. (Plan B). MS. AnSci.

**W.Y. Ho.** 2011. Expression of recombinant porcine myostatin propeptide in an Escherichia coli system. (co-advising with Dr. YS Kim). MS. AnSci.

**Srivanni Yagarlanda.** 2010. The anti-oxidants levels of superoxide dismutase in pregnant ovaries of wild and transgenic (myostatin) mice. MS. AnSci.

**Hongfei He:** 2009. Analyses of bacterial diversity and dynamics within raw and pasteurized milk. (co-adviser with Dr. LiYong). MS. Food Sci.

**Nicole Sullivan.** 2008. Hawai'i's consumer preferences and knowledge of milk. MS. AnSci.

**Ravi Putluru.** 2006. Differential expression of superoxide dismutase in bovine corpus. MS. AnSci.

**Michelle Watson.** 2004. Environmental effects on IgG and IgM concentrations in vaccinated and unvaccinated dairy cattle. MS. AnSci.

**Noni Keala.** 2004. Identification and understanding of factors affecting performance of dairy cattle in heat stress conditions. MS. AnSci.

**T.Z. Huang.** 1995. The supplementation of vitamin A & D, vitamin E-Selenium and Vitamin E on the conception rates of dairy cattle in the sub-tropics. MS. AnSci.

**K. Nusser.** 1990. Environmental effects on reproduction in the bovine. MS. AnSci.

**R. Wong.** 1988. In vitro culture of the bovine reproductive tract explants in defined median that contains steroids. MS. AnSci.

**Active in other student thesis program (MS and Ph.D.)**

**Hu Li.** 2000. Sensitive and rapid HPLC method for determination of 1-hydroxyprone in human urine by adding triethylamine. MS. MBBE.

**Burrel, V.** 1999. Genetic manipulation of sperm function in mice. Ph.D. Anatomy and Reproductive Biology, John A. Burns School of Medicine.

**H. Rachuonyo.** 1997. Effects of cotton products on dairy cattle fertility in the sub-tropics. MS. AnSci. (I wrote the grant but transferred it to Dr. J.Carpenter when I left in 1993-1994.)

**K.L. Yeah.** 1992. Computable general equilibrium analysis of external and policy shocks on the Malaysian agricultural sector. Ph.D. Ag. Econ. CTAHR

**K.M. Pattrick.** 1992. Purine involvement in corpus luteum function in non-pregnant sheep. Ph.D. Anatomy and Reproductive Biology, John A. Burns School of Medicine.

**Y. Tanaka.** 1991. The use of Norgestomet implants to induce puberty in prepubertal beef heifers in subtropical climate. MS. AnSci.

**S. Ellis.** 1989. An investigation into the in situ digestibility of several tropical grasses and alfalfa preserved as hays and silages. MS. AnSci.

**G. Tomita.** 1989. An evaluation of the incidence of bovine mastitis in a subtropical environment. MS. AnSci.

**M. Thamotharan.** 1988. The effect of ovariectomy and progesterone replacement on uterine secretion of prostaglandin F2a in sheep and the effect of progesterone on the lifespan of the corpus luteum in heat stressed dairy heifers. MS. AnSci

**K. Gremmer.** 1987. Effect of oviductal vein resection at day four on embryonic survival in ewes and, prostaglandin F2a challenge at day eighty postbreeding in hysterectomized or intact ewes. MS. AnSci

**Jose Guevara.** 1987. Factors associated with variations in heritability estimates for milk yield in tropical climate. MS AnSci.

**Alan Tom.** 1987. Viral and rickettsia agents in Penaeid shrimp. MS AnSci.

***IX. Graduate students (MS) who participated and/ won awards (†) at the CTAHR Student Research Symposium († indicate those who won awards)***

**Qianting Li, 2015†**

“Probiotic potential of lactic acid bacteria isolated from fermented taro skins”  
Dept. of HNFAS award, Best MS poster, 2015.

[http://cms.ctahr.hawaii.edu/Portals/27/Programs/2015%20SRS%20Program\\_Reduced\\_v3.pdf](http://cms.ctahr.hawaii.edu/Portals/27/Programs/2015%20SRS%20Program_Reduced_v3.pdf)

**T.L. Sy, 2014.**

“Evaluation of long-haul shipping stress for beef calves transported from Hawaii to the contiguous United States.” 2014.

**J. Onaga, 2014**

“Use of microarray for the evaluation of long-haul shipping stress in beef calves.”

**N. Yamada, 2013.**

“Thermal regulation in Jersey and Holstein cows in heat stress environment.” 2013.

**T.L. Sy, 2012†**

“A novel method to cooling dairy cows.”  
Dept. of HNFAS award, Best MS poster, 2012.

**Wing Yeung Ho, 2010†**

CTAHR Research Symposium Award Winner (MS poster), 2010.  
"Soluble expression of recombinant porcine myostatin propeptide in an Escherichia coli expression system."  
(co-advisor with Dr. YKim.)

**Hongfei He, 2007†**

Dept. of HNFAS award, 2007.  
"Microbiological quality of pasteurized milk available in Hawaii"  
CTAHR Research Symposium Winner (MS poster), 2008.

**Ravi Putluru, 2006.†**

CTAHR Research Symposium Winner (MS poster), 2006.  
"Differential expression of superoxide dismutase (SODs) in bovine.

**Hu Li, 1998†**

Dept. of Animal Science winner, 1998.  
"Seasonal effects on the quality of tropical forages grown in Hawai'i"

***X. Mentoring undergraduates who participated and/or won awards (†) at the CTAHR Student Research Symposium.***

**Krista Ann Lee, 2015†**

CTAHR Student Research Symposium, Undergraduate (UG) winner "Award of Merit".  
"College life crossing paths with contaminated technology."  
(co-advisor with Dr. Li Yong)

**Elyse Bowman, 2015.**

CTAHR Student Research Symposium, Dept. HNFAS UG Oral presentation winner.  
"Development and analysis of a tropical probiotic beverage using water kefir grains."

**Ana Keliikuli, 2014†**

CTAHR Student Research Symposium, Dept. HNFAS UG Poster winner.  
"Comparison of phosphorus-solubilizing and nitrogen-fixing bacteria among Korean Natural Farming, organic and conventional farming methods."  
(co-advisor with Dr. Li Yong and Dr. K.H. Wang)

**Elyse Iseke, 2014†**

CTAHR Student Research Symposium, Undergraduate Oral Winner.  
"Transforming the "old poi" into a modern food: a shelf-stable probiotic yogurt alternative."  
(co-advisor with Dr. Li Yong)

**Richelle Rafanan and Carlo Rada, 2012.**

"Community feeding programs: Perspective on motivation to serve the homeless nutritional adequacy of the meals served."

**Kara Yamada and Kacie Ho, 2011†**

CTAHR Research Symposium Award winner (poster), 2011  
"Development of a snack-bar from okara, a tofu by-product."  
(co-advisor with Dr. W.Iwaoka)

**Sunnen Kim, 2008†**

CTAHR Research Symposium Award of Merit (poster), 2008.  
"Carcass quality and meat tenderness of Hawai'i pasture-finished cattle and mainland feedlot-finished cattle."  
(In Dr. Y.S. Kim's absence, I worked with Sunnen on the poster and presentation.)

**Tembra Way, 2001†**

CTAHR Research Symposium Award of Merit, 2001.  
"*The efficacy of the Living Machine system in remediation of slaughterhouse wastewater.*"  
Tembra won one of the 4 awards at the UHM Annual Campus wide Symposium and Exhibit of Undergraduate Research.

**Rick Akutagawa, 1991†**

CTAHR Research Symposium Award of Merit, 1991.  
"Seasonal effects on milk production and milk composition."

**David Takaki, 1990†**

CTAHR Research Symposium Award of Merit, 1990.  
"Alternative methods of controlling the fly *M. sorbens*."

**Debra Ashimine, 1989†**

CTAHR Research Symposium Winner, 1989.  
"Effects of heat stress on endocrine profiles of Dairy Cattle."

***XI. Mentoring of undergraduate research projects that are being published***

**Lindsey Woody.** 2013 (graduated in Dec. 2013; assisted by Dr. LiYong)

"Potential causes of diarrhea in piglets following weaning"  
[www.ctahr.hawaii.edu/oc/freepubs/pdf/LM-27.pdf](http://www.ctahr.hawaii.edu/oc/freepubs/pdf/LM-27.pdf)

**Jaemi Lee Yoshioka†.** 2013. (graduated in Dec. 2013; assisted by Dr. LiYong)

"Microbial populations in fermented taro skins: potential benefits?"  
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/SA-16.pdf>

**Ana Keliikuli.** 2014. (graduated in May 2014; assisted by Dr. LiYong, Dr. K.H. Wang)

"Unraveling the mystery of Korean Natural Farming"

†participated in the UHM Undergraduate Research Opportunity Program, Fall Forum  
Nov. 23, 2013.

## ***XII. Teaching Responsibilities (0.1 FTE)***

- Anima Sci. 201 - 3 credits every Spring semester; (coordinator and conduct 40% of class time and interactions including field trips, class reports (5), etc.)
- Animal Sci. 433 - 3 credits every odd year in Spring semester
- Animal Sci. 453 - gave lecture on non-infectious diseases in dairy cattle. (Dr. Ashley Stokes instructor, Spring 2010, 2012 and 2014)
- Animal Sci. 499 - 3 students in 2014; 1 student in Spring 2015
- FSHN/AnSci. 350 - gave lectures in the class taught by Dr. Dian Dooley until she retired. (this class is no longer offered in the Dept. due to faculty shortage.)
- FSHN 491 - Spring semester 2010, 2013. (Dr. Wayne Iwaoka, co-instructor)
- FSHN 494 - co-instructor with Dr. LiYong on the capstone class project.
- AnSci/FSHN 601 - 1 credit, Fall 2007 (co-instructor Dr. J. Dobbs); gave a lecture for each of 2008 and 2009.
- AnSci. 699/700 - graduate student research/thesis
- ASAN 493 - South-East Asian Studies: Globalization in Asia: Impact on Philippines/South East Asia. (instructor: Dr. Federico Magdalena, April 2010; Fall 2010)
- ASAN 600S/620P - South-East Asian Studies: Problems and Issues (instructor: Dr. B. Aquino, 2008)
- ASAN 630 - Politics and Society in Southeast Asia. (Dr. B. Aquino, 2009)

***XIII. Sample of Legislative achievements in the recent years (working with farmers and/or state agencies)***

- 1) 2012: HCR 104 - House Concurrent Resolution urging the University of Hawaii to designate the Magoon Research and Teaching facility site for the University of Hawaii College of Tropical Agriculture and Human Resources.  
[I played a crucial role in getting this resolution passed in 2012.]
- 2) 2009: HR 191 HD 1 - Resolution requiring the Dept. of Land and Natural Resources and Dept. of Agriculture to work together to identify land for dairies.
- 3) 2008: Act 46; SB 2956 – Eliminated the section on Class II utilization in the Milk Act (HRS chapter 157) [I worked with Dept. of Ag.]
- 4) 2007: SB 2646 CD 1 – Part IX, section 14 and 16 of the Important Agriculture Land; required the DLNR and the HDOA to work together to identify state owned lands and transferred the important agriculture lands to HDOA management (outcome of HB 2231 introduced by Rep. Say and Tsuji.)
- 5) 2007: HB 2293 CD 2 – bill addressed the purchase of the Galbraith Trust land and subsequent ownership of the irrigation system once used by sugarcane industry.
- 6) 2005: HB 1640 CD1 - Act 183 Important Agriculture Land in the State of Hawaii  
[I worked with key legislators to help them on issues of concern.]

***XIV. Other reports to the state legislature and the Governor***

In response to the House Concurrent Resolution (HCR) 170 SD1 "Requesting the Dept. of Agriculture, the dean of College of Tropical Agriculture and Human Resources and the president of Hawaii Farm Bureau Federation and members of various sectors to examine current policies, procedures, operations and best practices to develop a long term solution to effectively protect the livestock industry"; dairy sector, CN Lee and J. Kahana, December 2007.

In response to the HCR No. 210 "Requesting the Agribusiness Development Corporation (ADC) to develop a pilot project for agricultural and economic development ventures on vacant sugar lands", CN Lee, December 1995.

In response to the HCR No. 202 HD1 "Urging the governor to direct the Department of Accounting and General Services to utilize combined ethanol fuel in the fleet of state vehicles and to promote discussions on the use of ethanol as an alternative fuel for transportation and power generation by developing incentives", prepared by DBEDT, DOA and ADC (CN Lee), December 1995.

Annual Report of the Agribusiness Development Corporation (ADC, Agriculture Administrative Program - AGR 192) for the Eighteenth Legislature and Governor, CN Lee, December 1995.

***XV. Reports to the Governor's Agriculture Committee.***

GK Fukumoto, M. DuPont and CN Lee. 1999. *Livestock Industry Partnering for Education and Program Implementation: Nutrient Management Alternatives and Pollution Prevention Planning – Phase 1*



*The feasibility of expanding dairies on the neighbor island.* 1994. (provided technical comments to M & E Pacific; the completed study is with State Dept. of Agriculture.)

*Final Environmental Impact Statement - Oahu Livestock Agriculture Park.* 1993. (assisted in all technical, social and economic reports for this study.)

C.N. Lee and G. Toyama. 1989. *Preference exhibited by ovipositioning Musca sorbens Wiedemann to dung pats from dairy cows fed the same ration.*(report to Gov. Ag. Coordinating Committee.)

C.N. Lee and G. Toyama. 1989. *Ovipositional preference of caged Musca sorbens to cow dung containing 50% partially digested feed supplements commonly used at dairies.*(report to Gov. Ag. Coordinating Committee.)

C.N. Lee and G. Toyama. 1989. *Nutritional quality of cow dung as a factor in ovipositional selectivity exhibited by Musca sorbens Wiedemann.* .(report to Gov. Ag. Coordinating Committee.)

C.N. Lee and G. Toyama. 1989. *Effect of cow dung containing different percentages of partially digested ground corn, cottonseed meal and wheat mill run and its attractiveness to ovipositing Musca sorbens.* .(report to Gov. Ag. Coordinating Committee.)

C.N. Lee and G. Toyama. 1989. *Selectivity exhibited by ovipositing Musca sorbens among dung of cows fed guinea grass with either ground corn, rolled corn or cottonseed meal in amounts normally fed at dairies.* (report to Gov. Ag. Coordinating Committee.)

C.N. Lee and G. Toyama. 1989. *Selectivity exhibited by ovipositing Musca sorbens Wiedemann among dung from cows fed either guinea grass and varying amounts and combinations of rolled corn, rolled barley and high protein pellets.* (report to Gov. Ag. Coordinating Committee.)

C.N. Lee, G. Komatsu, G. Toyama, H. Matsuura, E. Boteilho and G. Fukumoto. 1988. *The efficacy of 2-chloro-1 (2,4,5-trichlorophenyl)-vinyl dimethyl phosphate (trade name-Rabon) as a laticide for Musca sorbens and its residue in milk.* (report to Gov. Ag. Coordinating Committee.)

#### ***XVI. International Work Experiences***

Worked in the following countries:

1993-1994 - all of Asia, as Marketing Director for Worldwide Sires Inc., Visalia, CA. Helped open the Chinese market for US genetics in beef and dairy cattle, negotiated the Korean, Singapore and Thailand protocol for cattle embryos, the health protocol for semen for The Philippines, Singapore, Malaysia and drafted the first protocol for Vietnam.

1995 - 2010 - periodic trainer for managing cattle under heat stress environment for Taiwan via collaboration with Taiwan Livestock Research Institute, the Feed Trade Association - Taiwan, Malaysia Dept. Veterinary Services and Livestock Production, etc.

1998-2000 - travelled to conduct training in dairy management and nutrition with Land O'Lakes-Worldwide Sires Inc. (USDA-AID programs); countries were Kenya, Uganda, Malawai.

#### ***XVII. Diversified Agriculture Experiences (mostly truck crops)***

1995-1996 - Executive Director of Agribusiness Development Corporation (ADC) State of Hawai'i for the rejuvenation of former sugarcane lands. Started Waialua Farmers Cooperative (today the successes of Twin Bridge Farms, Big Wave Tomato, etc can be traced back to the WFC), assisted in the development and growth of Aloun Farm Inc. - second largest truck crop producer in the state farming over 2,500 acres, assisted Jefts Farms - the largest truck crop grower in the state of Hawaii, assisted Hamakua Farmers Cooperative, etc.

More recent work are with faith based organization that fund projects with workforce "training" and efforts in homeless shelter, Next Step in Kakaako, Cedar Church in Kalihi. Efforts are in hydroponics and aquaponics projects.

#### **Service In Recent Years (2008-2013; and limited to UHM only)**

CTAHR representative to the Manoa Faculty Senate 2008-2009 and 2010-2012.

HNFAS faculty representative to UHPA 2008 - 2012.

UHPA Board of Directors, 2012 - present.

#### ***XVIII. Solicited and set up the following endowment for students:***

a) Hawaii Fresh Milk Industry Scholarship for Animal Sci. student - 2011  
<http://www.hawaii.edu/news/article.php?ald=4450>

b) James Richard "Dick" Bunker Hope Scholarship for HNFAS student - 2013.  
[http://www.ctahr.hawaii.edu/e-notes/06\\_21\\_2013.html](http://www.ctahr.hawaii.edu/e-notes/06_21_2013.html)

c) also involved in various groups setting up scholarships for students in agriculture and culinary arts. (example: via the Onion Festival, >\$20k was raised of schools in Ewa.)

#### ***XIX. Award***

CTAHR's Ka Pouhana Award, or the student mentorship award, in Spring, 2013 nominated by two student organizations: FSHN Council and S.O.F.T

442 Kapiolani Avenue  
Honolulu, Hawaii 96815

James H.Q. Lee

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<b>Education</b>	1968 - 1974	Iolani School, Cum Laude	Honolulu, Hawaii
	1974 - 1978	University of Hawaii Bachelors of Business Administration, Honors	Honolulu, Hawaii
	1978 - 1981	Richardson School of Law, University of Hawaii Juris Doctorate	Honolulu, Hawaii
<b>Professional experience</b>	1981 - 1986	Ikazaki, Devens, Lo, Youth & Nakano Attorney at Law - Associate	
	1986 - 1990	Devens, Lo, Youth, Nakano & Saito Attorney at Law - Partner	
	1990 - present	Devens, Nakano, Saito, Lee, Wong & Ching Attorney at Law - Managing Partner	
	1976 - present	K.B. Lee Corporation, Director The K.B. Lee Corporation is a family holding Company of which Hee Hing Corporation is a subsidiary.	
	1997 - 2008	Aloha Beer Company, LP Managing Director Aloha Beer Company, LP is a partnership which owns and operates Sam Choy's Restaurants in Hawaii and Japan.	
	2014 - present	US Kinden, Director US Kinden is a subsidiary of Kinden Japan and the parent company of Wasa Electric Inc.	
<b>Publications</b>	1981	Taxation of Foundations - UH Law Review	

**Professional  
Licenses**

1979	Certified Public Accountant
1981	Hawaii State Bar Association

**Community  
Activities**

1993 – 2003	Big Brothers/Big Sisters of Honolulu Board of Directors; Past President
1999 – 2001	Iolani School, Leadership Committee
2000 – 2001	Boy's Scouts of America, Director
2003 - 2013	Big Brothers/Big Sisters Foundation, Inc Board of Directors; Past Chair
1999 - present	Iolani School, Family Fair Division Chair, Fair Chair (2003 – 2005, 2011)
2009 – 2014	University of Hawaii, Board of Regents
2010 - 2014	University of Hawaii Board of Regents, Chair – Audit Committee
2011 – 2014	University of Hawaii Board of Regents, Vice Chair
2010 – 2012	Research Corporation University of Hawaii, Board of Directors; Vice Chair
2013 – 2014	Presidential Search Committee
2013 - 2014	Student Affairs Committee, Vice Chair

**Recognition/  
Awards**

1983	Downtown Jaycees, Member of the Year
1994	Board Member of the Year - Big Brothers/Big Sisters of Hawaii
1998	National Philanthropic Award – Outstanding Small Business
2000	Iolani School – Alumni of the Year – Service Award
2014	Shidler School of Business, Hall of Fame

Honoree, University of Hawaii

2015

National Philanthropy Day, Volunteer in

Philanthropy Honoree

# MICHAEL W.Y. LEE

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## SUMMARY

**Financial Analyst** with strong analytical skills and PC support. Inventive and resourceful team player, with skills ranging from building databases, to analyzing budgets, and performing presentations. A quick learner, goal oriented, and willing to work extended hours to meet deadlines. Effective verbal and written communicator dedicated to excellent customer service.

## TECHNOLOGY SKILLS

**Platforms:** All Windows Platforms; Apple/Macintosh

**Programs:** Proficient in Microsoft Excel, Access, Frontpage, Outlook, Powerpoint, Word; Adobe Acrobat, Photoshop, and FTP

## SPECIAL SKILLS

**Languages:** Proficient in speaking Cantonese.

## WORK EXPERIENCE

**K.B. Lee Corporation, Honolulu, HI**  
**Property Manager**

06/01/14 – Present

Administered daily functioning of properties – Inspects sites regularly to ensure compliance with organizational established policies, safety measures and quality standards. Managed financial operations of various properties – Invoicing, payments for leasing, taxes, maintenance, insurance and others. Analyzes and calculates all essential information required, such as property taxes, building's physical condition and area population. Coordinates marketing initiatives, sales and leasing of properties. Document and reported all financial transactions related to the properties.

**Hoku Brewing Company, Honolulu, HI**  
**Director of Operations**

10/1/13 – 6/30/15

Responsible for overseeing day to day operations including HR, AP, AR, Marketing, and Wholesale beer distribution. Promoting team sell days with sales reps/team leaders in each wholesaler. Execute and develop a promotional calendar geared towards building sales and distribution. Develop key customers in each territory and attain a proprietary relationship with said retailers to gain sales and distribution. Plan and execute promotion events with key retailers that may occur any ay of the week. Keep a weekly/bi weekly planner of goals and account calls. Forecast seasonal brand execution and track results.

**Pacific Rim Caterers, Honolulu, HI**

06/01/09 – 8/31/13

**Director / Catering Manager**

Maintain top quality food production and sanitation standards both in the restaurant and all catering operations. Responsibilities include:

- Hires, trains and supervises all catering personnel
- Schedules and coordinates the work of all catering and kitchen personnel to ensure that all food preparation is economical and technically correct
- Works with clients/customers to arrange and follow through on all catering details and to ensure all special requests are met. Directs setup for events. Responsible for pricing, billing and resolving customer complaints. Develops menu/costing.
- Ensures that high standards of sanitation and cleanliness are maintained throughout the kitchen at all times
- Establishes controls to minimize food and supply waste and theft
- Safeguards all food preparation personnel by implementing training to increase their knowledge about safety and sanitation
- Maintains cost controls by conducting a monthly inventory
- Meets or exceeds cost of goods sold (COGS) budget
- Maintain kitchen equipment by following appropriate operating instructions, troubleshoot breakdowns and perform preventive maintenance (PM)
- Full compliance with the State Department of Health regulations and guidelines

**Hawaiian Telcom, Honolulu, HI**

09/01/06 – 5/31/08

**Revenue Assurance Analyst**

Responsible for maintaining and monitoring a system of audit and control points designed to identify errors, revenue leakage, or other anomalies that occur during collection, mediation, rating, and presentment of billable event data.

- Implemented audit between CRM, Billing, and Provisioning to assure all orders make it to billing properly.
- Developed and managed tools, methods, and procedures to identify and correct revenue leakage or other errors and provide extensive reporting to interested internal customers.
- Effectively communicated difficult and/or complicated material to non-technical or other non-financial personal.
- Maintained extensive M&P documentation associated with revenue assurance.

**State Capitol, Honolulu, HI**

12/15/03 - 06/01/04

**Budget Analyst – House Minority Research Office**

Analyzed the State's budget and Capital Improvement Projects, and produced reports to the House Representatives, the Governor, and her staff. Analyzed all financial impact bills that passed through the Legislature, and prepared reports and presentations for the House Representatives.

- Assisted in the development of the House Minority Research Office bills database.
- Created time saving databases for use by Legislative Analysts, resulting in increased efficiency and records accuracy.
- Analyzed and researched financial bills, and made presentations and recommendations to the Representatives, to further their knowledge before they vote on the floor.
- Produced in partnership with the Chief Analyst a budget report for each Department Director in the State for purposes of cost savings.
- Successfully completed many research projects requested by House Representatives and Department Heads regarding financial matters.
- Effectively communicated with Departments and all levels of management within the State of Hawaii.

## **EDUCATION**

**University of Hawaii at Manoa, Honolulu, HI**

B.B.A., Finance with Distinction

**Saint Louis School, Honolulu, HI**

High School Diploma



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# CHRIS MAYERSON

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## PROFILE


My passion and expertise for cultivating exceptional medical cannabis in a regulated legal framework has allowed me to gain a unique skill set. As the stigma surrounding cannabis is being removed, my ambition is to help usher in a new era and share my experience within this nascent industry.

## EXPERIENCE

CO-FOUNDER & CHIEF CULTIVATOR, AURORA CANNABIS;  
CREMONA ALBERTA 2013-PRESENT

Working along side Health Canada to help draft the Marihuana for Medical Purposes Regulations (MMPR) I was in a fortunate position to have an in depth understanding of the new regulations. This resulted in successfully obtaining a full production and sales licence, a feat less than 1% of applicants have achieved. Involved in all aspects of the application, construction and production processes in Aurora's 55,000 sq ft facility I have a wealth of experience and assets relating to the emerging cannabis industry.

As Chief Cultivator I am directly responsible for managing the day to day operations involving the cultivation of medical cannabis. This includes all aspects of cultivation, from seed to harvest. Part of my responsibilities is also to maintain an accurate and up to date inventory of not only cannabis plants in production, but also plants in the drying / curing process, packaging stage, testing and retention samples, and all quarantined and released product. Inspectors from the Office of Controlled Substances inspect and audit our facility at a minimum every 4 weeks to ensure compliancy.



Maintaining the integrity of a secure facility is also a part of my daily responsibilities. More than 150 high resolution security cameras monitor the facility, inside and out, 24 hours a day, 7 days a week. Working alongside onsite security personnel I am responsible that all employees follow all security related SOPs and that no theft or diversion occurs. To date, not one single instance of theft or diversion has occurred at our licensed facility. Literally, every single gram of cannabis, whether it be plants in production, seeds, waste material set for destruction, or finished dried cannabis, is accounted for at any given moment.

Production works diligently with Quality Assurance to ensure that all cannabis produced meets or exceeds the stringent limits placed on cannabis by Health Canada. By following Good Production Practices (GPP) which were derived from the Good Manufacturing Practices (GMP) that are in place within the pharmaceutical manufacturing industry, I can consistently and reliably produce medical cannabis that is not only exceptional in its efficacy but also in its safety. Although I currently am licensed by the province of Alberta as a Pesticide Applicator, no pest control products are used in our facility. Working with leading entomologists I was able to develop and implement an Integrated Pest Control Management Program (IPM) which has been extremely successful in preventing outbreaks of harmful pests. Environmental controls, specifically the Argus Titan system, allows me to control environmental variables with such accuracy that microbiological contamination such as powdery mildew or botrytis are not able to infect my crops of medical cannabis. Strict gowning, cleaning and sanitization procedures were developed to ensure that bacterial contamination is never a concern.

Being the founder of Aurora has allowed me to be present in all aspects of the design and construction of our facility, which is the first and only purpose built facility in Canada. Not only have I been able to participate in the process of creating the physical structure of the facility, but I am also

happy to have been directly involved in the creation and implementation of all Standard Operating Procedures (SOPs) that are currently in use at Aurora.

MMAR DESIGNATED GROWER;  
CALGARY ALBERTA 2007-PRESENT

As a designated grower under the Medical Marihuana Access Regulations (MMAR) I was able to work directly with patients to gain experience on cannabis cultivation practices, strains / genetics, extraction techniques, concentrate formulations, edible and topical preparations. Created an open dialogue with Health Canada, the RCMP and other Law Enforcement agencies.

The highlight of being a designated grower was the ability to work one on one with patients to determine the best course of action in treating their specific ailment. Over the years I was able to see first hand that all cannabis is not created equal, and that understanding the difference in strains is paramount in providing the ideal medication for patients. The genetic diversity in cannabis can at first be overwhelming, but through out the years I have developed a first hand knowledge of the specific traits of individual strains that offer the most effective treatment possible for each patient under my care. Further to developing an in-depth understanding of genetics, I was fortunate to be able to develop and create extractions and preparations of cannabis, further expanding on the healing benefits of cannabis to my patients.

OWNER & OPERATOR, EVOLVE CONCRETE DESIGNS;  
CALGARY ALBERTA 2002-2013

As a small business owner, I was directly involved in all aspects of running Evolve Concrete Designs, which became known for its creative approach to high end projects.

Over the years I was able to develop the skills necessary to run a successful business. These attributes include the ability to manage time and resources, create and execute a business plan, develop and maintain good relationships with suppliers, subcontractors and clients. During this time I was also hone my accounting skills and gain an understanding of book keeping and taxes.

EDUCATION

ST. FRANCIS HIGH SCHOOL, CALGARY ALBERTA – 1999

**Brian Ruden**, an attorney, began his legal career as a litigator but soon found his niche as a tax resolution expert. Working for Omni Financial, based out of Broomfield, CO, Brian negotiated resolutions to some of the biggest, and most high profile, cases in the country. His success in this arena, coupled with his strong people skills, made him Omni's first choice for training newly hired associates the intricacies of advanced negotiations and corporate re-structuring.

In 2010, Brian became involved in the medical marijuana industry and became a partner in Tree of Wellness, Inc. – an ongoing Colorado State approved medical marijuana dispensary and 4000 sq. ft. grow facility. Due in great part to Brian's determination to find the best resolution to every situation, Tree of Wellness has become the preeminent dispensary in Colorado Springs. The dispensary is renowned for its quality of medicine, personable and knowledgeable staff, and compliance with state and local regulations.

Brian has spent years researching state of the art growing techniques and testing strains. As a result, the medicine and recreational products produced at his three (3) facilities and sold at his three stores are consistently considered the highest quality in Colorado State. His success as a medical marijuana cultivator led to the filming of two documentaries focusing on growing medical marijuana solely under LED lights. Recently Brian has been featured in a documentary with Harry Smith and is a regular guest on CNBC's Power Lunch.

## **Industry Specific Experience**

### **1. Tree of Wellness: Owner - June, 2010 to Present**

Originally and currently licensed in Colorado Springs as a medical marijuana store and OPC in Denver.

### **2. Starbuds (Operated under Colorado Health Consultants, LLC): Owner - July, 2013 to Present**

Originally licensed in Denver as a medical marijuana store and OPC. In January, 2014 received recreational licenses for both the store and the cultivation facility. Currently recreational only.

### **3. Altermeds: Owner - Purchased March, 2014 to Present**

Originally licensed in Louisville as a medical marijuana center and Boulder as an medical OPC. Recreational licenses for both the store and the OPC approved in May, 2014. Currently recreational only.

### **4. Herbal Alternatives II, LLC: Owner - To be opened November, 2014**

Received final approval in June, 2014 for opening a medical marijuana dispensary in Washington, DC. A total of only five dispensaries have received approval for the entire city.

### **5. Starbuds – Aurora: Owner – To be opened December, 2014**

Was awarded one of four available dispensary licenses for Ward 1 in Aurora, Colorado on August 28, 2014. Projected opening of dispensary is December, 2014.

# Brian Ruden

[REDACTED]  
[REDACTED]

**Admitted to Colorado Bar, 2005**

## EDUCATION

**University of Denver College of Law**, Denver, Colorado  
Juris Doctor, May 2005

- CALI Award Winner for Highest Grade in Legal Writing

**University of Massachusetts**, Amherst, Massachusetts  
Bachelor of Science in Hotel, Restaurant and Travel Administration, February 1998

## EXPERIENCE

**Law Clerk**, Milan and Malara, P.C.  
Denver, Colorado, Summer 2004, 2005

- Extensive legal research and writing: drafted legal memos, letters, motions, complaints, trial briefs, and discovery for cases in Contract, Tort, Family Law, and Worker's Compensation
- Researched and authored outline of new Colorado family law on removal, outline presented at CLE classes and used in test case trial brief.
- Prepared cases for trial, assisted in strategy development both before and during trial, prepared trial notebooks

**Lodging Accountant**, Mount Snow Ski Resort  
West Dover, Vermont, September 1998 – June 2002

- Responsible for all accounting operations of 200-room timeshare luxury hotel and conference center with annual gross revenue of \$5 million, 1 wholly-owned 100 room hotel, 4 condominiums, 4 restaurants, 2 bars
- Consolidated accounting procedures among 6 properties in order to correct widespread inter-property imbalances in daily audit
- Established reliable, accurate, and timely daily audit procedure by facilitating integration of hotel operations software with accounting software
- Created an Excel-based program to facilitate revenue analysis by market segments
- Designed report analyzing ratios of revenue to occupancy in relation to budget and forecast; presented results at weekly marketing strategy meeting
- Prepared \$2 million annual budget for board approval of homeowner's association; processed over 650 monthly billing statements to individual timeshare owners
- Successfully trained three junior accountants in daily auditing procedures

**Regional Sales Manager**, B.M. Enterprises  
Agawam, Massachusetts, February 1998 – September 1998

- Maintained average monthly sales of \$40,000 through in-home demonstrations; consistently ranked top salesmen in Western Massachusetts during tenure
- Promoted to corporate recruiter and trainer during second month of employment, hired and trained 10 new sales people weekly; Taught classes on motivation and closing techniques

**KENNETH N.M. SUMIDA, M.D****EDUCATION**

1986-1989	Fellowship, Hematology and Medical Oncology, Scripps Clinic and Research Foundation, La Jolla, CA
1985-1986	Chief Resident, Internal Medicine, Oregon Health Sciences University, Portland, OR
1983-1985	Residency, Internal Medicine, Oregon Health Sciences University, Portland, OR
1982-1983	Internship, Straight Medicine, Oregon Health Sciences University, Portland, OR
1978-1982	Doctor of Medicine, John A. Burns School of Medicine, University of Hawaii, Honolulu, HI
1978-1981	MS, Pharmacology, University of Hawaii, Honolulu, HI
1974-1978	BA, with Honors, Microbiology, University of Hawaii, Honolulu, HI

**POSITIONS/APPOINTMENTS**

1991-present	Director of Medical Education, Kuakini Medical Center, Honolulu, HI
1991-2013	Associate Program Director, University of Hawaii Internal Medicine Residency Program, University of Hawaii, John A. Burns School of Medicine, Honolulu, HI
2015-present	Associate Professor, Department of Medicine, University of Hawaii, John A. Burns School of Medicine, Honolulu, HI
1989-2015	Assistant Professor, Department of Medicine, University of Hawaii, John A. Burns School of Medicine, Honolulu, HI
2011-present	Associate Clinical Professor, Clinical and Translational Research Program, University of Hawaii Cancer Center
1989-2011	Clinical Faculty, Cancer Research Center of Hawaii, Honolulu, HI
1989-present	Private Practice Oncologist, OnCare Hawaii, Inc., Honolulu, HI
1998-2001	Vice President, Pacific Medical Administrators Group, Honolulu, Hawaii
1989-present	Active Staff, Kuakini Medical Center, Honolulu, HI
	Active Staff, The Queen's Medical Center, Honolulu, HI
1989-2011	Courtesy Staff, St. Francis Medical Center / Hawaii Medical Center, Honolulu, HI
1992-2010	Courtesy Staff, Kapiolani Medical Center at Pali Momi, Honolulu, HI
1989-2006	Consulting Staff, Kapiolani Medical Center for Women and Children, Honolulu, HI
1986-1989	Medical Staff, Scripps Clinic Medical Group, La Jolla, CA
1985-1986	Clinical Instructor/Chief Resident, Department of Medicine, Oregon Health Sciences University, Portland, OR
1984-1986	Physician, Veterans Administration Medical Center, Vancouver, WA
1983-1985	Physician, Riverside Psychiatric Hospital, Portland, OR
1983-1984	Staff, Kaiser Permanente Medical Group, Portland, OR

**LICENSURE/CERTIFICATION**

Hawaii	License 6645, Expires 01/31/2016
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Certification            American Board of Internal Medicine, Internal Medicine, 1985  
American Board of Internal Medicine, Hematology, 1988  
American Board of Internal Medicine, Medical Oncology, 1989

## OTHER EXPERIENCE

1991-present            Member, Resident Selection Committee, Department of Medicine, University of Hawaii, John A. Burns School of Medicine, Honolulu, HI  
2002-2005            Chairman, Resident Selection Committee, Department of Medicine, University of Hawaii John A. Burns School of Medicine, Honolulu, HI  
1998-2001            Member, Medical School Admissions Committee, University of Hawaii, John A. Burns School of Medicine, Honolulu, HI  
2001-present            Interviewer, Medical School Admissions, University of Hawaii, John A. Burns School of Medicine, Honolulu, HI  
2009-2011            Member, Physicians Advisory Committee, Love Thomas Settlement Agreement, HMSA  
1999-2001            Member, Governors Blue Ribbon Panel on Cancer Care in Hawaii  
2001-present            Member, Clinical Research Advisory Board, Cancer Research Center of Hawaii / University of Hawaii Cancer Center  
2011-present            Member, Data Safety Monitoring Committee, Clinical Trials Unit, University of Hawaii Cancer Center  
1998-1999            Member, Board of Directors, Pacific Health Care, Honolulu, HI  
1997-present            Member, Board of Directors, Kuakini Health Network, a Physician Hospital Organization, Honolulu, HI  
1997-present            Member, Medical Management Committee, Kuakini Health Network, Honolulu, HI  
1997-2011            Chairman, Medical Management Committee, Kuakini Health Network, Honolulu, HI  
1997-2001            Member, Board of Directors, Pacific Medical Administrators Group, Honolulu, HI  
1997-present            Member, Credentials Committee, Pacific Medical Administrators Group, Honolulu, HI  
1989-present            Member, Oncology Committee, Kuakini Medical Center, Honolulu, HI  
1991-2003            Chairman, Oncology Committee, Kuakini Medical Center, Honolulu, HI  
2003 to present            Director of Oncology, Kuakini Medical Center, Honolulu, HI  
1990-1994            Member, Ethics Committee, Kuakini Medical Center, Honolulu, HI  
1991-present            Member, Medical Executive Committee, Kuakini Medical Center, Honolulu, HI  
1991-present            Member, Department of Medicine Steering Committee, Kuakini Medical Center, Honolulu, HI  
1991-present            Member, Medical Care Evaluation Committee, Kuakini Medical Center, Honolulu, HI  
1991-present            Member, Continuing Medical Education Committee, Kuakini Medical Center, Honolulu, HI  
1991-present            Member, Credentials Committee, Kuakini Medical Center, Honolulu, HI  
2009-present            Member, Informatics Committee, Kuakini Medical Center, Honolulu, HI  
1990-1994            Member, Board of Directors, American Cancer Society, Hawaii Division  
1990-1992            Member, Board of Directors, Queen's Cancer Institute, The Queen's Medical Center, Honolulu, HI

## HONORS AND AWARDS

1978    BA with Honors, University of Hawaii  
1998    Alpha Omega Alpha Honor Society, University of Hawaii  
1992    Physician of the Year, Kuakini Medical Center  
2002    Excellence in Teaching Award, University of Hawaii Internal Medicine Residency Program  
2003    Excellence in Teaching Award, University of Hawaii Internal Medicine Residency Program  
2005    Teaching Attending of the Year, Kuakini Medical Center, University of Hawaii Internal Medicine Residency Program  
2014    Senior Medical Student Most Inspirational Faculty, Department of Medicine, University of Hawaii



2009 Clinical Trials Participation Award, Cancer Research Center of Hawaii  
2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015 Best Doctors in America, Inc. / Best Doctors in Hawaii  
2008, 2009, 2010, 2011, 2012, 2013, 2014 Patient's Choice Award, Vitals.com  
2013 Castle Connolly's Top Doctors

## PROFESSIONAL SOCIETIES

Member, American College of Physicians  
Member, American Society of Hematology  
Member, American Society of Clinical Oncology  
Member, Hawaii Society of Clinical Oncology  
Member, Alpha Omega Alpha Medical Society

## CURRENT RESEARCH EXPERIENCE

2010-present	<b>Principal Investigator</b> , National Surgical Adjuvant Breast and Bowel Program (NSABP). Cancer Research Center of Hawaii / University of Hawaii Cancer Center, Honolulu, HI
1989-2014	<b>Sub-Investigator</b> , Hawaii MB-CCOP (Minority-Based Community Clinical Oncology Program) (NIH/NCI, 5 U10 CA63844-15), Cancer Research Center of Hawaii / University of Hawaii Cancer Center, Honolulu, HI
2014-present	Core Faculty, NCORP, University of Hawaii Cancer Center, Honolulu, HI
1989-present	<b>Sub-Investigator</b> , Clinical Trials, The Queen's Cancer Center, The Queen's Medical Center, Honolulu, HI

## SELECTED PEER REVIEW PUBLICATIONS

1. Improvement of long-term survival of colorectal cancer in Japanese-Americans of Hawaii from 1990 to 2001, Masaki Hata, Kazuhiro Sakamoto; Janine Doneza; **Kenneth Sumida**; Kiichi Sugimoto; Shun Ishiyama; Makoto Takahashi; Yutaka Kojima; Yuichi Tomiki; Junji Machi, *International journal of clinical oncology* 2010;15(6):559-64
2. Cardio-Oncology/Onco-Cardiology. Hong RA, Iimura T, **Sumida KN**, Eager RM, *Clin Cardiol.* 2010 Dec;33(12):733-7
3. Assessment of Pain in Older Asian Americans with Cancer. Chung SM, Masaki KH, Somogyi-Zalud E, **Sumida KN**, Wen A, Blanchette PL. *Hawaii Med J.* 2009 Apr; 68(3):62-5.
4. Long-term Outcome of Radiofrequency Ablation for Unresectable Liver Metastases from Colorectal Cancer: Evaluation of Prognostic Factors and Effectiveness in First- and Second-line Management. Machi J, Oishi AJ, **Sumida K**, Sakamoto K, Furumoto NL, Oishi RH, Kylstra JW. *Cancer J.* 2006 Jul-Aug; 12(4): 318-26.

