

STATE OF HAWAII
DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESOURCE MANAGEMENT DIVISION
HONOLULU, HAWAII

January 25, 2022

Board of Agriculture
Honolulu, Hawaii

Subject: REQUEST FOR CONSENT TO ASSIGNMENT OF GENERAL LEASE NOS. S-9015 AND S-9020; AGRIGENETICS MOLOKAI LLC, LESSEE/ASSIGNOR, TO FRIENDLY ISLE GROWING SERVICES CORPORATION, ASSIGNEE; TMK: (2) 5-2-001:023 AND 028; MOLOKAI AGRICULTURAL PARK, LOTS 14 & 19, ISLAND OF MOLOKAI, MAUI COUNTY, HAWAII

Authority: Section 166-6, Hawaii Revised Statutes (HRS), and Sections 4-153-33(a)(6)(C), and 4-153-1 and 13, Hawaii Administrative Rules (HAR)

Lessee/Assignor: Agrigenetics Molokai LLC

Assignee: Friendly Isle Growing Services Corporation

Land Area: GLS-9015: 45.596 Acres
GLS-9020: 49.149 Acres

Tax Map Key: GLS-9015: (2) 5-2-001:023, Lot No. 14 (see Exhibit "A")
GLS-9020: (2) 5-2-001:028, Lot No. 19

Land Status: Encumbered by Governor's Executive Order No. 3696 to the Department of Agriculture for Agricultural Park purposes in 1996

Annual Base Rental: GLS-9015 – \$1,680.00 per year
GLS-9020 – \$3,160.00 per year

Lease Term: GLS-9015 – September 1, 1998 through August 31, 2033
GLS-9020 – November 1, 1998 through October 31, 2033

Character of Use: Diversified agriculture

Consideration: None

A1

BACKGROUND:

General Lease No. S-9020 dated October 26, 1998 was originally awarded to Novartis Corporation. By mesne assignment the lease was transferred to Agrigenetics Molokai LLC, a Hawaii limited liability company, in May 2001.

General Lease No. S-9015 dated August 7, 1998 was awarded to The Plumeria Patch, Ltd, a Hawaii corporation. In 2012, the lease was assigned to Agrigenetics Molokai, LLC, a Hawaii limited liability company.

In 2018, Agrigenetics closed down its seed production operation at the Molokai Agricultural Park and has been in the process of closing down company operations on the island. Consequently, Agrigenetics is requesting consent to transfer General Lease Nos. S-9015 and S-9020 to Friendly Isle Growing Services Corporation, owned and operated by Russell DeCoite, due to extreme economic hardship pursuant to Section 4-153-33(a)(6)(C), HAR. Russell DeCoite, who is a fourth-generation farmer on Molokai, plans to grow a variety of products on both parcels including but not limited to sweet potato, sunflower, sorghum, corn, peppers, taro, etc. He intends to expand his family's farming operations to meet the market demand for these products. The DeCoite family currently holds title to three existing leases at the Molokai Agricultural Park on which they produce sweet potato as their primary crop.

Friendly Isle Growing Services Corporation qualifies as an agricultural company with more than 75 percent of its officers qualifying as a Bona fide farmer. Russell DeCoite, the sole corporate officer, qualifies as a Bona fide farmer with more than two years of fulltime farming experience and meets eligibility and residency requirements in accordance with Sections 4-153-1 and 13, HAR.

There is no consideration for the assignment of these leases.

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RECOMMENDATION:

That the Board of Agriculture consent to the assignment of General Lease Nos. S-9015 and S-9020 from Agrigenetics Molokai LLC, Lessee/Assignor, to Friendly Isle Growing Services Corporation, Assignee. All documents shall be subject to review and approval as to form by the Department of the Attorney General, and such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.


Respectfully Submitted,



BRIAN KAU, P.E.
Administrator and Chief Engineer
Agricultural Resource Management Division

Attachments – Exhibit “A”

APPROVED FOR SUBMISSION:



PHYLLIS SHIMABUKURO-GEISER
Chairperson, Board of Agriculture

STATE OF HAWAII
DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESOURCE MANAGEMENT DIVISION
HONOLULU, HAWAII

January 25, 2022

Board of Agriculture
Honolulu, Hawaii

Subject: REQUEST FOR: 1) CONSENT TO ASSIGNMENT OF GENERAL LEASE NO. S-4927; VANXAY BOUNLANGSY, LESSEE/ASSIGNOR, TO SUMITRA VIYANAN BARTON, ASSIGNEE; AND 2) APPROVAL OF EXTENSION OF LEASE; TMK: (1) 4-1-035:006, WAIMANALO AGRICULTURAL PARK LOT 6, KOOLAUPOKO, WAIMANALO, ISLAND OF OAHU, HAWAII

Authority: Sections 166-6, 166-7 and 166-9, Hawaii Revised Statutes (HRS), and Sections 4-153-33(a)(2) and (b), and 4-153-33-(a)(6)(C), Hawaii Administrative Rules (HAR)

Lessee/Assignor: Vanxay Boulangsy

Assignee: Sumitra Viyanan Barton

Land Area: 10.209 gross acres

Tax Map Key: (1) 4-1-035:006 (see Exhibit "A")

Land Status: Encumbered by Governor's Executive Order No. 3464 to the Department of Agriculture for agricultural park purposes in 1990

Annual Rental: \$7,000.00 per year

Character of Use: Diversified Agriculture

Lease Term: 35 years, August 1, 1986 through July 31, 2021

Consideration: None

REMARKS:

General Lease No. S-4927 was awarded to Vanxay Boulangsy in 1986 by the Board of Land and Natural Resources. In 1990 Governor’s Executive Order No. 3464 transferred the Waimanalo Agricultural Park lands to the Department of Agriculture for management purposes. Mr. Boulangsy and his wife, Erlinda Boulangsy, developed the premises producing bitter melon, peppers, eggplants, ti leaf and various flowers for lei. In 2018 Mr. Boulangsy passed away. Ms. Boulangsy’s declining health has made her unable to farm, and she began experiencing extreme economic hardship. Ms. Boulangsy, who is the Personal Representative of the Estate of Vanxay Boulangsy, requests that the lease be assigned to their family friend Sumitra Viyanan Barton pursuant to Section 4-153-33(a)(6)(C), HAR.

Sumitra Viyanan Barton cultivates mushrooms which she sells at markets and to various local Thai restaurants. In addition to the existing crops on the premises, Ms. Barton would like to expand her operations to include mushrooms, mango, avocado, lychee and vegetables. Ms. Barton qualifies as a bona fide farmer with more than two years of fulltime farming experience and meets the eligibility requirements for agricultural parks pursuant to Sections 4-153-1 and 13, HAR.

Subject to the approval of the assignment of lease, Ms. Sumitra requests a 20-year extension of the lease term from August 1, 2021 through July 31, 2041 for a cumulative total of not more than fifty-five years pursuant to Section 4-153-33(a)(2), HAR. The Board of Agriculture (Board) may extend the term of the lease to qualify the lease for mortgage lending purposes, pursuant to Section 4-153-33(b), HAR. Consequently, Ms. Barton has been preapproved for a \$30,000 loan, subject to Board approval of extension of the lease term. The loan proceeds will be used solely for farming operations and improvements on the demised premises. At its October 26, 2021 meeting, the Board approved the annual base rent of \$13,350.00 per year for the extension period, as determined by an independent appraiser.

There is no consideration for the assignment of lease.

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RECOMMENDATION:

That the Board of Agriculture: 1) consent to the assignment of General Lease No. S-4927 from Vanxay Boulangsy, Lessee/Assignor, to SumitraViyanan Barton, Assignee; and 2) approve the extension of General Lease No. S-4927 to expire on July 31, 2041. All documents shall be subject to review and approval as to form by the Department of the Attorney General, and such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.