5. Parathyroid Hormone Expression in a Patient with Metastatic Nasopharyngeal Rhabdomyosarcoma and Hypercalcemia. Wong K, Tsuda S, Mukai R, **Sumida K**, Arakaki R. *Endocrine*. 2005 Jun; 27(1):83-6.
6. Prevalence of Venous Thromboembolism at a Teaching Hospital in Okinawa, Japan. Kishimoto M, Lim HY, Tokuda Y, Narita M, Kitazono H, Ito H, Seto TB, **Sumida KN**, Gelber RP. *Thromb Haemost*. 2005 May; 93(5):876-9.
7. Variation in Breast Cancer Management in Hawaii: A Survey of Physician Practice. Gelber RP, **Sumida KN**, Seto TB. *JHQ Online*. 2004 Jul/Aug, pp. W4-1-W4-5.
8. 5-Azacidine: An Alternative Treatment of Myelodysplastic Syndromes in Patient with Refractory Response to Hematopoietic Growth Factor, a Case Report and Review of the Literature. Suwanawiboon B, **Sumida KN**. *Hawaii Med J*. 2004 Jan; 63(1) 14-6, 25.
9. 28 year old Man with Thrombophilia and Hypercalcemia. Acoba JD, **Sumida KN**. *Hawaii Med J*. 2002 Nov; 61(11):254-6, 258
10. Parkinsonism Associated with Interferon Alpha Therapy for Chronic Myelogenous Leukemia. Sarasombath P, **Sumida K**, Kaku DA. *Hawaii Med J*. 2002 Mar; 61(3):48, 57.
11. Ultrasound-guided radiofrequency thermal ablation of liver tumors: percutaneous, laparoscopic, and open surgical Approaches Machi J, Uchida S, **Sumida K**, Limm WM, Hundahl SA, Oishi AJ, Furumoto NL, Oishi RH, *J Gastrointest Surg*. 2001 Sep-Oct;5(5):477-89.
12. Angioimmunoblastic T-cell Lymphoma (AIL-TCL) following Macrolide Administration . Sasaki TY, **Sumida KN**. *Hawaii Med J*. 2000 Feb; 59(2):44-7, 56.
- 13 Significant Increase of Plasma Prostaglandins in Cancer Patients. Hokama Y, Cripps C, **Sumida K**, Mookini RK, Oishi N, Kimura LH, Kobara TY. *Res Commun Chem Pathol Pharmacol*, 1981 Feb; 31(2):379-82.



**TROY M. TANJI, M.D., INC.**

*Eye Physician and Surgeon*



## **CURRICULUM VITAE**

### **CLINICAL APPOINTMENT**

#### **ASSISTANT CLINICAL PROFESSOR**

University of Hawaii John A. Burns School of Medicine  
Department of Surgery  
Division of Ophthalmology  
Honolulu, Hawaii

### **POST-GRADUATE TRAINING**

#### **GLAUCOMA FELLOWSHIP: Doheny Eye Institute**

University of Southern California School of Medicine  
Department of Ophthalmology  
Los Angeles, California  
July 1995-July 1996

#### **RESIDENCY: LSU Eye Center**

Louisiana State University School of Medicine  
Department of Ophthalmology  
New Orleans, Louisiana  
July 1991-June 1995

#### **INTERNSHIP: University of Hawaii Integrated Medical Residency Program**

University of Hawaii John A. Burns School of Medicine  
Department of Internal Medicine  
Honolulu, Hawaii  
June 1990-June 1991

## **EDUCATION**

### **M.D., University of Hawaii John A. Burns School of Medicine**

Honolulu, Hawaii

July 1986-May 1990

### **B.A. with Distinction, University of Hawaii at Manoa**

Major: Zoology

Honolulu, Hawaii

September 1982-May 1986

## **HONORS AND AWARDS**

### **PROFESSIONAL**

Castle Connolly Top Doctors®, 2015

Hawaii Health Care Hero Award (Healthcare Association of Hawaii), 2014

Best Doctors in America®, 2005-2006, 2007-2008, 2009-2010,  
2011-2012, 2013-2014

### **RESIDENCY**

Chief Resident, LSU Eye Center, 1994-1995

LSU Eye Center, Most Outstanding Research Presentation, 1995

### **MEDICAL SCHOOL**

Alpha Omega Alpha Honor Medical Society, 1989

V. Edward Franchville Award in Ophthalmology, 1990

### **UNDERGRADUATE**

Phi Beta Kappa, 1986

Phi Kappa Phi, 1985

Phi Eta Sigma, 1983

University of Hawaii Board of Regents Scholarship, 1985, 1986

University of Hawaii Award for Academic Excellence, 1985, 1986

## **RESEARCH AND PUBLICATIONS**

- Teramoto KM, Tanji TM. Drainage of Choroidal Effusions. In: Aref AA, Varma, R, eds. *Essentials in Ophthalmology: Advanced Glaucoma Surgery*. Philadelphia:Springer, 2015;117-124.
- Tanji TM, Update on Glaucoma Surgery, In: American Academy of Ophthalmology Focal Points: Clinicians' Corner Questions, 2012;volume XXX, number 6:9-13.
- Minckler D, Mosaed S, Dustin L, Francis B, Trabectome Study Group. Trabectome (Trabeculectomy – internal approach): Additional experience and extended follow-up. *Trans Am Ophthalmol Soc* 2008;106:149-160.
- Francis BA, Minckler D, Dustin L, Kawji S, Yeh J, Sit A, Mosaed S, Johnstone M, Trabectome Study Group. Combined cataract extraction and trabeculectomy by internal approach for coexisting cataract and open-angle glaucoma. *J Cataract Refract Surg* 2008;34:1096-1103.
- Tanji TM, Heuer DK. Aqueous shunts. In: Spaeth GL, ed. *Ophthalmic Surgery: Principles and Practice*, third edition. Philadelphia:Saunders, 2003;297-308.

#### RESEARCH AND PUBLICATIONS (continued)

- Kokame GT, DeLeon MDL, Tanji TM. Serous retinal detachment and cystoid macular edema in hypotony maculopathy. *Am J Ophthalmol* 2001;131:384-386.
- Jacob JT, Burgoyne CF, McKinnon SJ, Tanji TM, LaFleur PK, Duzman E. Biocompatibility response to modified Baerveldt glaucoma drains. *J Biomed Mater Res* 1998;43:99-107.
- Tanji TM, Lundy DC, Minckler DS, Heuer DK, Varma R. Fascia lata patch graft in glaucoma tube surgery. *Ophthalmology* 1996;103:1309-1312.
- Tanji TM, Varma R. The Doheny glaucoma outcome study. ARVO Abstract (poster). *Invest Ophthalmol Vis Sci* 1996;37:#1904.
- Jacob-Labarre JT, McKinnon SJ, Tanji TM. Biocompatibility response to modified Baerveldt glaucoma drain. ARVO Abstract (poster). *Invest Ophthalmol Vis Sci* 1996;37:#1164.
- Heckenlively JR, Tanji TM, Logani S. Retrospective study of hyperabnormal (supranormal) electroretinographic responses in 104 patients. *Trans Am Ophthalmol Soc* 1994;92:217-233.
- Logani SC, Logani S, Tanji TM, Heckenlively JR. Retrospective clinical review of supranormal electroretinographic responses. ARVO Abstract (poster). *Invest Ophthalmol Vis Sci* 1994;35:#591.

Tanji TM, Peyman GA, Mehta NJ, Millsap CM. Perfluoroperhydrophenanthrene (Vitreon) as a short-term vitreous substitute after complex vitreoretinal surgery. *Ophthalmol Surg* 1993;24:681-685.

Tsukimura B, Tanji TM, Kamemoto F. Sinus gland activation of cyclic GMP in the mandibular organ of *Homarus americanus*. *Am Zoologist* 1986;26:480.

## **PROFESSIONAL ACTIVITIES**

Vice President, Eye Surgery Center of Hawaii, 2015

Associate Examiner, American Board of Ophthalmology, 2000-2015

Exam Development Committee, American Board of Ophthalmology, 2013-2015

Instructor: Angle/Schlemm Canal Surgery for Adult Open-Angle Glaucoma: Ab

Interno Approach, American Academy of Ophthalmology Skills Transfer course, 2007-2015

Associate Medical Director, Eye Surgery Center of Hawaii, 2011-2015

Volunteer Ophthalmologist, University of Hawaii Athletic Department, 2012-2015

Special Examiner for Prop Development, American Board of Ophthalmology, 2012

Instructor: Implantation of Glaucoma Drainage Devices, American Academy of Ophthalmology Skills Transfer Course, 2010-2011

## **PROFESSIONAL ACTIVITIES (continued)**

Admissions Interviewer, University of Hawaii John A. Burns School of Medicine, 1998-2010

Task Force on Efficient Practice Models, American Academy of Ophthalmology, 2007

Office Record Review Section Reviewer, American Board of Ophthalmology, 2007

Special Associate for Prop Development, American Board of Ophthalmology, 2004-2005

Chairman, Department of Ophthalmology, Kuakini Medical Center, 2000-2002

Peer Reviewer, Ophthalmology, 1996-2004

CME Chairman, Hawaii Ophthalmological Society, 1999-2000

Member at Large, Hawaii Ophthalmological Society, 1999-2000

Treasurer, Hawaii Ophthalmological Society, 1998

Chairman, Hawaii Ophthalmological Society Glaucoma Community Program, 1998-2000

Peer Reviewer, Archives of Ophthalmology, 1998

Advisory Board Member, Hawaii Lions Eye Health Project, 1997

## **COMMUNITY ACTIVITIES**

Board of Counselors, Mid-Pacific Institute, 2007-2014  
Affiliate Member, Leeward Oahu Lions Club, 2001-2013

## **PROFESSIONAL MEMBERSHIPS**

American Academy of Ophthalmology  
American Glaucoma Society  
American Eye Study Club  
Hawaii Medical Association  
Hawaii Ophthalmological Society  
Study Club for Ophthalmic Research in Hawaii

## **CERTIFICATION AND LICENSURE**

Diplomate, American Board of Ophthalmology  
Diplomate, National Board of Medical Examiners  
Hawaii State Medical License  
California State Medical License

Wayne K. Wills  
[REDACTED]  
[REDACTED]  
[REDACTED]

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## **EXECUTIVE LEADERSHIP & MANAGEMENT/OPERATIONS/INVESTIGATIONS PROJECT COORDINATION AND IMPLEMENTATION**

### **Overview**

Highly accomplished leader with over 29 years of law enforcement, investigative and senior managerial experience developing and executing investigations and operations attacking transnational crime. Proven track record of building collaborative teams and coordinating with governmental and private sector partners to achieve positive results. A successful executive leader, manager, supervisor who conducted a myriad of law enforcement duties with a reputation for meeting the most challenging organizational and individual goals and objectives on time and within budget. A pragmatic and focused individual recognized for "making seemingly impossible situations work." I have a proven and verifiable record of:

- Exceptional interaction with groups and individuals. I pride myself in being service oriented.
- Producing higher enforcement outcomes and outputs during a period of shrinking budgets.
- Mastery of bringing together groups with divergent points of views and working and negotiating with the parties towards a common goal.
- Savvy and prowess in supervising and leading individuals and groups to maximize productivity and maintain employee morale.
- Developing and implementing highly successful strategic business plans (short and long term) in the State of Hawaii, Territory of Guam and Commonwealth of the Northern Mariana Islands.
- Developed a reputation among the law enforcement community and private sector partners as an approachable and fair government leader.

### **Professional Experience**

#### **Consultant**

KAI Investigative and Security Services, LLC.  
Honolulu, Hawaii  
January 2016 – Present

Provide consulting and support services for administrative and criminal investigations relating to traditional and non-conventional forms of crime. Well versed in organizational protocols of state, local and federal law enforcement agencies. Strong background in both administrative and operational practices with a specialty in customs and immigration violations. Provide guidance and oversight relating to emerging threats with the aptitude and knowledge to provide security and risk assessments to reduce and mitigate human and physical threats.

#### **Special Agent in Charge (retired)**

U.S. Immigration and Customs Enforcement (ICE)  
Homeland Security Investigations (HSI)  
Honolulu, Hawaii May 2004 – December 31, 2015

As the Special Agent in Charge of the ICE/HSI Honolulu Field Office I manage an enforcement portfolio in both domestic and international law enforcement overseeing criminal investigations targeting: Detection of Fraudulent Documents, Detection of Suspected Terrorists, Identity and Benefit Fraud, Human Trafficking, Unlawful Commerce of Unauthorized and Counterfeit Goods, Drug Smuggling, etc. I provide strategic



direction in managing and supervising over eighty Special Agents and support staff who conduct long-term impact investigations with a nexus to protecting our nation's borders within the State of Hawaii, Territory of Guam and Commonwealth of the Northern Mariana Islands. I am responsible for reviewing and approving operational plans, physical and information security plans, continuity of operation plans (COOP), and conducting extensive liaison activities with local, state, federal, foreign as well as private sector organizations. I am also responsible for day-to-day administrative processes to include processing of personnel actions, management of security clearances and execution of a budget.

**Specific duties, achievements, assets and skills:**

- Presently hold Top Secret – SCI Clearance
- I engineer consensus between parties with disparate and sometimes conflicting agendas through negotiation and diplomacy.
- I understand that proactive management of relations (foreign and domestic) have a profound and direct impact on the effectiveness and success of an organization.
- I monitor and oversee internal controls that have a focus on loss prevention and fraud waste and abuse. I implement strategies to deter, reduce and correct nefarious activity associated with incidents of fraud waste and abuse and loss of product and/or revenue.
- I evaluate the requirements for the deployment of physical security measures that protect the workforce and also incorporate a means to prevent, deter and/or track “insider threats.” The aforementioned includes infrastructure that is Homeland Security Presidential Directive (HSPD12) compliant.
- Investigatory Activities: I oversee, direct and manage an investigative workforce of over eighty personnel that on a day-to day basis, present investigative plans and strategies to address ever so changing threats. Investigative activities are uploaded and tracked in a case management system that will ensure timely recordation of activities and can be accessed by others with a need-to-know.
- I review and manage evidence gathering procedures to ensure that written or other “hard” evidence is gathered in such a manner that is consistent with agency and judicial protocols.
- I regularly review existing local policies and procedures to determine if they are consistent with *meeting missions and agency requirements*. When necessary I engage stakeholders or “tiger teams” to establish or modify protocols and procedures to minimize internal loss, exposure or risks. I direct personnel to maintain complete and accurate case file records (electronic and hard copy). I also ensure that all personnel are both trained and aware of the requirement to safeguard Personal Identifiable Information (PII).
- Response a level of operational readiness, 24/7, to respond to events and emergencies requiring an “all-hands” or “scaled” response.
- I review and modify Continuity of Operations Plans (COOP) to ensure operational resilience in the wake of a man-made or natural emergency/disaster.
- I implement, engineer, authorize and deploy instruments, hardware and technology (to include the use of IT data) as part of the office's security program to protect the workforce, facilities and other capitalized property.
- Management Activities: I manage and monitor assignments in such a way that the outputs and outcomes are delivered within requisite timeframes and fiscal boundaries (if applicable). I approach day-to-day administrative and investigative functions from a global perspective but have the experience and ability to hone in on threat and vulnerabilities quickly and act upon or direct those activities effectively. I clearly recognize that many decisions warrant the inclusion of partners and stakeholders such as the legal or

public affairs teams.

- I aggressively and proactively build coalitions and developed personal relationships with a wide array of leaders and organizations within the Pacific theater. These interactions include politicians, private sector CEOs, homeland security advisors, military flag and general officers, etc.
- I forge, encourage, develop, facilitate and foster partnerships with state, local federal and foreign law enforcement partners.
- I examine and identify Information Technology (IT) needs for stated mission and convey those requirements to IT experts to ensure proper access to technological assets are provided to employees in order to meet mission critical requirements.
- Strong analytical and writing skills. Proficient with Microsoft Office apps.
- Exceptional and proven experience in building and maintaining relationships across organizations and with a diverse spectrum of internal and external stakeholders.
- I have, maintain and have access to a network of Federal, State, Local law and Foreign law enforcement officials that have the ability to effect positive change and maintain a secure environment and/or respond to significant incidents.

#### Additional Experience

**Associate Special Agent in Charge**, U.S. Immigration and Customs Enforcement; March 2003 – August 2003; San Diego, California

**Assistant Special Agent in Charge**, ICE: Honolulu, Hawaii, August 2003 – May 2004

**Deputy District Director**, U.S. Immigration and Naturalization Service; November 1999 - March 2003; Honolulu, Hawaii

**Deputy Assistant Regional Director**, U.S. Border Patrol; May 1998 - November 1999; Laguna Niguel, California

**Supervisory Special Agent**, INS: Agana, Guam, October 1996 – May 1998

**Special Agent**, INS: Honolulu, Hawaii, June 1993 - October 1996

**Senior Inspector**, INS: Honolulu, Hawaii, March 1991 – June 1993

**Border Patrol Agent**, U.S. Border Patrol: San Diego, California, June 1986 – March 1991

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#### **Education**

**University of Hawaii**

**BACHELOR OF ARTS DEGREE, 1985**

**Communications**

**U.S. Naval Postgraduate School** - Pacific Executive Leaders Program, March 2013

**U.S. Naval Postgraduate School** – Fusion Center Leaders Course, November 2012

## **Wayne K. Wills**

### **EXECUTIVE LEADERSHIP & MANAGEMENT/PROJECT COORDINATION AND IMPLEMENTATION/ASSET AND FACILITIES MANAGEMENT**

#### **Overview**

Highly accomplished leader with over 29 years of law enforcement, investigative and senior managerial experience developing and execution of projects within the ICE portfolio. Proven track record of building collaborative teams and coordinating with governmental and private sector partners to achieve positive results. A successful executive leader, manager, supervisor with a reputation for meeting the most challenging organizational and individual goals and objectives on time and within budget.

From January of 2015 to September 2015 temporarily assigned to ICE HQ (Washington, DC) as the Executive Director for Asset and Facilities Management – **Senior Executive Service (SES)**:

#### **Asset Management Directorate:**

- ✓ Fleet program of over 12,000 vehicles;
- ✓ Administration of the health and safety program for over 20,000 employees;
- ✓ Management and accountability for all capitalized and personal property;
- ✓ Transportation contract within the National Capital Region (DC);
- ✓ Oversight of worldwide mail management program for ICE.

#### **Facilities Management Directorate:**

- ✓ Administration of approximately 600 occupancy agreements at federal facilities or commercial space.
- ✓ Over 200 active projects (includes both construction and tenant improvements, this could range from \$3K – over \$25Mil).
- ✓ Construction, remediation, capital improvements at 18 ICE/DHS “owned” facilities.
- ✓ Responsible for the review, reconciliation, administration and payment of the monthly rent bills related to the 600 occupancy agreements - annualized, over \$300Mil.
- ✓ Led and collaborated with a team of Deloitte experts to build solutions for complex scenarios with a focus to provide superior customer support.
- ✓ Administration of a budget of over \$65Mil that relates to construction and improvements.
- ✓ Work on regular basis with ICE Office of Professional Responsibility on security related requirements for all new projects.

# key personnel



## Steven D. Wong, AIA, DBIA, PRINCIPAL ARCHITECT

Mr. Steve Wong's professional experience covers a broad spectrum of architectural projects for government agencies, as well as for the private sector. As Vice-President and Principal-in-Charge of the firm's Architectural Division, he has been the lead designer and manager for most of the firm's major projects. Mr. Wong is well qualified as one of the project architects to design projects in the areas of education, healthcare, multi-family residential, single-family residential, commercial and laboratory design. He has been with Mitsunaga & Associates, Inc. for the past 28 years.

Beyond Mr. Wong's specialty with architectural design, he is also a very capable contract administrator. During his affiliation with Mitsunaga & Associates, Inc., he has competently filled roles of Construction Manager, Project Architect, and Building Inspector on a variety of projects. His knowledge of the responsibilities of the differing professional roles has allowed him to become a reliable component of our past project teams.

### Education

University of Hawaii  
at Manoa - BARCH,  
Architecture, 1971,

### Professional Registration

Registered  
Architect:  
State of Hawaii,  
AR-4646

Design-Build  
Institute of America  
Professional (DBIA),  
#140977

Affiliations  
American Institute  
of Architect (AIA)

National Historic  
Foundation

### Project Experience:

- **Central Lab & Maintenance Facility**  
Honolulu, Oahu, Hawai'i
- **Board of Water Supply, Microbiology Laboratory**  
Honolulu, Oahu, Hawai'i
- **University of Hawaii Bio-Medical Building**  
Honolulu, Oahu, Hawai'i
- **Queen Medical Center - Pauahi Tower Water Infiltration Remedial Work**  
Honolulu, Oahu, Hawai'i
- **Camp Walker Middle/High School**  
Daegu, South Korea
- **Queen Medical Center - General Services Building, Phase I & II**  
Honolulu, Oahu, Hawai'i
- **Queen Medical Center - Ambulatory Care Clinic**  
Honolulu, Oahu, Hawai'i
- **Queen Medical Center - Same Day Surgery**  
Honolulu, Oahu, Hawai'i
- **Osan Elementary School**  
Osan, South Korea
- **St. Francis Medical Center - Renal Dialysis Addition at Hilo Hospital**  
Hilo, Island of Hawai'i
- **Manoa Valley District Park Master Plan**  
Honolulu, Oahu, Hawai'i
- **Kapolei High School Master Plan**  
Kapolei, Oahu, Hawai'i
- **Maryknoll Community Center**  
Honolulu, Oahu, Hawai'i
- **Mokuola Vista Senior Rentals**  
Honolulu, Oahu, Hawai'i
- **Wilder Vista Family Rentals**  
Honolulu, Oahu, Hawai'i
- **Kalakaua Vista Senior Rentals**  
Honolulu, Oahu, Hawai'i

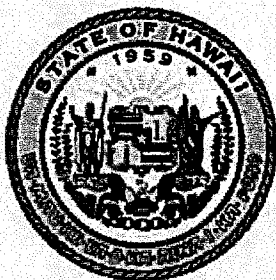
# About Mitsunaga & Associates, Inc. in Healthcare

Mitsunaga & Associates, Inc (MAI) provides an innovative, creative and highly collaborative approach to healthcare projects. MAI utilizes client input, cultural knowledge and information from current and trending healthcare practices to create quality design. MAI is familiar with accelerated time lines and has the ability to complete projects quickly and efficiently. In addition, MAI has gained an understanding of healthcare facilities' operational restrictions and needs. Each discipline at Mitsunaga & Associates, Inc. has contributed to a wide variety of healthcare projects. MAI has experience in renovation and new construction projects in architecture, civil engineering, structural engineering, mechanical engineering, electrical engineering and construction management.



The Queen's Medical Center Pauahi Tower

Mitsunaga & Associates, Inc. also works with a variety of clients from the private and public



**KAPI'OLANI**  
MEDICAL CENTER  
FOR WOMEN & CHILDREN  
An Affiliate of Hawaii Pacific Health

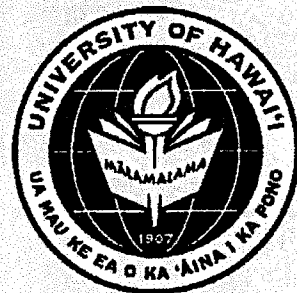


**THE QUEEN'S**  
MEDICAL CENTER

**STRAUB**  
CLINIC & HOSPITAL  
An Affiliate of Hawaii Pacific Health



Kapi'olani Health System  
A Health Care Organization  
Caring In Our Tradition



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

AGH has a detailed plan for operating 2 Dispensaries and 2 Production Centers in Honolulu County in compliance with the Department of Health (DOH) Administrative Rules 11-850 governing MMJ Dispensaries (the Rules). We provide a summary below and attach additional comprehensive details as appendices. **AGH's team has great experience in start-ups, project management, real estate development, and construction in Hawaii and across North America. AGH's industry team has built and operates licensed MMJ dispensaries and grows in both Colorado and Canada.** AGH developed policies and procedures to focus on patient safety, product safety and public safety.

AGH's staffing plan is built upon a strong management team consisting of individuals highly experienced in the MMJ industry, patient education, safety, security, compliance, regulated business, pharmaceuticals, scientific research, agriculture, and community outreach. AGH provides written policies and procedures governing the qualifications, recruitment, hiring, and training of employees of production centers and dispensary locations in accordance with Rules 11-850-34. See our attached staffing plan for more information **Appendix 2(a) - Human Resources Staffing and Development Plan**. In addition, further training will be provided to employees on i) health, safety, and sanitation standards; ii) security protocols; iii) prohibitions and enforcement; iv) confidentiality; and v) any other topics set out by the DOH.

AGH will focus on hiring residents of Hawaii and send them to Starbuds dispensaries, our cultivation partner, in Colorado for MMJ cultivating and dispensing training. See **Appendix 2(b) - AGH Organizational Chart** for the company structure. **AGH's goal is 1) to establish best practices and bring knowledge from around the world to Hawaii to kick-start a made-in-Hawaii MMJ industry; and 2) to create new knowledge on MMJ through local research (see Appendix 2(c) - Research Plan).** A core focus of AGH is to create new and ground breaking knowledge in medicine and agriculture related to MMJ. AGH plans to donate 5% of profits to local charities and an additional 5 % of profits to scientific research. AGH has a Medical Advisory Board with decades of research experience and advisors who are



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

internationally recognized in their fields. AGH hopes to use this opportunity to put the State of Hawaii at the forefront of new MMJ research due to the islands' secure borders and favourable growing conditions.

**Production Center Plan Summary:** AGH is fully funded and has on-demand access to additional resources as needed to build and operate a DOH compliant production center capable of meeting patient needs (see **Appendix 2(d) – Financial Letters of Intent**). AGH made significant investments into planning and design to provide MMJ product to patients as quickly as possible upon license award.

AGH plans to use 2 indoor, fully secured, solar production centers in [REDACTED]. The address of the production centers is [REDACTED]. We have leased [REDACTED] out of the available [REDACTED] have owned and operated [REDACTED] and are excited to expand their agricultural pursuits while working with AGH. Dr. CN Lee, agriculture specialist, confirms that the site is located on good agricultural land with ideal sun, temperature, humidity, sufficient water (existing private well and aquaponic ponds) and accessible power (situated on working farm with proximity to power lines). AGH and [REDACTED] predicts there are synergies between our operations; for example, [REDACTED]

[REDACTED] The site is located in accordance with the distance restrictions and requirements set out in the Rule 11-850-8(c) (See **Appendix 2(e) - [REDACTED] Farm Location Map**). Our solar production centers are secured enclosed indoor facility with an interior not visible from the outside as required under Rule 11-850-32. **Our production centers will each be built with the following features:**

- a concrete foundation with solid sheet metal walls enclosing an indoor facility that is secure and not visible from the exterior;
- an opaque, light diffusing roof of hurricane resistant polycarbonate tiles allowing sunlight in and reducing the need for artificial lighting;



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

- artificial lighting to supplement sunlight to maximize growth during the plant's vegetative stage; and
- carbon dioxide (CO<sub>2</sub>) generators to improve plant growth.

Our production centers will be built in two phases on the same 2-acres. Initially, AGH plans to build a 7920 sq. ft. steel walled, polycarbonate roof, solar production center designed by Nexus Corp. with support building in order to meet **our target October 13, 2016 patient sale start date** (the Nexus Solar Production Center) (see **Appendix 2(f) - Summary of the Nexus Solar Production Center** for details).

The second phase is the construction of a 14,979 sq. ft. steel walled, polycarbonate roof fully-sealed, environmentally controlled solar production center designed by Surna Inc. for increased production efficiency, improved product quality and lower patient product costs (the Surna Solar Production Center) (see **Appendix 2(g) - Summary of the Surna Solar Production Center** for details). AGH selected the smaller Nexus Solar Production Center because it falls within permitting exemptions for its size and use on agricultural land (see HI Rev Stat § 46-88 (2013), and allows AGH to quickly and easily begin production. The decision to build the larger Surna Solar Production Center will be based on market demand and patient need. See **Appendix 2(h) - Plans for Nexus Solar Production Center and Appendix 2(i) - Plans for Surna Solar Production Center** for technical drawings and more information. AGH is able to work closely with Nexus and Surna through our experienced grow team, agricultural consultant, and our architect consultant. Steven D. Wong, AGH's Architect Consultant, is a Professional Architect in Hawaii who specializes in hospitals, medical facilities, and laboratories projects. **Steven will ensure that each production center complies with local code and addresses the unique challenges of manufacturing in Hawaii, including the sustainable energy use, water consumption, and waste.**

**Dispensaries Plan Summary:** We have 2 dispensing locations located at [REDACTED] and [REDACTED] selected for their inherent safety and accessibility (see **Appendix 2(j) – Signed Property Lease Offers**). These locations are confirmed by





**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

Newark Grubb to be located at least 750 feet from restricted property as required under Rule 11-850-8 (see **Appendix 2(k) - Suitability Letters**). For more information, see **Application Section 5(c)** and **Appendix 5(c)(3) – Dispensary Layout** for more detailed plans on the dispensary design and layout.

**Start-Up Timeline:** AGH understands the need for qualifying patients to access MMJ therapies as soon as possible. We have carefully planned out, step-by-step, the project milestones for a successful on budget and on time launch for qualifying patient sales. **We intend to be operational and dispensing to qualifying patients 6 – 9 months from award of the license (target date October 13, 2016)** (see **Appendix 2(l) – Detailed Start-Up Timeline** for opening plan with specific dates and milestones).

**Production Plan and Forecasting Demand**

AGH's first MMJ harvest will be on October 1, 2016. Beyond the start-up phase and the first harvest, AGH intends to begin a new grow cycle and harvest with the same temporal cycle of vegetation, flowering, harvesting, trimming, curing and processing. The only difference is that instead of seed germination, AGH will clip cuttings from the original plant and grow from clones. See **Appendix 2(m) – Grow Plan** for further details on the type of grow, lighting, irrigation and control systems.

**On average, AGH will harvest once every 3 months. As a result, AGH anticipates 4 growth cycles during the first year of operations.** The harvest time (drying, trimming, curing and processing) is not factored into these cycles because drying occurs concurrently with planting of the next batch of clones in the same grow room. Once dried, the harvested plants are moved into a separate processing room to complete trimming, curing and process. **Based on projected patient need, AGH plans on harvesting up to [REDACTED] of MMJ in the first year of operations.** AGH may need to modify its initial production, depending on patient demand.

AGH based 2016 demand on the calculation that there are 12,638 registered qualified patients enrolled in the MMJ Registry Program; that 23% reside in Oahu (2907); and that three MMJ Dispensary



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

Licenses will be issued for Oahu. As Hawaii's medical need in terms of qualifying patients and prescription dose is uncertain, AGH based 2017 estimates on Colorado's Department of Revenue information during 2011-2012 (first year of licensed medical dispensaries). AGH estimates that a total population of est. 991,789 (2014) resides in the City and County of Honolulu. As a result, AGH estimates that there to be roughly 19,835 qualifying patients to be serviced by 3 license holders (6611 patients each). Therefore, AGH expects that at the beginning of the MMJ Dispensary Licensing Program the number of qualifying patients in the City and County of Honolulu to be between 2907 and 19,835.

AGH prepared financials based on patient volumes amount to 1% of the population of the City and County of Honolulu (less than the 2% in Colorado) with a patient capture of 20% (vs. 33.3% if evenly distributed among dispensaries) due to supply by caregivers growers under the MMJ Registry Program, and the black market. AGH forecasts 1984 qualifying patients purchasing an average 0.9 g of dried MMJ daily dose per qualifying patient and a \$15 per gram retail price in 2016. On a monthly basis, AGH will evaluate the estimated monthly usage against the forecasted usage and will make adjustments on the amount of MMJ it is producing, based on qualifying patient need.

**Insurance**

AGH is prepared for unforeseen events through its well documented standard operating procedures. In the event of an insurable event, AGH has researched comprehensive MMJ-specific liability insurance policies (see **Appendix 2(o) – Liability Insurance Policy**).

**AGH has a highly capable professional team with a comprehensive plan to operate a MMJ dispensary in Honolulu focused on patient safety, product safety and public safety.**



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

**Appendix List**

Title	Page
2(a) – Human Resources Staffing and Development Plan .....	7
2(b) – AHG Organizational Chart .....	21
2(c) – Research Plan .....	22
2(d) – Financial Letters of Intent .....	26
2(e) – [REDACTED] Location Map .....	29
2(f) – Summary of Nexus Solar Production Center .....	30
2(g) – Summary of Surna Solar Production Center .....	32
2(h) – Plans for Nexus Solar Production Center .....	35
2(i) – Plans for Surna Solar Production Center .....	43
2(j) – Signed Property Lease Offers .....	53
2(k) – Suitability Letters .....	60
2(l) – Detailed Start-Up Timeline .....	63
2(m) – Grow Plan .....	66
2(n) – Liability Insurance Policy .....	71



2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations

## **Appendix 2A - Human Resources General Staffing and Development Plan**

The following policies and procedures comply with the requirement under Rule §11-850-34.

### **1. Summary of Roles and Responsibilities**

**Chief Executive Officer/President** (0.5 FTE) has general charge, control and supervision of the business and affairs of AGH. CEO reports to the Board of Directors.

The **Chief Operating Officer** (1 FTE) oversees the daily operations of AGH, creates operation strategies and policies, manages human resources, provides oversight of overall budget, regulatory compliance, governmental relations and community engagement. The **Chief Financial Officer** (0.5 FTE) manages AGH's financial situation/risk, prepares books of account records, maintains accounting records, and establishes accounting procedures. The **Chief Medical Officer** (0.25 FTE) provides oversight of patient education materials and actively engages in research regarding the efficacy and use of MMJ. The **Compliance Officer/General Counsel** (0.5 FTE) monitors AGH's compliance with laws, and provides legal advice on corporate and stakeholder issues. All of these individuals report to the CEO.

The remainder of AGH staff will be divided into Cultivating staff and Dispensing staff.

The **Head of Cultivating** (1 FTE) manages the cultivating process and trains and manages all employees involved in the Cultivating Process. The Growers are responsible for growing the MMJ plants (rooting, fertilizing, watering, staking, chopping, and harvest). AGH will need (2 x 1 FTE) **Growers** when fully operational. AGH will need (3 x 0.5 FTE) **Trimmers** to trim the dried MMJ by machine and by hand using electric scissors and use airtight jars for curing. The **Director of Product & Manufacturing** (1 FTE) is responsible for MIP made with CO2 extraction technology and all product laboratory testing, stocks and restocks of the dispensary and vaults, product quality control, and product safety. Part-time Individuals will be cross-trained to perform more than one function to allow for greater employment continuity depending on the harvest cycle (for example, a 0.5 FTE Grower can also be a 0.5 FTE Trimmer). The **Executive**



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

**Consultant on Agriculture** (0.5 FTE) is responsible for providing local agriculture advice to the Cultivating Team specific to the local microclimate terroir, regulations, and growing conditions for the island of Oahu. The Head of Cultivating reports to the COO. The Cultivating staff, including the Director of Product & Manufacturing, reports to the Head of Cultivating.

The **Head of Dispensing** (1 FTE) will manage day-to-day dispensary operations and controls, be responsible for the dispensing process, and train and manage of all employees involved in the dispensing process. The Head of Dispensing will work closely with the Head of Cultivating and out-of-state MMJ consultants to implement MMJ dispensary best practices in accordance with written policies and procedures. The **Receptionist** (2 x 1 FTE) registers qualifying patients with AGH, and verifies documentation and patient status before recording qualifying patient information, and managing patient issues. The **Patient Education Specialist** (1 FTE) answers questions from qualifying patients and provides information about strains of MMJ provided by AGH, the types of MMJ products offered, the methods of consumption, the suggested dosage amounts for particular products, the health effects of MMJ, addiction prevention information, and Federal and State laws relating to MMJ. The **Addiction Prevention & Patient Counsellor** (0.5 FTE) prepares all patient education materials for the Patient Education Specialist and provides patient addiction and medical counselling if necessary.

The **Product Dispensers** (5 x 1 FTE) dispense MMJ flowers, and MIPs to qualifying patients. The **Cashiers** (2 x 1 FTE) weigh the final MMJ flower buds and MIP and obtains payment from the qualifying patient.

The **Security Guards** (5 x 1 FTE) monitor and manage the safety and security of qualifying patients, and employees; and ensure the security of MMJ plants and final products. The Security Guards report to the Director of Security and Anti-Diversion. The **Director of Security and Anti-Diversion** (1 FTE) reports to



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

the COO and manages security force, alarm systems, security equipment, and relationship with local law enforcement and emergency services.

The **Inventory Control Manager** (1 FTE) with the Head of Dispensing double checks all reports, oversees, the storing, tracking, counting, and safekeeping of receipts and MMJ products, and performs the inventory audits for AGH. On a daily basis, with the Head of Dispensing, will conduct the daily close to insure that the daily sale of product balances with the inventor control system, that the receipts balance with the register receipts, and that all remaining product balances to the inventory manifest and along with receipts are placed in the cash vault at the end of each business day. The Inventory Control Manager reports to the CFO. All inventory and receipt reports will be reviewed by the CFO.

**2. Staff Recruitment and Hiring Plan**

The following are the qualifications and experiences required for each position:

**CEO/President:** over 15 years experience of running and managing a business, with demonstrated strong leadership abilities and teamwork experience .

**CFO:** Over 8 years experience of financial management. CPA preferred.

**CMO:** Over 15 years experience practicing medicine with preference to medical specialists with clinical trial experience or working relationships with public or private research programs; demonstrated interest in policy making and strong leadership abilities.

**Compliance Officer/General Counsel:** Over 15 years experience providing regulatory and corporate legal services to regulated businesses.

**Director of Security and Anti-Diversion:** Over 15 years experience in law enforcement or security services, with demonstrated leadership and management capabilities.

**Executive Consultant on Security and Anti-Diversion:** Over 20 years experience in law enforcement, security in regulated industry and security-related matters.



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

**Addiction Prevention & Patient Counsellor:** Over 3 years experience providing patient counselling and substance abuse treatment.

**Head of Cultivating:** Over 4 years experience as a commercial grower with varied MMJ grow experience (indoor/outdoor); demonstrated ability to manage issues pertaining to disease, and other cultivation issues.

**Growers:** No prior experience is necessary, but gardening experience is a benefit. On the job training will be provided. Demonstrated strong work ethic in prior positions and ability to engage in manual labour.

**Trimmers:** No prior experience necessary. On the job training will be provided. Demonstrated strong work ethic in prior positions and attention to detail.

**Director of Products and Manufacturing:** Over 2 years experience in biochemistry or manufacturing. Preferred medical, chemistry or biochemistry experience in previous job or education.

**Executive Consultant on Agriculture:** Over 15 years experience with local agricultural and horticultural growing conditions in Hawaii, specifically Oahu Island.

**Head of Dispensing:** Over 4 years experience with managing retail or service industry, with demonstrated leadership and management capabilities.

**Inventory Control Manager:** Over 2 years experience in retail or financial audit.

**Receptionist:** Over 1 year experience in executive assistant or secretarial role. Must be attention-to-detail orientated.

**Patient Education Specialist:** Over 1 year in service or hospitality related industry. Must demonstrate significant knowledge in MMJ, including strain types and their effects, types of MMJ products offered by AGH, methods of MMJ consumption, suggested dosage amounts, the health effects of MMJ, and addiction prevention information and Federal and State law relating to MMJ.



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

**Product Dispenser:** Must demonstrate significant knowledge similar to Patient Education Specialist role.

Prior retail sales experience required, with capability to provide outstanding customer service. Able to work on feet for lengthy periods of time.

**Cashier:** Prior experience as a cashier or managing receipts required. Demonstrated excellent work ethic in prior positions.

**Security Guards:** Must be former, auxiliary or current police officers, former military, or trained security specialists with active license to carry arms.

All open positions will be advertised in the local paper and on two online Internet job sites, listing the position description, workweek, hourly compensation range and benefits. Any employee candidate must complete an employment application and submit a job application. Each candidate will undergo an initial screening interview by the immediate supervisor and then, if recommended, interview with the COO. An offer of employment is conditional on the candidate passing all background check administered by AGH and the DOH, in accordance with AGH's policy titled "Conducting and Maintaining Background Checks". AGH shall seek out candidates with diverse employment backgrounds: experience with fast-paced, high-touch guest-oriented or foodservice environments, such as hotels and restaurants; retail pharmacies; and health care clinics. Qualified production center candidates may likely emerge from agriculture and botany programs at the University of Hawaii, local farming operations, or other work environments that require an extreme attentiveness to detail.

**3. Human Resources Policies**

**(a) Wages**

The following is a list of proposed wages for the first year of operation for AGH.

CEO:

[REDACTED]

COO:

[REDACTED]





**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

CFO: [REDACTED]

CMO: [REDACTED]

Compliance Officer/General Counsel: [REDACTED]

Director of Security & Anti-Diversion: [REDACTED]

Addiction Prevention & Patient Counsellor: [REDACTED]

Head of Cultivating: [REDACTED]

Growers: [REDACTED]

Trimmers: [REDACTED]

Director of Products and Manufacturing: [REDACTED]

Executive Consultant on Agriculture: [REDACTED]

Head of Dispensing: [REDACTED]

Inventory Control Manager: [REDACTED]

Receptionist: [REDACTED]

Patient Education Specialist: [REDACTED]

Product Dispenser: [REDACTED]

Cashier: [REDACTED]

Security Guards: [REDACTED]

**(b) Opportunities for Advancement**

When a non-exempt position opportunity arises (either laterally or for advancement), AGH will post the position internally first. AGH prefers to advance a current employee internally if the candidate is qualified and is in "good standing", meaning they are not in the midst of any disciplinary proceedings and their performance in the current position is commendable.

**(c) Benefits**



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

AGH will offer all employees the following benefits:

Group Health and Dental Insurance: AGH plans to offer a generous health and dental insurance plan. AGH will determine the level of employer contribution. Before coverage (family, two-person, or individual) becomes effective, the employee must authorize payroll deductions.

Vacation: Vacation rates for all employee who work 40 hours per week are earned each pay period per the below schedule. These amounts will be prorated for part-time employees who work at least 20 hours per week.

- Employees earn 3.08 hours (2 weeks) in their first year;
- Employees begin earning 4.62 hours (3 weeks) beginning on his/her one year anniversary;
- Employees begin earning 6.15 hours (4 weeks) beginning on his/her five-year anniversary.

Holidays: On a fiscal year basis, AGH recognizes all official State and Federal holidays in accordance with HRS §329D-6(e).

Sick Leave: Full-time employees shall accrue 8 hours of paid sick leave per month of active employment or paid leave (not including leaves covered by insurance or Workers Compensation). Sick time will be prorated for part-time employees who work at least 20 hours per week.

Bereavement Leave: In the event of the death of a child, spouse/partner, parent, sibling, grandparent, grandchild, parent of spouse/partner or person living in the household, employees may be granted up to three (3) days of paid bereavement leave within 7 days of the date of death.

Leave of Absence: An employee may request an unpaid leave of absence for reasons unrelated to the Hawaii Family Leave Law or the Family and Medical Leave Act, by applying in writing to his/her supervisor.

COBRA: AGH will comply with federal COBRA regulations that provide for limited continuation of health and dental coverage for employees and their families following termination, divorce, death or if a child reaches the age limitation of the insurance plan.



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

Workers' Compensation: AGH will carry a Workers' Compensation insurance policy. If an employee is injured as a result of accident or illness on the job, he/she may be eligible for Worker's Compensation Benefits. The amount of benefits payable and the duration of payment depend upon the nature of the injury or illness.

Unemployment Compensation Benefits: In the event of separation from AGH, an employee may or may not be eligible to receive unemployment compensation benefits by applying to a local office of the Department of Employment & Training. Accordingly, AGH will follow current laws in issuing an informational notice to all separating employees advising them of their right to claim for unemployment insurance benefits.

Retirement and 401K: Employees who worked a minimum of 12 months as of June 30th may be eligible to participate in AGH's 401 K retirement plan.

**(d) Workplace Environment**

All employees of AGH should be treated to a workplace environment required by law.

Equal opportunity and non-discrimination will be given in all aspects of the employment relationship, including hiring, promotion, transfer, selection for training opportunities, wage, benefits, and salary administration.

AGH shall actively recruit women, veterans, Native Hawaiians, Native Americans, local residents of Hawaii, and minorities. AGH welcomes applications from people with disabilities, and is committed to making adjustments and promoting accessibility to reasonably accommodate employees and other persons with disabilities.

The workplace shall be free from any harassment (sexual, bullying, or any other reason or type of harassment).

Violent behavior of any kind, or threats of violence, either implied or direct, are prohibited on the dispensary property and at dispensary sponsored events. Such conduct by a dispensary employee will not be



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

tolerated. An employee who exhibits violent behavior may be subject to criminal prosecution and shall be subject to disciplinary action up to and including dismissal. Violent threats or actions by a non-employee (such as a customer, visitor, or former employee) may result in criminal prosecution. The dispensing organization will investigate all complaints filed and any possible violation of this policy of which we are made aware. Retaliation against a person making a complaint regarding violent behavior or threats of violence made to him/her is also prohibited.

Non-exempt hourly employees who work over 40 hours in a workweek will be paid overtime.

Employees will be paid full regular pay for the first 3 days of jury duty, and thereafter will be paid the difference between the employee's regular compensation and the compensation received from the court. Employees are entitled to unpaid time off for witness duty.

Full-time female employees who have been employed at least 6 consecutive months are entitled to maternity leave in accordance with Hawaii's Family Leave Law, which provides 4 weeks of unpaid leave per child.

An employee may take a leave of absence for military or reserve duty in accordance with Federal and State law, and the employee will be paid the difference, for a period of up to 10 days, of the difference between their regular salary and their military pay.

Employees will be covered under AGH's workers' compensation insurance policy.

No employee will have to work more than 6 hours without at least a 30-minute meal break.

The dispensary will initially provide three sets of uniforms for each staff member. Uniforms will consist of: pocketless black "casino" pants and pocketless polo shirts (short sleeves and long sleeves). The polo shirts will have the dispensary logo printed on the front. Color of the polo is determined by dispensary position: security will wear black; Patient Consultants will wear heather gray; reception will wear white; and managerial staff will wear green.



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

We believe that the DOH can trust that our experienced and credible team are capable of executing our plan thus helping to ensure that the local community and public at large remain confident in the regulatory regime established to oversee the MMJ industry as it develops.

As a new industry in Hawaii, we believe it is important to establish integrated and adaptive management frameworks for corrective and preventative actions. There will be growing pains and a strong local executive management team and advisory board will guide our strategy. Our management team is experienced in establishing and implementing a corrective action process. The steps include: i) locating and documenting the root cause of any non-conforming issue without regards to appearance; ii) eliminating the recurrence of that issue through a thorough review of that non-conformity issue; iii) analyzing the effect such a nonconformity may have had on a product or service produced before the nonconformity was discovered and taking immediate and corrective action; and iv) establishing revised protocols to prevent recurrence.

**4. Employee Training and Development**

AGH recognizes that newly hired employees may be unfamiliar with palliative care and MMJ role in helping address debilitating conditions of qualifying patients. New employees may not have worked in a regulated and high profile environment. Therefore, AGH will invest heavily in training and ongoing education for all employees, no matter their incoming experience or role within the organization.

AGH's staff development plan is based on training by both the employee's supervisor and by the employee's experienced peers. AGH's philosophy is to cross-train each employee within the Cultivating or the Dispensing departments so that an employee can rotate through different positions if the employee wishes, but also to allow AGH staffing flexibility when certain employees are unavailable due to vacation, illness or other leaves of absence.



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

Each employee receives compliance training upon hire and on an annual follow-up basis. The compliance training provides information and reinforces the employee's understanding of: the mission of AGH to provide high quality medicine using socially responsible and environmentally sustainable methods while supporting the local community and promoting new medical research; the vision of AGH to uphold the tenets of patient safety, product safety and public safety.

Overall company policy review will include the following topics:

- Harassment policy (reviewed upon hire and annually with employee);
- Equal employment opportunity;
- Worksite safety;
- Anti-diversion;
- Production center and Dispensary access and security protocols;
- Confidentiality, patient privacy, and HIPAA compliance;
- Disaster preparedness;
- Alcohol and drug free work policy;
- Employee performance evaluations;
- Exempt vs. Non-Exempt and Overtime Classification;
- Hawaii Family Leave Act ("HFLA") (eligibility and rights);
- Benefits;
- Whistleblower policy and reporting wrongdoing.

In addition, employee compliance training ensures that employees understand AGH's employee handbook, including policies such as: the right of AGH to conduct 24/7 video surveillance in all areas of the production center and the dispensaries; the right of AGH to conduct personal searches (consistent with State law); the prohibition of illegal drug or alcohol use while working and prohibition on bringing any illegal drugs or



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

alcohol to work; AGH as a smoke-free environment; AGH as a harassment free environment; safety responsibilities of the employee; workplace violence prevention; and guidelines for appropriate conduct while at work. A copy of the employee handbook is provided to each new hire, and each individual must return a signed attestation that they have read it, understand it, and agree to comply with it within a week of its receipt.

In addition, each employee must undergo a comprehensive training program to ensure he/she performs his or her job function at a high level. The employee is tested to confirm they demonstrate a measurable skill and knowledge. The training includes Company written training materials for each specific job function and detailed on-the-job training by the employee's supervisor. AGH tailors training to the roles and responsibilities of each employee.

After initial training, employees receive a minimum eight (8) hours of on-going training annually.

Position-specific training will vary by role and responsibility. The following are examples based on key employment role groupings with a training outline.

**Dispensary employee - Level 1 (2 weeks)**

- Viewing BioTrack instructional videos and materials, position specific;
- Patient education/cannabinoid dosing and therapies information;
- one-day learning tour of production center to provide exposure;
- full-week of job shadowing current employee team member;
- operating manual walk-through including: patient identification, supply limit compliance, proper packaging and labelling, cash handling; and
- final testing of knowledge requires a 100% score.

**General cultivation employee - (1 week training/1 months job shadowing)**

- viewing BioTrack instructional videos and materials, position specific;



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

- manual provided and testing on subjects include: seed germination, sexing, cloning, transplanting, strain differentiation, pruning, training, watering, nutrient mixing, ph maintenance, data-logging, light adjustment, humidity and temperature controls, life-cycle determination, mould and pest identification, nutrient-deficiency identification, drying, curing, trimming, cleaning and sterilization of production center;
- One-day learning tour of dispensary;
- On-going reviews/corrective action plans;
- final testing of knowledge requires a 100% score.

**Receptionist/Patient Intake**

- viewing BioTrack instructional videos, position specific;
- one-day learning tour of production center;
- manual provided and testing on subjects including: patient identification, job-specific security issues, and conflict management;
- final testing of knowledge requires a 100% score.

**MIP Production**

- Extensive job shadowing;
- viewing BioTrack instructional videos, position specific;
- one-day learning tour of dispensary;
- role-specific emergency preparedness training including CO2 gas, volatile gas and general safety;
- manual provided and testing on subjects including: safe CO2 extraction, safe butane extraction, proper gas purging, water extraction, alcohol extraction, dry sieve extraction, packaging, labeling, and sanitation;
- Hazard Analysis Critical Control Point (HACCP) training;





**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

- final testing of knowledge requires a 100% score.

In order to restrict access to the dispensary, employees will responsible for maintaining a significant portion of the facility. Schedules for rotating cleaning of the staff washroom will be posted on the employee board. Maintenance (including vacuuming, dusting, and cleaning of displays) of the dispensing room, consultation rooms and restricted access areas are part of an employee's daily duties. An outside bonded cleaning service may be used to clean the waiting room, front entry area, and the washroom located adjacent to the waiting room.

AGH documents all training provided, and obtains a signed statement from each employee indicating the date, time, and place he or she received training and the topic discussed, including the names of presenters. The employee record of training and related employee record required in Rules 11-850-35 shall be maintained for 6 years in accordance with Rules 11-850-42.

In addition, AGH performs and documents periodic performance evaluations for each of its employees and as a result of these evaluations will make suggestions for additional focused training, if necessary.

In terms of dried MMJ, AGH provides written policy and procedures for cultivation employees on the: 1) safe and appropriate use of equipment; 2) effective training and monitoring of employees in the production of MMJ; 3) protocols for laboratory testing of MMJ; and 4) safe and appropriate storage and disposal or destruction of MMJ at all states of production and sale in accordance with Rules 11-850-71. AGH also provides written policy and procedures in relation to MIPs similar to those for dried MMJ, but including safe and appropriate storage of materials used to produce MIPs in accordance with rules 11-850-72.

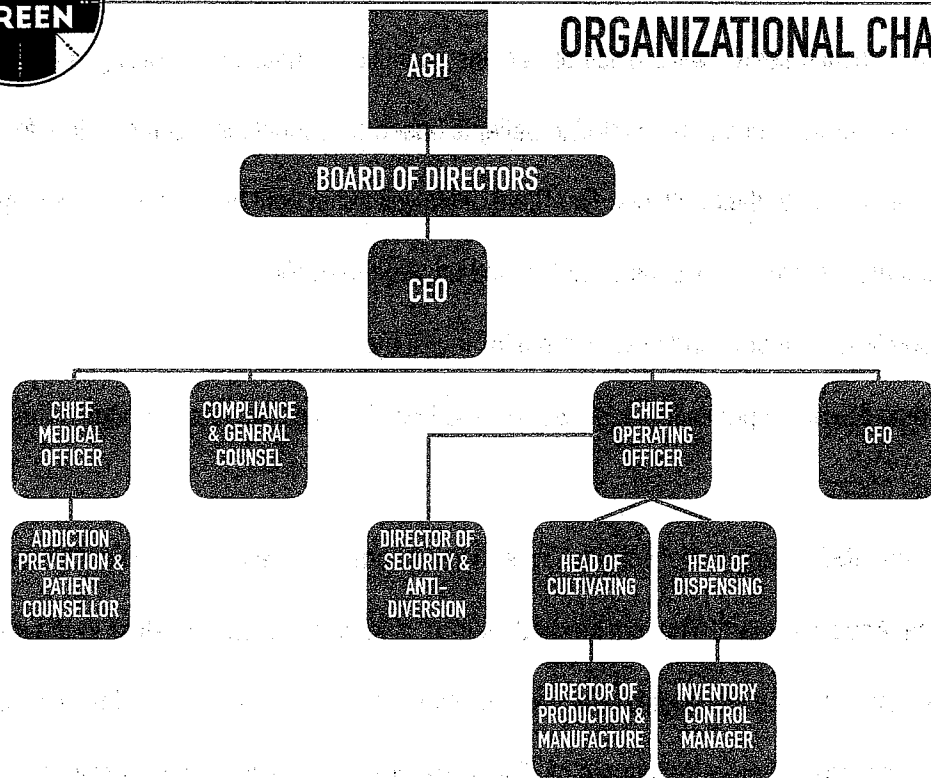
Version 1: Draft

Date: January 10, 2016



2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations

**Appendix 2(b) – AHG Organizational Chart**



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

**Appendix 2(c) - Research Plan**

AGH is committed to supporting extensive research through clinical trials aimed at studying the efficacy of MMJ as a statistically relevant form of treatment for Hawaii patients. Scientifically driven clinical data derived from local research will provide physicians quantified cannabinoid profiling and therapy options to more accurately recommend MMJ to patients based on cannabinoid composition, form, quantity, and frequency of dosage to their patients. The State of Hawaii will benefit by having tangible data that may be used to evaluate the clinical success of MMJ to media and the public.

AGH will support MMJ research and development in Hawaii by:

1. Providing 5% of net profits for local Hawaii based MMJ-related research through donations and funding grants;
2. Donating MMJ for use in local clinical trials recommended by the Chief Medical Officer and the Medical Advisory Board. The manner and method of MMJ donations (whether to the trial principal investigator or to the individual patient and in what form) will be pre-approved by the DOH. No cost MMJ donations will ease the burden of clinical trial costs on the sponsoring institution (e.g. University of Hawaii) and potentially stimulate interest in additional trials; and
3. Providing access to researchers to our a separate and secure research portion of the production center with pre-approval by the DOH.

**Medical Advisory Board**

Dr. Gregg Kokame has extensive experience in funding and running clinical trials over the past two decades. Through his large-scale medical network, AGH has begun to establish a top tier medical advisory board.

The Medical Advisory Board will be comprised of members of the Hawaii medical and scientific research community (from a variety of disciplines) committed to developing concrete clinical data on the



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

efficacy and effects of MMJ on Hawaii-approved disease indications; and the cultivation of MMJ. Board members will meet regularly to discuss potential new trials, make MMJ donation recommendations, review the status of ongoing trials, and report on findings to be published for peer review from concluded trials.

As of the date of application submission, three members of the medical and research community have volunteered to sit on AGH's Medical Advisory Board:

Dr. Gregg Kokame, MD

- Clinical Professor, Division of Ophthalmology, Department of Surgery, John A Burns School of Medicine, University of Hawaii
- Medical Director, The Retina Center at Pali Momi, Pali Momi Medical Center
- Board Member Pali Momi Foundation Board
- President, Eye Surgery Center of Hawaii

Dr. Kenneth Sumida, MD

- Associate Professor of Medicine, John A Burns School of Medicine, University of Hawaii
- Associate Clinical Professor, Clinical and Translational Research Program, University of Hawaii Cancer Center
- Director of Medical Education, Kuakini Medical Center
- Oncologist, OnCare Hawaii, Inc.
- Principal Investigator- NRG Oncology and National Surgical Adjuvant Breast and Bowel Program.

Dr. Troy Tanji, MD

- Assistant Clinical Professor, Division of Ophthalmology, Department of Surgery, John A Burns School of Medicine, University of Hawaii
- Vice President, Eye Surgery Center of Hawaii



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

Generating Additional Support

All organizations approved by the State and DOH to dispense, cultivation and manufacture MMJ products will benefit from clinical cannabis trials. AGH will approach each licensed organization and request their support of the Medical Advisory Board clinical trial recommendations.

AGH's goal is to not only bring MMJ knowledge to the State, but to actively pursue the creation of new knowledge on MMJ in Hawaii. We hope to build a center of excellence on MMJ research in the State built upon Hawaii's strong agriculture policies, secure border, and favourable growing conditions.

There is a unique opportunity in Hawaii that will allow researchers to confirm and improve upon previous MMJ studies and focus on minority research.

Preliminary Research Topics

The Medical Advisory Board proposes a study for MMJ therapy for the side effects of cancer treatment (i.e. pain, nausea); as a cancer fighting medicine; and the treatment of glaucoma.

In terms of cancer therapy, the Medical Advisory Board suggest that achievable studies include: 1) investigation of weight gain, body mass in cancer patients treated with MMJ; 2) quality of life studies in patients who are on protracted chemotherapy programs with and without MMJ; and 3) comparison studies of MMJ vs. conventional anti-nausea medications. Our Medical Advisory Board is most excited about working with the University of Hawaii Cancer Center ("UHCC") on: 1) assessing for possible molecular targeting of the cannabis compound, enlisting the molecular lab and cancer biology specialists at UHCC; and 2) evaluation of possible anti-cancer properties of cannabis through the natural products and experimental therapeutics lab at the UHCC.

In terms of glaucoma, the current issues with MMJ as therapy are 1) the brief duration of action after systemic administration (i.e. requiring every 2 hour dosing); and 2) the adverse effects observed in chronic use. The Medical Advisory Board proposes that a topical form of MMJ may become a whole new



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

class of glaucoma agent, which will lead to developing important research. AGH has already initiated talks with an internationally recognized glaucoma specialist, and the chairman of one of the nation's leading eye institutes. The Medical Advisory Board have connections with a number of companies which have developed topical delivery systems for difficult to penetrate molecules. The Medical Advisory Board believe that topical or intravitreal use in a sustained delivery platform could prove very useful for diseases that currently have no treatment as MMJ is a neuroprotectant. Possible applications include retinitis pigmentosa (currently untreatable), dry macular degeneration, retinal dystrophies and some optic nerve diseases.

Version 1: Draft

Date: January 10, 2016



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

**Appendix 2(d)- Financial Letters of Intent**



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations:**

**Appendix 2(l) – Detailed Start-up Plan**

- Prior to Jan. 28, 2016 AGH has signed Offers to Lease for a Production Center and 2 Dispensaries.
- On April 15, 2016, the DOH issues AGH a Dispensary License to operate.
- In anticipation of receiving a license, prior to April 15, 2016, AGH plans on (1) submitting permitting plans for the proposed Nexus Solar Production Center; (2) obtaining final architectural and engineering drawings and plans for the build-out of the Nexus Solar Production Center and the dispensaries; (3) securing a contract with a local general contractor to begin site preparation and build-out of the space on April 16, 2016; and (4) interviewing and hiring CEO, COO, 1 grower assistant, and 3 security guards.
- On April 16, 2016, AGH takes possession of lands located at [REDACTED] pursuant to an executed lease agreement. Construction begins immediately to prepare the site and build out the Nexus Solar Production Center. It is anticipated that it will take no more than 45 days to complete the renovation and construction. In parallel, AGH will prepare the permitting plans for the Surna Solar Production Center for submission by July 1, 2016.
- On May 6, 2016, AGH requests inspection of the Nexus Solar Production Center not less than 30 days prior to producing any MMJ as per §11-850-32 of the Rules.
- On June 1, 2016, AGH takes possession of the 2 dispensaries pursuant to executed lease agreements. Construction begins immediately. It is anticipated that it will take no more than 90 days to complete the renovation to the interior and exterior of the existing building.
- As of June 6, 2016, AGH completes the construction of the Nexus Production Center and the first seeds are germinated.
- On June 9, 2016, the germinated seeds are planted in rockwool cubes and placed under a florescent light.





**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

- On June 20, 2016, the rooted seedlings are tagged with a barcode using the BioTrack System and are transplanted into coco coir soilless medium.
- On July 5, 2016, the vegetative stage commences.
- On Aug. 1, 2016, the vegetative cycle is complete and sex of the plants is confirmed. The male plants are cut and the female plants are cloned, tagged with a barcode number and the flower cycle begins.
- On Sept. 1, 2016, the AGH completes construction of the dispensaries and requests inspection not less than sixty days prior to opening as per §11-850-33 of the Rules.
- During the first weeks of Sept., AGH begins to recruit, interview, and perform background checks of additional growers, trimmers, security guards, inventory control manager, receptionists, patient education specialist, product dispensers, and cashiers.
- On Oct. 1, 2016, the plants are harvested and the drying process begins.
- On Oct. 5, 2016, the drying period is completed, and the flower buds are trimmed over a 2-day period.
- On Oct. 7, 2016 the trimming is completed.
- On Oct. 7, 2016, the entire harvest (flower buds and trim) is weighed and the information entered into the BioTrack System. Weighed samples of each batch are selected and sent for lab testing. AGH uses the BioTrack System to document the amount of the harvest used for each type of final MMJ product (dried flower or manufactured). Also on Oct. 7, 2016, the curing process begins on the final product flower buds and trim.
- On Oct. 12, 2016, the curing process is completed. The flower buds and trim are re-weighed and the information is entered into the BioTrack System. Products are stocked in the dispensaries, the secured room,, and the final product secured vault room, as required. On or before Oct. 12, 2016, the lab testing results will be received and the results will be entered into the BioTrack System as this



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

information is included on the label on each dispensed product. On Oct. 13, 2016, the dispensary is operational and patient sales begin.

We expect permitting approval for the Surna Solar Production Center the first week of Jan. 2017 (six months from submission). AGH will begin site preparation in early Dec. 2016. The decision to proceed with the second production center will be based on patient need. Upon permitting approval, AGH will provide Surna will confirmation and payment to begin manufacturing and procurement of all systems. On March 1, 2017, Surna will complete assembly of all components and ship containers from Houston to Honolulu arriving in 10 to 14 days. Construction on the Surna Production Center will begin on April 1, 2017. AGH expects to complete the exterior structure in 4 weeks and another 8 weeks for the interior and systems. The Surna Solar Production Center should be completed on July 1, 2017. AGH expects its first harvest from the Surna Solar Production Center in Oct. 2017.

The above start-up timeline is conservatively based on obtaining the DOH's inspection at least thirty days prior to producing. If the DOH allows for inspection with less than thirty days prior to producing, AGH would be able to start-up earlier. AGH will seek staged provisional inspection of its Production Center with 2 grow rooms completed on an earlier basis. If the DOH approves a staged build out, then AGH anticipates that seed germination could begin within 3-4 weeks after receipt of the license, reducing the timeline above. It is anticipated that AGH could build and equip two grow rooms allowing seed germination and first plant growth, during which time AGH would complete construction of the other grow rooms.



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

**Appendix 2(m) – Grow Plan**

The success of any organization starts with hiring the right people for the job. The goal of recruitment is to locate employees with a strong work ethic, technical knowledge and skills, and passion to manufacture and process the highest quality medical MMJ products in Hawaii. AGH is fortunate to have 2 experienced MMJ growers on its team and a number of scientists and academics to quantify and test the proven techniques of our growers.

Chris Mayerson is the co-founder and head cultivator for one of the largest licensed medical MMJ grows in Canada with [REDACTED] in a 55,000 sq. ft. indoor facility with a monthly production [REDACTED] per month. Chris, a master grower, manages a team of 30 full-time production employees. Chris has experience with every commercial growing technique and horticultural lighting system. Chris has refined proprietary cultivation techniques through his experience in cultivation facility design.

Brian Ruden is a master grower and owner of [REDACTED] grows spanning [REDACTED] with a total [REDACTED] in Colorado. Brian is an experienced indoor and outdoor grower. Brian is the first grower in the US to use a 100% LED lighting system with MMJ. AGH believes that Brian's experience will support the use of LED lights in the Surna Solar Production Center and further reduce AGH's carbon footprint in terms of electricity usage.

Dr. Kiva Ferraro has a PhD in plant biochemistry, who brings a level of technical sophistication to the design, build-out, and management of the production center, with an emphasis on efficient workflow. Dr. Ferraro has extensive knowledge of indoor farming techniques, including greenhouse, environment and light optimization techniques, humidity control, plant nutrient management, and proper handling and application of pesticides.



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

AGH hopes that the combination of experienced MMJ growers with agricultural scientists will form a cutting edge team pushing the boundaries of current MMJ growing techniques and increasing the scientific cultivation knowledge on MMJ.

The following is a description of the growing techniques and processes for AGH's initial production center.

**Seeds and Clones**

MMJ can be grown from seeds or from clones. Clones are cuttings taken from their "mother" plant and rooted before planting. A cutting taken from a mother plant will exhibit identical characteristics to that of its mother plant (i.e. growth rate, potency, pest resistance, and mold/mildew resistance). Commercial cultivation prefers clones to cultivation from seeds because MMJ plant are either male or female, and only the female plants produce medical MMJ. When seeds are used, it can take up to 4 weeks before the sex can be determined, wasting valuable time in growing medicine. Additionally, because different seeds have different phenotypes, it is almost impossible to maintain uniform and consistent strains when growing from seeds. Although the first harvest in the Nexus Solar Production Center will be from seed, once the mother plants are developed from this harvest, AGH will grow from clones.

**Vegetative Stage**

Once a clone is rooted it goes into the "vegetative stage", where the plant grows without producing flowers. This stage is maintained by providing at least 18 hours of constant and uninterrupted light for a 4-week period. In Honolulu, the longest day of the year is 13:18 hours long and the shortest is 10:41 hours long. Therefore, AGH will use double-ended HPS or LED lights to supplemental artificial lighting at dawn and dusk to extend the photo light period to 18 hours during the vegetative state. If the production center does not have the right light, the plant's hormones will change and the plant will begin to flower. A vegetative period shorter than 4 weeks will result in less plant growth. The plants could be manipulated using both high stress and low stress training techniques to maximize each plant's production and potential.



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

**Flowering Stage**

Once the plants have reached the optimal height and other characteristics, the light cycle of the plant will be changed and AGH will aim to have the plants under natural sunlight and artificial lights for 12 hours and in the dark for 12 hours. AGH will use a curtain light deprivation system to shield the plants from any additional light during the dawn and dusk hours. This stage is known as the "flowering stage". On average, a MMJ plant requires 8 to 11 weeks of flowering to mature and reach its full medicinal potential. Prior to harvesting, the nutrients provided to the plants in the pots will be replaced with plain water for a minimum of 10 days to flush out any and all nutrients stored in the plant. By flushing the plant, the final product will be clean of any stored nutrients and the final product will be more consistent.

**Grow Medium**

There are several ways to cultivate MMJ using different mediums. The different mediums are soil, coco coir, rock wool, hydroton, perlite, and water. AGH will use coco coir, which is the preferred medium for this type of climate by all our consultants. AGH will use a simple modern drip line irrigation system that is designed to reduce water waste.

**Extraction for Manufactured MMJ Products**

AGH will utilize a proprietary CO<sub>2</sub> supercritical fluid extraction (SFE) machine to process all parts of the MMJ plant into a solvent-free concentrated extract. The concentrated extract is also infused with terpenes that can be used to create a range of allowable manufactured MMJ products.

Carbon dioxide usually behaves as a gas in air at standard temperature and pressure (STP), or as a solid called dry ice when frozen. If the temperature and pressure are both increased from STP to be at or above the critical point for carbon dioxide, it can adopt properties midway between a gas and a liquid. More specifically, CO<sub>2</sub> behaves as a supercritical fluid above its critical temperature (304.25 K) and critical pressure (72.9 atm or 7.39 MPa), expanding to fill its container like a gas but with a density like that of a



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

liquid. CO2 is an important commercial and industrial solvent due to its role in chemical extraction in addition to its low toxicity and environmental impact. The relatively low temperature of the process and the stability of CO2 also allows most compounds to be extracted with little damage or denaturing to the extracted products. In addition, the solubility of many extracted compounds in CO2 vary with pressure, permitting selective extractions.

Additional centrifugal equipment, specialized lab glass, cooling/heating equipment, and desiccation ovens allow us to manipulate the extract on a molecular level so that we can achieve the desired traits that the patient requires. The CO2 extract will serve as the base active ingredient for most infused or manufactured products.

While SFE using CO2 as a solvent may require more capital to implement, it is superior and safer to other extraction methods using other solvents, such as butane, hexane, isopropyl alcohol and ethanol. Our SFE process will have a low environmental impact and nonexistent toxicity and will result in an extract with no residual solvent, superior purity, selectivity, yield, and lower operating costs. SFE is a safer, cleaner, and faster technology for the extractions of oils and active medicinal ingredients (such as cannabinoids) from the MMJ plant.

Below is a list of the advantage of SFE over other extraction mediums, such as alcohol and hydrocarbons:

1. CO2 is nontoxic and is generally regarded as safe by the FDA for use in food products. Our bodies produce it when we breathe, and it is commonly used in carbonated beverages. With CO2 as a solvent for oil extraction, no toxins, heavy metals or hydrocarbon materials come in contact with the extracted oils.
2. CO2 is "solvent free". Other extraction solvents, such as hydrocarbon based propellants like propane and butane, hexane and pentane, or ethanol/alcohol mixtures require additional distillation or purging beyond the extraction process to separate the solvent from the extracted oil. CO2 has a



**2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations**

- very low boiling temperature and wants to be a gas at room temperature, thus it naturally separates from the extracted oil the same way a soda goes "flat". The spent plant material is also free of residual solvents so it can be reused or disposed of quite easily.
3. CO2 is non-flammable. Flammable solvents must be processed in an explosion proof environment. CO2 is not flammable and does not require costly explosion proof facilities.
  4. CO2 is "cold" – Botanical oil extractions can be done at temperatures that are native to the botanical material, minimizing thermal degradation of the plant material and the extracted oil.
  5. CO2 is "tuneable" – the solvency power of CO2 can be adjusted simply by increasing or decreasing pressures and/or temperatures. The ability of the CO2 to selectively extract affords the ability to create unique extractions that have varying levels of desirable oils and waxes. Less desirable plant constituents, like chlorophyll, can also be "de-selected".
  6. CO2 is inexpensive. CO2 is readily available and widely used throughout several industries. In addition, the SFE system that we will use operates in a closed loop and recirculates the CO2 and subsequently recovers 95% of the CO2 used in each extraction.
  7. CO2 is environmentally friendly. Industrial CO2 for extractions comes from by-products – primarily hydrogen and ammonia manufacturing and fermentation for ethanol. CO2 used for extractions does not contribute to the overall atmospheric CO2 levels.



2) Plan for operating a MMJ dispensary in the county for which the applicant is seeking a license, including but not limited to a timeline for opening a retail dispensing locations

**Appendix 2(n) - Liability Insurance Policy**

AGH will purchase a commercial liability insurance policy from Next Wave Insurance Services, LLC that is comparable to business liability insurance and commercial general liability insurance purchased by MMJ cultivators and dispensaries on the US Mainland. Our policy will provide:

- General liability insurance coverage for no less than \$1,000,000 per occurrence and \$2,000,000 in aggregate, annually, and
- Product liability insurance coverage for no less than \$1,000,000 per occurrence and \$2,000,000 in aggregate, annually.

The deductibles for AGH's liability policy will be as follows:

- Liability - \$2500
- Property – Multiple Deductible Choices

The general and product liability coverage for AGH, upon award of a license to dispense, will meet or exceed the insurance requirements set out on the mainland for the MMJ industry. In addition, during build-out, we will consult with our insurance broker to design and build additional safety features into our procedures and facilities.

Version 1: Draft

Date: January 10, 2016





# NOGUCHI & ASSOCIATES, INC.

January 25, 2016

Aloha Green Holdings, Inc.  
Dba Honolulu Medical Cannabis  
449 Kapahulu Ave. Ste. 209  
Honolulu, HI 96815

RE: Insurance Program and Estimated Costs

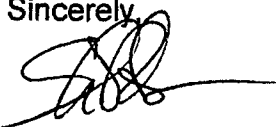


Dear William:

There are 2 Programs currently available specifically geared towards Cannabis facilities. These programs include special coverages intended to protect the unique exposures related to the Medical Marijuana industry. Since Hawaii just approved Medical Marijuana, there are no known rates established for Hawaii specifically, but based on some discussions and research, I anticipate the following insurance costs for your operations. I have broken the costs down for you based on coverage typed to keep things simple for now. Coverage:

Package Policy:	Estimated Premium	\$10,000.00 - \$15,000.00 (Monthly)
Workers Compensation:	Estimated Premium	\$1,000.00 - \$2,000.00 (Monthly)
TDI:	Estimated Premium	\$500.00 - \$1,000.00 (Monthly)
Medical Insurance:	Estimated Premium	\$2,000.00 - \$3,000.00 (Monthly)
Directors & Officers:	Estimated Premium	\$1,000.00 - \$2,000.00 (Monthly)

Please review this and let me know if you have any questions.

Sincerely,



NEXT WAVE  
INSURANCE SERVICES LLC

# CANNABIS AND HEMP OPERATIONS

Medical and Recreational Operations are Approved

## COVERAGES

## CLASSIFICATIONS

### ➤ General Liability

- Occurrence - A+ Rated carrier
- Up to \$1.0M /\$2.0M Occurrence/Aggregate
- Hired and Non-Owned \$1.0M (max limits)
- Primary and Non-Contributory wording

### ➤ Product Liability

- Claims Made – A+ Rated Carrier
- \$1.0M /\$2.0M Occurrence/Aggregate
- \$2,500 Deductible
- \$1,500.00 minimum premium

### ➤ Excess Liability

- Occurrence - A+ Rated carrier
- Up to \$4.0M limits
- Excess coverage is over GL only

### ➤ Property

- ISO property forms – A+ rated carrier
- Up to \$10.0M property limits
- Cargo (coming early 2015)
- Property Enhancements
- Several deductible options

### ➤ Crop

- Non-Admitted carrier – A+ Rated
- Up to \$5.0M Living plants
- Finished stock is included in property limits

### ➤ Equipment Breakdown

- Admitted carrier – A+ Rated carrier
- Up to \$10.0M limits
- Loss of Business Income
- Reputational recovery
- Data Compromise

### ➤ Cyber Liability

- Admitted and Non-Admitted – A+ Rated carrier
- \$1.0M Occurrence

### ➤ Cultivation

- Indoor
- Outdoor
- Greenhouse

### ➤ Processors/Harvesters

- Owned
- Sub-contracted

### ➤ Manufactures

- Cannabis products
- Non-cannabis products

### ➤ Wholesaler/Distributors

- Brokers

### ➤ Transporters

- Owned
- Sub-Contracted

### ➤ Franchisers

- In State or Multi State

### ➤ Dispensary/Retail

### ➤ Delivery

- To Consumer

### ➤ Laboratory

### ➤ Property Management

### ➤ Landlord/Building Owners

### ➤ Tobacco Retail Store

### ➤ Garden Store

- Retail and Wholesale
- Hydroponics

### ➤ Schools

Approved Association Discounts



## GENERAL LIABILITY

	NWIS - MMD
Aggregate Limit	\$2,000,000
Damages to Rented Premises	Up to \$500,000
Defense Outside the Policy Limits	YES
Duty to Defend	YES
Audible Policy	YES
Policy Forms	ISO - APPROVED
Occurrence Form	YES
Claims Made	NO
Excess Liability	\$4,000,000
AMBest Rating	A++
Wavier of Subrogation Endorsement	YES
Primary and Non-Contributory Endorsement	YES
Pesticide Applicator Endorsement	YES
Law and Ordinance Endorsement	YES
Hired and Non-Owned Auto (excluding delivery)	YES
Stop Gap Coverage (WA)	YES

## PROPERTY

	NWIS - MMD
Total Insurable Value TIV (including crop TIV)	\$10,000,000 - PER LOCATION
Maximum Number of Locations	NO MAX TO THE NUMBER OF LOCATION
Policy Forms	ISO - APPROVED
Theft - Sublimit	NO SUBLIMIT
Outdoor Property	YES - \$10,0M
Employee Dishonesty Endorsement	YES
Multiple Deductible Choses	YES

## CROP - SEEDS, LIVING PLANTS, HARVESTED, FINISHED STOCK

	NWIS - MMD
Crop Coverage	YES
Coverage Limits	\$5,000,000
TIV Max Limits	PER LOCATION
Theft - Sublimit	NO SUBLIMIT

## PRODUCT LIABILITY

	NWIS - MMD
Products Coverage	SEPARATE POLICY LIMITS
Aggregate Limits	\$2,000,000
Recreational	YES
Medicinal	YES
Cultivation, Manufacturing, Retail, laboratory Classifications	YES
Duty to Defend	YES
Defense Outside the Policy Limits	YES

## EQUIPMENT BREAKDOWN

	NWIS - MMD
Total Insured Value (TIV)	UP TO \$10,000,000
Loss of Income	UP TO \$ 1,000,000
Data Breach	YES
Identify Recovery	YES
Admitted Paper	YES

### **3) Proof of financial stability and access to financial resources**

#### **3(a) Legal sources of finances immediately available to begin operating a dispensary**

AGH is financially stable with funds exceeding the required \$1.2M (M=million and k=thousand) that have been held in a bank account under our control for the required 90-day period preceding our application submission in accordance with DOH Rule 11-850-15(6). (Please refer to **Appendix 3(a)(1) - Letter from Devens Nakano Saito Lee Wong & Ching** for detail of this deposit). **We have budgeted [REDACTED] for the build out of our first production center, 2 dispensaries and operating costs for 2016.** We estimate that we will need an additional \$3.6M in 2016 and we have access to financial resources well in excess of this projected amount. **We have on demand access to [REDACTED] from KB Lee Corp. which is a company owned in part by James H.Q. Lee who is our shareholder and a lifelong Hawaii resident.** Please refer to **Appendix 3(a)(2) – KB Lee Commitment Letter** as evidence of this additional funding. This will provide us with a buffer of approx. [REDACTED] more than our projected capital needs. **We also have access to an additional [REDACTED] from Brian Ruden who is our team member and a licensed MMJ producer from Colorado.** Please refer to **Appendix 3(a)(3) – Brian Ruden Commitment Letter** as evidence of this additional funding. **In total, we have committed access to a total of [REDACTED] and can readily access additional funds if needed.** Based on our team's experience with building and operating several licensed MMJ production centers and dispensaries in Colorado and Canada, **we are confident that our forecasted financial projections are conservative and we will not need to access any additional financial resources.** If our projections are correct, **we will be able to fund future expansion and growth after Year 1 with internally generated cash flow and will not need additional capital for the build out of our second production center.** Please refer to the following appendices for additional evidence of proof of funds:

- **Appendix 3(a)(4) – Confirmation Letter from First Hawaiian Bank re deposit of funds**
- **Appendix 3(a)(5) - Copies of First Hawaiian bank accounts for Aloha Green Holdings Inc.**



### 3) Proof of financial stability and access to financial resources

- Appendix 3(a)(6) - Copies of First Hawaiian bank accounts for Ono Baking Company LLC

#### 3(b) A summary of financial statements in businesses previously or currently owned or operated by the applicant

In addition to practicing law and real estate development, James H.Q. Lee previously operated numerous restaurants. James' restaurant holdings had **total annual revenues of [REDACTED] with over 500 employees in 12 locations worldwide**. Foods costs were 33% with operating expenses at 62%, including labour costs of 35%. James also ran a successful retail business with a line of salad dressings, sauces, and clothing with annual revenues of [REDACTED]. Currently, James is the managing partner of a law firm with 4 partners, 1 associate and 6 employees. James provides legal services to over 600 clients [REDACTED].

[REDACTED] The individual applicant, Thomas J. Wong, is a partner at the same law firm.

Brian Ruden owns and operates several licensed MMJ businesses in Colorado including 6 retail dispensaries that operate under the tradename "Starbuds" and 3 MMJ cultivation facilities and [REDACTED] manufacturing facility as part of the same company. Brian is also part owner of the Tree of Wellness, a licensed MMJ dispensary that consists of 1 medical MMJ dispensary, 1 MMJ cultivation facility, and 1 MMJ manufacturing facility. **Brian's businesses currently generate [REDACTED] combined annual sales and is projecting sales [REDACTED] in the next year.** His overall expenses are [REDACTED] for retail dispensaries and [REDACTED] for cultivation facilities. Starbuds has contributed millions in sales taxes, payroll taxes, income taxes, licensing fees, and permits fees to the local and state government in Colorado.

#### 3(c) A financial plan for operating a MMJ dispensary in Hawaii

We have a conservative financial plan based on our team's extensive knowledge and experience with building and operating licensed MMJ businesses in Colorado and Canada. Our team members also have tremendous financial knowledge and planning experience in operating and managing numerous other



### 3) Proof of financial stability and access to financial resources

businesses in Hawaii and elsewhere. Our financial plan was reviewed by a CPA and is summarized below. Please see **Appendices 3(c)(1) to 3(c)(5)** for more details of our financial projections.