Respectfully Submitted,



BRIAN KAU, P.E.
Administrator and Chief Engineer
Agricultural Resource Management Division

Attachments – Exhibit “A”

APPROVED FOR SUBMISSION:



PHYLLIS SHIMABUKURO-GEISER
Chairperson, Board of Agriculture



STATE OF HAWAII
DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESOURCE MANAGEMENT DIVISION
HONOLULU, HAWAII

January 25, 2022

Board of Agriculture
Honolulu, Hawaii

Subject: REQUEST FOR CONSENT TO ASSIGNMENT OF GENERAL LEASE NO. S-4428; BRIAN CONNERS BUSHE AND JENNIFER TAMASHIRO-BUSHE, LESSEE/ASSIGNOR, TO SHANE CASTILLO JR., ASSIGNEE; TMK: 3rd DIV/1-5-116:014, LOT 14, PAHOA AGRICULTURAL PARK, ISLAND OF HAWAII, HAWAII

Authority: Section 166-7 and 166-9, Hawaii Revised Statutes, (HRS), and Section 4-153-33(a)(6)(B), Hawaii Administrative Rules (HAR)

Lessee/Assignor: Brian Connors Bushe and Jennifer Tamashiro-Bushe

Assignee: Shane Castillo Jr.

Land Area: Approximately 20.000 acres

Tax Map Key: 3rdDiv/1-5-116:014 (Exhibit "A")

Lease Term: S-4428 – 55-years, February 1, 1975 through January 31, 2030

Land Status: Encumbered by Governor's Executive Order No. 3380, February 26, 1988, to the Department of Agriculture for agricultural park land purposes.

Annual Base Rent: \$3,500.00 (until 2/1/2030 re-opening)

Character of Use: Diversified Agriculture

Consideration: \$125,000.00

BACKGROUND:

General Lease S-4428 was awarded to Oren J. Tsunozumi, by the Board of Land and Natural Resources effective February 1, 1975. The subject lease was assigned from Oren Tsunozumi to Kerry David Blair and Melinda Tan Blair with the approval of the Board of Land and Natural Resources at its meeting on February 26, 1988. This lease was transferred to the Department of Agriculture by Governor's Executive Order No. 3380, dated February 26, 1988. On August 23, 2001 the Board of Agriculture consented to the Assignment of the subject lease from Kerry and Melinda Blair to Brian Connors Bushe and Jennifer Tamashiro-Bushe.

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Due to physical disability, Brian Connors Bushe and Jennifer Tamashiro-Bushe are requesting the assignment of General Lease S-4428 to Shane Castillo Jr. Pursuant to the terms of General Lease S-4428 and Section 4-153-33(a)(6)(B), HAR, an assignment of lease is permitted due to physical disability.

Shane Castillo Jr. has owned and operated C & C Tropicals since its inception in 2019, growing and selling a wide variety of flowers and foliage. His main crops are heliconia, ginger and ti leaves. He was also raised on a taro farm located on the island of Kauai.

Mr. Castillo's intent is to expand the current anthurium operation and cultivate a variety of flower foliage such as Calathea, Palms, Cordyline and Monstera. Additionally, Mr. Castillo plans to continue the cultivation of fruit trees, such as, lychee, macadamia nuts, durian, citrus and star apple.

Shane Castillo qualifies as a bona fide farmer, with more than two years of full-time farming experience, and satisfies the eligibility requirements pursuant to Sections 4-153-1 and 13, HAR.

There is a consideration of \$125,000.00 for the assignment of lease. Staff does not recommend an adjustment of the annual rental rate as the consideration amount appears to be consistent with fair market values. The amount due to the Lessor is \$0.00.

RECOMMENDATION:

That the Board of Agriculture approve the assignment of lease from Brian Connors Bushe and Jennifer Tamashiro-Bushe, Lessee/Assignor, to Shane Castillo Jr., Assignee, under General Lease S-4428 and the consideration of \$125,000.00. All related documents are subject to the review and approval as to form by the Department of the Attorney General, and such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.

Respectfully submitted,



BRIAN KAU, P.E.
Administrator and Chief Engineer,
Agricultural Resource Management Division

Attachments - Exhibit "A"

APPROVED FOR SUBMISSION:



PHYLLIS SHIMABUKURO-GEISER
Chairperson, Board of Agriculture

STATE OF HAWAII
DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESOURCE MANAGEMENT DIVISION
HONOLULU, HAWAII

January 25, 2022

Board of Agriculture
Honolulu, Hawaii

Subject: REQUEST FOR APPROVAL TO SUBLEASE BETWEEN THE
HAMAKUA AGRICULTURAL COOPERATIVE,
LESSEE/SUBLESSOR, AND WILLIAM BEACH, SUBLESSEE;
GENERAL LEASE NO. S-5551, TMK: 3rd DIV/ 4-6-003:001, 002,
AND 020 (por), LOT NO.S. 01 AND 2A, HONOKAIA MAKAI
TRACT, HAMAKUA, ISLAND OF HAWAII

Authority: Section 166E-6, Hawaii Revised Statutes, (HRS), and Section 4-
158-19(a)(6), Hawaii Administrative Rules (HAR)

Lessee/Sublessor: Hamakua Agricultural Cooperative

Sublessee: William Beach

Land Area: Lot No. 01, 14.239 acres
Lot No. 2A, 10.968 acres

Tax Map Key: 3rd Div/ 4-6-003:001, 002, and 020 (por) (Exhibit "A")

Land Status: The Hamakua lands were transferred to the Department of
Agriculture by Governor's Executive Order No. 4250, dated
October 22, 2008, pursuant to Act 90, SLH 2003

Lease Term: June 30, 1998, through June 29, 2033

Sublease Term: January 1, 2022, through June 29, 2033

Base Rental: \$1,564.00/year – Lot No. 01, until June 29, 2029 (Reopening Date)
\$1,204.73/year – Lot No. 2A, until June 29, 2029 (Reopening Date)

Character of Use: General Agriculture and pasture purposes in accordance with a
Plan of Utilization and Development approved by the Department.

REMARKS:

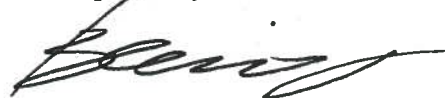
William Beach is a member of the Hamakua Agricultural Cooperative and currently holds a sublease with the Hamakua Agricultural Cooperative: General Lease S-5551, Lot No. 2C, consisting of 15.400 acres where 3 acres are planted in orchard consisting of mango, banana, lychee, and avocado. The remainder of the property is used for cattle pasture. He is requesting approval to sublease Lot(s) 01, consisting of 14.239 acres, and 2A, consisting of 10.968 acres, located in Honokaia to increase the size of his cattle operation.

William Beach qualifies as a bona fide farmer with more than two years of full-time farming experience and meets application and eligibility requirements in accordance with sections 4-158-1 and 27, HAR.

RECOMMENDATION:

That the Board of Agriculture approve the Sublease between the Hamakua Agricultural Cooperative, Lessee/Sublessor, and William Beach, Sublessee, for Lot Nos. 01 and 2A in Honokaia, under General Lease No. S-5551, through the expiration date of June 29, 2033, and further subject to the approval as to form of the consent document by the Department of the Attorney General, and such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.