**Production Center 1 Start-up Budget** – Appendix 3(C)(1) - Our first production center will cost about [REDACTED] to build. We budgeted [REDACTED] to adopt environmentally friendly technology and [REDACTED] to build out our two dispensaries. We are budgeting [REDACTED] for security measures to provide protection for our employees and the public and to prevent diversion and theft. **Total start-up budget for Year 1 is [REDACTED].** AGH has access to funds exceeding the start-up budget for Year 1 build-out and operations.

**Production Center 2 Investment Cost** - See Appendix 3(c)(2) - The budget for our second production center is approx. [REDACTED]. **We plan to build our second production center on the same land as our first production center to minimize expenses and build out costs.** We will save on rent because we are leasing two acres which is sufficient for both production centers. We expect to save on site services such as security, water, sewage and the cost of electricity installation since we will be building sufficient capacity for these services at the start for both production centers. **We will benefit from economies of scale by having both production centers at the same location.** In accordance with DOH Rules 11-850-6, our two production centers will be in physically separate and individually identifiable structures with no shared exterior walls in compliance with the limit on allowable number of plants in each.

**Sale Forecast** - See Appendix 3(c)(3) - We estimate that about 1% or 9,900 residents of Hawaii will become qualified patients in Honolulu. We estimate that AGH will serve 20% or 1,984 of these patients. We forecast that patients will purchase 12 ounces per year. This translates into projected demand of 1,488 pounds per year or **124 pounds per month.** These estimates are based on our team's experience from Colorado and Canada, and extensive research we conducted on projected and actual demand in other jurisdictions that have legalized MMJ. We plan to use 1% of our MMJ production as feedstock for manufacturing MMJ products and we believe the demand for manufactured MMJ products will increase over time. We will set appropriate pricing for MMJ products to reduce the incentive for diversion. A law



### 3) Proof of financial stability and access to financial resources

enforcement informant has informed us that current street prices are around \$15 per gram depending on quality and location. We plan to set our dispensary prices at or slightly above street prices at \$16 per gram in Year 1 and \$14 in Year 2. **We believe that when dispensary prices are below street prices, dispensaries may unintentionally provide incentive for "black market" or "straw buyer" diversion purchases.** Through responsible pricing practices, we will support state law by discouraging diversion.

**Human Resources Budget** - Appendix 3(c)(4) - Our team has years of experience recruiting and hiring first class talent in their respective, successful businesses, including licensed MMJ operations. We will **focus on hiring local residents of Hawaii** for all positions within our company. **We have budgeted \$1.6M to hire 33 employees in Year 1 and will increase from there.** We have budgeted to provide medical insurance and other competitive benefits for all of our employees to minimize any potential burden on the State. We will invest in training and development to help transfer knowledge to Hawaii.

**Proforma Income Statement** - See Appendix 3(c)(5) - We expect to make a modest profit in Year 1 and Year 2 and plan to reinvest our profits back into the company for the future benefit of our patients and the Hawaii community. We are committed to donating 5% of net income to the local community and an additional 5% of net income toward grants for medical and scientific research to create a "Center of Excellence" in Hawaii for MMJ research. **In addition to our financial commitment, AGH has the local network and knowledge base to achieve our research goals.** We plan to invest most of our net income in Year 2 to build our second production center which will enable us to better serve our patients. We do not expect any significant return on investment until Year 3 and we have the resources and the investor patience to see our plan through. Our dedicated team believes in our mission and we are prepared to execute.

As per DOH Rule 11-850-41(a)(3), we will retain all financials records for a minimum of 6 years. As per DOH Rule 11-850-38, we will submit quarterly reports on a form and in a manner prescribed by the DOH. See **Appendix 3(c)(6) – DOH Quarterly Report.**



## 5) Capacity to meet the needs of qualifying patients

### (D) Measuring and improving customer satisfaction:

AGH will always strive to provide each patient with exceptional service and products. Ongoing feedback is essential to delivering a first-class patient experience. We will obtain feedback on an ongoing basis as it is necessary to improve customer satisfaction. **All patient feedback will be sent directly to senior management.** Once a patient complaint is received, senior management will investigate and assess whether any corrective action should be taken. The findings of any investigation and assessment will be provided to our patients. **Our policy is to address all complaints within 72 hours.** All patients will be provided with the appropriate DOH contact information in the event a patient wishes to communicate directly with the DOH. Our team has extensive retail experience and has developed an effective 4-step feedback program that is used successfully to provide guidance for improving patient satisfaction and creating outstanding customer service. **Our 4-step feedback program consists of: 1) conducting surveys; 2) collecting feedback; 3) performing analysis; and 4) taking action.** See Appendix 5(d)(1) - **Patient Feedback Program.** To administer our survey, patients will be asked to provide their contact information and explicit consent to receive text or email marketing. Patients will have the option of submitting anonymous feedback and can opt-out of receiving marketing messages at any time. **All of our patient correspondence will be in accordance with the CAN-SPAM Act that regulates commercial electronic messages.** After we collect feedback and analyze for trends or identify cases that require further investigation, it is important to take action. This could mean responding to a complaint or improving a product or service. **Our feedback program will improve patient satisfaction by allowing us to benchmark our performance over time and ensure we take effective action.** By combining modern data collection methodology with current technology, we can gain the knowledge to improve our operations, strengthen our patient relationships and enhance customer satisfaction.





## 5) Capacity to meet the needs of qualifying patients

### Appendix List

Title	Page
5(a)(1) – Patient Education Handbook .....	7
5(a)(2) – Patient Education Plan .....	31
5(a)(3) – Patient Safety and Addiction Identification Guideline .....	35
5(c)(1) – Suitability Letters .....	42
5(c)(2) – Highway Access .....	45
5(c)(3) – Dispensary Layout .....	46
5(c)(4) – Disaster/Emergency Plan .....	52
5(d)(1) – Patient Feedback Program .....	54



**5) Capacity to meet the needs of qualifying patients**

**Appendix 5(a)(1) – Patient Education Handbook**



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# ALOHA GREEN

Patient Education Handbook



Updated: January 20, 2016  
VERSION 1

# Welcome to Aloha Green!

Aloha Green is a Hawaii medical marijuana (MMJ) licensed dispensary serving the City and County of Honolulu. We aim to treat our patients with respect and educate them about treating their approved medical conditions through MMJ treatments as a supplement to standard medicine.

## Mission

**"To safely help patients obtain the highest quality plant based medicines grown in Hawaii using socially responsible and environmentally sustainable methods while supporting the local community and promoting local new local-based medical marijuana research."**

Aloha Green products come in a wide variety of medication, including dried herbs, extracts, and concentrates. We constantly work to increase our knowledge of new cultivation techniques and innovations, and we work with our patients to ensure this knowledge helps to produce higher quality medicine.

The Aloha Green staff are experts at proper MMJ use and best practices for medicating. We encourage the sharing of experiences between staff and patients so that we can relieve the symptoms of others and share knowledge. Aloha Green is committed both to providing safe access to medical MMJ and to protecting the continued use of Hawaii's Medical Marijuana Dispensary Licensing Program.

We strive to operate within a model that is based upon compassion, as well as ethical and legal integrity. Aloha Green pledges to operate in strict compliance with the letter and the spirit of Hawaii's laws.

Aloha Green is proud to donate 5% of company profits to local-Oahu based charities and another 5% of company profits for MMJ research.

## PATIENT'S RIGHTS AND THE LAW

**Confidentiality:** Aloha Green strictly adheres to patient and caregiver confidentiality. We will never share identifiable information unless authorized by the patient, if there is imminent harm to oneself or others, requested by the Hawaii Department of Health, or required by law.

**Using Medical MMJ:** It is illegal to possess or use medical MMJ in a public vehicle, on school grounds or property, in the workplace of the qualifying patient, or at a public park, recreation center, youth center or other public place. The law does not provide protection on federal property such as airports, immigration check-points, reservations, and federal parks. In addition, it is illegal to operate a motor vehicle while under the influence of MMJ.

**Amounts You Can Possess:** Four (4) ounces of useable medical MMJ may be possessed over the course of 15 days; or eight (8) ounces over the course of 30 days.

**Interaction with Law Enforcement:** Show the officers your enrollment card. Your current enrollment card offers certain legal protections under state law, so long as you are acting within the guidelines of the law. If you are engaging in an activity that is prohibited under state law, your enrollment card will not offer those protections. At this present time, MMJ continues to be identified as a Schedule I controlled substance under Federal Controlled Substances Act. For that reason, participation in the Hawaii MMJ Registry Program may not protect participating patients, caregivers or producers from potential criminal liability under federal laws.

**Federal Law Protections:** Act 241 does NOT protect patients, caregivers or producers from federal laws. It only protects enrolled patients from arrest and prosecution for the possession and use of medical MMJ under Hawaii State Law. Caregivers are protected from prosecution for possession of medical MMJ while transporting it to a registered patient.

**Visiting Another State:** You cannot board a flight with MMJ or transport MMJ to another state or another island within the State.

*If you would like a copy of the Hawaii Act 241, or the Department of Health, our staff will gladly provide you copies free of charge.*

## **GUIDELINES TO STAY SAFE AND HEALTHY**

MMJ must be treated like all other medications meaning it must be used properly and responsibly. Misuse or overuse of medical MMJ can result in numerous negative effects. It is important to adhere to the medical advice of your doctor and to use good judgment when treating with medical MMJ.

Keep in mind that the Hawaii Medical MMJ Dispensary License Program is going through many changes, and in order for it to succeed we must work together to ensure MMJ is used responsibly and negative circumstances are mitigated.

### **Precautions for use of medical MMJ:**

- Treat MMJ as you would any other medication. MMJ has different effects on different individuals. Your medical MMJ is for you and only you.
- Properly store your medical MMJ in an airtight childproof container provided to you by Aloha Green, and keep it out of direct light. Refer to our MMJ storage section in this handbook for more information.
- Always use an appropriate dosage and when in doubt remember: less is more. Follow your doctor's recommendations and make sure to ask questions to Dispensary staff if you need more information about medical MMJ or MMJ derived products.
- Keep all MMJ products out of reach of children and pets at all times.

## **PATIENT CODE OF CONDUCT**

Aloha Green patients must abide by the following, and will be required to attest to this during the orientation process. Aloha Green reserves the right to refuse service for any violations of our Code of Conduct.

- Consumption of medical MMJ or MIP is never allowed on the premises of Aloha Green. Consumption of medicine is also prohibited from use in a public place.
- Firearms are strictly prohibited on Aloha Green property.

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- No alcohol or illegal drugs are allowed on Aloha Green property.
- Patients and caregivers are required to present their DOH issued MMJ card and proper form of identification prior to accessing Dispensary services.
- Aloha Green patients and caregivers agree to never sell or otherwise distribute medical MMJ or MIP's obtained at Aloha Green. Those who do so will be permanently excluded from Aloha Green.
- Patients and caregivers agree to comply with Hawaii State law on the amount limits for medical MMJ and MIP's.
- Patients and caregivers agree to keep their medical MMJ or MIP's in the sealed medication bag or container until arrival at the destination.
- Any person who is not a qualified patient or caregiver is not permitted within the Dispensary area of Aloha Green. Guests are allowed to stay in the waiting room.
- Aloha Green requires everyone be treated with mutual respect. You may be asked to leave if you use offensive or abusive language, or engage in disruptive behavior.

## CARDHOLDER INFORMATION

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### HOW TO QUALIFY FOR MEDICAL MMJ IN

#### HAWAII

**In order to qualify for medical MMJ card in Hawaii, you must have been diagnosed with one of the following medical conditions:**

- Cancer
- Glaucoma
- HIV/AIDS
- Cachexia or wasting syndrome
- Severe Pain
- Severe Nausea
- Seizures/Epilepsy
- Severe Muscle Spasms
- Multiple Sclerosis
- Crohn's Disease
- Post-Traumatic Stress Disorder
- Any other condition approved by Department of Health

#### HOW TO GET CERTIFIED

Certification means a medical provider is attesting and referring a patient to the medical MMJ program in the event that all of the following apply:

- A patient has an eligible condition.
- The condition is chronic and debilitating.
- Standard treatments have failed to provide adequate relief
- The benefits of medical MMJ usage outweigh the detriments. Note: Referrals or recommendations by medical providers mean the same as certification, and all certifications must be submitted on the Department of Health Medical MMJ Program application forms.

*An Aloha Green staff member can provide you with information on how to obtain the proper application forms.*



## HOW TO USE MEDICAL MMJ:

### INGESTION OPTIONS

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A patient can experience the effects of MMJ by inhaling smoke or vapors, ingesting MMJ added to food or drink, taking liquid extracts such as tinctures or oil concentrates under the tongue, or applying MMJ lotions to the skin. Each delivery system will have a slightly different medicinal effect even when using the same strain of MMJ. ***Remember: These are estimates. Not everyone will experience the same effects, at the same time, or for the same duration. Go slow. Use caution. Prevent over medicating.***

- **Inhalation: Onset 1-5 minutes, Duration 1-4 hours**
  - Inhalation of MMJ has several advantages, including fast onset, ease of consuming the correct dosage, and convenience. Smoking is perhaps the most traditional method of MMJ use, and while it works well for many patients, it has some disadvantages. The heat and smoke irritate the respiratory tract and lungs and could potentially worsen conditions such as asthma and COPD.
  - Herbal vaporizers are very popular with many medical MMJ patients, and are widely considered to be the healthiest way to inhale MMJ. Studies have shown vaporizers reduce the amount of harmful substances created compared to burning and smoking.
  - The vaporizer heats the MMJ to a specific temperature between 300 and 400 degrees Fahrenheit, which releases the medicinal substances into a vapor, while preventing the plant material from burning. The vapor produced is warm and non-irritating. It contains the smell and flavor of the MMJ without some of the irritation of traditional inhalation. A wide variety of vaporizers can be found on the market today, and many require some practice before achieving optimal use.
- **Topical (external use on skin): Onset and duration variable**
  - MMJ or its oil-based extracts can be added to balms, lotions, and rubbing alcohol. These preparations are easy to make at home and can be applied topically. They are often effective at

alleviating pain, muscle spasm, inflammation, itching, and various skin conditions, such as eczema. Topical use of MMJ does not produce psychoactive effects. The efficacy of a topical preparation may depend on its potency.

- **MMJ Tincture: Onset within 30 minutes, duration 1-6 hours**
  - A tincture is a concentrated liquid extract of MMJ, often in a solution of alcohol or glycerin. It can be absorbed directly through the mucous membrane in the mouth for faster onset. Place the tincture drops under your tongue and hold the tincture in your mouth for 30-60 seconds before swallowing. Brushing one's teeth first can increase blood flow and speed the onset. Tinctures are a popular delivery system because they are convenient, discrete (minimal odor), and easy to dose correctly.
  - Because each batch of tincture may have a different potency, start with a few drops and increase slowly to test its effects and determine the correct dosage.
- **Ingestion: Also known as Edibles: onset within 1-2 hours, Duration 6-8 hours**
  - MMJ can be added to a wide range of foods and drinks.
  - When MMJ is eaten and digested it is metabolized in the liver. This process creates different medicinal effects, with a stronger psychoactive reaction. It is often difficult to achieve the correct dosage when consuming MMJ edibles, mostly because it takes so long for the patient to know if he or she has taken too little or too much. For these reasons, we emphasize caution when eating MMJ; it is a good idea to start with a very small amount, wait 2-3 hours, then repeat the dose if needed.
  - While it is not dangerous to overdose on edible MMJ, the effects can be quite unpleasant, sometimes aggravating the symptoms a patient wishes to improve.
  - MMJ must be heated to convert the cannabinoids into their active form before being consumed, however new research is emerging on the therapeutic properties of raw cannabinoids obtained from juicing the plant, which seems to have

antioxidant, anti-inflammatory, and antimicrobial properties without any psychoactive effects.



***A word of caution to those choosing to medicate with edible MMJ*** – unlike with smoking and vaporizing, it is much easier to over-consume, and therefore over-medicate with ingestion. Because it can take longer to feel the effect and/or because the edibles taste good, patients are warned to start with a small amount, wait an hour or two before ingesting more, and be more cautious with consumption as not to exceed recommended dosage.

### **Quality Through Testing**

Aloha Green understands that the proper labeling of our products is one of the most valuable tools patients have to guarantee the quality of our products. In order to protect your health and safety, your labels will always include our testing results that tell you:

- Potency of THC and CBD
- Microbiological Testing
- Heavy Metals Testing
- Mycotoxin Testing
- Pesticides
- Residual Solvents

**If you would like to know more about testing, ask your sales agent.**

## MMJ - A TECHNICAL BREAKDOWN

Medicinally, the mature plant's flowers and leaves have been used in a variety of forms because they contain a resin filled with terpenes and cannabinoids, such as THC, which causes certain psychoactive and physical reactions, and CBD, or cannabidiol, a powerful anti-inflammatory and antioxidant

THC, or delta-9-tetrahydrocannabinol, is the main cannabinoid responsible for the psychoactive effects, while other cannabinoids such as CBD, cannabigerol (CBG) and cannabichromene (CBC) are thought to have many other beneficial properties.

### ACTIVE INGREDIENTS IN MMJ

Scientists have discovered several hundred terpenes and about 70 cannabinoids in MMJ. Each cannabinoid produces certain effects.

A great deal of research has been done on the medical uses of MMJ, especially in the last few years since the discovery of the "endocannabinoid system", an important regulatory system that keeps other body systems in balance. Stimulation of endocannabinoid receptors (called CB1 and CB2 receptors) by compounds produced by the human body or by cannabinoids from the MMJ plant results in the medical properties.

The cannabinoids that are thought to be primarily responsible for the medical effects observed with MMJ include:

- Cannabichromene, or CBC, which provides pain relief and calming effects;
- Cannabidiol, or CBD, which treats anxiety, convulsions, inflammation and nausea without causing psychoactive effects. CBD also has neuroprotectant and antioxidant effects;
- Cannabinol, or CBN, which reduces the occurrence of seizures and lowers intraocular pressure;
- Cannabigerol, or CBG, which also lowers intraocular pressure, promotes relaxation and contains antimicrobial properties;
- Delta-9-Tetrahydrocannabinol, or THC, which treats a wide variety of medical problems, such as pain and nausea, and it has the strongest psychoactive effect of all of the cannabinoids found in MMJ;
- Flavonoids, terpenes and terpenoids, which create the smell and

flavor of each MMJ strain, increase circulation and may treat a variety of skin conditions;

- Tetrahydrocannabivarin, or THCV, shows positive results for metabolic disorder and type 2 diabetes treatments.

### MMJ STRAINS: SATIVA VS. INDICA

Medical MMJ is available in more than one hundred varieties, all of which offer unique combinations of effects. Therefore, within certain broad categories, patients should test different varieties to find the one that most suits their needs. (Your Aloha Green Journal will help you track the different strains you choose)

There are four main categories of strains: sativa, indica, sativa/indica hybrids and high-CBD varieties (which are usually indica derivatives). The specific concentration of each cannabinoid is different by plant and strain. Please bear in mind that some patients respond differently to the various MMJ strains than might be expected from the general guidelines below.

- **MMJ Sativa:** The Sativa strains tend to mentally stimulate and energize the patient, making it suitable for use during daytime hours. Patients may also experience feelings of euphoria when taking sativa MMJ. Negative side effects are rare and mild, but feelings of paranoia and anxiety may be caused or amplified. The sativa strain is thought to be helpful for treating problems such as:
  - General abdominal complaints;
  - Depression
  - Headaches;
  - Fatigue;
  - Lack of Appetite.
- **MMJ Indica:** Those who take an indica strain may experience a sedated or relaxed feeling, so patients usually get the best results when taking it at night. Indica is thought to be useful in treating:
  - Anxiety;
  - Insomnia;
  - General Pain;
  - Muscle Spasms.
- **MMJ Sativa/Indica Hybrids:** The most commonly used MMJ strains

are sativa/indica hybrids. Growers created various hybrids to give medical MMJ patients the benefits of both sativa and indica for optimal results. Each hybrid is typically either a sativa or indica dominant crossbreed. Hybrids tend to work well for treating:

- Lack of Appetite;
- Nausea.
- **MMJ High-CBD:** The MMJ varieties in this strain have been laboratory tested and were found to have high cannabidiol, or CBD, levels. High-CBD strains offer several health benefits without a large degree of the psychoactive effects making them more desirable for patients who want the medical benefits without feeling “high” or impaired. Medicinal high-CBD strains are an excellent option for people who need to treat:
  - Anxiety;
  - Inflammation;
  - General Pain;
  - Seizures.

### CHOOSING THE RIGHT MEDICINE

Once patients understand how certain cannabinoids help their medical condition, the next step is finding the right MMJ. There are hundreds of varieties of medical MMJ, each with slightly different medicinal effects. Finding the right medicine will likely require trying out a number of varieties, but the following guidelines can help direct your search. Most patients eventually find 2-3 different strains that work well for different purposes, such as one for daytime and one for sleep. Medical MMJ strains fall into a few major categories: indica, sativa, hybrid indica/sativa, and high-CBD.

- MMJ sativa strains were originally found in tropical and equatorial regions. The plants are tall and the leaves are thin, and the buds often have a spicy or savory flavor. These varieties are generally more mentally stimulating, more energetic and euphoric. They tend to help more with nausea and other abdominal complaints, appetite stimulation, headaches, depression, and fatigue. Although side effects are uncommon and usually mild, sativa strains are more likely

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to cause or worsen anxiety or paranoia.

- MMJ Indica strains originated in more temperate regions. The plants are shorter and more bushy, and often have a sweet or fruity flavor. Indica varieties are often more relaxing and sedating. They tend to help more with pain, anxiety, muscle spasms, and insomnia.
- Hybrid Indica/Sativa strains are very common, and have been bred to achieve specific qualities. Many hybrid strains are able to produce effects that provide the best of both worlds.
- High-CBD strains are specific strains that have been tested by a laboratory and demonstrate high levels of cannabidiol (CBD). CBD has several exciting medicinal properties, including anti-anxiety, anti-inflammatory, anti-tumor, anti-seizure, and pain relief. Interestingly, strains high in CBD are much less psychoactive, making them desirable for patients who want the medical benefits without getting “high” or impaired. For more information on strains that have been found to contain high levels of CBD

When choosing a strain be sure to ask for medicinal strains that are compatible with your medical condition.

## COMMITMENT TO QUALITY

At Aloha Green, we take great pride in providing the highest quality service and products for our patients and caregivers. We strive to improve in all aspects of the Aloha Green experience. Our comprehensive Quality Assurance Program ensures these expectations will be met. As part of the QA Program, testing and certification is a combination of both in-house compliance and third party testing by Steep Hill labs verification. If you have any concerns about any of our products or services, please contact us at:

**Phone:** XXX.XXX.XXXX

**Email:** ~~info@alohagreenmmj.com~~

If you would like to bring your concerns you have about any of Aloha Green’s products or services to the attention of the Hawaii Department of Health MMJ Dispensary Licensing Program, you can reach them at:

**Email:** \_\_\_\_\_

**Mail:** 1250 Punchbowl Street  
Honolulu, HI 96813, United States

**Website:** [health.hawaii.gov/](http://health.hawaii.gov/)

## UNDERSTANDING EDIBLES

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Aloha Green does NOT SELL edibles and advises against ingesting MMJ.

Although inhaling MMJ smoke is a fast and effective way to introduce cannabinoids into the bloodstream, some patients are not comfortable inhaling smoke, or believe smoking is an unhealthy method of consuming MMJ.

Adding MMJ to food to get high has been around for years. Unlike smoking MMJ, MMJ edibles are introduced to the body through the gastrointestinal tract. Absorption is slower when cannabinoids are ingested, with a lower, more-delayed peak of the THC concentrations and other cannabinoids that must be processed by the liver before entering the blood stream. In other words, MMJ edibles are slower to kick in and to wear.

Some users describe the effect as being 'heavier' or 'deeper.' This reaction may be the result of the liver changing the cannabinoid THC into the more potent 11-hydroxy-THC, which tends to have a stronger more sedative effect. Although there is synthetic THC sold in pill form under the name Marinol that is approved in the U.S.A. for reduction of nausea and vomiting in cancer chemotherapy, and to increase appetite in HIV-wasting disease, it has proven very unsatisfactory due to a long delay of action time, and poor absorption in the GI tract. It will require some trial and error to find what the best method for any one individual.



*A word of caution to those choosing to medicate with edible MMJ – unlike with smoking and vaporizing, it is much easier to over-consume, and therefore over-medicate with ingestion. Because it can take longer to feel the effect and/or because the edibles taste good, patients are warned to start with a small amount, wait an hour or two before ingesting more, and be more cautious with consumption as not to exceed recommended dosage.*



## POSSIBLE SIDE EFFECTS

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Medical MMJ is a potent and effective medicine that has significant therapeutic benefits for countless medical conditions including cancer, HIV/AIDS, multiple sclerosis, glaucoma, to name a few. Like all medicines, medical MMJ may cause certain side effects. Below is a list of some of the more common side effects:



**NOTE:** *While most side effects are very common and harmless, if you believe you are experiencing a health emergency, call 911 or consult your physician.*

### Anxiety or Uneasiness

Medical MMJ affects everyone differently. While medical MMJ can cause a feeling of euphoria, sometimes, people do experience feelings of anxiety; this side effect is more common in sativa strains. If this happens to you, there are several things you can do: Try to stay in a comfortable and secure environment and eat something. This will often reduce the feeling of anxiety. You may want to reduce your dosage or try using an indica strain for medication.

### Hunger

Hunger is a very common side effect, and the reason many patients use medical MMJ. This side effect will diminish as the medication wears off. Try to avoid over-eating unhealthy foods by stocking up on healthy foods and snacks.

### Dry Mouth or Thirst

MMJ often makes people feel thirsty. Because of this, it is helpful to stay hydrated by drinking water. Avoid drinking caffeinated beverages like coffee, tea, or soft drinks, as this will cause further dehydration.

### Redness in the Eyes

This is a common side affect and will not hurt you. You may choose to use over the counter products for cosmetic reasons if you're concerned about your appearance.

## **DRAFT COPY**

### **Drowsiness**

MMJ can cause drowsiness to some who use it. As with all medicines that can produce drowsiness, don't drive or operate heavy machinery.

### **Insomnia**

Some people find that they can't sleep after using MMJ. If this happens to you, try reducing your dosage, and avoid using it for about two hours before you want to sleep. Also, using an indica strain to medicate may reduce this side effect.

### **Short-Term Memory Loss**

It is not uncommon for patients to find it difficult to carry on a complicated conversation, keep track of details, or perform complex tasks while under the influence of MMJ. If this happens to you, schedule your time so that you don't have to do these things when using your medicine. This is a temporary effect and will not cause long-term effects on your memory.

### **Euphoria**

MMJ can make patients feel euphoric. While this is considered a side effect, laughter has healing powers that can lift your spirits, which can benefit your health. This effect will dissipate as the effects of the MMJ wear off. If this effect interferes with your daily activities, adjust your medication times or dosage.

## **MINIMIZING NEGATIVE EFFECTS BY CONTROLLING DOSAGE**

First of all, with MMJ it is important to know that more is not always better. Many of the benefits of MMJ actually diminish with increased dosage, and very high doses can actually cause the symptoms one might be trying to cure.

Using the correct dose of MMJ is the single most important factor in having a successful therapeutic relationship with this powerful herb.

Unlike most medications, MMJ cannot be prescribed at a certain quantity and frequency based on body weight and age. We all have a unique internal chemistry, and the cannabinoid system is very complex, so different

dosages will be best for different people. You can, however, use the following guidelines to help optimize your dosage pattern and get the best results from medical MMJ.

## REPORTING ADVERSE REACTIONS

Medical MMJ is a potent and effective medicine that has significant therapeutic benefits to countless medical conditions. Like all medicines, medical MMJ may cause certain side effects. Most are very common, harmless and temporary and will diminish with time. If you suffer a reaction, in the future, you can reduce the dosage or changed to a different stain or MMJ-derived product.



If you suffer an adverse reaction or any complications from any of our MMJ products, and believe you are suffering from a health emergency, call 911.

If not an emergency, you can contact your personal physician. You can also contact a manger at Aloha Green at:

**Phone:** XXX.XXX.XXXX

**Email:** [info@alohagreenmmj.com](mailto:info@alohagreenmmj.com)

At Aloha Green, we take great pride in providing the highest quality service and products for our patients and caregivers. If you have any concerns about any of our products or services, please contact us at:

**Phone:** XXX.XXX.XXXX

**Email:** [info@alohagreenmmj.com](mailto:info@alohagreenmmj.com)

If you would like to bring your concerns you have about any of Aloha Green's products or services to the attention of the Hawaii Department of Health MMJ Dispensary Licensing Program, you can reach them at:

**Email:** \_\_\_\_\_

**Mail:** 1250 Punchbowl Street  
Honolulu, HI 96813, United States

**Website:** [health.hawaii.gov/](http://health.hawaii.gov/)

## ADDICTIONS

MMJ can be addictive. As with other prescribed medication, MMJ has its benefits but it also has dangers, especially when abused. It is important to follow the prescribed instructions when using cannabis and to speak with your provider of any concerns you may have.

Questions to ask yourself:

- Do you need to use more MMJ to produce the same effects? (Tolerance)
- Do you suffer from any of these symptoms when you're not using MMJ: physical dependence on cannabis when you discontinue use and there are symptoms of irritability, insomnia, decreased appetite, upset stomach, anxiety, depression, agitation, cravings, and/or mood swings? (Withdrawal)
- Are you using more MMJ than intended/prescribed?
- Have you been wanting to cut down on MMJ use but cannot?
- Do you find yourself canceling social engagements or reducing other activities so that you may focus on MMJ?
- Do you find your MMJ interfering with your personal and/or professional relationships?
- Have people around you commented on how you have changed negatively?



*If you have answered yes and are concerned, please make an appointment with your provider to discuss options available.*

## STORING MEDICAL MMJ

Proper Storage of Medical MMJ is an absolute must to maintain potency. The freshness and potency of your medical MMJ will rely on four important items:

- **Handling:** Too much handling of medical MMJ will cause trichomes to fall off, minimize handling only to time of consumption
- **Light:** Trichomes can be destroyed by light, store your medical MMJ in a dark place
- **Air:** Medical MMJ will dry out when exposed to air
- **Heat and Moisture:** Heat will dry out medical MMJ and moisture will promote bacteria growth, which can be dangerous.

Aloha Green provides each patient with an airtight childproof container to store and keep the MMJ. Aloha Green highly suggests using the provided containers as they are specifically designed to preserve freshness and prevent children from coming in contact with the MMJ.

Store your medical MMJ container in a cool dark place. Medical MMJ can be stored in the refrigerator but the freezer is not recommended. The freezer will actually freeze your medical MMJ and make the trichomes fragile thus making it easier for them to fall off.

Just remember that your medical MMJ was grown with intimate care to maximize trichomes and potency. Always keep in mind that handling, light, air exposure, and heat pose a threat to potency of medical MMJ.



**Caution:** *Keep all MMJ products out of reach of children and pets at all times. Keep in mind MMJ edibles can look appealing to children and animals. Avoid any mishaps by storing your MMJ edibles in a safe and secure place.*

## FREQUENTLY ASKED QUESTIONS

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How can I contact the State MMJ Program?

**Email:** \_\_\_\_\_  
**Mail:** 1250 Punchbowl Street  
Honolulu, HI 96813, United States  
**Website:** [health.hawaii.gov/](http://health.hawaii.gov/)

Where do I find program applications and information updates?

All applications and updates can be found on the Hawaii Department of Health website, or by sending a self-addressed, stamped envelope to the program.

What conditions make a patient eligible for the program?

Currently, there are 11 qualifying conditions: Severe chronic pain, intractable nausea/vomiting, severe anorexia/cachexia, Crohn's disease, Post-traumatic Stress Disorder, cancer, glaucoma, multiple sclerosis, epilepsy, and HIV/AIDS.

Can other conditions be added to the list?

Yes. The Department of Health may add other conditions at its discretion.

My card expired. Is that a problem?

If your card expires, your enrollment in the program will lapse, and there is no legal protection offered under Act 241. You may still submit your re-enrollment forms and they will be processed in the order they are received.

How much medical MMJ may I possess as a licensed patient?

4 ounces or 8 ounces of useable medical MMJ may be possessed over the course of 15 days or 30 days, respectively.

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Is my confidentiality protected if I am approved for medical MMJ?

We keep patient and caregiver identity information confidential. Aloha Green will only share this if requested to do so by the Hawaii Department of Health or authorized by the patient.

Can I use medical MMJ anywhere in Hawaii?



**NO.** It is illegal to possess or use medical MMJ in a public vehicle, on school grounds or property, in the workplace of the patient or primary caregiver, or at a public park, recreation center, youth center or other public place. The law does not provide protection on federal property such as airports, immigration check-points, reservations, and federal parks. It is still illegal to operate a motor vehicle while under the influence of MMJ.

Can I share my medical MMJ?

**No. Never.**

What happens if I come in contact with a law enforcement officer?

Show the officers your enrollment card. Your current enrollment card offers certain legal protections under state law, so long as you are acting within the guidelines of the law. If you are engaging in an activity that is prohibited under state law, your enrollment card will not offer those protections.

Does this apply to federal law enforcement?

At this present time, MMJ continues to be identified as a Schedule I controlled substance under Federal statute. For that reason, participation in the Hawaii Medical MMJ Dispensary Licensing Program may not protect qualified patients or caregivers from potential criminal liability under federal laws.

Are cards from other state medical MMJ programs valid in Hawaii?

**No.** Only cards issued through the Hawaii Medical MMJ Dispensary License Program are considered valid in Hawaii. Hawaii has no reciprocity agreements with any other medical MMJ state.

**DRAFT COPY**

Am I protected under Hawaii law if I'm visiting another state and using my medical MMJ?

**No.** You are protected from arrest and prosecution for the possession and use of medical MMJ under State Law while in Hawaii. If you cross a state border, you are no longer protected under Hawaii law.

What is the right medication for my medical condition?

Each medical condition is different and specific types/strains of MMJ will help in different ways for every condition. The Aloha Green staff will aid all patients in finding the proper medication for their individual condition.

Can I be arrested for a DWI when using medical MMJ?

**YES.** We recommend patients avoid driving or operating vehicles (cars, trucks boats, airplanes, motorcycles) and other machinery while using MMJ. MMJ can impair reaction time and potentially lead to an accident. In Hawaii, a person under the influence of a substance, including MMJ or prescription medications, to the point that it impairs their ability to drive, may be charged with a DWI.



## **EDUCATION TEAM**

Education and Addiction Counselor, Dr. Andrea Lau, Psy.D., M.Ed., MSW

Andrea was born and raised in Vancouver, B.C. She obtained her Bachelor of Science and Master of Social Work at the University of Southern California and then continued to obtain a Master of Education from the University of Hong Kong. She then went on to get a doctoral degree in clinical psychology from Alliant International University. Her postdoctoral fellowship was completed at the University of British Columbia where she collaborated as part of a multidisciplinary team, and participated in program development and administration. She provided consultation with faculty, staff, and parents regarding student concerns. She has experience with providing outreach and community development activities as well as providing psychoeducation.

*Aloha Green's education team will be available by appointment for all patients that are interested in a more in depth look into medical MMJ*

## 5) Capacity to meet the needs of qualifying patients

### Appendix 5(a)(2) – Patient Education Plan

The AGH team is dedicated to educating our patients with personalized health advice on how to safely and effectively use MMJ as a medical treatment. Our dispensary team will provide every qualifying patient with the knowledge, informational materials, and tools to best achieve their treatment objectives. The process will begin with an intake interview and presentation of the patient handbook, which will cover:

- background and history of medical marijuana in Hawaii;
  - the AGH's mission and vision;
  - a clear warning that marijuana has not been analyzed or approved by FDA, that there is limited information on side effects, that there may be additional health risks with using marijuana, and that marijuana should be kept away from children;
  - a warning that when under the influence of marijuana, driving is prohibited and operating machinery should be avoided;
  - an interactive discussion about tolerance, potential dependence issues, and symptoms of withdrawal;
  - information about identifying signs and symptoms of substance abuse and addiction;
  - referral information for local substance abuse treatment programs;
  - information regarding the administration, and dosing methods for marijuana;
  - a clear statement that registered qualifying patients may not distribute marijuana to any other individual, and that they must return unused, excess, or contaminated products to us for disposal.
- A signed acknowledgment by the patient of the above will remain in the patient record;
- strain selection information that describes the possible associated effects of each strain;
  - information about potency and the need to manage administration to achieve desired palliative effects with the minimum amount of product; and



## 5) Capacity to meet the needs of qualifying patients

- information about continuing opportunities to meet with patient support team members to discuss patient's condition.

### Patient Education Principles

- **Essential Service:** Patient education is an essential part of achieving an effective treatment plan for our patients.
- **Accuracy:** Providing accurate information on the health benefits on specific MMJ strains and manufactured products will allow patients to make more informed decisions on treatment options.
- **Privacy:** Private consultation room available to all patients seeking information in a discreet and confidential environment.
- **Commitment:** We are committed to making significant investments in research, training, electronic medical records and a patient management system so that we are better able to inform patients on the latest available treatments pertaining to their condition and can provide patients with more personalized care.
- **Compassion:** Understanding that our patients are not just customers, but clients seeking our consultation and advice on treating conditions that affect their quality of life.

### Additional points:

- Ensure patients receive honest and accurate information about using MMJ.
- Provide detailed information on proper ingestion options, inhalation techniques, and possible side effects.
- Provide carefully designed and comprehensive education and support program for qualifying patients and caregivers.
- Confidential patient consultation and personalized care options available to help alleviate medical conditions provided in a private consultation room if requested.



## 5) Capacity to meet the needs of qualifying patients

- Our addiction prevention/patient counselor will work with our Medical Advisory Board to provide training and teach patients and caregivers to use our patient handbook, which will be available to every patient and caregiver. They will also provide training to our dispensary staff, including updates regarding latest developments in the treatment and uses of medical cannabis.
- The patient handbook allows patients to track the effects of specific medical cannabis strains.
- Conduct regular ongoing surveys and request feedback from patients to enable us to produce products specific to our patients' needs.
- Patient care and customer service is a priority. We will carefully screen and hire patient care and customer service staff who understand that compassion, product knowledge, and integrity are essential to the well-being of our patients and the success of Hawaii's medicinal marijuana program.
- See patient handbook for additional details which include the following:
  - Medical Cannabis: A Safe and Effective Medicine
  - Patient's Rights: Knowing the Law
  - How Do I Qualify?
  - Understanding Medical Cannabis
    - Breaking Down Cannabis
    - Strains and Uses: Sativas and Indica
    - How to Use Medical Cannabis
    - Choosing the Right Medicine
    - Proper Storage of Your Medicine
    - Patient Code of Conduct
    - Quick Guide
    - FAQ's



## 5) Capacity to meet the needs of qualifying patients

- Ingestions Options
- Inhalations Techniques
- Possible Side Effects
- How to report adverse reactions and complaints about our products and services



## 5) Capacity to meet the needs of qualifying patients

### Appendix 5(a)(3) – Patient Safety and Addiction Identification Guideline

#### EMPLOYEE MEMO: Patient Safety and Addiction Identification Information Circular

**TO:** All dispensary employees

**DATE:** January 20, 2016

This memorandum provides an introduction to the physical and psychological effects of Marijuana (MMJ). Please review the following and keep in mind identifiable symptoms to assist our patients.

MMJ is a psychoactive drug and medicine. Cannabis is often consumed for its mental and physical effects, such as heightened mood, relaxation, and an increase in appetite. Possible side effects include a decrease in short-term memory, dry mouth, impaired motor skills, red eyes, and feelings of paranoia or anxiety. Onset of effects is within minutes when smoked and about 30 minutes when eaten. They last for between two and six hours.

#### **Cannabis over-activates parts of the brain**

- Altered senses (ex. Brighter colors)
- Altered sense of time
- Changes in mood
- Impaired body movement

#### **Short term effects on cognition include:**

- Short-term memory
- Distorted sense of time
- Decreased sensory perception
- Attention span
- Problem solving
- Verbal fluency
- Increased reaction time



## 5) Capacity to meet the needs of qualifying patients

- Psychomotor control

### Long term effects:

- Cognitive impairment
- Respiratory symptoms,
- Suppression of the immune system,
- Dizziness,
- Memory loss,
- Loss of decision-making capability,
- Psychosis,
- Other mental health disorders (8, 30, 32–38).

With chronic cannabis-use, it is still unclear the degree to which short-term impairments in brain function are reversible. There are studies that show brain function recovering over time, but there are other studies that demonstrate subtle effects, such as slowed information processing, that may persist long after discontinuation.

Functional imaging studies have shown less activity in brain regions involved in memory and attention in chronic marijuana users than in non-users, even after 28 days of abstinence (Block, O'Leary et al., 2002; Quickfall & Crockford, 2006).

In a systematic review of medical cannabis treating certain neurologic disorders (Koppel et al, 2014), of 1619 patients who were treated with cannabinoids for less than 6 months, 6.9% stopped the medication due to adverse effects. Of the 1118 who received placebo, 2.2% stopped because of adverse effects. The following symptoms were reported: nausea, increased weakness, behavior changes, mood changes, suicidal ideation, hallucinations, dizziness, vasovagal syncope, fatigue, feelings of intoxication. There was one death "possibly related" to treatment (a seizure, followed by fatal aspiration pneumonia) (Wade et al., 2006).

No direct fatalities (overdoses) have been attributed to cannabis, even in recreational users of increasingly potent marijuana, possibly because of the lack of endocannabinoid receptors in the brainstem. However, deleterious



## 5) Capacity to meet the needs of qualifying patients

effects on judgment can indirectly endanger patients who perform dangerous tasks such as driving. Cannabis has been associated with a 2-3 fold increase in accidents on the road (Drummer, Gerostamoulos et al., 2004; Ramaekers, Berghaus et al., 2004).

### Physical effects

- **Breathing problems.** Cannabis smoke irritates the lungs, and frequent cannabis smokers can have the same breathing problems that tobacco smokers have. These problems include daily cough and phlegm, wheezing, shortness of breath, more frequent lung illness, and a higher risk of lung infections. There is also an increased risk of both acute and chronic bronchitis.
- **Increased heart rate.** Cannabis increases heart rate and mildly increases blood pressure, which then forces the heart to work more strenuously. Among those with pre-existing heart disease, cannabis may have serious adverse effects, such as increased risk of heart attack. Mettleman and colleagues (2001) studied 3882 patients who had heart attacks and showed that in the hour after smoking cannabis, users were 4.8 times more likely than non-users to have heart attacks.
- **Problems with child development during and after pregnancy.** Cannabis use during pregnancy is linked to increased risk of both brain and behavioral problems in babies. If a pregnant woman uses cannabis, the drug may affect certain developing parts of the fetus's brain. Resulting challenges for the child may include problems with attention, memory, and problem-solving. Additionally, some research suggests that moderate amounts of THC are excreted into the breast milk of nursing mothers. The effects on a baby's developing brain are still unknown. Studies found an increase in specific birth defects, including ventricular septal defect, in offspring of cannabis smokers (Ammenheuse, Berenson et al., 1998; Forrester & Merz, 2007). Many of the compounds in smoked cannabis readily cross the placenta (growing fetus will absorb) and pass into breast milk (nursing infants will ingest). Studies show that cannabis use during pregnancy or breast feeding is linked with the following outcomes: low birth weight, developmental delay, and behavioral problems.

### Mental effects

Long-term cannabis use has been linked to mental illness in some users, such as:





## 5) Capacity to meet the needs of qualifying patients

- temporary *hallucinations*—sensations and images that seem real though they are not
- temporary *paranoia*—extreme and unreasonable distrust of others
- worsening symptoms in patients with *schizophrenia* (a severe mental disorder with symptoms such as hallucinations, paranoia, and disorganized thinking)

Cannabis use has also been linked to other mental health problems, such as:

- depression
- anxiety
- suicidal thoughts among teens

However, it is uncertain whether there is a correlation or causation with these links. More research is needed.

### **Withdrawal**

Abruptly stopping or no longer using cannabis after a prolonged phase of cannabis use can lead to the following withdrawal symptoms:

- Irritability
- Insomnia
- Decreased appetite
- Anxiety
- Depression
- Agitation
- Cravings
- Mood swings

These peak within the first week after quitting and last up to 2 weeks.

### **Addiction**



## 5) Capacity to meet the needs of qualifying patients

According to a study endorsed by the National Institute on Drug Abuse (NIDA), about 9 percent of people who use marijuana will become abusers. If you broaden the scope to include marijuana dependence, the rate could be higher than 20 percent, at 4.5 million users. This is compared to about 7 percent of alcohol users. However, the number of people actually admitted to substance abuse clinics for treatment of marijuana abuse only numbered 340,212 in 2010, a tiny fraction of the estimated number of people addicted to the drug.

Addiction is a progressive, long-term continuing problem. When an addict tries to stop using and fails because life without the drug is just too hard, that is addiction. Once an addict is convinced he or she cannot live without cannabis, the dependency becomes an obsession. When the addict uses even though he or she promised themselves they wouldn't, this is compulsion.

Contrary to common belief, marijuana can be addictive. Research suggests that about 1 in 11 users becomes addicted to marijuana (Anthony, 1994; Lopez-Quintero 2011). This number increases among those who start as teens (to about 17 percent, or 1 in 6) (Anthony, 2006) and among people who use marijuana daily (to 25-50 percent) (Hall & Pacula, 2003). While the drug may have benefits when used for a medically prescribed purpose, it also has dangers – especially when abused. When it is used over a long period of time it is known to cause dependence, tolerance, and even addiction.

### **Marijuana addiction signs include:**

**Tolerance to cannabis.** If you realize that you have to smoke more cannabis to produce the same effects than you are becoming addicted to the drug.

**Withdrawal when cannabis is not smoked.** If you have signs of withdrawal such as upset stomach, anxiety or depression when you do not smoke cannabis than your body has already developed a physical dependence on the drug.

**Smoking more cannabis than you intended.** If you tell yourself or others that you will only smoke a certain amount of cannabis and then you wind up smoking more than you had anticipated or intended to, you are addicted.



## 5) Capacity to meet the needs of qualifying patients

**Inability to control or cut down cannabis use.** If you've tried to cut back on your smoking or tried to use less but still find that you wind up smoking more or using more than you anticipated you are suffering from a potential sign of addiction.

**Spending most of your time getting high.** If cannabis has taken over your life to the point that you spend most of your time getting high and do not take part in other activities because you are busy getting high you are suffering from addiction.

**Reduced activities because time is spent focused on cannabis.** If you no longer take part in activities that you once liked to enjoy because you are busy smoking cannabis than there is a sign of addiction.

**Smoking cannabis despite known consequences.** If you have already suffered consequences as a result of getting high and you still continue to use, there is a sign of addiction. For example, if cannabis use is interfering in your personal relationships or professional relationships, yet you still continue to use.

Cannabis addicts, in particular, tend to believe that they must be "okay" since there are *much* worse drugs, and *other* people whose lives are *much* worse off as a result of *their* using. That is when they are still in denial.

### How to overcome addiction

Fortunately, there are a number of options for help when it comes to overcoming cannabis addiction and taking back control of your life:

**Inpatient Rehab** – in most cases, inpatient rehab will not be required for those who are addicted to cannabis unless your addiction is paired with a co-occurring mental illness or if you are also addicted to another drug or substance such as alcohol

**Outpatient Rehab** – this is the most common method of treatment for cannabis addiction and takes place on daily, weekly or even semi-weekly sessions that include counseling and therapy to assist the individual in learning how to recognize and avoid the situations that trigger them to smoke cannabis and to overcome their addiction



## 5) Capacity to meet the needs of qualifying patients

**Behavioral therapy** – many people who smoke cannabis do so because they are bored or they need a mood boost. Behavioral therapy can teach these people how to overcome their addiction to cannabis by changing the behaviors that they take part in to more positive behaviors that will help them to be more productive and less likely to smoke cannabis

**Cognitive therapy** – this method of treatment will help the addict to think in a different way that does not promote them to smoke cannabis

**Community reinforcement** – many people who smoke cannabis have trouble feeling good or happy without the drug due to chemical changes in the brain. Community reinforcement programs can help by providing a reward to an individual for recovery goals that are met such as not smoking pot for a month or making other commitments and following through with them

**Support groups** – many different support groups exist include Marijuana Anonymous groups which focus on the twelve-step recovery model which outlines a series of steps that take the addict from full-fledged addiction on through to sobriety.

No medications are currently available to treat marijuana addiction. However, continuing research may lead to new medications that help ease withdrawal symptoms, block the effects of marijuana, and prevent relapse.

## References

Koppel, B.S., Brust, J.C.M., Fife, T., Bronstein, J., Youssof, S., Gronseth, G. & Gloss, D. (2014). Systematic review: Efficacy and safety of medical marijuana in selected neurologic disorders. *American Academy of Neurology*, 82:1556-1563.

Wade, D.T., Makela, P., House, H., Bateman, C. & Robson, P. (2006). Long-term use of a cannabis-based medicine in the treatment of spasticity and other symptoms in multiple sclerosis. *Multiple Sclerosis*, 12:639–645



## 5) Capacity to meet the needs of qualifying patients

### Appendix 5(c)(1) – Suitability Letters



7) **Ability to comply with the requirements in this chapter and chapters 329 and 329D, HRS, for inventory tracking, security, and sales limits for qualifying patients**

only. Sales and inventory reports can be generated and customized based on a wide variety of data fields.

**All purchase transactions are tied to individual patient records.**

On the cultivation side, every plant is given a barcode. **This barcode allows AGH to track every plant and every batch or strain in our production center.** Every grow room has a barcode and is also associated with growth phase, so the system knows which rooms are for vegetation, flowering, propagation, or cloning. If a plant is moved from one room to another without documentation, a plant room audit, by scanning the plants in each room, will report what plants are currently in that room and what used to be in that room. You can quickly reconcile at that point.

All components of the software maintain strict batch tracking through all operations representing true seed-to-sale inventory management. During plant harvest, similar plants (or plants of the same strain) will be assigned a batch number by the software and will maintain this batch number until the finished product reaches the qualifying patient in its delivered form, including dried flower or manufactured product. Individual plant records may be used to track any employees who may have handled a plant, and what nutrients went into a plant. Products taken from each batch will be tracked for manufacturing, shipping of product, or other adjustments throughout distribution. Reports can be generated from each batch or package from a batch, and such data may be used for recall purposes. **In accordance with DOH Rule 11-850-61 and HRS 329D-6(j) and (k), our BioTrack System allow comprehensive tracking of all seeds, plants, trim, waste, product in shipment, manufactured product (including physical weight of marijuana used to manufacture), finished flower inventory, and amounts purchased by qualifying patients in any fifteen day period. The BioTrack System enables a complete employee chain of custody tracking for inventory, from seed to sale allowing management to see which employees have handled the product at every stage.**



**7) Ability to comply with the requirements in this chapter and chapters 329 and 329D, HRS, for inventory tracking, security, and sales limits for qualifying patients**

**Security**

In addition to daily inventory procedures, we will conduct a monthly inventory audit of MMJ in the process of cultivation and finished stored MMJ using generally accepted accounting principles.

Documentation will include, but not limited to: the date of the inventory, a summary of the inventory findings, and the names, signatures, and titles of individuals who conducted the inventory. **We will also conduct a comprehensive annual inventory on the anniversary after the date of the previous comprehensive inventory in conjunction with our annual independent financial audit [Rule 11-850-39].** Should any material reduction in the amount of MMJ in the dispensary's inventory occur, AGH will determine where the loss has occurred and document and take corrective action. All losses and/or disappearances must be reported to the Director of Security & Anti-Diversion. We will use high-precision scales that will be calibrated daily. All weights must fall within specific tolerances to ensure there is no inventory shrinkage or theft. Our inventory tracking system will alert management when weights fall out of specified tolerances (for example, each gram must weight 1.03 grams +/- 0.02 grams; and each ounce must weigh 28.55 grams +/- 0.02 grams). **In the event of a breach or failure of the BioTrack System, AGH will suspend operations dependent on the tracking system until it is fully operational again [Rule 11-850-61(d)].** AGH will have a backup power source to protect against power loss. In the event of a loss of internet access, BioTrack has the ability to operate in offline mode. While operating in offline mode AGH may continue to process sales with an onsite server, even if the internet connectivity goes down. When service is restored, all changes made in offline mode will be updated and synced within the system.

**Sales Limits**

For every patient transaction, AGH staff query the BioTrack System that tracks the patient's purchasing history to ensure patients are only dispensed permitted quantities during the applicable period in accordance with Rule 11-850-42, and to minimize the risk of diversion by patients. **AGH will not dispense any combination of MMJ products or manufactured MMJ products to patients in excess of**



7) **Ability to comply with the requirements in this chapter and chapters 329 and 329D, HRS, for inventory tracking, security, and sales limits for qualifying patients**

**4 ounces during any 15 consecutive day period; or 8 ounces during any 30 consecutive day period.**

AGH will access the DOH's electronic database to confirm the patient's MMJ registration has not expired, track the patient's purchasing history, including frequency of visits and amounts purchased from other dispensaries, and confirm that patients have not exceed allowances before dispensing. **To prevent diversion, AGH has determined that no patient may purchase more than 2 ounces of MMJ from AGH during any one visit and qualifying patients may not make more than one purchase from AGH per day.** In addition, AGH's price per product will be placed above the "street price" to make diversion financially unreasonable. Within "Sales Limits" a BioTrack System user can regulate the permissible quantities allotted to a patient or caregiver. The system stores patient purchases and cross references with any DOH defined limits. As the system will be recording every transaction, this data can be parsed, filtered and reported against at any time. **The BioTrack System can issue stop purchase alerts if patients attempt to exceed defined limits and disallow the completion of the sale.** In the event that a patient has exceeded their purchasing limit, the dispensary will be notified within the BioTrack System that the patient has exceeded their sales limit, in response, we will inform the patient and decline the sale. The BioTrack System does not allow for a dispensary to transact with a patient that has exceeded their pre-defined sales limit. Prior to selecting BioTrack, AGH audited all the major suppliers of inventory tracking and POS systems. Each system has their benefits and drawbacks, but the **greatest differentiator is our team's familiarity with the BioTrack System** in their current licensed seed-to-sale operations in Colorado and Canada. **This experience will allow AGH to avoid many of the common pitfalls new users must overcome when adopting a new system.** AGH will be able to comply with all requirements set out by the DOH on inventory tracking, security and sales limits for qualifying patients using a combination of the BioTrack System, continuing employee systems training, and written policies and procedures.





**7) Ability to comply with the requirements in this chapter and chapters 329 and 329D, HRS, for inventory tracking, security, and sales limits for qualifying patients**

**Appendix List**

Title	Page
7(a) – BioTrack Support Letter .....	7
7(b) – BioTrack System Data Entry Protocols .....	21



## Appendix 7(a) - BioTrack Support Letter



**BioTrackTHC™**  
The Only Seed to Sale Solution

1/21/2016\_

-  
Tai Y. Cheng  
Aloha Green Holdings Inc.

Reference: BioTrackTHC Support Document

Dear Tai,

BioTrackTHC provides effective cutting -edge technology solutions for the emerging legal marijuana industry. Solutions that not only prevent product theft, but assist business owners in running their cultivation, processing, packaging, and retail operations more profitably and more legally compliant. Furthermore, this is all done without leaving sensitive business and consumer data vulnerable in the cloud. Specifically, BioTrackTHC is the industry's only true seed--to--sale software system with enterprise resource planning, complete inventory tracking, point--of--sale, marketing, financial reporting and regulatory compliance features. Subsequently, because it is a server -based system with advanced security features, customers can rest assured that no one,- not even the BioTrackTHC team,- can access their business or consumer information without their permission.

This document confirms BioTrackTHC's intentions to enter into a formal agreement with Aloha Green Holdings Inc. to provide software solutions guaranteed to meet published Hawaii Department of Health reporting, regulation, and compliance guidelines for cannabis production facilities in the event that an authorized license is obtained.

Thank you for your consideration of BioTrackTHC. We are eager to assist you in your efforts to acquire a license and look forward to entering into a software solution agreement with you upon receipt of that license.

Best Regards,

Moe Afaneh  
Chief Operating Officer





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### Hawaii HB 321

- (A) Secure inventory tracking and control;
- (B) Protecting confidential customer information;
  - (1) Ability to comply with the requirements in this chapter and chapters 329 and 3290, HRS, for inventory tracking, security, and sales limits for qualifying patients;
    - (1) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products;
  - (2) Ability to comply with the requirements for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 3290-7 and 3290-8, HRS;
  - (3) Ability to comply with requirements for signage, packaging, labeling, and chain of custody of products;
  - (4) A plan for secure disposal or destruction of marijuana and manufactured marijuana products;

***BioTrackTHC™ enables the business to collect, store, and retrieve all data and activity -- with respect to inventory records, quality assurance/laboratory testing, supplier records, patient records, client-records, employee records, recall reports, quarantine and waste reporting, sales/transaction records, disposal records, and all scanned documents -- at any time, in real time, either in-system or through the report generation tool. The System is able to record transfers of small amounts of marijuana product to a laboratory for testing. Input may include fields including but not limited to: date of transfer, transferred by, order number, source license number, laboratory name, laboratory license number, and list of transferred products including product ID, product name, lot and/or batch number, and quantity. BioTrackTHC creates a 16 digit non-repeatable identifier for each plant. This identifier is printed onto a barcode that is affixed to the plant and will remain associated with this given plant throughout its lifecycle. A user can trace the lineage of any product all the way back to the plant from which it derived. Any action performed by an employee is stored within the system indefinitely and is searchable.***

- (a) A dispensary licensee shall not transfer any marijuana or manufactured marijuana products to any other dispensary.
- (b) A dispensary licensee shall not accept any marijuana or manufactured marijuana products from any other dispensary.

**NO pre-rolls, no samples, no paraphernalia**

§11-850-35 Employee records

(a) A dispensary licensee shall have available at each dispensary facility a time clock or other adequate method to record the month, day, year, and time that each employee arrives at and leaves the facility.

(b) Time record entries shall be made at the time an employee reports for duty and again when the employee goes off duty and at any time the employee leaves and returns to the premises for any reason.

(c) A dispensary licensee shall maintain all employee records, including the specific employee training provided and hours worked.

***The Time Clock function within BioTrackTHC records the date and time that every employee clocks into and out of the system. A manager can be granted the permission within the system to modify the clock in/out times for an employee in the event of an error or someone forgetting to clock out.***

§11-850-36 Transport

(a) A dispensary may transport marijuana and manufactured marijuana products between its facilities, and between its facilities and a laboratory for testing.

(b) Only employees designated by the dispensary licensee, who are trained and knowledgeable on the transportation protocols required by this chapter, shall transport marijuana and manufactured marijuana products. Every transport of marijuana and manufactured marijuana products shall be accompanied by at least two employees.

(c) Each time marijuana and manufactured marijuana products are transported, the dispensary licensee shall prepare a manifest on a form prescribed by the department that lists the elements required by the department's tracking system. A dispensary licensee shall only transport marijuana or manufactured marijuana products that are listed on the manifest. A dispensary licensee shall transport marijuana or manufactured marijuana products in secured containers. The dispensary licensee shall include a copy of the manifest in the interior and on the exterior of the container.

(b) Upon receipt of marijuana and manufactured marijuana products the dispensary licensee or the laboratory shall immediately report to the department any discrepancies between what is received and what is on the manifest.

(c) The designated employees transporting marijuana and manufactured marijuana products shall not stop at a location not listed on the manifest.

(d) The dispensary licensee shall transport marijuana and manufactured marijuana products using routes that reduce the possibility of theft or diversion.

(e) A dispensary licensee shall not transport marijuana or manufactured marijuana products:

- (1) Off site to qualifying patients or to primary caregivers;
- (2) To another county or another island within the same county; or
- (3) To, from, or within any federal fort or arsenal, national park or forest, any other federal enclave, or any other property possessed or occupied by the federal government.

***BioTrackTHC provides functionality for Cultivators, Processors and Dispensary Licensees to create transfer manifest documents. Transfer manifests will be stored and tracked by the System. Input data may include, but is not limited to, the following fields: ship from name, license number and route description. For each item include destination address, destination name, license number, address, product description, product ID and lot number, quantity and units of measure. Transfer manifests will be used as shipping documents for transfers between locations within an organization or sales between Licensees.***

(b) A dispensary licensee shall give the department access to all parts of the dispensary property, equipment, records, documents, and any other substance, material, or information relevant to ensure the dispensary licensee's compliance with this chapter, upon request.

***BioTrackTHC™ enables the business to collect, store, and retrieve all data and activity -- with respect to inventory transfers, inventory-tracking records, supplier records, patient records, client-records, employee records, recall reports, quarantine and waste reporting, sales/transaction records, disposal records, and all scanned documents -- at any time, in real time, either in-system or through the report creation tool.***

#### §11-850-38 Reports.

(a) A dispensary licensee shall submit quarterly reports on January 15, April 15, July 15, and October 15.

If the due date for submitting a quarterly report falls on a Saturday, Sunday, or State holiday, the report will be on time if it is submitted on the next day that is not a Saturday, Sunday, or State holiday. Reports shall be submitted on a form and in a manner prescribed by the department.

(b) Reports shall include but not be limited to:

1. Records of entry and exit for all individuals who entered a dispensary facility;



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2. Amounts by category of marijuana produced and manufactured marijuana products manufactured and offered for sale;
3. Amounts by category of marijuana and manufactured marijuana products sold;
4. A list of all marijuana, manufactured marijuana products, or unusable marijuana materials that have been destroyed or will be destroyed;
5. A summary financial statement;
6. Laboratory results of all tests conducted;
7. Description of any breach or halt in its security system and tracking system; and
8. Any other information requested by the department.

***BioTrackTHC™ enables the business to collect, store, and retrieve all data and activity -- with respect to inventory transfers, inventory-tracking records, supplier records, patient records, client-records, employee records, recall reports, quarantine and waste reporting, sales/transaction records, disposal records, and all scanned documents -- at any time, in real time, either in-system or through the report creation tool.***

§11-850-39 Audits

- (a) A dispensary licensee shall obtain an independent financial audit annually, at the dispensary licensee's expense, and shall provide a copy of the audit's findings to the department.
- (b) The report shall be completed and submitted to the department no later than sixty days prior to the end of the license expiration date, or at another time as the department may direct.
- (c) When a license is revoked, suspended, surrendered, or expires, a dispensary licensee shall file a final report thirty days following revocation, suspension, surrender, or expiration.

***In the course of doing business, a user can perform inventory audits to confirm or adjust what's showing in your inventory and what the user actually has on hand. After clicking on the Inventory Audit icon a list will populate showing all of the items for inventory in the current inventory room. If the user wishes to run a "Blind Audit" this will prevent the employee from seeing the original weights or any differences. The Inventory Shrinkage report allows you to total loss across various products for a given time period with a threshold to ignore adjustments outside of a certain increment (mistakes).***

§11-850-41 Record retention.

- (a) A dispensary licensee shall retain for a minimum of six years business operation records including but not limited to:

- (1) Inventory tracking including transport of marijuana and manufactured marijuana products;

- (2) Sales and compliance with dispensing limitations for each qualifying patient and primary caregiver;
- (3) Financial records including income, expenses, bank deposits and withdrawals, and audit reports;
- (4) Logs of entry and exit for dispensary facilities; and
- (5) Employee records.

(b) A dispensary licensee shall retain for a minimum of one year all security recordings.

***BioTrackTHC™ enables the business to collect, store, and retrieve all data and activity. All inventory records, patient records, recall reports, sales/transaction records, product disposal records, and all scanned documents can be accessed at any time (real time), either in-system or through the report creation tool. Though system actions can be adjusted or voided, at no time is any data ever fully deleted as BioTrackTHC™ maintains a log of every action, including adjustments and voids, so that the entire history of the system may be reconstructed. The availability and report ability of the system data enables the said entity to produce any information necessary for the Department during an inspection or at the Department's request.***

§11-850-42 Allowed quantities for dispensing.

(a) A dispensary licensee may dispense to a qualifying patient or primary caregiver any combination of marijuana or manufactured marijuana products that shall not exceed four ounces of marijuana during a period of fifteen consecutive days, and shall not exceed eight ounces of marijuana during a period of thirty consecutive days .

(b) Consistent with section 11-850-61, a dispensary licensee shall determine the quantity of marijuana or manufactured marijuana products purchased by a qualifying patient or primary caregiver from any other licensed dispensary within the state and shall not sell any amount of marijuana or manufactured marijuana products to that qualifying patient or primary caregiver of a qualifying patient that exceeds the limits identified in this chapter.

***Within "Sales Limits" a user can regulate the permissible quantities allotted to a patient or caregiver.***

§11-850-43 Disposal or destruction.

(a) A dispensary licensee or laboratory certified by the department to test marijuana and manufactured marijuana products shall dispose of or destroy unused, unsold, contaminated, or expired marijuana or manufactured marijuana products, or waste products resulting from the



cultivating or manufacturing process, including any inventory existing at the time of revocation or surrender of a license, in a way that assures that the marijuana or manufactured marijuana product does not become available to unauthorized persons and is documented as subtracted from inventory.

(b) A dispensary licensee shall destroy or dispose of unused, unsold, contaminated, or expired marijuana or manufactured marijuana products by a means prescribed by the department or the department of public safety narcotics enforcement division administrator.

(c) A dispensary licensee shall establish written policies and procedures to be followed by all of its employees for the disposal or destruction of unused, unsold, contaminated, or expired marijuana and manufactured marijuana products.

***During or after a Harvest or Cure, a user would create a batch for the "green waste" which would include broad leaf trim, and stems that weren't going to be converted into a concentrated format. All waste would be weighed, given it's own 16-digit barcode, which is permanently stored in the system prior to it being destroyed. When a BioTrackTHC user sends a sample for Quality Assurance testing and the sample does not meet minimum standards, a user may; 1) Place the product into quarantine for destruction, or, 2) Convert the product into a different format. If the user converts the non-conforming sample and originating lot, the new converted product must be retested.***

#### §11-850-61 Tracking requirements

(a) A dispensary licensee shall track electronically the dispensary's inventory of marijuana and manufactured marijuana products through each stage of processing, from propagation to point of sale, disposal, or destruction, and maintain a record of clear and unbroken chain of custody at all stages, including during transport of the inventory between dispensary facilities and between a dispensary facility and a laboratory.

(b) A dispensary licensee shall track electronically all sales of marijuana and manufactured marijuana products to qualified patients and primary caregivers from all dispensaries in the State, to ensure that no sales are authorized in excess of legal limits, as set out in section 3290-7, HRS, and shall have a sales system that automatically prohibits sales in excess of the legal limits and that cannot be overridden manually.

(c) A dispensary licensee shall acquire, operate, and maintain a secure computer software tracking system that interfaces with the department's computer software tracking system to allow the department real time, twenty-four hour access to the dispensary licensee's tracking system and inventory records. The dispensary licensee's tracking system shall capture and report all the data required by the department's tracking system.



(d) In the event of a breach or failure of its tracking system, a dispensary licensee shall suspend operations dependent on the tracking system until the tracking system is fully operable. The dispensary licensee shall notify the department immediately upon the breach or failure, and again when it resumes operations.

***BioTrackTHC™ enables the business to collect, store, and retrieve all data and activity -- with respect to inventory records, quality assurance/laboratory testing, supplier records, patient records, client-records, employee records, recall reports, quarantine and waste reporting, sales/transaction records, disposal records, and all scanned documents -- at any time, in real time, either in-system or through the report generation tool. The System is able to record transfers of small amounts of marijuana product to a laboratory for testing. Input may include fields including but not limited to: date of transfer, transferred by, order number, source license number, laboratory name, laboratory license number, and list of transferred products including product ID, product name, lot and/or batch number, and quantity. BioTrackTHC creates a 16 digit non-repeatable identifier for each plant. This identifier is printed onto a barcode that is affixed to the plant and will remain associated with this given plant throughout its lifecycle. A user can trace the lineage of any product all the way back to the plant from which it derived. Any action performed by an employee is stored within the system indefinitely and is searchable.***

## PRODUCTS AND PRODUCT STANDARDS

### §11-850-71 Marijuana.

(a) A dispensary licensee may dispense marijuana only in the form of dried matured processed flowers of female cannabis plants.

### §11-850-72 Manufactured marijuana products.

(a) A dispensary licensee may manufacture marijuana products limited to capsules, lozenges, pills, oils and oil extracts, tinctures, ointments, and skin lotions.

### §11-850-74 Equivalent weights for manufactured marijuana products.

(a) A dispensary licensee that produces manufactured marijuana products shall calculate the equivalent physical weight of the marijuana that is used to manufacture the product, and shall make available to the department and to consumers of the manufactured marijuana product the equivalency calculations and the formulas used.

(b) A dispensary licensee shall include the equivalent physical weight of marijuana on the label of the products offered for sale.

***BioTrackTHC is a complete inventory control system that also creates a searchable, secure, tamper-evident record of each and every action performed within the system. The name and address of the recipient, the quantity delivered, and the product name, potency, batch number, and lot number of the product can all be recorded for each distribution.***

## LABORATORY CERTIFICATION, TESTING, AND STANDARDS

### §11-850-81 Laboratory testing required.

A dispensary licensee shall not dispense marijuana or manufactured marijuana products unless a laboratory certified by the department pursuant to this chapter has tested the marijuana and manufactured marijuana products and they meet the requirements set out in this chapter.

### §11-850-85 Laboratory standards and testing

(a) A certified laboratory shall test a statistically representative sample from each batch of marijuana or manufactured marijuana products. The dispensary licensee shall maintain in a secure tamper-proof manner a similar sample from the same batch, for verification testing as directed by the department.

(a) A certified laboratory shall issue to the dispensary licensee and the department a certificate of analysis for each batch of marijuana and manufactured marijuana products tested for that dispensary; provided that a certified laboratory may only test and report on those things for which it is certified. The certificate of analysis shall include the results with supporting data for the following:

- (1) The chemical profile of the batch for the following compounds:
  - (A) 9 (delta 9) - Tetrahydrocannabinol (THC)
  - (B) Tetrahydrocannabinol Acid (THCA)
  - (C) Cannabidiol (CBD)
  - (D) Cannabidiolic Acid (CBDA)
  - (E) Cannabigerol (CBG)
  - (F) Cannabinol (CBN)
- (2) The presence of the following contaminants, which shall not exceed the following levels:
  - (A) Heavy metals:
    - (i) Arsenic 10.0 ppm
    - (ii) Lead 6.0 ppm
    - (iii) Cadmium 4.0 ppm
    - (iv) Mercury 2.0 ppm



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(B) Pesticides regulated by the U.S. Environmental Protection Agency: 1.0 ppm

(C) Solvents:

(i) Butanes 800 ppm

(ii) Heptanes 500 ppm (iii) Benzene\*\* 1 ppm

(iv) Toluene\*\* 1 ppm (v) Hexane\*\* 10 ppm

(vi) Total Xylenes

(m,o,p-xylene) 1 ppm

\*\* Contaminants in solvents

(D) Any visible foreign or extraneous material, that is not intended to be part of the product being produced, including but not limited to mold, hair, insects, metal, or plastic;

(E) Moisture content of plant material <15%

(F) Microbiological impurities, including but not limited to:

1. Total Viable Aerobic Bacteria:

a. Unprocessed and Processed Materials: 105 Colony Forming Unit (CFU)/g

b. C02 and Solvent Based Extracts: 104 CFU/g

2. Total Yeast and Mold:

(a) Unprocessed and Processed Materials: 104 CFU/g

(b) C02 and Solvent Based Extracts: 103 CFU/g

(iii) Total Coliforms:

(a) Unprocessed and Processed Materials: 103 CFU/g

(b) C02 and Solvent Based Extracts: 102 CFU/g

(iv) Bile-tolerant Gram Negative Bacteria:

(a) Unprocessed and Processed Materials: 103 CFU/g

(b) C02 and Solvent Based Extracts: 102 CFU/g

(v) *E. coli* (pathogenic strains) and  
*Salmonella spp.*: Not detected in  
1 g

(vi) *Aspergillus fumigatus*, *Aspergillus flavus*, *Aspergillus niger* :  
<1 CFU/g;

(vii) Mycotoxins: <20 µg (micrograms) of any mycotoxin per kg  
of material; and

(3) Additional testing requested at the discretion of the department.

***The above information can all be generated within BioTrackTHC and reflected on the label for each product.***

(d) The certified laboratory may retest or reanalyze the sample or a different sample from the same batch by following its standard operating procedure to confirm or refute the original result, upon request by the dispensary licensee or upon request by the department at the dispensary licensee's expense.

(e) The certified laboratory shall return to the dispensary licensee or destroy in a manner approved by the department any samples or portions of samples of marijuana or manufactured marijuana products that remain after testing and analysis are completed.

(f) A certified laboratory shall create, and maintain for a period of at least five years, records of testing it conducts on marijuana and manufactured marijuana products, including but not limited to:

1. The time and date the sample was obtained;
2. A description of the sample, including the amount;
3. What tests were conducted on each sample;
4. The results of the tests including the certificate of analysis; and
5. Evidence of the time, date, and method of disposal or destruction of a sample after testing is completed, and the amount of sample disposed of or destroyed, or the time and date a sample was returned to a dispensary with a description including the amount;
6. and shall make all the records available to the department upon request.

(g) A dispensary licensee shall ensure that each sample is tested and analyzed for each of the items set out in subsection (c), and may obtain results from different laboratories for different items if a laboratory cannot perform all the tests.

(h) A dispensary licensee shall maintain records of all laboratory testing results including the certificate of analysis.

(i) The level of contaminants in marijuana and manufactured marijuana products shall not exceed the standards provided in subsection (c), and if any of the standards are exceeded, the dispensary licensee shall not dispense any portion of the batch of marijuana or manufactured marijuana product that does not conform to the standards.

(j) A dispensary licensee shall destroy a batch that does not conform to the testing standards set out in subsection (c) as indicated by the certificate of analysis; provided that a dispensary licensee shall quarantine a non-conforming batch until any retesting pursuant to subsection (d) is completed, after which the dispensary licensee shall dispose of or destroy the batch if the results of retesting confirm that the batch is non-conforming. For purposes of this section, quarantine means that the batch shall be separated from all other inventory and the quarantine status shall be indicated in the tracking system. The quarantine shall be lifted only by the department, and only upon



receipt by the department of a certificate of analysis indicating that the batch conforms to the testing standards set out in subsection (c).

***BioTrackTHC automatically syncs testing data upon receipt from a certified testing location. Testing will ensure the product is free of contaminants with consistent THC and/or CBD levels. Furthermore, every plant interaction is recorded, including but certainly not limited to what additives are used and when, allowing cultivators to replicate results or make applicable changes to increase plant quality and consistency. BioTrackTHC syncs testing data to the applicable plant batch or barcode for easy display and retrieval. To simplify the process that information can be directly ported onto the associated product labels.***

***All aspects of the marijuana plants, byproduct wastes, weights, ID numbers and associated data is stored in the system indefinitely. Destruction event information and explanations are also documented and stored within the BioTrackTHC system. This data cannot be modified or deleted by the cultivation center employees or even by BioTrackTHC.***

***BioTrackTHC records manual inventory adjustments through a detailed notes section. The reason for disposal and, if applicable, disposal company are recorded and archived to the 16 digit barcode associated with the disposed cannabis. As with all transactions in the BioTrackTHC system, the employee responsible for the transaction is required to enter a PIN number or biometric fingerprint recording the date, time, and reason for the transaction.***

§11-850-92 Packaging and labeling for retail sale.

(b) Each package shall be labeled using only black lettering on a white background with no pictures or graphics and shall include:

- (1) Information about the contents and potency of the marijuana and manufactured marijuana product, including but not limited to:
  - (A) Net weight in ounces and grams or volume; and for manufactured marijuana products, also the equivalent physical weight of the marijuana used to produce the manufactured marijuana product;
  - (B) The concentration of tetrahydrocannabinol or 9 tetrahydrocannabinol, total tetrahydrocannabinol and activated tetrahydrocannabinol-A, and cannabidiol;
- (2) The dispensary licensee's license number and the name of the production center where marijuana in the product was produced;
- (3) The batch number and date of packaging;



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- (4) Includes a computer tracking inventory identification number barcode generated by tracking software;
- (5) Date of harvest or manufacture and "Use by date";
- (6) Instructions for use;
- (7) The phrases "For medical use only" and "Not for resale or transfer to another person";
- (8) The following warnings:
  - (A) "This product may be unlawful outside of the State of Hawaii and is unlawful to possess or use under federal law";
  - (B) "This product has intoxicating effects and may be habit forming";
  - (C) "Smoking is hazardous to your health";
  - (D) "There may be health risks associated with consumption of this product";
  - (E) "This product is not recommended for use by women who are pregnant or breast feeding";
  - (F) "Marijuana can impair concentration, coordination, and judgment. Do not operate a vehicle or machinery under the influence of this drug"; and "When eaten or swallowed, the effects of this drug may be delayed by two or more hours";
  - (6) A disclosure of the type of extraction method, including any solvents, gases, or other chemicals or compounds used to produce the manufactured marijuana product; and
- (9) The name of the laboratory that performed the testing; provided that the information in paragraphs (1) through (7) shall appear on the package, and the remainder may appear on a package insert or on the package.
  - (c) A dispensary licensee shall not label as organic any marijuana or manufactured marijuana product unless permitted by the United States Department of Agriculture in accordance with the Organic Foods Production Act.

***BioTrackTHC™'s label creation tool enables licensed producers to create custom container-client labels with any fields necessary to comply with applicable law. All aforementioned required fields can be added as variables. In addition to this a user can add custom disclaimers and warnings. The system will automatically print the container-client specific label upon completion of the sale.***

7) Ability to comply with the requirements in this chapter and chapters 329 and 329D, HRS, for inventory tracking, security, and sales limits for qualifying patients

**Appendix 7(b) – BioTrack System Data Entry Protocols**

The following written policy and procedure sets out the protocols for AGH employees on how to enter and use information generated from the BioTrackTHC system (the "BioTrack System") from the production center to the dispensary to patient sale.

**NOTE:** ~~Only trained supervisors will be permitted to edit values within the BioTrack System. Additionally, any edits, reasons for each edit, and the editing username will be recorded in perpetuity for review.~~

**Production Center**

Tracking begins at the cultivation facility. AGH will only use seeds in its first growth cycle from which a mother plant will be grown and AGJ will thereafter cultivate from clones. During the first cycle, the seeds will be counted for each strain and included in the BioTrack System for inventory tracking. A unique barcode that identifies the mother plant will be attached to the plant, and each plant rooted from the mother plant will also be assigned a barcode. When a clone is taken from existing stock, or a seed is germinated, a supervisor, using his unique user ID, will input relevant descriptive data into the BioTrack System and the BioTrack System will generate a unique identifying serial number and barcode. As the plant progresses through its growth stages, its status will be updated from clone, to vegetative, to flowering. The identifier attached to the plant's cultivation container remains constant.

At harvest, the plant's serial number will be transposed into a new group known as a "batch". A batch can be defined as a single strain harvested from a single cultivation unit on the same day. All plants within a batch will be identified with a new, unique "batch number". At this point gross plant count will no longer be the important metric. Instead, weight in grams becomes the critical tracked value. All weighing will be on certified scales and in view of video cameras. The first recorded weigh will be that of the "wet" weight of all the plants in the batch. Primary trimming will commence and the wet weights of the usable MMJ and resulting waste will be recorded. This product will then be weight separated as dried MMJ flower, laboratory testing samples, and waste groupings These separated weights will again be recorded both





**7) Ability to comply with the requirements in this chapter and chapters 329 and 329D, HRS, for inventory tracking, security, and sales limits for qualifying patients**

manually and input into the BioTrack System. AGH will confirm the total weight of the separated groupings equals the total weight of the harvest for a particular batch. The flower buds will be placed in a container for curing and each container will be labeled with a barcode. Curing containers with flower will be placed in one of six rated-safes located in a central, separate and secured room. The secured room is located inside the secure production center. ~~Access to the secured room will be limited to select, properly trained supervisory staff. The weight value of each jar or package will be recorded both provision to, and distribution from, the secured room. Following drying and curing, the MMJ batch will undergo a secondary trimming. These product weight and waste weight will again be recorded both manually and input into the BioTrack System. AGH will confirm the total weight of the separated groupings equals the total weight of the harvest for a particular batch. The BioTrack System will generate a label for each package of MMJ, which lists the batch ID number, the gross weight and net weight. These packages will be in vacuum-sealed bags stored separately in the secured room. Access will be limited to selected supervisory staff. The weight of each package will be recorded both on intake to the secured room, and distribution from the secured room.~~

**Manufactured MMJ Products**

All manufactured MMJ products will be recorded in a similar manner prior to the finished products entered into the BioTrack System. All product transfers will be internal, as manufactured MMJ products production will take place in the same facility as the cultivation of MMJ.

For concentrates production, weights of incoming raw product will be recorded both in a manual log, and in the BioTrack System. Finished product weights, sample for laboratory testing weight, and waste weight will be recorded in a manual log, and in the BioTrack System. When a manufactured MMJ product is created, the type and quantity of the manufactured MMJ product will be entered into the BioTrack System. The BioTrack System, similar to the ones for dried MMJ flower, will assign a batch number. For example, the same strain processed on the same day via the same method will constitute a batch. Finished



**7) Ability to comply with the requirements in this chapter and chapters 329 and 329D, HRS, for inventory tracking, security, and sales limits for qualifying patients**

concentrates will be stored within the same secured room as finished dried MMJ flower prior to distribution to the dispensaries.

**Transportation**

Protocols as described in AGH security policies and procedures regarding transportation will be enforced for the transportation of MMJ and manufactured MMJ products from the production center to the dispensaries. Each dispensary will have on premises a reinforced, ~~metal like secure storage room~~ with safes similar to the production center's secured room. Protocols for accessing this room, and checking products in or out, will be the same as those for the production center. For more details on transportation security, see Application Section 4 on AGH's ability to comply with security.

**Dispensaries**

Initial receipt of product will be done in "package" increments as defined by the BioTrack System. Staff will weight each individual package and generate a new label, which includes the package's gross and net weights, as well as a unique package identifying number and product description.

When a qualifying patient purchases MMJ product and the Cashier enters the type of product, quantity and cost of the product into the BioTrack System, the BioTrack System will automatically deduct the weight of the purchased product from the total weight of the harvested plant batch to which it relates. All provisioning activities of MMJ products will occur within the BioTrack System's retail module. Verification of patient registration status will take place at the secure patient intake area by the Receptionist, and then again at a patient provisioning station within the secure dispensing area. The BioTrack System allows dispensary staff to upload and reference scanned copies of a qualifying patient's photo ID and other referenced paperwork, which AGH security staff will use to valid identify. Warnings of expired registration cards and approaching purchase limits are also displayed within the BioTrack System.



**7) Ability to comply with the requirements in this chapter and chapters 329 and 329D, HRS, for inventory tracking, security, and sales limits for qualifying patients**

As a result, the BioTrack System will provide real time checks and balances to ensure that the amount of MMJ and manufactured MMJ products produced matches that which is sold, used for lab testing, or is product waste.

**Inventory Counts and Discrepancies**

The Head of Dispensary and Inventory Control Manager will complete daily initial inventory allocation and nightly inventory reconciliation for staff responsible for provisioning.

On a weekly basis, AGH will conduct an inventory count of marijuana in the process of cultivation as well as all stored marijuana products. In addition, on a monthly and annual basis, the Company will conduct a comprehensive inventory count. The Inventory Control Manager will enter their findings into the BioTrack System. The inventory data shall be maintained in electronic format, backed-up and stored off-site, and will include all information required by the DOH.