Respectfully submitted,



BRIAN KAU, P.E.
Administrator, Agricultural
Resource Management Division

Attachment – Exhibit “A”

APPROVED FOR SUBMISSION:



PHYLLIS SHIMABUKURO-GEISER
Chairperson, Board of Agriculture

PONOKAIA

EXHIBIT "A"



STATE OF HAWAII
DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESOURCE MANAGEMENT DIVISION
HONOLULU, HAWAII

January 25, 2022

Board of Agriculture
Honolulu, Hawaii

Subject: REQUEST FOR CONSENT TO ASSIGNMENT OF GENERAL LEASE NO. S-4859; HENRY CHO, SR. (DECEASED), LESSEE/ASSIGNOR; DEAN MARUYAMA, ASSIGNEE; TMK:3RDDIV/7-3-049:004, LOT NO. 04, KEAHOLE AGRICULTURAL PARK, PHASE I, NORTH KONA DISTRICT, ISLAND OF HAWAII, STATE OF HAWAII

Authority: Sections 166-7 and 166-9, Hawaii Revised Statutes ("HRS"), and Section 4-153-33(a)(6)(B), Hawaii Administrative Rules ("HAR")

Lessee/Assignor: Henry Cho, Sr. (deceased)

Assignee: Dean Maruyama

Land Area: 5.005 acres

Tax Map Key: 3rd Div/7-3-049:004 (see Exhibit "A")

Land Status: Encumbered by Governor's Executive Order No. 3379 to the Department of Agriculture for agricultural parkland purposes.

Lease Term: March 1, 2001, through February 28, 2046 (45 years)

Annual Base Rent: \$2,000.00/year until 03/01/2026 (rent reopening)

Character of Use: Diversified Agriculture or Aquaculture

Consideration: \$125,000.00

BACKGROUND:

At its meeting held on August 1, 2000, the Board of Agriculture awarded Henry Cho, Sr. General Lease No. S-4859, Lot 4, located in the Keahole Agricultural Park.

Mr. Henry Cho, Sr. passed away on November 28, 2013. Donovan Cho, son of Henry, was named Personal Representative to his father's estate and is requesting that General Lease No. 4859 be assigned to Mr. Dean Maruyama. Pursuant to terms of General Lease S-4859 and Section 4-153-33(a)(6)(B), HAR, an assignment of lease is permitted due to extreme economic hardship, as business operations closed upon Mr. Cho's passing.

Mr. Maruyama currently holds General Lease No. S-4857 Lot No. 6, located in the Keahole Agricultural Park. Dean owns and manages a sod farming operation that has been in the trade of producing various turfgrass products and services on the Big Island of Hawaii since 2005. Due to the growth of the business, he is hoping to obtain the additional 5.005 acres to expand his sod farming operation.

There is a consideration of \$125,000.00 for the assignment of lease. Staff does not recommend an adjustment of the annual rental rate as the consideration amount appears to be consistent with fair market values. The amount of lease premium due to the Lessor is \$0.00.

RECOMMENDATION:

That the Board of Agriculture consent to the assignment of General Lease No. S-4859 from Henry Cho, Sr. (deceased), Lessee/Assignor, to Dean Maruyama, Assignee, subject to the approval as to form of the assignment and consent documents by the Department of the Attorney General, and such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.

Respectfully submitted,



BRIAN KAU, P.E.
Administrator and Chief Engineer
Agricultural Resource Management Division

Attachment – Exhibit “A”

APPROVED FOR SUBMISSION:



PHYLLIS SHIMABUKURO-GEISER
Chairperson, Board of Agriculture

1/1/80
 1/1/81
 1/1/82
 1/1/83
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 1/1/88
 1/1/89
 1/1/90

DWG NO 4555 REVISED AUG 18, 1988 DATE DEC 15, 1980 BY H.A.R.M.S. SOURCE P.M. 1784 P.M. 1787

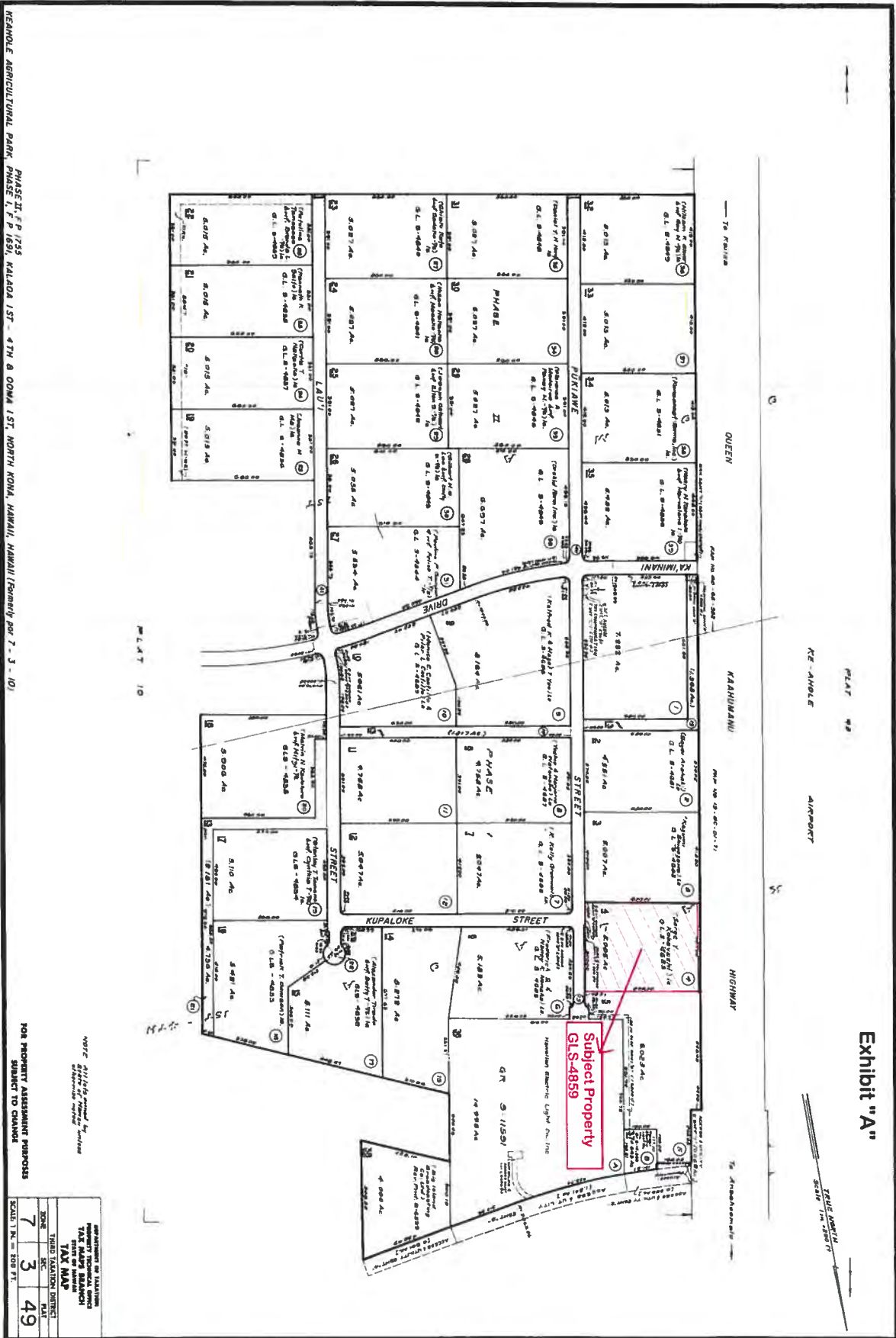


Exhibit "A"

7 - 3 - 49 3 RD. DIST.