Gross weight variances of more than 5% between total weights of harvested marijuana and total marijuana dispensed, stored and/or accounted for as product waste are not permitted for input by the BioTrack System. If such an event occurs, the Head of Dispensaries and the Director of Security and Anti-Diversion will be required to investigate, document, and address the occurrence.

In the event of a, AGH shall immediately perform an internal audit to determine the reason for the discrepancy. If AGH determines there is an error or inaccuracy in its inventories then it will investigate the cause and immediately put into place corrective operational measures to avoid such error or inaccuracy in the future.

Draft 1

Date: January 20, 2016



**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

The AGH team is very capable of maintaining the confidentiality of a qualifying patient's medical condition, health status, and purchase of MMJ products in strict compliance with DOH Rule 11-850-40 and all applicable laws on handling medical records. Confidentiality is essential to maintaining our patients' trust and ensuring public confidence in Hawaii's Medical Marijuana Dispensary Program. **Our team of professionals have experience routinely handling and maintaining confidentiality in a variety of capacities, including as a pharmacist, as doctors and as lawyers.** Also on our team are two licensed MMJ producers from Colorado and Canada who have directly applicable experience in safeguarding confidential MMJ patient information.

**BioTrack System** - We plan to use the BioTrack patient management and point of sale (POS) system (the BioTrack System). Our confidentiality protocols will utilize the BioTrack System and we will incorporate security features to help maintain confidentiality, such as controlling and tracking access to patient information. This allows for accurate auditing and helps ensure employee compliance with DOH Rules. **The BioTrack System will be protected by high-level encryption and firewalls to prevent hacking of transaction information and patient records.** All electronic information will be backed up daily on a off-site secured server maintained in a fortified location. **Access to patient information on our system will be protected by password and biometric fingerprint access that is accessible only by managers and duly authorized dispensary employees who have a need to access such information to fulfill their job functions.** The BioTrack System has the ability to keep records indefinitely and we will design our system to retain records for a minimum of six years as required under DOH Rule 11-850-41.

**Training** - We believe proper training is key to maintaining confidentiality. **Our training program was developed with input from our medical and legal team in combination with the practical operational experience of our licensed MMJ producers from other jurisdictions.** The emphasis of our training is to ensure that all members of our team understand their obligations and the importance of maintaining patient confidentiality at all times, whether at work in a dispensary or outside of work hours. **All**



**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

dispensary employees will receive training on patient confidentiality and caregiver obligations, Health Insurance Portability and Accountability Act (HIPAA) compliance, and dispensary confidentiality procedures. In particular, dispensary employees who require access to patient information to fulfill their job functions will be trained in professional conduct, ethics and state and federal laws regarding patient confidentiality. This training will safeguard, and keep confidential, any identifying personal information, including the medical condition of our patients. All employees shall also be trained to report any suspicious or unauthorized access or use of patient information by another employee or the company. We will reinforce our confidentiality training at regular intervals to ensure our employees are up to date with the latest policies and procedures pertaining to patient confidentiality.

**HIPAA and Security** - To secure all patient information, we will implement privacy and security policies in accordance with HIPAA even though we are not required to follow HIPAA. **All patient information will be entered into our system and we will follow PCI and HIPAA standards for security including data transmission, encryption and storage.** Our servers will be kept in a restricted access room protected by: motion sensors; video surveillance; biometric security locks; NIH grade firewalls; and commercial grade security measures (please see our Application Section 4 for details on security). At the dispensary level, the BioTrack System will allow managers to restrict access to patient information based on the role of the employee. **AGH policy limits, and strictly confines, access to patient information during dispensing or in the performance of an employee's duties. Unauthorized access to patient information by any employee without explicit patient consent or for unlawful purposes will result in disciplinary action, which could include termination. See Appendix 8(a) – Confidentiality Policy.** In addition to biometric security, each employee will be required to have a unique and individualized username and password for accessing our system. Passwords must be characterized as "strong" (having a combination of letters, numbers, and symbols and a minimum of 8 characters long) and changed quarterly. To prevent unauthorized access, the BioTrack System will automatically logout a user after a period of



**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

inactivity. In addition, we can track any unauthorized entry attempts. All information transmitted and stored on AGH servers is encrypted. Patient reports can be generated so they only reference patient number, not name, further protecting the confidentiality of patients and caregivers.

**Paper Records** - The majority of patient and personnel records will be computerized. Hard copy documents retained for each patient may include: signed confidential health information release forms; dispensary release of liability form; copy of the patient's registration card and a copy of the patient's government issued photo ID. Hard copy documents retained in staff files may include: signed employment agreements; a copy of government issued photo ID; signed employment acknowledgements; background check consent forms; and signature pages from employee reviews. All paper copies of staff and patient records will be kept in a locked cabinet in the vault room. Where appropriate, paper records will be scanned and digitized to reduce the need to access the hard copy files and vault room. Additional policies relevant to hard copy patient information include: lists of patients or notes from patient conversations may never be taken out of the dispensary; any paper with patient information must be shredded prior to being discarded in a recycle bin; paper placed in a recycle container may not be removed or re-used for any purpose; any paper with patient information must never be left in view of other patients or visitors; and all dispensary staff is expected to take reasonable caution to reduce the chance of patient information being overheard or provided to uninvolved persons.

**Confidentiality Audit** - We will undergo an **annual internal audit** to assess whether there has been any inappropriate access to patient information. If inappropriate access is suspected at any time or identified during an audit, senior management and our board of directors will be notified and will determine whether the incident should be reported and what appropriate disciplinary measures need to be taken, which could include termination. In accordance with DOH Rule 11-850-40(b), we will install large signage in our dispensaries stating that photography or video recording is strictly prohibited, with the exception of our own internal security system, the DOH or person approved by the DOH and law enforcement.



**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

**Appendix List**

Title Page

8(a) – Confidentiality Policy ..... 5



**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

**Appendix 8(a) – Confidentiality Policy**

**Confidentiality of Personal Health Information Policy and Procedure**

The purpose of this policy is to assert AGH's commitment to the protection of patient health information from theft, loss and unauthorized access, copying, modification, use or disclosure. This policy addresses issues of collection, access, use and disclosure of patient information and provides guidelines for handling breaches of patient privacy.

**Definition**

"AGH" refers to Aloha Green Holdings.

"Patient health information" or "personal health information" is identifying information about an individual in oral or recorded form, if the information:

- relates to the physical or mental health of the individual, including the individual's medical history and the individual's family history;
- relates to the providing of health care to the individual, including the identification of a person as a provider of health care to the individual;
- relates to payment or eligibility for health care;
- is the individual's identifying health care number; or
- identifies an individual's caregiver or substitute decision-maker;

**Commitment to the Privacy of Patients and the Confidentiality of Their Personal Health Information**

1. AGH recognizes its obligation to respect privacy and is committed to maintaining the confidentiality of patient health information, whether written, verbal, electronic, photographic or stored on any other medium.
2. AGH also recognizes its obligation to ensure and facilitate timely access to information as required by authorized individuals for direct patient care, individual administrative use, legal use, or where required to do so by law.





**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

3. To assist with meeting our privacy obligations, AGH has designated a contact person, the Chief Compliance Officer, who is accountable for AGH's compliance with its own policies and applicable privacy legislation.

4. It is the legal, professional and ethical duty of all persons affiliated with AGH to keep private the information they receive from and about patients. This duty arises from the recognition that competent patients have the right to control the collection, use and disclosure of their personal health information, including the right to determine the time and manner in which the disclosure of such information may occur to third parties, including physicians, family members, friends and others.

5. Accordingly, it is the obligation of all of those who collect, receive and share confidential information concerning patients at the AGH to exercise the utmost vigilance in the protection of patient confidentiality.

6. Individuals have the right to access information maintained on them and to require amendment and correction to information incorrectly recorded about them.

**Consent for the Collection, Use and Disclosure of Patient Health Information**

7. The knowledgeable consent of the individual is required for the collection, use or disclosure of personal health information. An individual's consent is knowledgeable if he/she understands the purpose of the requested collection use or disclosure and that he/she may give or withhold consent.

8. Consent does not always need to be in written form; sometimes it may be implied or obtained verbally.

9. For example, we may assume we have a patient's consent to collect, use and disclose his/her patient health information for the purposes of providing treatment, unless the patient tells us otherwise.

10. As well, circumstances do not always require asking the patient to sign a consent form; consent may be obtained orally and that fact recorded in the individual's record by noting the time, to what the consent relates (eg. collecting, using or disclosing what information), the purpose for the collection, use or disclosure and any other relevant details.



**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

11. When you elect to request the patient to sign a consent, have the patient complete and sign the AGH

**Consent for Disclosure of Personal Health Information**

12. Some circumstances render it impracticable or imprudent to obtain the individual's consent or local laws may not require us to obtain it. Examples of such circumstances include disclosing patient health information in the course of reporting an incident to the law enforcement, investigating a person's conduct for law enforcement purposes or reporting a child in need of protection to a children's aid society.

13. Nevertheless, regardless of our statutory authority, it sometimes may be advisable to obtain the patient's consent in any case, in particular if you believe that the individual would want to have the choice over whether his/her information is used in a certain manner or if serious consequences may flow from the particular use or disclosure of the information.

14. In deciding whether to obtain an individual's consent, you should exercise professional judgment, discuss the decision with your peers, review this policy and/or consult with the Chief Compliance Officer.

15. An individual is incapable of consenting when the individual is not able to understand:

- The information needed to make a decision on whether or not he/she should consent to the collection, use or disclosure of personal health information; and
- The consequences of giving, withholding or withdrawing consent.

16. You may presume an individual is capable of consenting unless you have reason to believe otherwise.

17. If you determine that an individual does not have capacity to consent and in the case the individual is a patient, you should get the individual's caregiver or substitute decision-maker's consent instead.

**Authority to Collect Health Information**

18. Health information should always be collected directly from the individual whenever possible.

19. If unable to collect health information directly from the individual to whom it pertains, you may seek to obtain the information from another source, like another knowledgeable person, health care practitioner or



**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

institution. In those circumstances, you should make every reasonable attempt to obtain the individual's consent as soon after you are able to contact the individual in this regard.

20. You should only collect as much confidential information as is necessary to accomplish the purpose for which you are collecting it. Simply put: do not collect more than you need

21. Prior to collecting confidential information from an individual, consider for what purpose you are seeking to collect the confidential information and if the purpose is for something other than teaching, providing care or a purpose related to providing care, inform the individual of those purposes.

22. You may only use confidential information for the purposes for which you have identified to the individual.

**Authority to Use Health Information**

23. As part of your association with AGH, you may have access and use certain confidential information. This access is limited, and strictly confined, to information required for the performance of your current AGH duties. Access to patient information must be done with patient consent and only for lawful purposes in the treatment of a patient.

24. Access to one's own health record while in an AGH dispensary must be done in confidence and with approval of a manager.

25. In so far as your AGH duties require, you are specifically authorized to collect and use personal health information from an individual to whom the information pertains as required in order to:

- provide care to the individual;
- assist AGH with confirming allowable limits and obtaining payment for care provided to the individual;
- plan, administer and manage AGH and its programs;
- conduct risk management activities;



**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

- conduct quality improvement activities (such as sending an individual a patient satisfaction survey);
- teach or training;
- conduct research that has been approved by the AGH Medical Advisory Board;
- compile statistics;
- comply with legal and regulatory requirements; and
- fulfill other purposes as required by law.

26. In the clinical context, it is recognized that it will often be necessary to share confidential information with other members of a patient's health care team, those individuals within the patient's "circle of care."

27. This, however, should only occur when sharing such information is necessary to advance the therapeutic interests of the patient.

28. Judgments about sharing information must be made by members of the health care team guided by a bona fide belief as to what is in the best therapeutic interests of the patient.

29. Information should not be shared unless there is a legitimate need to know.

30. Consequently, care should be taken to ensure that confidential information and patient records are not generally available to non-treating personnel or others without a legitimate need to know.

31. Access to patient health information for research purposes will only be provided in accordance with the

32. Authorization may be given to our external agents and partners to use patient health information in order to assist AGH with fulfilling its mission. For example, patient health information and other confidential information is sometimes shared with outside companies, like the companies that provide AGH with our electronic health record, transcription services and maintenance services with respect to certain pieces of equipment, or the representatives of certain companies who are exposed to confidential information, including patient health information, by virtue of their presence at AGH, like the security guards who patrol AGH dispensaries.



**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

33. It is the responsibility of managers and officers of AGH who oversees the negotiation of the AGH's agreement with the external agent, in consultation with the Chief Compliance Officer, to ensure that the external agent and its representatives are contractually bound to adhere to our privacy requirements.

34. Extra care should be taken when working with foreign partner companies, like those based outside of Hawaii, to ensure that they appreciate their privacy obligations under the laws of Hawaii. Conformity to the laws of the United States is expected and foreign parties should be notified they are to comply with applicable Hawaii privacy legislation.

35. When information is routinely shared with other health care organizations, like another dispensary, a written agreement should be entered into between all of the parties to confirm when, how and for what purpose information is being shared.

36. You are encouraged to contact the Chief Compliance Officer/General Counsel for assistance with preparing any information sharing agreement.

**Authority to Disclose Health Information**

37. Requests for the disclosure of patient's health information should generally be referred to the Chief Compliance Officer.

38. Disclosure of information is generally prohibited without the individual's consent except as outlined below:

- As necessary in the performance of current AGH duties.
- As required by statute or law enforcement.
- If the disclosure is to another health care provider and it is reasonably necessary in order to provide health care to the individual and it is not possible to obtain the individual's consent in a timely manner.



**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

- When disclosing confidential information will eliminate or reduce a significant risk of serious bodily harm to a client or third parties. The first concern must be the safety of the client or third party. Even when you are confronted with the necessity to disclose, confidentiality should be preserved to the maximum possible extent.
- Pursuant to a Court Order, Subpoena, Summons, Search Warrant, or other legislation. In all instances, upon receipt of such a document, you should consult with the Chief Compliance Officer to ensure that the document legally authorizes the disclosure.

39. Every effort should be made to ensure that confidential information is not inadvertently disclosed to persons not otherwise entitled to receive such information:

40. Subject to the reasonable limits described below, confidential information should never be discussed in any area where others not entitled to receive that information are present.

For example:

- in public areas of AGH such as waiting room, staff room, hallways, or washrooms;
- at home;
- in public places outside AGH, unless required to do so by law or with permission from an authorized individual.

41. Employees must stay apprised of changes to this policy.

42. Confidential information should not be left in written form or displayed on computer terminals in locations where it may be seen by unauthorized persons.

43. Discretion should be used in determining what information is placed on whiteboards that are located in patient areas. If the whiteboard is publicly accessible, the information on it should, to the maximum extent possible, be limited to: patient name, physician and discharge date. Medical information should not be



**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

linked to an identifiable person, especially for those patients who have asked for additional privacy protections.

**Fundraising**

44. AGH shall, through its designated manager or officer, release certain contact information as prescribed by law for the purposes of communicating with and/or the fundraising of patients.

45. This information shall be handled in accordance with this policy.

46. Patient contact information should not be disclosed to third parties without the express consent of the patient.

**Media**

47. All inquiries from the media regardless of their nature should be immediately referred to the Chief Operating Officer.

48. After business hours, any manager or officer may be substituted.

49. Any release of information to the media must be done in accordance with this policy and must not include any patient health information without the patient's express written consent.

**Breaches of Patient Privacy**

50. Breach of privacy includes any intentional or inadvertent unauthorized access, use or disclosure of confidential information and any inappropriate disposal of confidential information. Common examples of breaches of confidentiality include, but are not limited to:

- the misplacement of a patient record;
- a laptop, with confidential information stored on it, is stolen;
- a letter addressed to one person is faxed to the wrong number;
- accessing personal health information of family members or friends without authorization;
- documents containing patient health information are left in a public area;



**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

- disclosure of patient information to a police officer without the patient's consent, a warrant or summons.

56. It is not a breach of privacy to report patient information in a research study as long as the information is unidentifiable or the patient's consent or Medical Advisory Board approval for the study has been obtained in advance.

57. While every effort will be made to maintain patient confidentiality, AGH recognizes that, in practice, reasonable limits may be placed on the principle of patient confidentiality. Sometimes the provision of quality care or education requires that confidential information be discussed among health care providers in patient care areas where other patients or visitors may be present. Nevertheless, careful consideration should always be given to how to minimize the compromise to patient privacy in these circumstances.

58. The following steps should be followed in the event a breach occurs:

- Inform your manager / supervisor and the Chief Compliance Officer;
- Identify the extent of the breach. For example, if the breach involves unauthorized disclosure of personal health information, determine what information was inappropriately disclosed, to whom the information relates and to whom it was disclosed.
- Take steps to contain it. For example, if the breach involves unauthorized access to confidential information stored electronically, take steps to suspend the sign-on facilitating the inappropriate access to the network or application.
- Ensure that any person not authorized to receive the confidential information did not make or keep copies of the information and get that person's contact information in case you need to follow up.
- Note down the unauthorized uses and disclosures in or linked to the affected confidential records.
- If necessary, investigate to determine the cause of the breach.





**8) Ability to maintain confidentiality of a qualifying patient's medical condition, health status, and purchases of marijuana or manufactured marijuana products**

59. It is the obligation of AGH and any employees involved in any breach to notify the patient whose privacy has been breached. In particular, patients whose privacy has been breached should be told: specifically what and how much confidential information was affected; and what immediate and long-term steps AGH and others have taken to rectify the breach. The involved employees should work with the Chief Compliance Officer to discharge this obligation.

60. Every person working at AGH has the right and responsibility to report a breach of privacy without fear of reprisal for doing so. Breaches of privacy can be reported to a manager, supervisor or directly to the Chief Compliance Officer.

61. Individuals who fail to comply with any part of this policy may be subject to discipline up to and including dismissal.



**9) Ability to comply with the requirements for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 329D-7 and 329D-8, HRS**

AGH believes our team has an exceptional ability and innovative plan to comply with the requirements for certified laboratory testing of MMJ and manufactured MMJ products pursuant to Subchapter 7 of the DOH Rules and sections 329D-7 and 329D-8, HRS. We have **two team members who are licensed MMJ producers from Canada and Colorado with years of experience in MMJ testing** which is required in both jurisdictions. **The MMJ products produced by our Head of Cultivating, Brian Ruden, and our Canadian MMJ Production Consultant, Chris Mayerson, at their respective licensed MMJ facilities have won international awards and been tested and found to be exceptionally pure and biologically natural.** Attached are the exemplary test results for Chris Mayerson. Please refer to **Appendix 9(a) – MMJ Test Results, which evidences our team's ability to pass Canadian MMJ testing standards, which are stricter than Hawaii MMJ testing standards.** We also have a PhD in plant biochemistry, 3 medical doctors, and a pharmacist on our team, all of whom have extensive experience with lab testing and managing lab services as a client. **Patient health and patient safety are our top priority.**

As per DOH Rule 11-850-81, we will ensure that all of our MMJ products are tested by an independent DOH-certified lab and that our MMJ products meet the standards set out in DOH Rule 11-850-85 before any MMJ products are dispensed to patients. AGH has developed product safety and testing policies to ensure that our products are tested for all the contaminants listed in DOH Rule 11-850-85(c), including but not limited to: heavy metals, pesticides, solvents, and microbiological impurities. AGH testing policies and procedures have been validated through extensive use in other jurisdictions. **Please see Appendix 9(b) - MMJ Testing Procedure for our MMJ testing process.** AGH will retain all test results for six years in accordance with DOH Rule 11-850-41. Testing will allow us to quantify the amount of cannabinoids present including: tetrahydrocannabinol and its acidic form (THC and THCA), cannabidiol and its acidic form (CBD and CBDA), cannabigerol (CBG), and cannabinol (CBN). By quantifying the cannabinoid content of our products we will allow patients to administer the proper dosage



9) **Ability to comply with the requirements for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 329D-7 and 329D-8, HRS** thereby increasing therapeutic effectiveness and patient safety. Through testing, AGH can identify the cannabinoid profile of each strain or MMJ product and allow patients to select the specific product with the exact properties they seek to help them address their medical needs. **We will provide a selection of MMJ products with varying levels of THC and CBD (labeled accordingly) to help each patient address their unique medical needs.**

**Quality Control Laboratory – We plan to incorporate a testing lab in our second production center, Surna Solar Production Center, for internal quality control.** This lab will provide an added level of protection for patient health, quality assurance, and product safety. Our internal lab will not replace independent third party testing. We have budgeted \$100k to setup our own lab and leverage our team's expertise with lab equipment and testing protocols. See Application Section 12 regarding product safety for more information on our quality control lab.

**Relationship with University of Hawaii -** According to the DOH website, as of December 2015, no lab had been certified to test MMJ in Hawaii. To be proactive in finding a testing solution, we have been in communication with the University of Hawaii (UH) and specifically, ~~Richard P. King, Jr., Dean of the School of Medicine~~, ~~the Dean of the College of Medicine~~. We suggested that the UH consider providing independent lab testing services for MMJ license holders and patients throughout Hawaii. ~~the Dean of the College of Medicine~~ informed us that both ~~the School of Medicine~~ and ~~the College of Medicine~~ have the lab facilities to handle MMJ testing requirements and that the UH has lab facilities on several islands which could help with MMJ testing outside of Honolulu. If the DOH were to engage the UH to provide the required testing for all of MMJ licensees, this could provide the UH with an additional source of funding for its educational and research programs. **AGH is committed to donating 5% of our profits towards research, and another 5% to local charities.** As further evidence of our ability to comply with DOH Rules and our commitment to patient health and safety, please see **Appendix 9(c) – UH President Support Letter from M.R.C. Greenwood,**



9) **Ability to comply with the requirements for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 329D-7 and 329D-8, HRS**

former President of the UH and internationally renowned scientist who is also a former Associate Director for Science with the White House Office of Science and Technology. We would gladly help facilitate a discussion between the DOH and the UH and would welcome the opportunity to be involved in the continuing development of MMJ standards and testing protocols in Hawaii. **Certified Laboratories – AGH is capable of compliance and has worked extensively with certified MMJ testing labs in other jurisdictions.** Our team currently works with Experchem, an independent certified MMJ testing lab in Canada that is also accredited by the US Food and Drug Administration (FDA). Please see **Appendix 9(d) – Experchem Credentials** for more information on Experchem and their capabilities and credentials. Our team also works with Rm3 Labs, an independent certified MMJ testing lab in Colorado. Rm3 Labs is certified by Colorado to perform potency, biocontaminant and residual solvent analyses, and is participating in the working group developing effective pesticide regulations for that state. Rm3 is currently in process of preparing for ISO17025 accreditation of their Colorado lab. Please see **Appendix 9(e) – Rm3 Credentials** for more information on Rm3. Both Experchem and Rm3 have expressed interest in setting up a lab in Hawaii to provide MMJ testing services for AGH. **For clarity, and in accordance with DOH Rules 11-850-82(a)(2), AGH does not have any financial interest in either Rm3 Labs or Experchem and both labs operate independent of AGH and its individuals team members.** Based on our team's extensive experience with testing MMJ products, AGH can help verify the capabilities of any certified lab that will be set up in Hawaii to ensure that product safety and patient health is properly guarded. We can help ensure that any certified, independent testing lab has established policies to control and maintain the chain of custody for samples of products provided to the lab for testing or research purposes. Our team is at the DOH's disposal for the above mutually beneficial objectives. Please see **Appendix 9(f) - Testing Lab Guidelines** that AGH developed in conjunction with Rm3 Labs as a due diligence reference tool for the DOH.



**9) Ability to comply with the requirements for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 329D-7 and 329D-8, HRS**

**Appendix List**

Title	Page
9(a) – MMJ Test Results .....	5
9(b) – MMJ Testing Procedure .....	9
9(c) – UH President Support Letter from M.R.C. Greenwood .....	10
9(d) – Experchem Credentials .....	12
9(e) – Rm3 Credentials .....	19
9(f) – Testing Lab Guidelines .....	21



9) Ability to comply with the requirements for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 329D-7 and 329D-8, HRS

Appendix 9(a) – MMJ Test Results





# EXPERCHEM LABORATORIES INC.

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TEL: 416-665-2134 Fax: 416-665-9251 Email: experchemlab@experchemlab.com

Total Quality Service

**Aurora Cannabis**

14613 134 Avenue

Edmonton, Alberta T5L 4S9

**Attention:** Chris Mayerson

**Date:** August 01, 2014

**PO No:** N/A

**Re: Product Name:** Medical Marijuana

**Project No:** 24004628

**Lot No.:** Sample #2 (HAZE)

**Date Received:** July 23, 2014

**# of Units:** 1

**Received Condition:** Good

**Package Type:** Bag

**Received Temperature:** RT (Room Temperature)

**Size:** 3g

**Date of Analysis:** July 31, 2014

## CERTIFICATE OF ANALYSIS

Test	Method	Specification	Result
Appearance	Visual	Report	Green and brown flower
Cannabidiol	EXPTM586 Rev 5	Report	CBD- 0.1700% CBDA- 0.0780% Total CBD 0.2479%
Total Tetrahydrocannabinol	EXPTM586 Rev 5	Report	16.3864%
Delta-9-tetrahydrocannabinol	EXPTM586 Rev 5	Report	0.8428%
Delta-9-tetrahydrocannabinol acid	EXPTM586 Rev 5	Report	17.7236%

*Debra Tany*

### Quality Assurance Department

LIMITS OF LIABILITY: Although care and diligence is exercised in the performance of our analytical services, our liability for damage or loss in all cases is limited to repeated analysis for no charge or a refund of payment received for the analysis in question.

August 01, 2014

Page



Total Quality Service

# EXPERCHEM LABORATORIES INC.

1111 FLINT ROAD, UNIT 36, DOWNSVIEW, ONTARIO M3J 3C7

TEL: 416-665-2134 Fax: 416-665-9251 Email: experchemlab@experchemlab.com

Aurora Cannabis

14613 134 Avenue

Edmonton, Alberta T5L 4S9

Attention: Chris Mayerson

Date:

August 05, 2014

PO No:

N/A

Re: Product Name: Medical Marijuana

Project No: 24004627

Lot No.: Sample #1 (Mixed)

Date Received: July 23, 2014

# of Units: 1

Received Condition: Good

Package Type: Bag

Received Temperature: RT (Room Temperature)

Size: 40g

Date of Analysis: August 05, 2014

## CERTIFICATE OF ANALYSIS

Test	Method	Specification	Result
Appearance	Visual	Report	Brownish green coloured leaf bud and stem
Arsenic	EXPTM 337, Rev. 4 (ICP Jan.31/13)	< 1.5 ppm	<0.1840ppm
Cadmium	EXPTM 338, Rev. 4 (ICP Jan.31/13)	< 0.5 ppm	0.0522ppm
Lead	EXPTM 338, Rev. 4 (ICP Jan.31/13)	< 1.0 ppm	0.3784ppm
Mercury	EXPTM 337, Rev. 4 (ICP Jan.31/13)	< 1.5 ppm	<0.0463ppm
Microbial	Current EP 2.6.13	Absent	No Growth Detected
	Current EP 2.6.13	Absent	None Detected
	Current EP 2.6.31	Absent (25g)	None Detected

Signature

Department

care and diligence is exercised in the performance of our analytical services, our liability for damage or loss in all cases is limited to repeated analysis for no charge or a refund  
sis in question.





# EXPERCHEM LABORATORIES INC.

1111 FLINT ROAD, UNIT 36, DOWNSVIEW, ONTARIO M3J 3C7

TEL: 416-665-2134 Fax: 416-665-9251 Email: [experchemlab@experchemlab.com](mailto:experchemlab@experchemlab.com)

Total Quality Service

**Aurora Cannabis**

14613 134 Avenue

**Date:** August 05, 2014

**PO No:** N/A

Edmonton, Alberta T5L 4S9

**Attention:** Chris Mayerson

**Re: Product Name:** Medical Marijuana

**Project No:** 24004627

**Lot No.:** Sample #1 (Mixed)

**Date Received:** July 23, 2014

**# of Units:** 1

**Received Condition:** Good

**Package Type:** Bag

**Received Temperature:** RT (Room Temperature)

**Size:** 40g

**Date of Analysis:** August 05, 2014

## CERTIFICATE OF ANALYSIS

Test	Method	Specification	Result
Bile Tolerant Gram Negative bacteria	Current EP 2.6.31	$\leq 1 \times 10^4$ CFU/g	<10 cfu/g
Total Aerobic Plate Count	Current EP 2.6.12	$\leq 1 \times 10^5$ cfu/g	80 cfu/g
Total Yeasts and Molds	Current EP 2.6.12	$\leq 1 \times 10^4$ cfu/g	30 cfu/g
E. coli	Current EP 2.6.31	Absent (1g)	None Detected Identify as Pantoea eucrina
Micro Identification	Current EP	Report	Pantoea eucrina

**Quality Assurance Department**

LIMITS OF LIABILITY: Although care and diligence is exercised in the performance of our analytical services, our liability for damage or loss in all cases is limited to repeated analysis for no charge or a fee of payment received for the analysis in question.

August 05, 2014

Page



## Experchem Laboratories

### Commitment to Total Quality Service

*Experchem* is a government-accredited regulatory consulting and analytical testing laboratory distinguished by its reputation for high quality, reliable service, and competitive prices. Through our team of highly qualified and experienced professionals we deliver thorough, accurate, and timely results for Pharmaceutical, Cosmetic, and Natural Health Product testing. As well, *Experchem's* knowledge in areas of Canadian and US regulations results in exceptional consulting services from experienced accredited, service-oriented professionals. The company's goal has always been to set a new standard in the areas of quality work and client services which is why we are known for our 'personal touch' and high level of client interaction.

At *Experchem* we strive to build strong, long-lasting partnerships.



### Becoming a Licensed Medical Marihuana Producer



*Experchem* provides all of your regulatory and testing needs, and is your one-stop-shop to take your company from the idea stage right through to a fully functional operation that is in compliance with the Marihuana for Medical Purposes Regulations (MMPRs). *Experchem* will help your firm obtain a Producer's License for the production of medical marihuana and will ensure your application is complete and accurate upon submission to avoid costly delays. We liaise continuously with Health Canada on your behalf for application and we represent you in audits.

*Experchem* can write all of the required SOPs that cover facility, equipment, and production processes and will help you set up a facility that is clean and controlled for sanitation and environmental conditions. Once established, we will continue to provide on-going regulatory and quality support. Your dedicated and highly qualified QA representative will always be available to address any of your concerns or issues.

We also arrange for testing of your product through our in-house analytical division. Our quality analytical experts conduct the required testing to the highest industry standards. We also conduct stability studies to ensure product integrity over time.

Each strain of cannabis has its own cannabinoid and terpenoid profile. Profiling of these strains will provide guidance for future clinical studies to determine medicinal effects.

Our professional analytical team can conduct the following medical marihuana tests:

- Basic cannabinoid profiling (THC, CBD, CBN)
- Advanced cannabinoid profiling
- Terpenoid profiling (aromatics)
- Microbial limits – Total Aerobic Count, E. Coli, Salmonella, Yeasts and Molds, Bile Tolerant Gram Negative Bacteria
- Pesticide Residues
- Aflatoxins
- Heavy Metals (Assay for Pb, As, Cd, Hg)
- Ash analysis

Our analytical methodology has been validated based on Health Canada and FDA regulations.

*Experchem Laboratories*

1111 Flint Rd. Unit 36, Toronto, ON M3J 3C7 • T: 416-665-2134, Ext. 298 • F: 416-665-9251 • TF: 1-866-610-5576

Contact: [sohilmana@experchemlab.com](mailto:sohilmana@experchemlab.com) • Visit us at [www.experchemlab.com](http://www.experchemlab.com)



Experchem Laboratories

## Commitment to Total Quality Service

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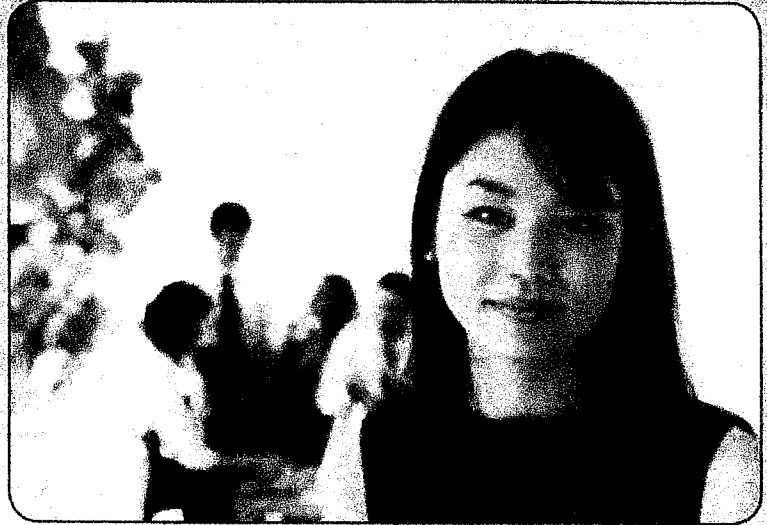
Our Mission is to provide quality service through a partnership between management, staff, and clients in an environment of honesty and trust.

Established in 1983, *Experchem* has been in operation for over 25 years. The company's goal has always been to set a new standard in the areas of quality work and client services which is why we are known for our 'personal touch' and high level of client interaction. As *Experchem* continues to grow, our key focus will be to maintain a high level of personal service. We value long-term business relationships with our clients and we strive to build strong, long-lasting partnerships. A dedicated team member is always available to handle any client issue at any time.

*Experchem* is an established leader in Pharmaceutical and NHP testing and strives to maintain the highest level of integrity in testing methods and business practices. *Experchem* is audited regularly and is accredited by the following institutions:

- o Health Canada (Drug Establishment License)
- o U.S. Food and Drug Administration (FDA)

*Experchem* proudly is an accredited laboratory with the Barbados Drug Service – Ministry of Health, and is listed as an approved laboratory for carrying out analytical testing in Barbados.



**9) Ability to comply with the requirements for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 329D-7 and 329D-8, HRS**

**Appendix 9(b) – MMJ Testing Procedure**

**MMJ Testing Procedure**

- 1) Each sample package is labeled with identifying barcode using the BioTrack system that corresponds specifically to the batch being analyzed for quality control.
- 2) Sample package is signed out and documented for transport under our secure transportation protocol to the certified testing lab.
- 3) Testing lab signs for receipt of the sample package and accepts responsibility for chain of custody.
- 4) Testing lab provides results within 5-7 days and determines if any MMJ samples have level of contaminants that exceed the standards dictated by the DOH Rule 11-850-85(c).
- 5) If level of contaminants exceed DOH standards, then the non-conforming batch will be quarantined, and the sample re-tested in accordance with DOH Rule 11-850-85(d).
- 6) If after a re-test, the level of contaminants still does not conform to the DOH testing standards, then we will destroy and dispose of the non-conforming batch under our disposal plan as described in Section 11 of our application.
- 7) If the sample passes independent testing, then we will use the information in the certificate of analysis results for that batch to label our child-proof packages of MMJ products for dispensing in accordance with our packaging and labeling plan as described in Section 10 of our application.
- 8) Patients can use the supplied information to contact and validate the authenticity directly with the independent testing lab.
- 9) With the identifying batch and lot numbers on each package, patients, the DOH and law enforcement can track the results and ensure that the products have been analyzed.
- 10) As a result, the packaging meets the chain of custody requirements linking the contents to lab testing results, and patients are assured that the medicine they receive has been tested.



**9) Ability to comply with the requirements for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 329D-7 and 329D-8, HRS**

**Appendix 9(c) – UH President Support Letter from M.R.C. Greenwood**





UNIVERSITY  
of HAWAII  
SYSTEM

M.R.C. Greenwood, Ph.D.  
President Emerita

Jan 24, 2016

Medical Marijuana Registry Program  
State of Hawaii, Department of Health  
1250 Punchbowl St.  
Honolulu, Hawaii 96813  
Attn: Dr. Virginia Pressler, MD  
Director of the Department of Health

Re: Aloha Green Holdings Inc.  
Medical Marijuana Program Applicant

Dear Dr. Pressler,

I am the president emerita of the University of Hawaii and Chancellor, Emerita of UC Santa Cruz. I am also a health scientist with knowledge of the importance of this research.

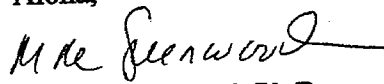
This is a letter in support of the medical marijuana license application of Aloha Green Holdings Inc. The principals of Aloha Green Holdings Inc. are well-respected local business leaders, medical doctors and attorneys. I have confidence in their ability to manage and operate two production centers for the cultivation and processing of medical marijuana and two medical marijuana dispensaries in the City and County of Honolulu.

Based on their operational qualifications, experience and disciplined approach, I am supportive of Aloha Green Holdings Inc.'s plans to operate a medical marijuana business. I am confident that Aloha Green Holdings Inc. will work diligently to satisfy any patient and community concerns and abide by the safety and security regulations of the Department of Health.

I am further inclined to support Aloha Green Holdings Inc. based on its commitment to support medical research programs and philanthropic plans. Aloha Green Holdings Inc. has committed to donate 5% of its net income for grant funding for marijuana medical and scientific research and an additional 5% to local charities to benefit those in need in the local community.

I have confidence that if a license was granted to Aloha Green Holdings Inc, their operations will meet the highest standards of patient safety, product safety and public safety. Thank you for your consideration of this letter.

Aloha,

  
MRC Greenwood, Ph.D.  
President Emerita

9) Ability to comply with the requirements for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 329D-7 and 329D-8, HRS

Appendix 9(d) – Experchem Credentials





Health  
Canada

Santé  
Canada

Health Products  
and Food Branch

Direction générale des produits  
de santé et des aliments

Health Products and Food Branch Inspectorate /  
Inspectorat de la Direction générale des produits de santé et  
des aliments

2nd Floor, Graham Spry Building /  
2e étage, Immeuble Graham Spry  
250 Lanark Avenue / 250, avenue Lanark  
A.L. 2002A / A.I. 2002A  
Ottawa, Ontario  
K1A 0K9

To: **Drug Establishment Licence (DEL)  
Holder**

Aux: **Détenteur de licence d'établissement de produits  
pharmaceutiques (LEPP)**

The enclosed Establishment Licence, issued by the Health  
Products and Food Branch Inspectorate, is valid from the  
date of issuance. The licence will remain valid as long as an  
application for annual review is submitted before April 1<sup>st</sup> of  
each year.

The licence indicates the activities which may be carried out,  
at the building(s) listed, for specific categories of drugs. If  
the licence indicates an activity of Import, a foreign site  
annex will be attached with a compliance expiry date. This  
foreign site annex lists the establishments which are in  
compliance with Canadian Good Manufacturing Practices  
(GMP). The foreign sites for which the GMP evidence is still  
under review (or the Certificates of Compliance from the  
Regulatory Authorities are awaited) are not listed/ updated on  
your licence at this time. Once the review has been  
completed, you will receive a revised foreign site annex.  
Please be aware that you cannot import products from any  
site which does not appear on your licence.

If there are any concerns with the licence, please contact  
Jennifer Cole.

-mail: Jennifer.L.Cole@hc-sc.gc.ca

La licence d'établissement ci-jointe, délivrée par  
l'Inspectorat de la Direction générale des produits de santé et  
des aliments, est valide à compter de la date de délivrance et  
demeurera valide pourvu qu'une demande d'examen annuel  
soit présentée avant le 1<sup>er</sup> avril de chaque année.

Cette licence indique les activités qui peuvent être menées  
dans le ou les établissements mentionnés pour des catégories  
particulières de médicaments. Si la licence fait mention d'une  
activité d'importation, une annexe sur les établissements  
étrangers y sera jointe ainsi que la date d'expiration en lien  
avec la conformité. Cette annexe fournit la liste des  
établissements qui se conforment aux Bonnes pratiques de  
fabrication (BPF) en vigueur au Canada. Les sites étrangers  
pour lesquels les preuves de conformité aux BPF n'ont pas  
été évaluées (ou pour lesquels on attend un certificat de  
conformité de l'autorité réglementaire) ne figurent pas ou  
n'ont pas encore été mis à jour sur votre licence. Dès que  
l'évaluation sera complétée, on vous transmettra une annexe  
des sites étrangers révisée. Veuillez noter que vous ne pouvez  
pas importer des produits d'un établissement qui n'apparaît  
pas sur votre licence.

Si vous avez des questions concernant la licence, veuillez  
communiquer avec Jennifer Cole à:

Courriel: Jennifer.L.Cole@hc-sc.gc.ca

Canada





Health Canada  
Santé Canada

Health Products and Food  
Branch Inspectorate

Inspectorat de la Direction générale  
des produits de santé et des aliments

Licence Number

100412-A

Numéro de la licence

Establishment Licence

Licence d'établissement

EXPERCHEM LABORATORIES INC.

1111 FLINT ROAD, , UNITS 36-41

DOWNSVIEW, ON, CANADA, M3J 3C7

This licence is issued in accordance with the Food and Drugs Act & Regulations (Division 1A & 2) for the following activities and categories of drugs:

Cette licence est délivrée conformément à la Loi et aux Règlements sur les aliments et drogues (titres 1A et 2) pour les activités et les catégories de drogues suivantes:

ACTIVITY/ Activité	CATEGORY/ Catégorie	Pharmaceutical Prod. pharmaceutique	Vaccines Vaccins	Blood <sup>3</sup> Sang	Schedule D <sup>4</sup> L'annexe D	Schedule C <sup>5</sup> L'annexe C	<sup>6</sup>
Fabricate Manufacturer							
Package / label Emballer-étiqueter							
Test <sup>1</sup> Analyser		X (Includes API)					
Distribute <sup>2</sup> Distribuer							
Import Importer							
Wholesale Vendre en gros							

(1) Perform the tests, including any examinations required under Division 2 / Analyser conformément au titre 2

(2) Distribute as set out in paragraph C.01.A.003 (a) and/or (b) / Distribuer à titre de distribuer au sens de l'alinéa C.01A.003 (a) et/ou (b)

(3) Whole blood and its components / Sang entier et ses composants

(4) Drugs listed in Schedule D to the Act, other than vaccines or whole blood and its components / Drogue visée à l'annexe D de la Loi, autre qu'un vaccin ou que le sang entier et ses composants

(5) Drugs listed in Schedule C to the Act / Drogue visée à l'annexe C de la Loi

(6) Drugs listed in the Schedule to Part G of the Food and Drug Regulations, drugs listed in Schedule F to the Food and Drug Regulations, narcotics as defined in section 2 of the Narcotic Control Regulations / Drogue visée à l'annexe de Partie G des Règlements sur les aliments et drogues, drogue visée à l'annexe F des Règlements sur les aliments et drogues, stupéfiants au sens de l'article 2 des Règlements sur les stu

(7) S refers to sterile dosage forms / S fait référence aux formes posologiques stériles

This licence is subject to the additional conditions as indicated in the attached:

Cette licence est assujettie aux conditions supplémentaires indiquées dans le feuillet joint:

Issued On / Emise le: 2015-06-22

Last Inspection Date / Date de la dernière inspection: 2015-05-27

MINISTER OF HEALTH

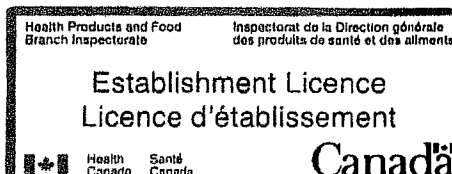
Countersigned: Director General, Health Products and Food Branch Inspectorate or delegated authority  
Contresigné par: Directeur Général, Inspectorat de la Direction générale des produits de santé et des aliments ou autorité déléguée

MINISTRE DE LA SANTÉ

Étienne Ouimette

This licence is the property of the Health Products and Food Branch Inspectorate and must be returned upon demand.  
Cette licence appartient à l'Inspectorat de la Direction générale des produits de santé et des aliments et doit être retournée sur demande.

Canada



Licence No. - No de licence

2016/6799

**LICENCE**

Pursuant to the provisions of the Controlled Drugs and Substances Act and its Regulations this licence is issued to:

**LICENCE**

Conformément aux dispositions de la Loi réglementant certaines drogues et autres substances et ses Règlements, la présente licence est délivrée à:

EXPERCHEM LABORATORIES INC.

36 - 1111 Flint Road

Downsview ON M3J 3C7

as a licensed dealer at the premises indicated above, for the conduct of the following activities:

- ☒ Possession
- ☒ Production
- ☐ Packaging
- ☒ Sale
- ☒ Sending, Transportation and Delivery

à titre de distributeur autorisé au lieu indiqué ci-haut, pour la conduite des activités suivantes:

- ☐ Possession
- ☐ Production
- ☐ Emballage
- ☐ Vente
- ☐ Expédition, transport et livraison

for the following controlled drugs and substances including their salts as listed in the Regulations:

pour les drogues et substances contrôlées suivantes incluant leurs sels telles que listées dans les Règlements:

PAGE 1 OF/DE 2

Opium  
Codeine  
Morphine  
Dihydrocodeine  
Hydrocodeine  
Hydromorphone  
Ethylmorphine  
Nalophine  
Oxymorphone  
Thebaine  
Ketamine  
Anileridine  
Alphaprodine  
Diphenoxylphenone  
Alfentanil  
Pethidine  
Propoxyphene  
Fentanyl  
Sufentanil  
Delta-8-Tetrahydrocannabinol  
Delta-9-Tetrahydrocannabinol  
Delta-9-Tetrahydrocannabinolic Acid  
3-(1,2-dimethylheptyl)-8,9,10-tetrahydro-6,6,9-trimethyl-6H-ibenzo[b,d]pyran-1-ol (DMHP)

Nabilone  
Buprenorphine

Amphetamine  
Dextroamphetamine  
Methohexital  
Phentermine  
Mazindol  
Amobarbital  
Butobarbital  
Thiopental  
Butorphanol

Testosterone  
Calusterone  
Fluoxymesterone  
Prasterone

Alprazolam  
Diazepam  
Triazolam

Cannabis resin  
Cannabis  
Cannabidiol  
Cannabinol  
Pyrahexyl

Cannabigerolic Acid  
Cannabigerol  
Cannabichromenic Acid  
Cannabichromene  
Cannabidiolic Acid

For laboratory testing purposes only.

1. For the purpose of this licence the analysis will be performed on samples of Cannabis received from persons in possession of a valid licence issued under the Narcotic Control Regulations, the Industrial Hemp Regulations or the Marihuana for Medical Purposes Regulations.
2. It is understood that the analysis of Hemp will be conducted in accordance to the methodology approved by Health Canada under the Industrial Hemp Technical Manual.
3. The production activity indicated above is limited to obtaining extracts from the Cannabis received, which is a necessary step for the analysis of Cannabinoids.
4. Any remaining material may be destroyed upon authorization by the appropriate Health Canada Regional Office or returned to clients.
5. The activity of sale, transportation and delivery is limited to the return of unaltered samples to clients.

(ANNEXE "A")

List of pharmaceutical products of controlled drugs and substances produced and packaged.

Assistant Manager or Manager, Licences and Permits Division,  
Office of Controlled Substances, CSD/HECS  
for and on behalf of the Minister of Health  
Effective date of the licence:  
this 1<sup>st</sup> day of January, 2016  
Ottawa, Ontario  
This licence expires: December 31, 2016

This licence is restricted, in addition to all other applicable conditions of licensure, in that the drug inventory cannot exceed the amount allowed by the security level indicated below.

Gestionnaire associé ou Gestionnaire, Division des licences et des permis,  
Bureau des substances contrôlées, DSCLT/SESC  
pour le Ministre de la Santé  
Date de prise d'effet de la licence:  
ce 1<sup>er</sup> jour de \_\_\_\_\_  
Ottawa, Ontario

La présente licence expire: 31 décembre, 2016

Cette licence est restreinte, en plus des autres conditions qui s'appliquent, du fait que l'inventaire des drogues ne peut pas dépasser le maximum autorisé par le niveau de sécurité apparaissant plus bas:



DATE

January 1, 2016

LIST OF CONTROLLED DRUGS AND SUBSTANCES (C D/S) MANUFACTURED OR PACKAGED  
LISTE DES DROGUES ET DES SUBSTANCES DÉSIGNÉES (D/S D) FABRIQUÉES OU EMBALLÉES

BY-PAR

EXPERCHEM LABORATORIES INC.

AT-A

36 - 1111 Flint Road  
Downsview ON M3J 3C7

BRAND OR COMMON NAME NOM USUEL OU MARQUE DE COMMERCE	*DRUG TYPE *TYPE DE DROGUE	C D/S CONTAINED IN PRODUCT D/S D CONTENUES DANS LE PRODUIT	STRENGTH PER UNIT TENEUR PAR UNITÉ	CONTAINER SIZES OFFERED FOR SALE CAPACITÉ DES RÉCIPIENTS OFFERTS EN VENTE
---	-------------------------------	--	--	--

SUBSTANCES TO BE MANUFACTURED AND DISTRIBUTED AS TEST KITS

KIT 1320	A	Cannabigerolic Acid	T.K. 107-001	1.0mg/mL in methanol	1 mL
KIT 1310	A	Cannabigerol	T.K. 107-002	1.0 mg/mL in Methanol	1 mL
KIT 1305	A	Cannabichromenic Acid	T.K. 107-003	1.0 mg/mL in Methanol	1 mL
KIT 1295	A	Cannabichromene	T.K. 107-004	1.0 mg/mL in Methanol	1 mL
KIT 1300	A	Delta8-Tetrahydro Cannabinol	T.K. 107-005	1.0 mg/mL in Methanol	1 mL
KIT 1290	A	Delta9-Tetrahydro Cannabinol	T.K. 107-006	1.0 mg/mL in Methanol	1 mL
KIT 1285	A	Delta9-Tetrahydro Cannabinolic Acid	T.K. 107-007	1.0 mg/mL in Methanol	1 mL
KIT 0382	A	Cannabinol	T.K. 107-008	1.0 mg/mL in Methanol	1 mL
KIT 1225	A	Cannabidiol	T.K. 107-009	1.0 mg/mL in Methanol	1 mL
KIT 1220	A	Cannabidiolic Acid	T.K. 107-010	1.0 mg/mL in Methanol	1 mL

\*DRUG TYPE  
\*TYPE DE DROGUE

A Narcotic/Stupéfiant  
B Verbal Prescription Narcotic/Stupéfiant d'ordonnance verbale  
C Codeine preparation as defined in Section 36 of the Regulations/Préparation de codéine telle que définie à l'article 36 du Règlement  
D Controlled Drug/Drogue contrôlée  
E Preparation/Préparation  
F Targeted Substance/Substance ciblée  
R Restricted Drug/Drogue d'usage restreint



Health  
Canada

Santé  
Canada

Healthy Environments  
and Consumer Safety  
Branch

Direction générale,  
Santé environnementale et  
sécurité des consommateurs

Address Locator 0300B  
Ottawa ON K1A 0K9

2015-12-31

Your file    Votre référence

Our file    Votre référence  
9636-6-0799  
OF-15-59-1070-1

Experchem Laboratories Inc.  
36 - 1111 Flint Road  
Downsview ON M3J 3C7

Dear Sir,

Please find enclosed your Controlled Drugs and Substances Licence issued for the year 2016, in accordance with the Regulations under the *Controlled Drugs and Substances Act*.

The list of personnel approved for your firm effective as of December 31, 2015, will be as follows:

QPIC: Mr. Sohil Mana  
A/QPIC: Ms. Rebecca Louise Oosting

Individuals Authorized to Place Orders: Mr. Dave Gordon  
Mr. Micheal Wiffen  
Mr. Sohil Mana  
Ms. Rebecca Oosting  
Mr. Michele Bertone

Individual in Charge of the Premises: Ms. Barbara Kovensky

In order to add Mr. Michele Bertone as an Alternate Qualified Person in Charge (A/QPIC) please submit an original criminal record check. The attached Application for Changes Affecting Personnel in Charge must also be completed and submitted along with an original criminal record check to add Mr. Ahmed Rumana as an A/QPIC.

Yours very truly,

James Bellis  
Head, Controlled Drugs & Substances Section  
Licences and Permits Division  
Office of Controlled Substances  
Health Canada

Canada

9) Ability to comply with the requirements for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 329D-7 and 329D-8, HRS

Appendix 9(e) – Rm3 Credentials





## About Rm3 Labs Colorado LLC

<http://www.rm3.us/>

Since its founding in 2009, Rm3 Labs has been a leader in providing scientific analysis for the medical and recreational marijuana communities of Colorado. A fully independent analytical laboratory, Rm3 brings its scientific expertise and technology to help its clients produce safe, pure and effective marijuana products.

Rm3 Labs' primary service is cannabinoid testing; its standard test quantifies THC, THC-A, CBD, CBD-A, CBG, CBG-A, CBC, THCV and CBN. Rm3 has developed particular expertise in working with cannabinoid-infused products, helping manufacturers produce consistent products and minimize waste and costs. We are one of a handful of laboratories in Colorado licensed to perform biocontaminant and residual solvent analyses on cannabis products. We also conduct ongoing research into extraction, separation and processing techniques, and advise dispensaries, growers and MIPs on technical issues they may encounter in their businesses.

Our Founder, Ian Barringer, received an ScB degree from Brown University in Neural Sciences and a JD degree, cum laude, from Boston College Law School. He was also a Harlan Fiske Stone Scholar at Columbia Law School. He has been a member of several Colorado commissions shaping the regulations affecting the industry, including the Governor's Amendment 64 Consumer Safety Working Group, the MED HB14-1366 Edibles Working Group and the MED Licensing and Permitted Economic Interests Working Group.

Our Laboratory Director, Mark Angerhofer, holds an MS in Civil Engineering from the University of Colorado and an MS in Environmental Chemistry from the University of Alaska, as well as a BS in Chemistry from the University of Montana. He has over a decade's experience in analytical chemistry. Prior to joining Rm3, he was the Organic Chemistry Work Lead at the Colorado Department of Public Health and Environment – Laboratory Services Division.

Rm3 Labs is fully licensed and certified by the Colorado Department of Revenue, and our processes have been reviewed and approved by the Colorado Department of Public Health and Environment. All of our procedures have been designed to comply with ISO 17025. We are currently collaborating in a number of clinical and investigatory research projects, including research by the University of Pennsylvania and the Veterans Administration into the use of marijuana for the treatment of Post-Traumatic Stress Disorder.

Our laboratory is located in Boulder, Colorado.

- 9) Ability to comply with the requirements for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 329D-7 and 329D-8, HRS

## Appendix 9(f) – Testing Lab Guidelines

### Testing Lab Guidelines

Our review of any lab engaged for testing will include, without limitation, reviewing the following:

- 1) The certifications of the lab in accordance with DOH Rule 11-850-82, including any deficiency reports generated in connection with such certifications;
- 2) The qualifications of the laboratory director and other personnel responsible for handling or analyzing samples;
- 3) The laboratory's Standard Operating Procedures for, among other things:
  - a. Procedures for the creation and handling of samples;
  - b. Sample accession (including rejection criteria), handling, storage and destruction;
  - c. All tests to be performed by the laboratory on our samples;
  - d. Quality Assurance and Quality Control;
  - e. Training of personnel responsible for handling or analyzing samples;
  - f. Validation of test methods;
  - g. Equipment calibration, maintenance and repair;
  - h. Facility security;
  - i. Document retention; and
  - j. Results Reporting;
- 4) That the laboratory has adequate space, facilities, personnel and equipment for performing the analyses provided;
- 5) Validation data for all tests to be provided; and
- 6) Participation in proficiency testing, as available, for all tests to be provided.



**9) Ability to comply with the requirements for certified laboratory testing on marijuana and manufactured marijuana products pursuant to this chapter and sections 329D-7 and 329D-8, HRS**

Our review would also ensure proper chain of custody protocols are in place:

- 1) Issuing instructions for the minimum sample and storage requirements;
- 2) Documenting the condition of the external package and integrity seals utilized to prevent contamination of, or tampering with, the sample;
- 3) Documenting the condition and amount of the sample provided at the time of receipt;
- 4) Documenting all persons handling the original samples, aliquots and extracts;
- 5) Documenting all transfers of samples, aliquots and extracts referred to another independent testing laboratory for additional testing or whenever requested by a client;
- 6) Maintaining a current list of authorized medical marijuana establishment agents and restricting entry to the laboratory to only those authorized;
- 7) Securing the laboratory during non-working hours;
- 8) Securing short and long-term storage areas when not in use;
- 9) Utilizing a secured area to log-in and aliquot samples;
- 10) Ensuring samples are stored appropriately; and
- 11) Documenting the disposal of samples, aliquots and extracts.







**10) Ability to comply with requirements for signage, packaging, labeling, and chain of custody of products**

AGH is fully capable of satisfying all of the requirements for signage, packaging, labeling and chain of custody of MMJ products in strict compliance with applicable laws and DOH Rules, including 11-850-91 to 93. Our ability to comply is based on established policies and procedures for our production centers and dispensaries regarding packaging, labeling and chain of custody. **Our team has extensive experience in all of these areas including many years of experience in the pharmacy/pharmaceutical industry, and operating licensed MMJ dispensaries and production centers in Canada and Colorado.** AGH is very familiar with packaging, labeling and chain of custody regulations and compliance. In addition, our team has law enforcement experience and legal knowledge of chain of custody compliance. The AGH team has considerable real estate development experience, both as a landlord and as a tenant, working with municipalities to obtain approvals, and experience installing signage that meets restrictions under municipal regulations or sign permits.

**Signage** - In accordance with HRS 329D-6(o)(2) and DOH Rule 11-850-91, we will ensure that our dispensaries will only post a single sign no greater than one thousand six hundred square inches and such sign will only state our trade name, in text. We will also ensure that our signage is in compliance with any applicable law or municipal ordinance and complies with whichever is more restrictive. **We will not display any MMJ products in windows or in public view** in accordance with HRS 329D-6(o)(1). Furthermore, in accordance with HRS 329D-7(14), we shall never have signage that includes the image of a cartoon character or other design intended to appeal to children. As most of our team are parents, grandparents, or work with at-risk children, we are sensitive to this issue and will take all measures to avoid using anything that will appeal to children and do everything in our power to prevent diversion to children.

**Chain of custody** - Our team of lawyers, former law enforcement, pharmacist, and licensed MMJ producers from other jurisdictions are intimately familiar with chain of custody procedures. Tai Y. Cheng, H's advisor/director, has experience with Forest Stewardship Counsel (FSC) Chain of Custody certification and the record/system requirements in order to provide assurances that wood-based products



**10) Ability to comply with requirements for signage, packaging, labeling, and chain of custody of products**

originate from environmentally sustainable forests. Chain of custody best practices from well-established industries such as forestry and pharmaceuticals provide guidance for the newly emerging MMJ industry.

**Our security plan and production process will ensure that the chain of custody is monitored and kept intact from the start in the production center to the final dispensing to the patient.** Our chain of custody procedures, video monitoring, and BioTrack inventory tracking system (the BioTrack System) will enable us to track all MMJ products throughout the seed to sale process (see Application Section 7 for detailed procedures on inventory chain of custody tracking). These procedures help ensure the quality, security, and accountability of our entire MMJ supply chain and protect our patients, our employees, the public, and the environment from exposure to contaminants and help prevent diversion.

**Packaging and Labeling** – MMJ products for dispensing will be discreetly packaged in a child-resistant container with the functionality and characteristics to allow strict compliance with HRS 329D-11 and DOH Rules 11-850-92. **Please refer to Appendix 10(a) - Packaging and Labeling Guidelines, for additional details on the functionality and characteristics of our packaging and labeling.** The BioTrack System includes a label creation tool that will enable us to create custom container/patient labels with all the necessary fields to comply with applicable law. In addition, we can add custom disclaimers and warnings. The BioTrack System will automatically print the container/patient specific label upon completion of the sale. The name and address of the patient, the quantity sold, the product name, potency, batch number, and lot number of all MMJ products will all be recorded for each transaction.

Our packaging will accommodate the following quantities of MMJ products: 1 gram, 2 grams, 7 grams, 14 grams, and 1 ounce (or 28 grams) and we will carefully monitor patient allowances to ensure that we never exceed the limits of 4 ounces within fifteen days or 8 ounces within thirty days as per HRS 329D-13(a). **Our packaging will allow law enforcement to reasonably determine the contents of an unopened package with clear descriptive and marked labels.** We have existing relationships with packaging and labeling suppliers through the licensed MMJ producers on our team. We selected Kush



**10) Ability to comply with requirements for signage, packaging, labeling, and chain of custody of products**

Bottles, Inc., a premier packaging supply and services company exclusively serving the cannabis industry, as our product packaging supplier. **We plan to use a combination of Kush Bottles' Philips RX Pop Top Opaque Child Resistant dram bottles and CRREO ATSM Child Resistant White Opaque Bags in various sizes to package MMJ products for sale in accordance with DOH Rule 11-850-92 (see Appendix 10(b) – Kush Bottle Descriptions). All of our packaging options are child resistant in accordance with Title 16 C.F.R. 1700 of the Poison Prevention Packaging Act.** Our tamper-proof packaging will keep MMJ products fresh for an extended period of time and will substantially reduce any mold or bacterial growth, and significantly minimize any degradation or discoloration.

After the MMJ has been harvested, dried and cured at our production center, we plan to package all MMJ products into large mylar packages along with oxygen and moisture absorbers for longer term storage and transportation. At this point in our production process we will collect samples that we will send to our testing lab for analysis. We have established procedures that will ensure that the chain of custody is monitored, recorded, and kept intact throughout transportation to and from the testing lab and our dispensaries. **Please refer to Application Section 4 for additional information on transportation and security to maintain chain of custody.**

**Quality Assurance** - We will implement a quality assurance process to periodically audit and ensure our packaging and labeling is in compliance with all of the relevant DOH Rules and applicable laws. Please refer to **Appendix 10(c) for our Quality Assurance Guidelines.**



**10) Ability to comply with requirements for signage, packaging, labeling, and chain of custody of products**

**Appendix List**

Title	Page
10(a) – Packaging and Labeling Guidelines.....	5
10(b) – Kush Bottles Description.....	8
10(c) – Quality Assurance Guidelines .....	10



**10) Ability to comply with requirements for signage, packaging, labeling, and chain of custody of products**

**Appendix 10(a) – Packaging and Labeling Guidelines**

We will adhere to the following guidelines in compliance with DOH Rules and MMJ laws.

- 1) Packaging will be child resistant in accordance with Title 16 C.F.R. 1700 of the Poison Prevention Packaging Act;
- 2) Packaging will be opaque so that the MMJ product within cannot be seen from outside the packaging;
- 3) Packaging will protect the MMJ product from contamination and will not impart any toxic or harmful substance to the MMJ product;
- 4) In the case of any permitted manufactured MMJ product such as capsule, lozenge, or pill containing marijuana, or its principal psychoactive constituent tetrahydrocannabinol, the product shall be packaged so that one dose, serving, or single wrapped item contains no more than ten milligrams of tetrahydrocannabinol; and no such manufactured marijuana product that is sold in a pack of multiple doses, servings, or single wrapped items, nor any containers of oils, shall contain more than a total of one hundred milligrams of tetrahydrocannabinol per pack or container.
- 5) Each package shall be labeled using only black lettering on a white background with no pictures or graphics, and in addition to the qualifying patient's name and our company's name, registration and telephone number, address and website information, shall include:
  - a) Information about the contents and potency of the marijuana and manufactured marijuana product, including but not limited to;
    - i) Net weight in ounce and grams; and for manufactured marijuana products, a listing of the equivalent physical weight of the marijuana used to manufacture the amount of the product that is within the packaging, pursuant to HRS[§329D-9](c);
    - ii) The concentration of:
      - (1) tetrahydrocannabinol or  $\Delta^9$  tetrahydrocannabinol;
      - (2) total tetrahydrocannabinol;



**10) Ability to comply with requirements for signage, packaging, labeling, and chain of custody of products**

- (3) activated tetrahydrocannabinol-A; and
  - (4) cannabidiol;
  - (5) we will consider additional information on the concentration of other active medicinal ingredients as appropriate or if requested for the benefit of the patients.
- b) Our dispensary license number and the name of the production center where the MMJ product was produced;
  - c) The batch number and date of packaging;
  - d) Includes BioTrack's tracking inventory identification number barcode generated by BioTrack software;
  - e) Date of harvest or manufacture and "Use by date";
  - f) Instructions for use;
  - g) Is clearly labeled with the phrases, with capitalization, "For medical use only"; "Not for resale or transfer to another person"; and "KEEP AWAY FROM CHILDREN";
  - h) The following warnings:
    - i) "This product may be unlawful outside of the State of Hawaii and is unlawful to possess or use under federal law";
    - ii) "This product has intoxicating effects and may be habit forming";
    - iii) "Smoking is hazardous to your health";
    - iv) "There may be health risks associated with consumption of this product";
    - v) "This product is not recommended for use by women who are pregnant or breastfeeding";
    - vi) "Marijuana can impair concentration, coordination, and judgement. Do not operate a vehicle or machinery under the influence of this drug"; and
    - vii) "When eaten or swallowed, the effects of this drug may be delayed by two or more hours";



**10) Ability to comply with requirements for signage, packaging, labeling, and chain of custody of products**

- i) A disclosure of the type of extraction method, including any solvents, gases, or other chemicals or compounds used to produce the manufactured marijuana product; and
- j) The name of the laboratory that performed the testing;

the information in paragraphs a-g above shall appear on the package, and the remainder may appear on a package insert as per DOH Rule 11-850-92.





**10) Ability to comply with requirements for signage, packaging, labeling, and chain of custody of products**

**Appendix 10(b) – Kush Bottles Description**

**Opaque Dram Child Resistant Pop Tops**



Philips RX Pop Top vials are an easy, convenient, and safe way to store medical and recreational herbs. The vials are child resistant but "pop" open with a simple squeeze on the sides near the top of the vial. The vials have a positive seal for enhanced freshness. All vials are medical grade plastic, BPA-free, and molded of natural gas based polypropylene FDA approved material. Colors are available with or without UV inhibitors.

These bottles are made in the USA and are certified child resistant. Appropriate paperwork is available upon request. Please call 888-920-5874 or email [info@kushbottles.com](mailto:info@kushbottles.com).



**10) Ability to comply with requirements for signage, packaging, labeling, and chain of custody of products**

**CRREO ATSM Child Resistant White Opaque Bag Large**

This new and improved ATSM certified CRREO child resistant exit bag is re-sealable, opaque, and white in color. Use the red zipper on top to open the child resistant seal on this high quality bag.

Dimensions: 13.5 in. by 9 in.



**10) Ability to comply with requirements for signage, packaging, labeling, and chain of custody of products**

**Appendix 10(c) – Quality Assurance Guidelines**

We shall implement a quality assurance process to periodically audit and ensure compliance with all of the relevant DOH Rules and state laws. Our process will included the following:

- Approve or reject all components, product containers, closures, in-process materials, packaging materials, labeling and marijuana or manufactured marijuana products;
- Review production and dispensing records to assure that no errors have occurred or, if errors have occurred, that they have been fully investigated and resolved;
- Approve or reject all procedures or specifications which may impact the identity, strength, quality and purity of the marijuana or manufactured marijuana products;

Our quality assurance team will have authority over both the production centers and dispensaries and shall:

(a) Set forth the responsibilities and procedures applicable to the quality assurance team in writing; and (b)

Follow the written responsibilities and procedures set forth pursuant to paragraph (a).



**11) A plan for secure disposal or destruction of marijuana and manufactured marijuana products**

AGH has a comprehensive and straightforward plan for the secure disposal or destruction of MMJ products. Waste generated from MMJ operations can be a target for theft or vandalism, and a threat to public safety if not properly processed and disposed of in a secure and responsible manner. **Our team is particularly knowledgeable in all aspects of disposing MMJ products based on our vast experience from team members who are licensed MMJ producers in other jurisdictions, which have stringent regulations governing the disposal of MMJ waste.** In addition, we have law enforcement, drug enforcement and Homeland Security experience dealing with the disposal of confiscated narcotics. We also have a pharmacist with experience in the disposal of pharmaceutical drugs.

Our waste disposal plan is environmentally friendly, will prevent diversion, and ensure compliance with any prescribed means of disposal, including DOH Rule 11-850-43, or any guidance from the Department of Public Safety Narcotics Enforcement Division administrator.

Given our mission to operate using environmentally sustainable methods, we will strive to limit the amount of waste that we produce and compost or recycle as much of that waste as possible. **Since we are located on agricultural land, we have the ability to compost most of our organic waste within the security perimeter of our production centers.** We may also offer our organic compost waste to local farmers once all MMJ waste has been destroyed and rendered unusable. **In fact, the landlord of our production center location has expressed interest in using our compost for his farming operation.** This will greatly limit the amount of waste generated and transportation of the finished compost. In an effort to reduce the amount of net solid refuse; all paper and cardboard waste from all facilities will be retained internally for use in our disposal process as a medium to mix MMJ waste.

Waste can occur in many areas of operation including MMJ dispensing and production. We will use our detailed plan and operating procedures to provide for the safe and proper disposal of all MMJ

To ensure compliance, we will provide proper training for all employees upon hiring as well as training on a regular basis afterwards. We will invest resources to make certain that we operate in



**11) A plan for secure disposal or destruction of marijuana and manufactured marijuana products**

strict compliance with all DOH Rules, environmental regulations and applicable laws pertaining to waste disposal and inventory tracking to prevent diversion. The guiding principle that will be instilled in our employees is that waste disposal is a team-oriented task. **Any team member disposing of waste should always be accompanied by another team member and should never be left alone in any production center or dispensary to dispose of waste.** Any non-compliance by any team member that deviates from our waste disposal plan and operating procedures will be grounds for disciplinary action and/or termination.

**Our waste disposal plan and operating procedures for handling MMJ waste at our dispensaries and production centers are described below.** All garbage and waste bins will meet all state and local laws and will be kept out of public view in a restricted access area. Separate and clearly labelled waste bins will be used for the various types of waste generated by the production center and the dispensaries. Access cards to restricted access areas shall only be provided to duly authorized employees. **The entire disposal process will be recorded under our video surveillance system and date/time stamped from start to finish for auditing purposes.** As an added patient service, we will accept at no charge any unused, excess, or contaminated marijuana from a registered qualifying patient and dispose of this material in the identical manner that we dispose of our own internal waste. We will maintain records of any such waste disposal for registered qualifying patient.

**Dispensary Waste Disposal Plan**

1. Rendering MMJ products and manufactured MMJ products unusable (including expired products and product recalls) will be scheduled once a week at a specified time (or more often if needed);
2. On an ongoing basis, we will keep an accounting of all MMJ products to be rendered unusable, including: weight/quantity, strain, batch number and reason for destruction as well as if no products are slated for destruction that week. If required, we will report information on any scheduled destruction to the DOH or law enforcement so that they can audit or supervise as needed;



**11) A plan for secure disposal or destruction of marijuana and manufactured marijuana products**

3. Under video surveillance and when the dispensary is closed to the public, at least one employee with the requisite level of authority plus one manager, will remove any MMJ products to be destroyed from the secured inventory safe;
4. All waste will be re-weighed or counted and the strain, batch number and reason for destruction will be verified.
5. The employee will enter the information into the BioTrack System (the "BioTrack System") and the manager will verify the entries and that the waste product has been removed from active inventory. All entries are assigned to the employee entering the information and dated.
6. The BioTrack System will maintain records of all waste information for a minimum of 6 years or for as long as required by the DOH. The BioTrack System is able to generate a paper trail for auditing as needed.
7. MMJ waste products will then be ground up and mixed with other ground non-consumable waste materials (such as paper, cardboard, coffee grounds, soil or other compostable waste) in a 1:3 ratio (1 part MMJ waste to 3 parts non-consumable waste). This ratio exceeds the minimum required 1:1 ratio that is found in regulations in other jurisdictions.
8. Non-compostable waste will be kept in a locked and secured garbage bin until it is picked up by Honolulu Disposal Service and delivered to the HPower plant for use in the waste energy recovery process. Composted waste may be provided to local farmers for use on their farms.
9. Electronic verification and video surveillance footage of every weekly rendering will be maintained for a minimum of six years or for as long as required by the DOH.



**11) A plan for secure disposal or destruction of marijuana and manufactured marijuana products**

**Production Center Waste Disposal Plan**

1. There will be more MMJ waste produced at our production centers due to the fact that there will be more plant material in a production center compared to a retail dispensary. We will endeavour to compost or recycle as much plant waste as possible.
2. Most of the plant waste is produced post-harvest and in order to prevent diversion during this time, real-time inventories are taken and stored both on paper batch logs and in the BioTrack System. In addition, storage of all MMJ containing materials will be confined to restricted access areas that will be under constant video surveillance.
3. We will use the same method that we use in the retail dispensary for rendering plant waste unusable by grinding it up and combining it with non-consumable waste materials (such as paper, cardboard, coffee grounds, soil or other compostable waste) in a 1:3 ratio (1 part MMJ waste to 3 parts non-consumable waste). Similar to a wood chipper, we will use 6 ½ hp gas-powered chipper/shredder mounted to a wheeled pedestal that shall accommodate a fifty-five gallon refuse container placed beneath the discharge outlet (see **Appendix 11(a) – MMJ Predator Wood Chipper**). These units shall be stored inside a locked, secure and limited-access enclosure located within the overall security perimeter. Precautions designated in OSHA's "Chipper/Shredder Safety for the Landscaping and Horticultural Services Industry" shall be adhered to at all times while operating the waste disposal unit.
4. All MMJ plant waste shall be discarded in separate waste bins that only contain MMJ plant material. The bins for MMJ waste will be green in color and non-plant waste bins will be gray in color. All waste bins will be labelled so that employees can clearly identify: "Plant Material Only" on the green bins; and "Other Waste" on the gray bins.
5. The MMJ green waste bins will be stored in limited access areas. Only duly authorized employees and managers shall handle the MMJ waste bins or have access to these limited access areas.



**11) A plan for secure disposal or destruction of marijuana and manufactured marijuana products**

6. All areas of the production center where MMJ waste will be produced, handled and disposed of will be under 24 hours video surveillance to prevent diversion.
7. Organic waste will be composted onsite within the secured perimeter of our production center and non-compostable waste will be kept in a locked and secured garbage bin until it is picked up by Honolulu Disposal Service and delivered to the HPower plant for use in the waste energy recovery process.

**There are two stages where most waste will be produced in our production centers: Pre-Harvest and Harvest. To illustrate our readiness and experience, please see Appendix 11(a) Standard Operating Procedure – MMJ Waste Handling for our production centers.**

We believe our comprehensive and environmental friendly plan for the secure disposal and destruction of MMJ will prevent diversion, maintain public safety and protect the local Hawaiian environment.





**11) A plan for secure disposal or destruction of marijuana and manufactured marijuana products**

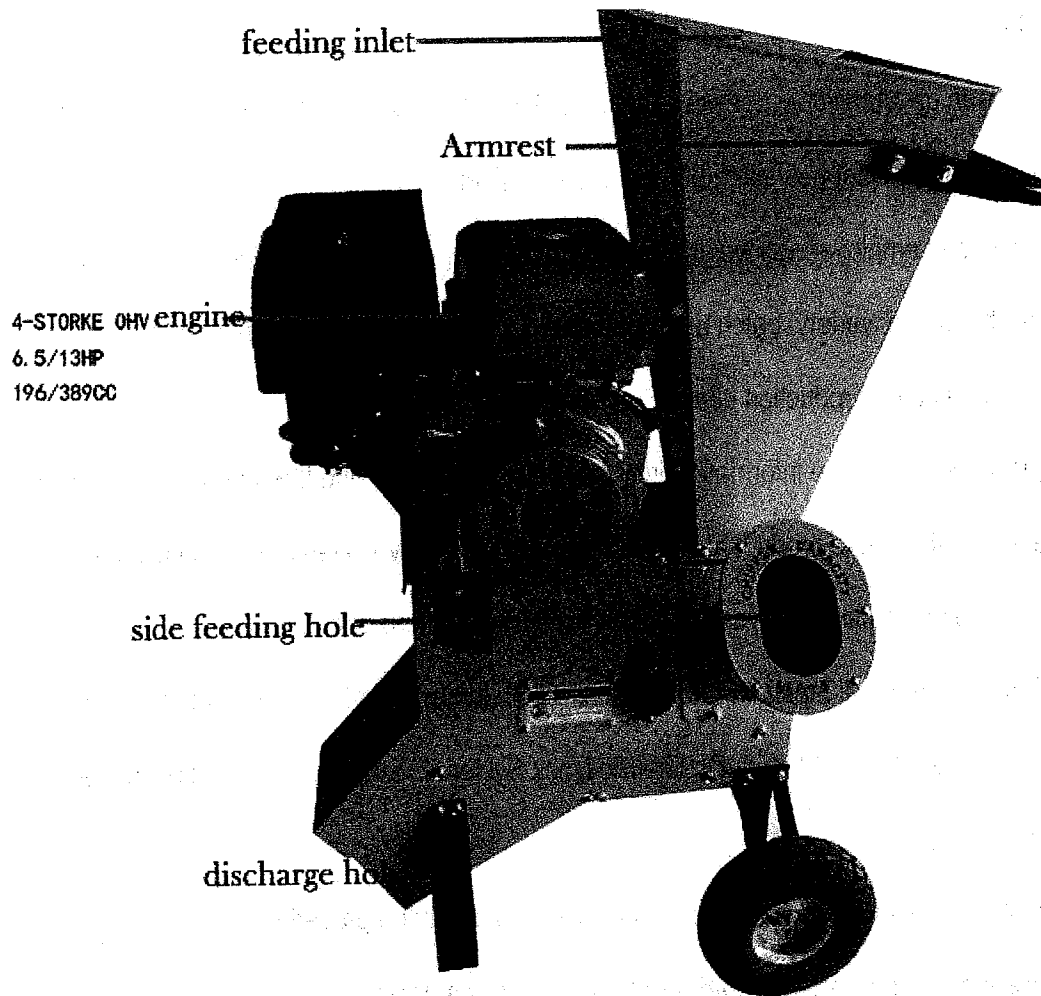
**Appendix List**

Title	Page
11(a) – MMJ Predator Wood Chipper .....	7
11(b) – Standard Operating Procedure – MMJ Waste Handling.....	8



11) A plan for secure disposal or destruction of marijuana and manufactured marijuana products

Appendix 11(a) – MMJ Predator Wood Chipper



**11) A plan for secure disposal or destruction of marijuana and manufactured marijuana products**

**Appendix 11(b) – Standard Operating Procedure – MMJ Waste Handling**

**Pre-Harvest Waste: defined as any plant material/removed/disposed of before harvest.**

Operating Procedure:

1. Regularly clean up all residual useless plant material and dispose into a green waste bin. Regular cleaning will help prevent pests and biological contamination.
2. A duly authorized employee will weigh the contents of the green waste bin with a manager present and record the strain, variety, batch number and reason for destruction for each particular cultivation room in the production center.
3. The employee will enter the information into the BioTrack System and the manager will verify the entries and that the waste product has been removed from active inventory. All entries are assigned to the particular employee entering the information and dated.
4. The BioTrack System will maintain records of all waste information for a minimum of 6 years as required by the DOH Rule 11-850-41. The BioTrack System is able to generate a paper trail for auditing as needed.
5. Render plant waste unusable and dispose according to operating procedures.

**Harvest Waste: defined as any plant material removed during a harvest.**

Procedure:

1. Take the batch sheet, and record the full wet weight of the plant in the area provided.
2. At the end of the wet trim, subtract the final wet weight from the original wet weight to get the accurate waste weight.
3. Record the accurate waste weight on the batch sheet and date and initial each entry.
4. Take the batch sheet and input wet weight, trim weight, and waste weight into the BioTrack System.



## **11) A plan for secure disposal or destruction of marijuana and manufactured marijuana products**

5. The employee will enter the information into the BioTrack System and the manager will verify the entries and that the waste product has been removed from active inventory. All entries are assigned to the particular employee entering the information and dated.
6. Render plant waste unusable and dispose according to operating procedures.

### **Disposing of Waste Material**

#### Procedure:

1. Alert security personnel that an exterior door needs to open for waste removal.
2. Security personnel shall evaluate cameras to ensure there is no suspicious activity or security risks before leaving security station.
3. Security personnel will inspect that the waste is compliantly unusable and also make sure there are no foreign or unapproved items being disposed.
4. Always have at least one employee and one manager dispose of waste.
5. Get the keys for the locked and secured garbage bin and open the access doors. All access door lock automatically and require key cards to enter.
6. Security will be on alert and supervising the employees and managers who will open access doors and unlock the secured garbage bin.
7. Security personnel locks the secured garbage bin and closes the access doors.
8. Never prop or leave access door open. Always check double locks on secured garbage bin.
9. Non-compostable waste will be kept in a locked and secured garbage bin as described above until it is picked up by Honolulu Disposal Service and delivered to the HPower plant for use in the waste energy recovery process. Organic waste will be composted onsite within the secured perimeter of our production center.



1. The first part of the document is a letter from the President of the United States to the Congress, dated January 1, 1861.

2. The second part is a report from the Secretary of the Treasury, dated January 1, 1861.

3. The third part is a report from the Secretary of the Interior, dated January 1, 1861.

4. The fourth part is a report from the Secretary of the Navy, dated January 1, 1861.

5. The fifth part is a report from the Secretary of the War, dated January 1, 1861.

6. The sixth part is a report from the Secretary of the State, dated January 1, 1861.

7. The seventh part is a report from the Secretary of the Army, dated January 1, 1861.

8. The eighth part is a report from the Secretary of the Navy, dated January 1, 1861.

9. The ninth part is a report from the Secretary of the War, dated January 1, 1861.

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13. The thirteenth part is a report from the Secretary of the War, dated January 1, 1861.

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15. The fifteenth part is a report from the Secretary of the War, dated January 1, 1861.

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18. The seventeenth part is a report from the Secretary of the War, dated January 1, 1861.

19. The eighteenth part is a report from the Secretary of the Navy, dated January 1, 1861.

20. The nineteenth part is a report from the Secretary of the War, dated January 1, 1861.

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22. The twenty-first part is a report from the Secretary of the War, dated January 1, 1861.