PHASE II, P 1785
 KEANOLE AGRICULTURAL PARK PHASE I, P 1691, KALAOA 1ST - 4TH & OOWA 1ST, NORTH KOHA, HAWAII, HAWAII TERRITORY, PAR. 7 - 3 - 101

FOR PROPERTY ASSESSMENT PURPOSES
 SUBJECT TO CHANGE

NOTICE: ALL LOTS OWNED BY
 THE STATE OF HAWAII
 ARE SUBJECT TO THE
 TAX MAP

ZONE	SEC	BLK	PLAT
7	3	3	49

DEPARTMENT OF LAND AND NATURAL RESOURCES
 TERRITORY ENGINEERING DIVISION
 HONOLULU, HAWAII

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STATE OF HAWAII
DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESOURCE MANAGEMENT DIVISION
HONOLULU, HAWAII

January 25, 2022

Board of Agriculture
Honolulu, Hawaii

Subject: REQUEST APPROVAL TO TERMINATE GENERAL LEASE NO.(S) S-4366;
PAUL H. MAYEDA, LESSEE; TMK: 3rd DIV/2-4-049:006, LOT NO. 22, AND S-
4637; PANAEWA TROPICALS, INC., LESSEE; TMK: 3rd DIV/2-4-049:004, LOT
NO. 20, PANAEWA FARM LOTS SUBDIVISION, WALAKEA, SOUTH HILO,
ISLAND OF HAWAII, HAWAII.

Authority: Section 166-E-8(c), Hawaii Revised Statutes (HRS), and Sections 4-
158-2(a)(8) and 33, Hawaii Administrative Rules (HAR)

Lessee: General Lease No. S-4366 Paul H. Mayeda
General Lease No. S-4637 Panaewa Tropicals, Inc.

Land Area: General Lease No. S-4366 – 10.008 acres
General Lease No. S-4637 – 10.021 acres

Tax Map Key: 3rd DIV/2-4-049:006 and 3rd DIV/2-4-049:004 (Exhibit "A")

Land Status: Encumbered by Governor's Executive Order No. 4300 to the
Department of Agriculture for agricultural parkland purposes in
2009

Lease Term: GLS-4366, 55 years, August 17, 1972 to August 16, 2027
GLS-4637, 65 years, May 1, 1980 to April 30, 2045

Current Rent: GLS-4366 - \$4,140.00 per year
GLS-4637 - \$4,380.00 per year

Character of Use: Diversified Agriculture

BACKGROUND:

General Lease No. S-4366 was awarded to Tommy M. Matsumoto, husband of Jean Matsumoto, by way of public auction on August 17, 1972. Mr. Matsumoto assigned his leasehold interest to a successor corporation, Matsumoto Nursery, Inc, on September 20, 1977. In 1986, Mr. Matsumoto requested that the lease be assigned to Mr. & Mrs. Paul H. Mayeda. At its meeting held on August 22, 1986, the Board of Land and Natural Resources (BLNR) approved the assignment from Mr. Matsumoto to Mr. and Mrs. Mayeda.

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At its meeting held on April 24, 2012, the Board of Agriculture (BOA) approved the assignment of General Lease No. S-4366 from Paul and Maxine Mayeda to Paul H. Mayeda as an individual and sole stockholder of all business entities operating on the various leased parcels. Mr. Mayeda continued to operate a tropical plant nursery in conjunction with General Lease No S-4637, held by Panaewa Tropicals, Inc., an entity owned solely by Mr. Mayeda and which is located two parcels away from the area encumbered by the subject lease.

General Lease No. S-4637 was originally awarded to Roy S. Shigenaga and H. Eunice Shigenaga, husband, and wife, by way of public auction by the Board of Land and Natural Resources (BLNR) on September 23, 1985. At its meeting held on August 23, 1985, the BLNR approved the assignment of General Lease No. S-4637 to Panaewa Tropicals, Inc. At its meeting held on April 28, 2015, the Board of Agriculture (BOA) approved the extension of General Lease No. S-4637 for a period of thirty (30) years commencing May 1, 2015, to and including April 30, 2045. The subject lease was transferred to the Department of Agriculture (DOA) by Governor’s Executive Order No. 4300 as of October 14, 2009.

Mr. Paul H. Mayeda died on July 5, 2017; his estate is being managed by Char Sakamoto Ishii Lum & Ching, a Law Corporation, specifically by Attorney Sean I. Chu. Since Mr. Mayeda’s passing, certified default letters dated, 6/7/2018, 11/8/2018, 2/7/2020, and 11/19/2020 have been sent to the law firm requesting payment of outstanding lease rents. The last inspection of both properties was conducted on April 8, 2021, whereby, a final certified default notice along with pictures of Lot(s) 22 and 20 were submitted to Mr. Chu for his review. On May 12, 2021, the DOA received a certified letter in response to its letter dated April 8, 2021, from Mr. Chu informing the department that “the “Estate” and Panaewa Tropicals, Inc. (“Panaewa Tropicals”) do not have sufficient assets and are requesting the termination or cancellation of the subject Leases”.

General Lease No. S-4366, Paul H. Mayeda, Lot No. 22, has an outstanding balance in the amount of \$12,560.32, including delinquent interest, for the period: 8/17/2017 to 02/16/2022. General Lease No. S-4637 Panaewa Tropicals, Inc., Lot No. 20, has an outstanding balance owing in the amount of \$18,588.17 including delinquent interest, for the period: 11/1/2017 to 04/30/2022. Total outstanding lease rents including delinquent interest: \$31,148.49. The Estate of Paul H. Mayeda is requesting the termination of both leases, including waiver or forgiveness of outstanding rents and delinquent interest totaling \$31,148.49, more or less, as of October 26, 2021, for leases S-4366 and S-4637 located in the Panaewa Farm Lots Subdivision. The Board has the authority to waive rental payments commensurate with section 4-158-2(a)(8).

Section 40-82, Hawaii Revised Statutes, provides that the Board may submit an account to the Department of the Attorney General (“AG”) for write-off provided that the account has uneconomical or impractical to collect by the AG.

The Agricultural Resource Management Division deems this account uneconomical and impractical to collect and recommends referral of the account to the AG to expedite the resolution of the outstanding balance due.

RECOMMENDATION:

That the Board of Agriculture:

1. Approve the cancellation of General Lease S-4366 and General Lease No. S-4637, pursuant to Sections 4-158-2(a)(8) and 33, HAR, and terminate all right, title, and interest granted to the Lessee therein effective as of the date of approval of this submittal. To include a waiver or forgiveness of outstanding rents and delinquent interest totaling \$31,148.49, more or less, as of October 26, 2021, for leases S-4366 and S-4637 located in the Panaewa Farm Lots Subdivision.
2. Authorize issuance of a lease cancellation document to be executed by the chairperson on behalf of the Board of Agriculture, and recorded at the Bureau of Conveyances; and
3. Authorize staff to prepare TMK: 3rd DIV/2-4-049;006 and TMK: 3rd DIV/2-4-049:004 for disposition to the public, pursuant to Sections 4-158-24 and 29, HAR
4. Approve the request to refer General Lease No, S-4366 Paul H. Mayeda, Lessee, and General Lease No. S-4637 Panaewa Tropicals, Inc., Lessee, as a DELINQUENT ACCOUNT(S) WRITE-OFF to the Department of the Attorney General for review and disposition in accordance with Section 40-82, Hawaii Revised Statutes.

All documents are subject to the approval as to form by the Department of the Attorney General, and such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.

Respectfully submitted,



BRIAN KAU, P.E.
Administrator and Chief Engineer,
Agricultural Resource Management Division

Attachments - Exhibit "A"

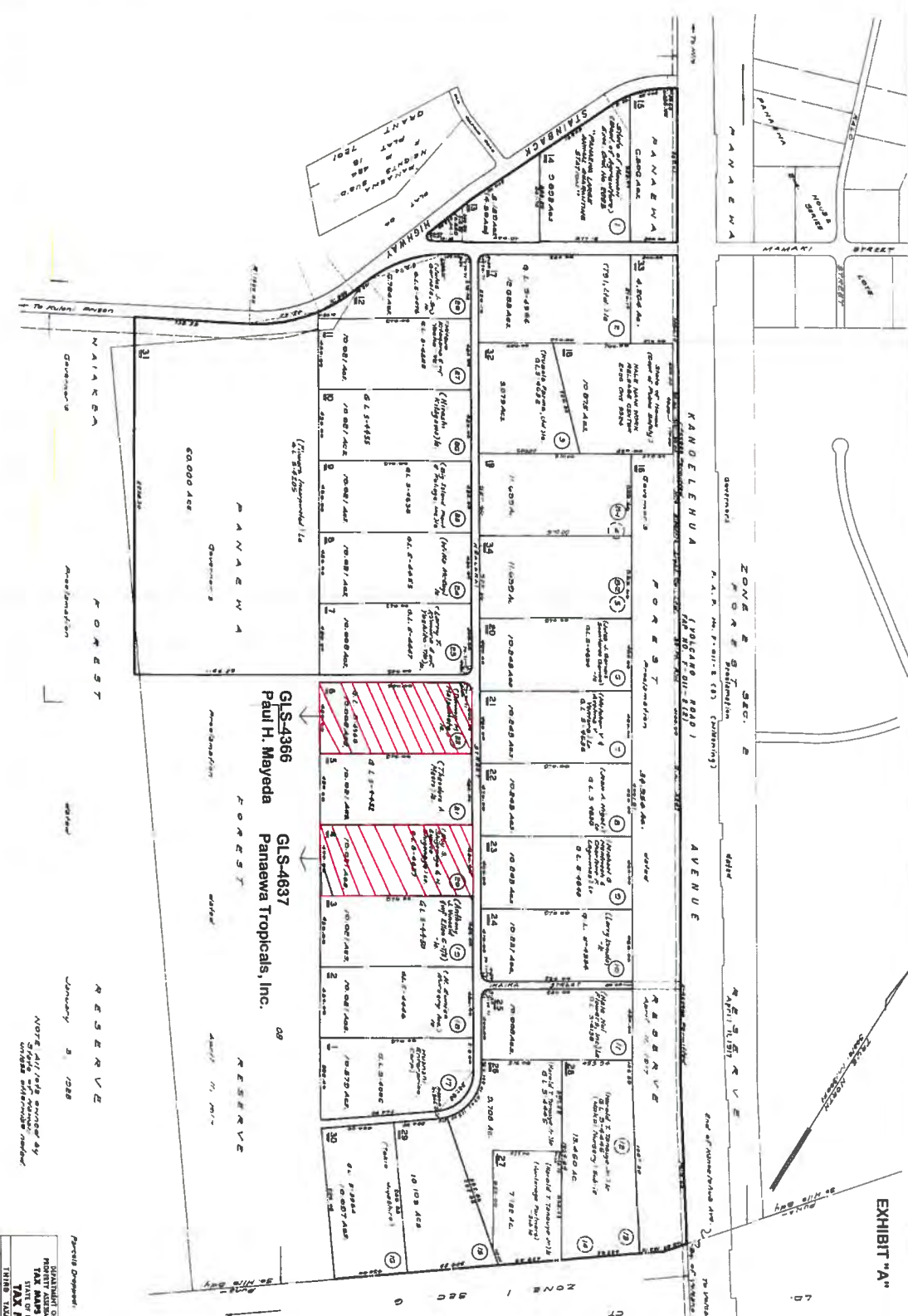
APPROVED FOR SUBMISSION:



PHYLLIS SHIMABUKURO-GEISER
Chairperson, Board of Agriculture

DWG NO. 5972
 SOURCE: Survey Division - 1933 PLAT 287-A
 BY: K.H.R.V. DATE: April 12, 1968

PANAEWA FARM LOTS, 2ND SERIES, FOR WAIAKEA, 5 HILO, HAWAII (Formerly par 2-4-08)



GLS-4366
 Paul H. Meyeda
 GLS-4637
 Panaewa Tropicals, Inc.

FOR REAL PROPERTY TAXATION PURPOSES
 SUBJECT TO CHANGE

STATEMENT OF TAXATION
 PROPERTY ASSESSMENT DIVISION
 STATE OF HAWAII
 TAX MAP

SCALE: 1" = 300 FT.	2	4	49
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STATE OF HAWAII
DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESOURCE MANAGEMENT DIVISION
HONOLULU, HAWAII

January 25, 2022

Board of Agriculture
Honolulu, Hawaii

Subject: REQUEST FOR CONSENT TO ASSIGNMENT OF GENERAL LEASE NO. S-4205 FLOWERS, INCORPORATED, LESSEE/ASSIGNOR, TO KOHALA PLANTS, INC., ASSIGNEE, TMK: 3rd DIV/2-4-049:031, LOT 31, PANAEWA FARM LOTS SUBDIVISION, WAIAKEA, SOUTH HILO, HAWAII.

Authority:	Section 166-E-3, Hawaii Revised Statutes (HRS), and Section 4-158-19(a)(4)(B), Hawaii Administrative Rules (HAR)
Lessee/Assignor:	Flowers, Incorporated
Assignee	Kohala Plants, Inc.
Land Area:	60.000 acres

Tax Map Key:	3 rd DIV2-4-049:031 (Exhibit "A")
Land Status:	Encumbered by Governor's Executive Order No. 4300 to the Department of Agriculture for agricultural parkland purposes in 2009
Lease Term:	55 years, September 26, 1968, through September 25, 2023
Annual Base Rent:	\$14,700/year until rental reopening
Character of Use:	Solely for cultivating, wholesaling, retailing, and packing nursery products
Consideration:	None

BACKGROUND

On September 26, 1968, a public auction was held at the State Building in Hilo, Hawaii. General Lease S-4205, a 55-year lease was awarded to Shinobu Oshima as the successful bidder. At its meeting held on October 26, 1979, the Board of Land and Natural Resources (BLNR), approved the Assignment of General Lease No. S-4205, from Shinobu Oshima, Assignor, to Flowers Incorporated, as Assignee.

The business has suffered economic hardship due to Hurricane Iselle, and most recently, the COVID-19 pandemic. Mr. Oshima was forced to release his employees due to the business being unable

A22

A 23

to generate and maintain revenues needed to endure the operating of Flowers, Incorporated. Mr. Oshima is experiencing extreme economic hardship requesting approval to assign General Lease No. S-4205 to Kohala Plants, Inc. pursuant to Section 4-158-19(a)(4)(B), HAR, to Kohala Plants, Inc.

Kohala Plants, Inc. is owned and operated by Thomas Y. Kadota, Jr., Kohala Plants, Inc. was established in 1982, providing landscaping for hotels on the West-side of the Big Island for 40+ years. Mr. Kadota currently holds two additional leases with the Department of Agriculture, also located in the Panaewa Farm Lots Subdivision. General Lease No. S-4455 Palms, Inc., Lot No. 26, consisting of 10.021 acres and General Lease No. S-4638 Big Island Plant & Foliage, Inc., Lot No. 25, consisting of 10.021 acres. With the additional 60 acres, the plan is to broaden their orchard crops to include papaya, citrus, fruits, edible herbs, spices, and cocoa.

Pursuant to terms of General Lease No. S-4205 and Section 4-158-19(a)(4)(B), HAR, an assignment of lease is permitted due to extreme economic hardship.

Kohala Plants, Inc, owned and operated by Mr. Thomas Y. Kadota, Jr., qualifies as a bona fide farmer with more than two years of full-time farming experience and meets the eligibility residency requirements of three years, commensurate with Sections 4-158-1 and 27.

There is no consideration for the assignment of lease.