23. The twenty-second part is a report from the Secretary of the Navy, dated January 1, 1861.

**12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS**

Through extensive experience, in the pharmaceutical/pharmacy industry and medical health field, the AGH team has the ability and knowledge to ensure product safety in accordance with DOH Rules and Sections 329D-8, 329D-10, 329D-11, HRS. Our team has experience in **food safety** and **manufacturing**. We have **2 licensed medical marijuana (MMJ) producers** from Canada and Colorado along with a **University of Hawaii (UH) professor of agriculture** to promote good agricultural and manufacturing practices, ensure product quality and safety, and safeguard patient health. **AGH will adopt Current Good Manufacturing Practices (CGMP) developed by the US Food and Drug Administration (FDA) to regulate pharmaceutical companies.** Our team of experienced professionals and experts, including medical doctors (MD) and scientists (PhD) have a comprehensive understanding of quality controls (QC) and a thorough understanding of standard operating procedures (SOPs), (see **Appendix 12(a) – Master Index** for AGH's MMJ SOPs), which will regulate our cultivation, processing, and manufacturing operations to ensure product safety. **Sanitation Protocols** – Product safety plan begins with establishing a sanitary environment. **We have strict protocols for personal hygiene by all production center and dispensary staff, (see Appendix 12(b) – Sanitation Protocols), in accordance with DOH Rule 11-850-75.** All employees will be trained on protocols and shall comply with all DOH regulations on sanitation and product safety. **BioTrack System** – The BioTrack System tracks all plants and products from seed to sale. If a product safety issue arises, the BioTrack System will allow for rapid identification of the affected products anywhere in our supply chain from the earliest stages of growth through to the point of sale to patients. **Our priority is protecting patient health. AGH will immediately recall or dispose of products if a safety issue is identified.** **Certified Testing Lab** - We will ensure each batch of **MMJ products and manufactured MMJ products are rigorously tested, per DOH Rule 11-850-85, by an independent, certified lab to ensure consistency and product safety.** Please refer to Application Section 9 for more details on lab testing. Our QC team has lab testing knowledge and will monitor our independent, certified testing lab to ensure compliance with all product



**12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS**

testing regulations per DOH Rules. **Any products found with unacceptable levels of contaminants upon a retest, per DOH Rule 11-850-85(d), shall be disposed of, as per DOH Rule 11-850-85(j), according to our waste disposal procedures found in Application Section 11.** We will keep testing results for a minimum of 6 years in accordance with DOH Rule 11-850-41. **Quality Control and Internal Lab** - We will incorporate a state of the art QC lab and cleanroom in our second production center (see **Appendix 12(c) – Cleanroom** and Surna Solar Production Center plan in Application Section 2) to conduct routine product safety monitoring and for QC in our manufacturing process. Our QC testing will involve statistically representative random sampling of each batch of plants and all MMJ products for all contaminants listed in DOH Rule 11-850-85(c). Products that pass our QC testing will be sent for final QC testing by an independent, certified lab. Our QC testing will complement the testing performed by an independent, certified lab and will provide a second layer of product safety to protect patient health. **Our internal lab will allow us to test raw materials, such as growing medium, plant nutrients, and water supply, used in our production centers, creating additional safeguards against any possible contamination.** We plan to conduct routine facility monitoring including regular microbial contaminant checks of plant pruning and harvest equipment and surfaces and fixtures in our cleanroom, harvesting, manufacturing and packaging areas to further ensure an uninterrupted supply of safe, high quality products for our patients. **We will regularly test our water source, and if needed, use reverse osmosis and/or a water treatment process to ensure clean, contaminant-free water, to help prevent microbial growth and water-borne disease.** **Microbial Testing** – The monitoring of our production centers and MMJ plants and products for total viable aerobic bacteria, total yeast and mold, and total coliform counts will be performed using proven microbiological methods. Our team has developed SOPs based on U.S. Pharmacopeial Convention (USP) recommended procedures for the microbial examination. Testing for the specified microorganisms, such as pathogenic *E. coli*, *Salmonella* spp. and *Aspergillus* spp. will be performed using quantitative real-time polymerase chain reaction (PCR) analysis. Our team has extensive



**12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS**

experience performing qRT-PCR analysis and have developed SOPs for routine testing for these specified microorganisms. **High Performance Liquid Chromatography (HPLC) testing** - Our lab will utilize HPLC to evaluate the cannabinoid and terpenoid profiles for each batch of plants. This will include identification and quantification of  $\Delta^9$ -tetrahydrocannabinol (THC), cannabidiol (CBD), cannabigerol (CBG), and cannabinol (CBN) and the acid forms of each of these (THCA, CBDA, CBGA and CBNA) in accordance with DOH Rule 11-850-85(c)(1). Profiling of the most abundant terpenoids may include myrcene, limonene, linalool, alpha-pinene and trans-caryophyllene. Our team has experience in HPLC analysis of natural plant products and has developed SOPs for the analysis of these compounds based on internationally recognized protocols and peer-reviewed scientific studies. **Decarboxylation** - We believe that the production of safe and effective manufactured MMJ products using extracts from MMJ plants requires an additional QC step not required for dried MMJ flowers. THC, the primary psychoactive compound in MMJ, exists in the plant in an acid form, THCA, which is not psychoactive. High heat converts THCA to THC through a process called decarboxylation. Decarboxylation of MMJ extracts can be achieved by heating at 100°C for 75 minutes. **If not decarboxylated, over time THCA present in MMJ extracts and manufactured MMJ products will spontaneously convert to THC, potentially increasing the potency beyond what may have been identified in earlier testing. Prior to the production of manufactured MMJ products, THCA in our extracts will be completely decarboxylated ( $\geq 95\%$ ) and verified by our internal lab and an independent, certified lab.** To ensure accurate and consistent dosing and labelling, no manufactured MMJ products will be dispensed until the decarboxylated THC test results and cannabinoid profile are available for that batch. **Manufactured MMJ Products** - In accordance with DOH Rule 11-850-72(b), AGH has established the following manufacturing SOPs to ensure product safety: safe and appropriate use of manufacturing equipment; safe and appropriate storage of materials used to produce manufactured MMJ products; effective training and monitoring of employees involved in the manufacturing process; lab testing protocols for manufactured MMJ products; and the safe storage and





**12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS**

disposal of manufactured MMJ products. All equipment and tools that come in contact with plants will be washed and sterilized (through the use of an autoclave where appropriate) on a regular basis and stored in an appropriate location. **We will analyze and label all manufactured MMJ products with dosage information on the cannabinoid content of the extract used, the specific profiles of cannabinoids present, and the equivalent weight of the MMJ plant material used to produce the manufactured MMJ products as per DOH Rule 11-850-74.** **CO<sub>2</sub> Extraction** - We plan to use carbon dioxide (CO<sub>2</sub>) supercritical fluid extraction (SFE) for the production of MMJ extracts. See **Appendix 12(d) - Supercritical Fluid Extraction** for illustration of CO<sub>2</sub> SFE equipment. With CO<sub>2</sub> SFE there is no need to test for organic and hydrocarbon solvents. **CO<sub>2</sub> SFE is the safest method for production of high purity MMJ extracts as it does not require the use of flammable or toxic hydrocarbon or organic solvents. We will use SFE grade CO<sub>2</sub>, the highest grade (>99.999%) commercially available, to ensure that our extracts are free of contaminants.** All extracts will be refrigerated or frozen to prevent degradation or contamination prior to use in our manufacturing process. **Cleanroom** – We will build a cleanroom for lab testing and manufacturing that will have controlled access and be served with a HEPA filtered, UV sterilized HVAC system, and UV sterilized airflow on par with bio-medical facilities. (See **Appendix 12(e) – UV Air Sterilizer**). Our cleanroom will utilize an air pressure cascade to ensure that the air flows only outwards, thus limiting the entry of contaminants into the cleanroom. Our air filtration and purification system will eliminate or significantly reduce the risk of microbial or insect infestation. **We will implement dress and behavior guidelines to limit the amount of contaminants that might enter the cleanroom and production center. Before entering a production center all personnel will be required to change from street clothes into clean work wear, including hair nets, gloves and shoe coverings. All personnel must also enter through an air shower to further eliminate any particles that might remain. All items being brought into the production center must also be sanitized and pass thru an air shower and sanitation process to prevent any contaminants or pests from entering the**



**12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS**

**production centers. Environmental Controls** - Our insect, pest and microbial contamination control strategy starts with our comprehensive prevention plan. Our production centers are designed to limit the ability of pests to spread. **Climate conditions and air quality in our production centers will be tightly controlled by an integrated environmental monitoring and control system, which will allow us to regulate air quality, circulation, temperature, and humidity levels.** Deviations from the ideal environment will trigger audible alarms and instant alerts to mobile devices of our team, thereby limiting the occurrence of conditions favourable to microbial growth. Microbial contamination can also result from improper drying of MMJ plants. Our production centers will be equipped with analytical scales (accurate to 0.01 g) and drying ovens (able to achieve and sustain 103°C) to ensure that all dried plant material has a moisture content between 5%-10%, which is better than the <15% required under DOH Rule 11-850-85(c)(2)(E). **Limited Use of Pesticides** - If insect or microbial contamination were to ever occur, our preference is always to destroy the afflicted crop or products rather than risk product safety and patient health by using pesticides. In limited cases and never within 4 weeks of harvest, we may consider using certain pest control methods that have approved by the State and the US Department of Agriculture (USDA). In the event of pesticide application, all products produced from the treated plants will be tested for pesticide residue. In accordance with DOH Rule 11-850-85(c)(2)(B), screening for pesticide residue will be conducted using gas chromatography-mass spectrometry (GC-MS) or liquid chromatography-tandem mass spectrometry (LC-MS/MS). Our team has experience performing LC-MS/MS analysis and have develop SOPs based on peer-reviewed scientific studies. Any result in excess of the allowable limits under the US Environmental Protection Agency regulations will result in the destruction of the entire batch. In summary, **our QC procedures will provide patients with the assurance that they are receiving high quality, effective and safe MMJ products.** Testing of raw materials and routine monitoring of our production centers will reduce the risk of contamination and ensure product safety. Please refer to **Appendix 12(f) – References** used in the development of our QC procedures.



**12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS**

**Appendix List**

Title	Page
12(a) – SOP Master Index .....	7
12(b) – Sanitation Protocol .....	9
12(c) – Cleanroom .....	13
12(d) – Supercritical Fluid Extraction .....	14
12(e)- UV Air Sterilizer .....	15
12(f) – References .....	16



12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS

Appendix 12(a) – SOP Master Index



**Aloha Green**  
**Master Index of Standard Operating Procedures**

DRAFT 21-Jan-2016  
Private and Confidential

**Security**

SEC-001.draft	Production Facility Security Overview
SEC-002.draft	Dispensary Location Security Overview
SEC-003.draft	Access Control Log
SEC-004.draft	Employee Access
SEC-005.draft	Theft and Diversion Prevention
SEC-006.draft	Contractor, Delivery and Pick up Management
SEC-007.draft	Emergency Response
SEC-008.draft	Key & Alarm Code Issuance and Tracking
SEC-009.draft	Visitor Log

**Production**

PRO-001.draft	Integrated Pest Control Management Program
PRO-002.draft	Hand Washing and General Hygiene
PRO-003.draft	Environmental Controls and Monitoring
PRO-004.draft	Cultivation Procedures (seed/clone to harvest)
PRO-005.draft	Cleaning and Sanitization
PRO-006.draft	Materials Management
PRO-007.draft	Plant Inventory Management
PRO-008.draft	Controlled Waste Management
PRO-009.draft	Controlled Waste Destruction
PRO-010.draft	Nutrient and Irrigation Log Book
PRO-011.draft	Harvest and Trimming
PRO-012.draft	Drying and Curing
PRO-013.draft	Sampling, Testing and Retention
PRO-014.draft	Finished Product Quarantine and Release
PRO-015.draft	Finished Product Material Specification
PRO-016.draft	Extraction and Manufactured Products Production
PRO-017.draft	Chain of Custody

**Dispensary**

DIS-001.draft	Background Checks
DIS-002.draft	Dispensary Operations
DIS-003.draft	Hiring and Training of Operators, Employees and Subcontractors
DIS-004.draft	Secured Shipping and Transportation
DIS-005.draft	Finished Product Packaging and Labelling
DIS-006.draft	Patient Access to Secured Areas
DIS-007.draft	DOH Quarterly Reports
DIS-008.draft	Dispensary Access Log
DIS-009.draft	Product Destruction

**12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS**

**Appendix 12(b) - Sanitation Protocol**

AGH requires that all employees maintain strict sanitation protocols throughout our production centers. Employees agree to uphold compliance with local and state departments. The purpose of these protocols is to protect people and products from contamination from microbial, chemical, and physical hazards. The four major ways contaminants can enter a live plant room are the bottom of your shoes, pets, hands, and clothing. We will mandate sanitary footbaths, a no pet policy, clean hand and glove procedures, and clean/sterile uniforms.

**All production center employees** (including all extraction, cultivation, and processing staff) will be required to pass through an air shower and a sanitary footbath and will be required to wear appropriate clean uniforms, hairnets, beard nets, gloves, and safety protection. Latex gloves will be required when anyone is in contact with plants, processing, and infused products processes. Latex gloves will be required when anyone is in contact with plants and any MMJ product. The patient should be the first person to touch any MMJ products with their bare hands. All tobacco use while on the premises or in a production center is strictly prohibited, due to the risk of the tobacco mosaic virus.

**Cultivators** will be required to shower and change into clean uniforms and gloves prior to entering a live plant room. They will be required to shower and scrub up to their elbows every time they enter the building. Cultivators will have their own pair of shoes on premise that are only to be worn in the cultivation areas and are never to leave the building.

**Authorized Visitor** will be required to go pass through an air shower, a footbath, scrub up to their elbows, and wear coveralls over their clothes, along with hairnets and gloves before entering any of the live plant or processing rooms. All visitors must sign in and out and be accompanied by a manager at all times.

**All processing staff** will be required to practice clean hand sanitation methods and wear clean uniforms and hairnets. Processing staff are not permitted to enter any live plant rooms. In the event that a



**12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS**

staff member from the extraction room needs to enter a live plant room, they must adhere to the same sanitation practices as a visitor and be escorted.

**Equipment.** Just as important as maintaining clean handling practices, it is also paramount that time is taken to sanitize equipment and tools that come in contact with any of the part of the plant stages and processes. All live plant related tools (e.g., scissors, stakes, clips, ties, ppm pens, pH pens, pots, fans, clone machines, measuring cups, pumps, air stones and tables) will be washed and sterilized (through the use of an autoclave where appropriate) on a regular basis and stored in their appropriate location. Autoclaved equipment will be marked with sterilization indicator tape. Any cleaning products used will be approved by local and state authorities and stored appropriately. All extraction equipment will be cleaned, sanitized, and stored appropriately and we will maintain accurate records and sanitation practices to meet local and state requirements.

**General Sanitization Practices.** Production centers will be routinely cleaned and kept organized. All dock, shipping and receiving areas will be cleared of litter, debris, used packaging materials, empty skids, etc. The receiving, shipping and storage areas are cleaned weekly with a disinfectant solution. Outside each door of each room where MMJ is present will be a sticky mat to prevent any cross contamination. The sticky mats will be cleaned weekly or as required. The MMJ product storage area and staging area will be swept monthly. The garbage will be collected when the containers are full and placed in the bins. The bins will be emptied daily or as needed. The steel racks for storage on the premises will be cleaned weekly. The storage of items in the premises will be such that there will be a minimum of 6 inches between the wall and the item.

**Cultivation Areas.** All rooms, where MMJ is to be planted, will fumigated before planting with chlorine tablets for 5 to 10 minutes. After 4-6 hours, the rooms will be cleaned as per procedure listed below. Once the room has been sanitized and recorded on a room cleaning form, the MMJ may be planted. The following cleaning will be done with disinfectant and rinsed with water:



**12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS**

- All grow rooms and cultivation areas will be cleaned and sanitized before planting and after each harvest.
- The processing and packaging room will be cleaned and sanitized before packaging and on a regular basis.
- The drying room will be cleaned and sanitized before drying and on a regular basis.
- The cleanroom and lab will be cleaned and sanitized weekly or as needed.
- The vault room will be cleaned and sanitized weekly or as needed.
- The water storage tank and water system will be sanitized as per the manufacturer's recommendation.

**Room Cleaning Frequency**

When the filters in the air handling system have been changed, the room will not be cleaned and sanitized until at least 24 hours after the replacement of the filters.

- The following rooms will be cleaned and sanitized before and after use:
- Growing Rooms
- Processing and Packaging Room
- Drying Room
- Cleanroom and Lab
- Vault Room

**Room Cleaning Procedures**

The rooms will be cleaned and sanitized in the following order.

The light fixtures will be cleaned with compressed air starting from one side and moving to the other side.

The ceiling will be cleaned with compressed air starting at one side of the room and using a side-to-side motion moving to the other side of the room.





**12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS**

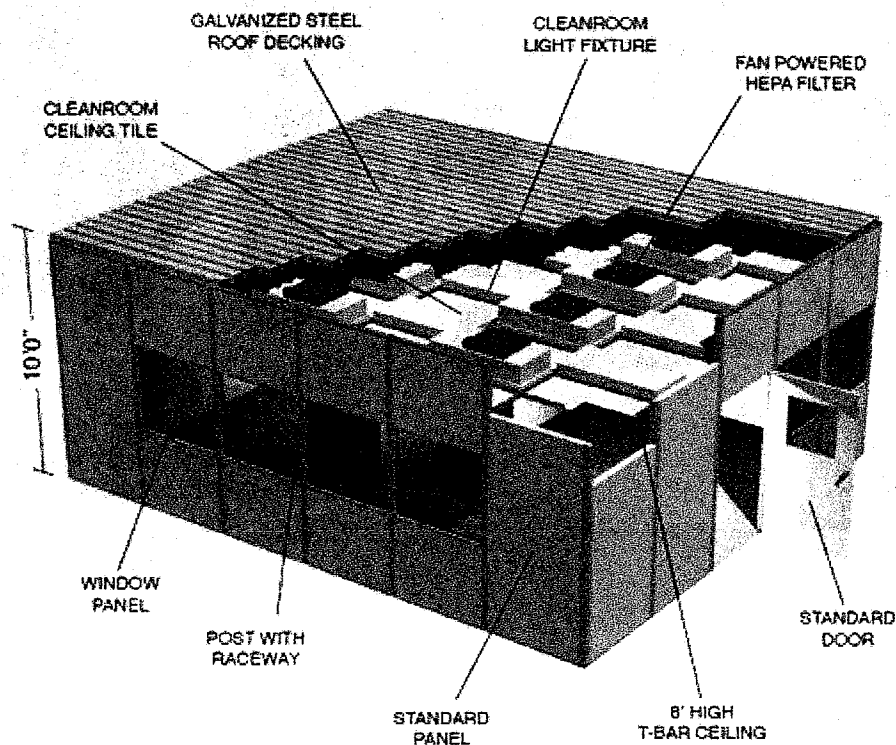
- The walls, fixtures and doors will then be cleaned and sanitized with the disinfectant solution. The disinfectant solution will be applied to the walls, fixtures and doors in a side-to-side motion starting from the top and working to the bottom with a contact time of 1 minute.
- Extra attention will be taken around small fixtures and points of contact between doors to ensure adequate cleaning.
- After disinfection with disinfectant solution, surfaces will be rinsed with water. If there is not a point of use located in the room the water will be moved to the room in cleaned and sanitized totes or piped in with a hose.
- The rinse water will be funneled to the closest drain for disposal.
- Lastly, the floor will be cleaned and sanitized. The floor will be sanitized with a disinfectant. Subsequently, the floor will be rinsed with water. The rinse water will be funneled towards the closest drain for disposal.
- Any unused water from the totes will be discarded in a drain after the cleaning and sanitizing of the room.
- Once all the cleaning and sanitizing is complete and adequate, a 'Cleaned' tag will be given to the room



**12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS**

**Appendix 12(c) – Cleanroom**

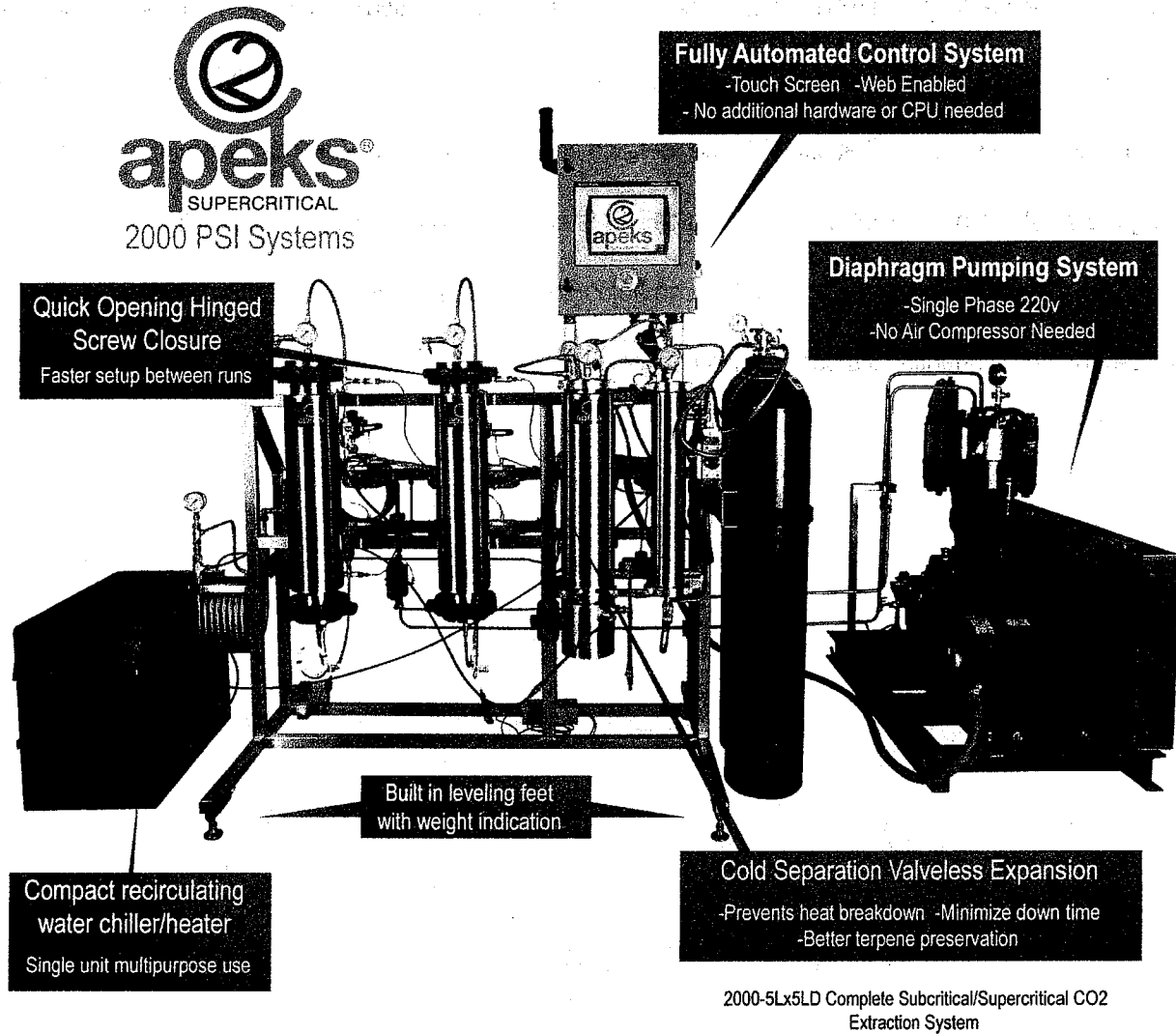
AGH will install a cleanroom within the Surna Solar Production Center. Cleanrooms are designed to provide a clean, Environmentally Controlled Environment. Clean levels are available from Class 100,000 to Class 1 (ISO Standards Class 1 thru Class 8), with temperature and humidity control. The standard system consists of a panelized wall structure that supports the roof and ceiling grid material. Filter units mounted in the ceiling draw outside air through a prefilter and deliver filtered air through a Hepa filter into the cleanroom. Filtered air is exhausted from cleanroom through adjustable exhaust vents near floor level. Clean levels will vary depending on quantity and configuration of filters.



12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS

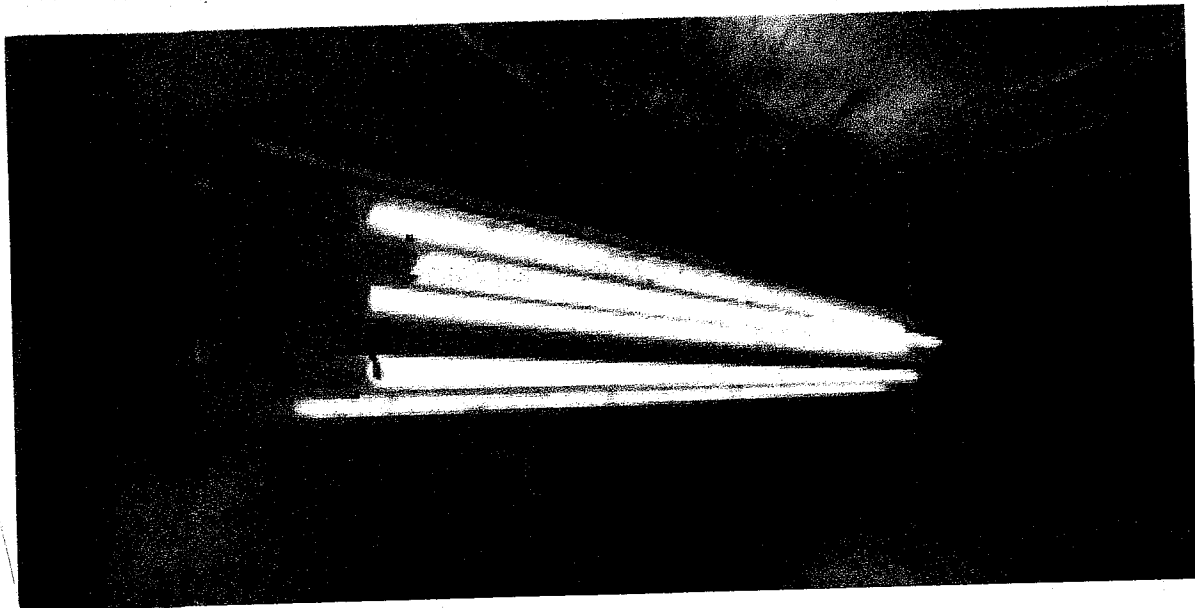
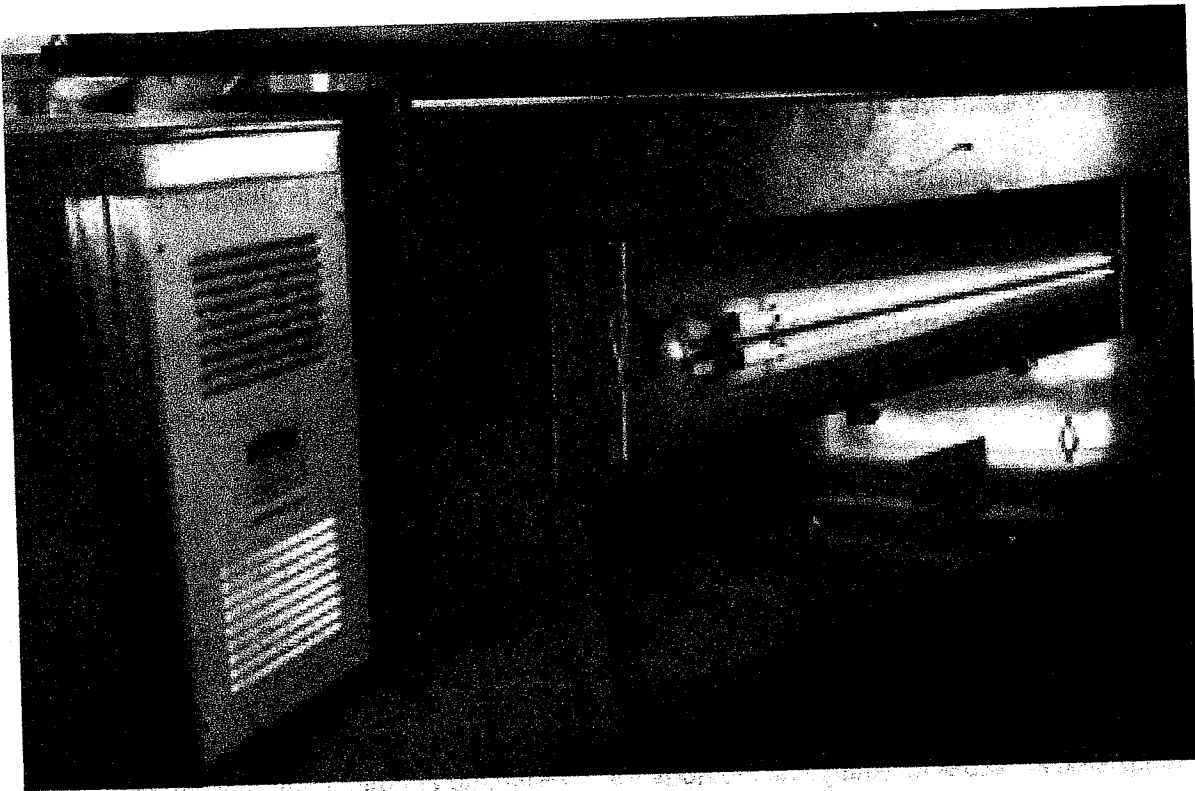
#### Appendix 12(d) – Supercritical Fluid Extraction

#### Supercritical Fluid Extraction - Carbon Dioxide (CO<sub>2</sub>)



12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS

Appendix 12(e) – UV Air Sterilizer



12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS

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**12) Ability to ensure product safety, in accordance with this chapter and sections 329D-8, 329D-10, 329D-11, HRS**

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### 13) No history of having a business license revoked

Aloha Green Holdings Inc. (AGH) is a recently incorporated Hawaiian company and has no history of having a business license revoked. In addition, **no member of the AGH team has a history of having a business license revoked in Hawaii or in any other jurisdiction (see Appendix 13(a) – No History of Having a Business License Revoked)**. AGH has thoughtfully assembled a team of highly respected professionals and leaders in their field, who can be trusted with the responsibility of developing the new Hawaiian medical marijuana (MMJ) industry with integrity and responsibility. The core values of patient safety, product safety and public safety are represented in abundance among our medical doctors, lawyers/law enforcement, and scientist team members. **AGH provides sworn affidavits from Thomas J. Wong, our individual applicant, and James H.Q. Lee, our sole shareholder, in which both declare that they have no history of having a business license revoked (see Appendix 13(b) – Statutory Declarations)**. Both Thomas J. Wong and James H.Q. Lee, as practicing attorneys in Hawaii, understand better than most, the implications of making such a statement under oath and the consequences of perjury. Both attorneys have been successfully practicing law in Hawaii since 1981 and in over 35 years, both lawyers have maintained an impeccable track record with no disciplinary actions against either by the Hawaii State Bar Association that governs the legal profession in Hawaii. In addition, James H.Q. Lee has owned and operated 3 breweries and multiple restaurants in Honolulu with no history of either an incident of business license discipline or revocation.

**The AGH team is comprised of medical doctors, lawyers and other professionals who belong to and are governed by their respective regulatory bodies. All team members are pillars of the community and have a keen understanding in their respective professional responsibilities and obligations and the importance of upholding their commitments.** AGH has gone to great lengths to ensure integrity of process and deliberately selected subject matter experts and leaders with strong ties to the community. We believe the purpose of the DOH in asking for a history of having a business license revoked is to ensure that if awarded a license, the licensee will remain in good standing and abide by the





### 13) No history of having a business license revoked

DOH Rules and applicable laws governing this newly developed medical MMJ dispensary program. Public confidence in the program and the DOH would be eroded if any licensees had their MMJ licenses revoked after issue. We can unequivocally assure the DOH that the **AGH team is most capable of upholding our commitments and abiding by DOH Rules and applicable laws governing MMJ.**

In regards to medicine, AGH's Medical Advisory Board is currently comprised of 3 long-time local residents of Hawaii (Dr. Gregg Kokame, Dr. Ken Sumida, and Dr. Troy Tanji), who have provided immeasurable time to medical research and education in their professional field. All 3 doctors have been voted as "Best Doctors in Hawaii" for their professionalism as well as for their involvement in the community. In regards to security, AGH's security infrastructure, policies and procedures were prepared and reviewed by Wayne K. Wills, recently retired Special Agent in Charge of Homeland Security (ICE) in Hawaii. As a graduate of Kamehameha Schools, Wayne appreciates the importance of community and upholding a reputation on the islands. Wayne has provided invaluable advice and information regarding every aspect of security for AGH to ensure the safety of patients, employees and the public. Wayne will personally recruit AGH's Director of Security & Anti-Diversion to carry on the task of helping AGH to protect residents of Hawaii. In regards to agriculture, our team member, Dr. Chin Nyeon Lee, PhD and Professor of Agriculture with the University of Hawaii (UH) for over 20 years, has provided expertise to ensure that AGH is properly equipped with the necessary local agricultural knowledge to successfully cultivate MMJ in Hawaii. Working with our experienced MMJ cultivators from Canada and Colorado, Dr. Lee and AGH will design the optimal cultivation system to allow **AGH operations to be environmentally sustainable and preserve a healthy environment for present and future generations.** AGH aims to use the most efficient technologies and apply sustainable practices including the following: 1) Optimize energy and water consumption/recovery; 2) Minimize waste generation, including water effluent; 3) Utilize sustainably managed renewable energy sources, including solar and wind; 5) Recover value from by-products; and 6) Control and eliminate emissions including greenhouse gases. AGH plans to be completely energy



### **13) No history of having a business license revoked**

independent from fossil fuels within 10-15 years both economically and environmentally. **AGH understands the unique challenges of agriculture and manufacturing in Hawaii and is capable of operating in a lawful manner in compliance with applicable regulations.**

AGH wishes to highlight two support letters as evidence of AGH's commitment to the community and scientific research. Dr. Charles Joel Rosser, Program Director of the Clinical and the Translational Research Program at the UH Cancer Center, is supportive of AGH's research commitment and AGH's Medical Advisory Board (see **Appendix 13(c) – Letter of Support from UH Cancer Center**). This letter represents real medical research opportunities by local doctors and researchers within the State of Hawaii for symptom alleviation as well as the potential to discover new medicines from MMJ. AGH also received a letter of support from UH President emeritus Dr. M.R.C. Greenwood (see **Appendix 13(d) – Letter of Support from Dr. M.R.C. Greenwood**). Dr. Greenwood's support is especially humbling due to her exemplary reputation among the scientific community as a Member of Institute of Medicine in National Academy of Sciences, and a world-renowned expert in obesity and diabetes research. **Dr. Greenwood believes in AGH's ability to fulfill its goal to create a center of excellence in Hawaii for MMJ research.**

AGH relies on the stewardship of their especially competent, local, and life-long resident team members to inspire the company to exude the idea of "ohana" to patients, employees, and the island community. Our local team has provided countless hours of dedicated community service at all levels at the UH, children's programs, medical research and education.

**AGH will do everything in our power to build public confidence in this program. AGH will give back to the Hawaii community by donating 5% of profits to local charities and another 5% of profits to funding scientific and medical research on MMJ in Hawaii. There is only great benefit for Hawaii and no risk to the DOH, patients, or the public if AGH is awarded an MMJ license.**



### 13) No history of having a business license revoked

#### Appendix List

Title

Page

13(a) – No History of Having a Business License Revoked ..... 5

13(b) – AHG Organizational Chart ..... 6

13(c) – Letter of Support from UH Cancer Center ..... 9

13(d) – Letter of Support from Dr. M.R.C. Greenwood ..... 12



### 13) No history of having a business license revoked

#### Appendix 13(a) - No History of Having a Business License Revoked

Name	Title	History of Business License Revoked
Thomas J. Wong	Individual Applicant	None
James H.Q. Lee, Esq, MBA	Shareholder/Director/ Chief Compliance/General Counsel	None
Wayne K. Wills	Law Enforcement & Security Executive Consultant	None
Michael Lee	Head of Dispensing	None
Brian Ruden, Esq.	Head of Cultivating	None
Christopher Mayerson	Canadian MMJ Production Consultant	None
Dr. Chin Nyeon Lee	Executive Consultant on Agriculture	None
Dr. Kiva Ferraro	Director of Product Safety & Quality Control	None
Dr. Andrea Lau	Addiction Prevention & Patient Counselor	None
Tai Y. Cheng, Esq, MBA	MMJ Advisor/Director	None
William Cao, Esq, MBA	MMJ Advisor/Director	None
Dr. Gregg Kokame, MD	Medical Advisory Board Member/Director	None
Dr. Kenneth Sumida, MD	Medical Advisory Board Member/Director	None
Dr. Troy M. Tanji, MD	Medical Advisory Board Member/Director	None
Derick Y.H. Cheng	Pharmaceutical Consultant	None
Steven D. Wong	Architect Consultant	None



**13) No history of having a business license revoked**

**Appendix 13(b) – Statutory Declarations**



**13) No history of having a business license revoked**

**Appendix 13(c) – Letter of Support from Hawaii Cancer Center**

*[Faint, illegible text from a letter of support, likely from the Hawaii Cancer Center, covering the majority of the page.]*





UNIVERSITY OF HAWAII  
CANCER CENTER

**Clinical and Translational Research Program**

February 1, 2014

Medical Marijuana Registry Program  
State of Hawaii, Department of Health  
1250 Punchbowl St.  
Honolulu, Hawaii 96813

Attention: Dr. Virginia (Ginny) Pressler, M.D., Director

RE: Aloha Green Holdings Inc. Medical Marijuana Registry Program Application

To whom it may concern:

This letter is to support the medical marijuana license application for Aloha Green Holdings Inc. ("Aloha Green"). I am familiar with the Aloha Green team, which is comprised of well-respected local business leaders, medical doctors and lawyers. I have confidence in their ability to manage and operate two production centers for the cultivation and processing of medical marijuana and two medical marijuana dispensaries in the County of Honolulu.

Based on their impressive operational qualifications, experience and disciplined approach, I am supportive of Aloha Green's plans to operate a medical marijuana business. I believe that Aloha Green will work diligently to satisfy any patient and community concerns and abide by the safety and security regulations of the Department of Health and the respective Police and Fire Departments.

I am further inclined to promote Aloha Green based on their medical and agricultural research programs and their affiliation with the University of Hawaii/University of Hawaii Cancer Center in order to develop new agricultural techniques and medical treatments that stand to benefit the people of Hawaii. Further, Aloha Green's Hawaii focused philanthropic plans are to donate 5% of their net income to provide grant funding for marijuana medical and scientific research in Hawaii. Furthermore, an additional 5% will go to support local charities to benefit those in need in the local community.

I look forward to working with Aloha Green in order for them to meet the highest standards of patient safety, product safety and public safety.

With much aloha,

A handwritten signature in dark ink, appearing to be "Virginia Pressler".



UNIVERSITY OF HAWAII  
CANCER CENTER

## Clinical and Translational Research Program

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**13) No history of having a business license revoked**

**Appendix 13(d) – Letter of Support from Dr. M.R.C. Greenwood**

I, Dr. M.R.C. Greenwood, am a member of the  
Alloha Green community and have known  
[Name] for [Time Period]. [Name] is a  
[Description of [Name]'s Role/Position] and has  
been a valuable member of the community.  
[Name] has demonstrated a strong commitment  
to the community and its values, and has  
been an active participant in various community  
activities. I have no knowledge of any history  
of [Name] having a business license revoked.





UNIVERSITY  
of HAWAII  
SYSTEM

M.R.C. Greenwood, Ph.D.  
President Emerita

Jan 24, 2016

Medical Marijuana Registry Program  
State of Hawaii, Department of Health  
1250 Punchbowl St.  
Honolulu, Hawaii 96813  
Attn: Dr. Virginia Pressler, MD  
Director of the Department of Health

Re: Aloha Green Holdings Inc.  
Medical Marijuana Program Applicant

Dear Dr. Pressler,

I am the president emerita of the University of Hawaii and Chancellor, Emerita of UC Santa Cruz. I am also a health scientist with knowledge of the importance of this research.

This is a letter in support of the medical marijuana license application of Aloha Green Holdings Inc. The principals of Aloha Green Holdings Inc. are well-respected local business leaders, medical doctors and attorneys. I have confidence in their ability to manage and operate two production centers for the cultivation and processing of medical marijuana and two medical marijuana dispensaries in the City and County of Honolulu.

Based on their operational qualifications, experience and disciplined approach, I am supportive of Aloha Green Holdings Inc.'s plans to operate a medical marijuana business. I am confident that Aloha Green Holdings Inc. will work diligently to satisfy any patient and community concerns and abide by the safety and security regulations of the Department of Health.

I am further inclined to support Aloha Green Holdings Inc. based on its commitment to support medical research programs and philanthropic plans. Aloha Green Holdings Inc. has committed to donate 5% of its net income for grant funding for marijuana medical and scientific research and an additional 5% to local charities to benefit those in need in the local community.

I have confidence that if a license was granted to Aloha Green Holdings Inc, their operations will meet the highest standards of patient safety, product safety and public safety. Thank you for your consideration of this letter.

Aloha,  
*M.R.C. Greenwood*  
M.R.C Greenwood, Ph.D.  
President Emerita

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud.

2. The second part of the document outlines the specific procedures for recording transactions. It details the steps involved in the accounting cycle, from identifying the transaction to posting it to the appropriate ledger account.

3. The third part of the document discusses the importance of reconciling accounts. It explains how regular reconciliation helps to ensure that the records are accurate and that any discrepancies are identified and corrected promptly.

4. The fourth part of the document discusses the importance of maintaining proper documentation. It emphasizes that all transactions should be supported by valid evidence, such as invoices, receipts, and contracts, to ensure the reliability of the records.

5. The fifth part of the document discusses the importance of periodic reviews. It explains that regular reviews of the financial records are necessary to identify trends, assess performance, and make informed decisions about the future of the organization.

6. The sixth part of the document discusses the importance of maintaining confidentiality. It emphasizes that financial records often contain sensitive information, and it is crucial to implement appropriate security measures to protect this information from unauthorized access.

7. The seventh part of the document discusses the importance of staying up-to-date with changes in accounting standards and regulations. It explains that the accounting profession is constantly evolving, and it is essential to stay informed of the latest developments to ensure compliance.

8. The eighth part of the document discusses the importance of seeking professional advice. It explains that for complex transactions or situations, it may be necessary to consult with a qualified accountant or auditor to ensure that the records are prepared correctly.

9. The ninth part of the document discusses the importance of maintaining a clear and organized system. It emphasizes that a well-organized record-keeping system is essential for efficient operations and for the ability to locate information when needed.

10. The tenth part of the document discusses the importance of regular backups. It explains that regular backups of the financial records are necessary to protect against data loss in the event of a system failure or disaster.