RECOMMENDATION:

That the Board of Agriculture approve the assignment of General Lease No. S-4205 from Flowers, Incorporated, Lessee/Assignor to Kohala Plants, Inc. Assignee, subject to the approval as to form of the assignment and consent documents by the Department of the Attorney General, and such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.

Respectfully submitted,



BRIAN KAU, P.E.
Administrator and Chief Engineer,
Agricultural Resource Management Division

Attachments - Exhibit "A"

APPROVED FOR SUBMISSION:


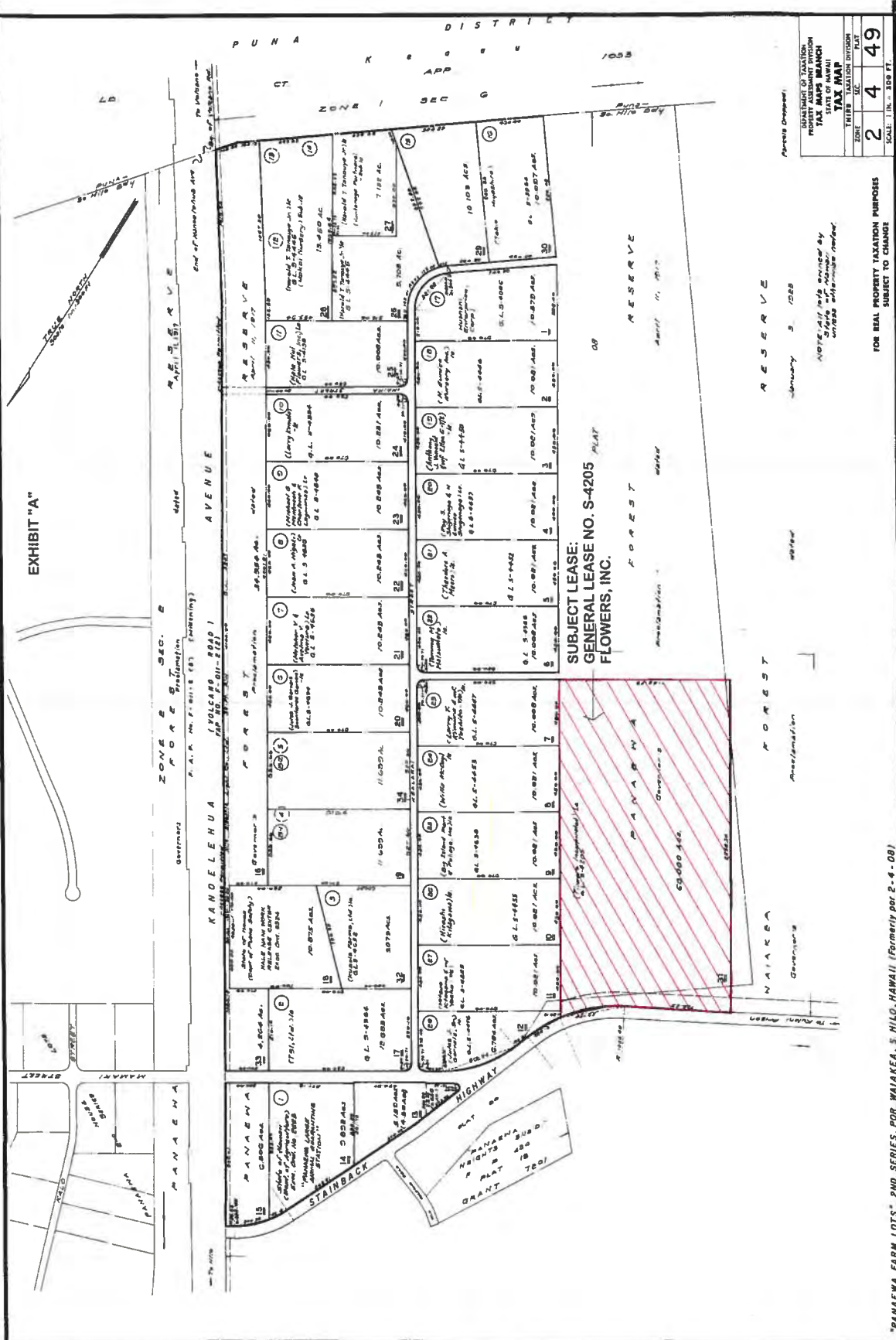

PHYLLIS SHIMABUKURO-GEISER
Chairperson, Board of Agriculture

EXHIBIT "A"



SUBJECT LEASE:
GENERAL LEASE NO. S-4205
PLAT
FLOWERS, INC.

PLAT	2
SECTION	4
TOWNSHIP	49

FOR REAL PROPERTY TAXATION PURPOSES
 SUBJECT TO CHANGE

"PANAENA FARM LOTS", 2ND SERIES, FOR WAIKAEA, S. HILLO, HAWAII (Formerly per 2-4-08)

A24.

State of Hawaii
Department of Agriculture
Plant Industry Division
Plant Quarantine Branch
Honolulu, Hawaii

January 25, 2022

Board of Agriculture
Honolulu, Hawaii

SUBJECT: Request to: (1) Allow the Importation of Avocado Root Rot, *Phytophthora cinnamomi*, a Fungus on the List of Restricted Microorganisms (Part A), for Laboratory Research Including Plant Inoculation, by the University of Hawaii, by Permit; and (2) Establish Permit Conditions for the Importation of Avocado Root Rot, *Phytophthora cinnamomi*, a Fungus on the List of Restricted Microorganisms (Part A), for Laboratory Research Including Plant Inoculation, by the University of Hawaii, by Permit.

I. Summary Description of the Request

PQB NOTES: *The Plant Quarantine Branch (PQB) submittal for requests for import or possession permits, as revised, distinguishes information provided by the applicant from procedural information and advisory comment and evaluation presented by PQB. With the exception of PQB notes, hereafter "PQB NOTES," the text shown below in Section II from page 2 through page 5 of the submittal was taken directly from Dr. Tian's application and subsequent written communications provided by the applicant, Dr. Tian. For instance, the statements on page 5 regarding effects on the environment are the applicant's statements in response to standard PQB questions and are not PQB's statements. This approach for PQB submittals aims for greater applicant participation in presenting import requests in order to move these requests to the Board of Agriculture (Board) more quickly, while distinguishing applicant provided information from PQB information. The portion of the submittal prepared by PQB, including Environmental Assessment, Advisory Subcommittee Review, Advisory Committee Review and Proposed Permit Conditions are identified as Sections III, IV, V, and VI of the submittal, which starts at pages 6, 7, 11, and 12 respectively.*

We have a request to review the following:

COMMODITY: A single shipment of up to three pure cultures of *Phytophthora cinnamomi*.

SHIPPER: Patricia Manosalva, University of California-Riverside,
3401 Watkins Drive, Boyce Hall 3485, Riverside, CA 92521

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Phytophthora cinnamomi
Miaoying Tian - UHM
January 25, 2022

Board

IMPORTER: Miaoying Tian, Ph.D., Department of Plant and Environmental Protection Sciences, University of Hawaii at Manoa, 3190 Maile Way, St. John 317, Honolulu, HI 96822 (See Appendix A).

CATEGORY: All species in the genus *Phytophthora*, are on the List of Restricted Microorganisms (Part A). This includes Avocado Root Rot, *Phytophthora cinnamomi*. Pursuant to Chapter 4-71A, Hawaii Administrative Rules (HAR), microorganism species on the List of Restricted Microorganisms (Part A) are categorized as high-risk microorganisms, which may be allowed import into the State under a permit approved by the Board.

PQB NOTES: *Phytophthora* species are plant pathogens, of which are potentially destructive, and can cause economic loss on crops worldwide. The name *Phytophthora* originates from Greek meaning "the plant destroyer". Many species of *Phytophthora* are host-specific and are difficult to control chemically which is why resistant varieties of crops are selected to produce. *Phytophthora cinnamomi* has a wide range of plant hosts. There are thousands of plant species that *Phytophthora cinnamomi* can infect.

II. Information Provided by the Applicant in Support of the Application

PROJECT: This is a part of a project titled "Reducing Avocado Losses To Major Challenges By Improving Resistance Selection And Disease Management Using Next Generation Technologies" sponsored by U.S. Department of Agriculture (USDA) [and] National Institute of Food and Agriculture (NIFA) Specialty Crops Research Initiative (SCRI) grant program, led by University of California Riverside with University of Hawaii at Manoa (UHM) as one of the sub-awardees.

PURPOSE: We will use the well-characterized *Phytophthora cinnamomi* cultures from California as a control to study the diversity of *P. cinnamomi* isolated from avocado plants in Hawaii.

OBJECTIVE: The objectives are to determine the diversity of the avocado *P. cinnamomi* isolates from Hawaii and whether there is [any] difference between the Hawaii isolates and California isolates. Tremendous efforts have been and are currently being made to develop novel fungicides, disease resistance rootstocks and other novel control measures in California. To be able to determine whether these control measures/resources are applicable in Hawaii, a comparison between the isolates is essential. The results will provide valuable knowledge to guide the avocado root disease control in Hawaii and therefore benefit the state. The import of the microorganisms is also essential for

Miaoying Tian and her collaborators at University of Hawaii (UH) to be able to complete the federally funded project. Without it, continued funding through University of California Riverside may be subject[] to termination. This funding has created job opportunities for a technician, an undergraduate student, and graduate student at UH.

PROCEDURE: We will use the imported isolates as the controls to perform *In vitro* fungicide sensitivity assay of the Hawaii isolates. This assay will be performed in petri dish[es] in the lab. The mycelia will be inoculated on the 10% V8 agar containing fungicides and the daily growth rate will be measured. We will also perform virulence variability assays. For this, we will first inoculate the detached avocado leaves placed in a plastic tray covered with a plastic dome, which will be performed in the lab. If this detached leaf assay is successful, we will only use the imported organisms in the lab. Otherwise, we will need [to] inoculate the avocado seedlings in [the] lab. The seedlings grown in the pots will be placed in a sturdy plastic tray and inoculated by burying mycelia grown on millet seeds in the soil of the plants. The plants will be carefully watered using a beaker to avoid soil/water splash.

DISCUSSION:

1. Person Responsible:

Miaoying Tian, Ph.D., Department of Plant and Environmental Protection Sciences, University of Hawaii at Manoa, 3190 Maile Way, St. John 304, Honolulu, HI 96822. Phone: 808-956-5305 Fax: 808-956-2832.

Dr. Tian will be responsible for safe storage and use of the imported microorganism. She is an associate professor in plant pathology with 20 years of experience working on various *Phytophthora spp.* since she was a graduate student at the Ohio State University. She has been a faculty [member] at UHM managing a research lab working on *Phytophthora spp.* at biosafety level 2 since 2014. Her latest General Biosafety Principles and Practices training and Transportation of Biological Substances Awareness training dates were completed on 02/09/2020 and 02/07/2020. The latest biosafety inspection of her lab was performed virtually by Todd Suda on 12/14/2020. A CV documenting her education, employments and research experience is attached (See attachment 1).

2. Safeguard Facility and Practices:

Contact person: Miaoying Tian, Ph.D., Department of Plant and Environmental Protection Sciences, University of Hawaii at Manoa, 3190 Maile Way, St. John 304, Honolulu, HI 96822 Phone: 808-956-5305 Fax: 808-956-2832

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The labs used include St. John 304 and 301 at biosafety level 2. Only authorized personnel are allowed access to the labs. The imported culture will be stored in sterile water in 2-ml tubes, which will be placed in a locked drawer. St. John plant science building is locked after work hours and only authorized employees can enter the building. Autoclaves are in place on the 3rd floor of St. John. The map of the 3rd floor of St. John is attached (Appendix A, page 3).

Strict [pre]cautions will be taken to avoid the accidental release during the transport and experimentation. The samples will be transported according to DOT/IATA [Department of Transportation/International Air Transport Association] requirements by triple packaging with the label "UN3373, Biological Substance, Category B", and may be opened for inspection. The routine handling of the microorganisms will be performed in a Class II biosafety cabinet. Any spills will be decontaminated using 10% bleach. The growth of the microorganisms and lab-based detached leaf infection assays will be performed in a contained manner, either in petri dish[es] or covered plastic tray[s]. If infecting the seedlings in the lab is needed, the plants in pots will be placed in a plastic tray to contain any contaminated water. The plants will be watered carefully to avoid splash out of the plastic tray. When the experiment is done, all plants/soil and single-use pots will be autoclaved at 121° C for at least 45 minutes by using saturated steam under at least 15 psi of pressure. All the plastic trays will be soaked in 10% bleach for at least 1 hour before rinsing with clean water. All related waste will be autoclaved as above. Only the individuals with biosafety training are allowed to access and handle the imported microorganisms. The individuals are required to attend the initial biosafety training and regular refresher training.

3. Method of Disposition:

The microorganisms will be stored in locked drawers in the applicant's lab with the valid USDA and HDOA permits until the completion of the research project. After that, they will be autoclaved at 121° C for at least 45 minutes by using saturated steam under at least 15 psi of pressure. The live microorganisms will not have direct contact with the environment.

4. Abstract of Organism:

Phytophthora cinnamomi is an oomycete belonging to phylum Oomycota within the kingdom Straminipila. It has a wide host range. However, the host specificity is barely studied. For example, whether an isolate that infects avocado is able to infect other plant species is unclear. *P. cinnamomi* occurs worldwide, including Hawaii. It seems that it has been present in Hawaii since a long time ago. It could have come to Hawaii with some of the plant materials brought by the early Polynesian explorers and settlers (Zentmyer, G. A., California Avocado Society

1985 Yearbook 69: 89-96). Kliejunas and Ko (Phytopathology, 1976, 66: 116-121) identified *P. cinnamomi* in ohia forests and found that it was widely distributed throughout the island of Hawaii. *P. cinnamomi* was also found in many other plant species in Hawaii (http://www.extento.hawaii.edu/kbase/crop/Type/phyt_prim.htm). *P. cinnamomi* was first described from avocado roots in southern California in 1942 and was thought to be probably imported into California from tropical America, Hawaii, or Australia in the late 19th century with importations of avocado or other subtropical/tropical plants (Zentmyer, G. A., California Avocado Society 1985 Yearbook 69: 89-96).

P. cinnamomi grows best in mild temperate or subtropical regions. It does not grow or survive at low soil temperatures (below 6°C) or at high soil temperatures (above 34-36°C). Optimum temperatures are in the range of 21-27°C. The pathogen does not survive well or spread rapidly under low soil moisture conditions. *P. cinnamomi* produces sporangia, which release zoospores. Zoospores infect the hosts when swimming to the roots. Periods of abundant soil moisture promote production of sporangia, release of zoospores, and invasion of host roots. However, *P. cinnamomi* does not develop under conditions of continuously saturated soil with consequent low oxygen concentrations. It produces disease most rapidly under soil conditions of somewhat acid to neutral pH. *P. cinnamomi* does not produce toxins.

5. Effects on the Environment:

The to-be-imported microorganisms will be used entirely for research in contained labs. The research results are expected to contribute to avocado disease control and therefore benefit avocado industry in Hawaii. There will be no expected adverse impact on aquaculture and horticulture industries, forestry, environment (e.g., native fauna and flora, natural resources), economy, and society.

Strict cautions will be taken to avoid the accidental release during the transport and experimentation. If accidental release happens, the potential environmental, economic, and societal impacts are minimal if not none. There are a couple of reasons for that: 1) this pathogen is not air-borne, so it may never reach the hosts before it dies after the accidental release; 2) *P. cinnamomi* has been found in many plant species in Hawaii (http://www.extento.hawaii.edu/kbase/crop/Type/phyt_prim.htm), there is no evidence suggesting that the imported isolates are more aggressive than the ones in Hawaii. Perceived as a low risk to Hawaii, import of the same microorganism has been permitted by USDA APHIS (permit number: P526P-21-00350, (see USDA permit pdf, Attachment 2).

III. Environmental Assessment (EA)

Pursuant to a May 2008 Hawaii Intermediate Court of Appeals decision (Ohana Pale Ke Ao v. Board of Agriculture, 118 Haw. 247 (Haw. App. 2008), the Department of Agriculture's (Department) import permit process is subject to the requirements of the Hawaii Environmental Protection Act, Chapter 343, Hawaii Revised Statutes (HRS). Under this decision, the requirement for an EA as a condition of the import permit or related authorization applies in those circumstances where the underlying permit activity for the importation initiates a "program or project" and where the use of state or county funds or state or county lands is involved. When those circumstances are present, as they appear to be when a new organism is used at University of Hawaii (state lands), an EA is required to determine whether the proposed project or program is likely to have a significant impact on the environment. However, certain activities may be eligible for "exemption" from an EA under provisions established through the Environmental Advisory Council (EAC), provided that the project or program is determined to have little or no impact on the environment.

Exemption from EA: In September 2008, the Department obtained the concurrence of EAC's Environmental Council for exemption from EA for those PQB import permits and related authorizations that satisfy certain criteria, including conditions to minimize risk to agriculture, horticulture, the environment, or animal or public health. The exemption from EA for microorganisms applies to the import of microorganisms for various purposes according to their placement on lists maintained by the Board and subject to permit conditions appropriate to eliminate or minimize risks associated with the microorganisms and their use. (See Exemption Class #10., item 3.a of the Department's exemptions, under the links for exemption lists for state agencies at: <http://hawaii.gov/health/environmental/oeqc/index.html/>). Permit conditions address matters such as health requirements, special precautions, and safeguarding from escape, theft, or release. Under the exemption, purposes for importation of microorganisms include, but are not limited to, food and beverage processing; clinical laboratory diagnostics or quality control testing; medical or scientific research by qualified entities and universities in standard research settings; classroom instruction at universities or high schools; microbial products; algae research or algae cultivation and production for food, feed, or export for processing for uses such as cosmetics, food supplements, and pharmaceuticals. The exemptions from EA are only applicable when a project or program will probably have minimal or no significant effect on the environment. Under EAC's rules and the Department's exemption list, exemptions are inapplicable when the cumulative impact of planned successive actions in the same place, over time, is significant, or when an action that is normally insignificant in its impact on the environment may be significant in a particularly sensitive environment.

PQB Process for Exemption from EA: When seeking an exemption from EA for an import request that requires the full Board review process, the Department must obtain the advice of other outside agencies or individuals having jurisdiction or expertise as to

the propriety of the exemption. (Section 11-200-8(a), HAR) The Board review process already includes recommendations and comments from the technical consultants (Advisory Subcommittee members) and the Advisory Committee on Plants and Animals (Advisory Committee). The representation of outside agencies such as the Hawaii Department of Land and Natural Resources, University of Hawaii, and Hawaii Department of Health, and the EAC, on the Advisory Committee provide opportunities for these agencies' input on the public health and environmental aspects of the import and appears to meet the consultation requirement of the EAC's rule. In addition, the input received from the Department's technical consultants on the Advisory Subcommittees, as individuals with expertise on the subject matter and the presence of additional individuals from the Hawaii Department of Health and University of Hawaii, appears to meet the consultation requirement. Where the recommendations from the technical consultants and Advisory Committee support exemption from an EA, the Department may prepare a declaration of exemption, which includes a description of the import request, lists of consultants, consultants' recommendation and comments, and the basis for the Department's determination of "probably minimal or no significant effect on the environment." The declaration of exemption from EA is submitted to the Board together with the import request. Where the recommendations from the technical consultants and Advisory Committee support an EA, the Department may require an EA as a prerequisite for Board review.

IV. Advisory Subcommittee Review

This request was submitted to the Advisory Subcommittee on Fungi for their review. Their recommendations and comments are as follows:

1. **I recommend approval ___ / ___ disapproval to allow the importation of the Avocado Root Rot, *Phytophthora cinnamomi*, a Fungus on the List of Restricted Microorganisms (Part A), for Laboratory Research Including Plant Inoculation, by the University of Hawaii, by Permit.**

Dr. Edward Desmond: Recommends approval.

Comments: "Provided mitigation measures are properly followed."

Mr. David Clements: Recommends approval.

Comments: None.

Dr. Susan Schenck: Recommends approval.

Comments: None.

Phytophthora cinnamomi
Miaoying Tian - UHM
January 25, 2022

Dr. A. Christian Whelen: Recommends approval.

Comments: None.

Dr. Stephen Ferreira: Recommends approval.

Comments: None.

Dr. Raquel Wong: Recommends approval.

Comments: None

Dr. George Wong: Recommends approval.

Comments: None.

- 2. I recommend approval ___/___disapproval to Establish Permit Conditions for the Importation of Avocado Root Rot, *Phytophthora cinnamomi*, a Fungus on the List of Restricted Microorganisms (Part A), for Laboratory Research Including Plant Inoculation, by the University of Hawaii.**

Dr. Edward Desmond: Recommends approval.

Comments: None.

Mr. David Clements: Recommends approval.

Comments: None.

Dr. Susan Schenck: Recommends approval.

Comments: None.

Dr. A. Christian Whelen: Recommends approval.

Comments: None.

Dr. Stephen Ferreira: Recommends approval.

Comments: None.

Dr. Raquel Wong: Recommends approval.

Comments: None

Dr. George Wong: Recommends approval.

Comments: None.

3. Are the Proposed Permit Conditions sufficient to assure that the Laboratory Research Including Plant Inoculation using Avocado Root Rot, *Phytophthora cinnamomi*, a Fungus on the List of Restricted Microorganisms (Part A), by the University of Hawaii, Presents Probably Minimal or No Significant Effects on the Environment?

Dr. Edward Desmond: Probably minimal or no significant effects on the environment.

Comments: None.

Mr. David Clements: Probably minimal or no significant effects on the environment.

Comments: None.

Dr. Susan Schenck: Probably minimal or no significant effects on the environment.

Comments: None.

Dr. A. Christian Whelen: Probably minimal or no significant effects on the environment.

Comments: None.

Dr. Stephen Ferreira: Probably minimal or no significant effects on the environment.

Comments: None.

Dr. Raquel Wong: Probably minimal or no significant effects on the environment.

Comments: None

Dr. George Wong: Probably minimal or no significant effects on the environment.

Comments: None.

4. Are the Proposed Permit Conditions sufficient to assure that the item requested for import presents probably minimal or no significant effects on the environment should it be accidentally released?

Dr. Edward Desmond: Yes.

Comments: None.

Mr. David Clements: Yes.

Comments: None.

Dr. Susan Schenck: No.

Comments: "I recommend allowing the import of the *P. cinnamomi* isolates because containment conditions appear adequate. If released, however, it might prove very damaging."

Dr. A. Christian Whelen: Yes.

Comments: "Provided they are properly followed."

Dr. Stephen Ferreira: Yes.

Comments: "While it is an important pathogen, it is really not prevalent in Hawaii. It certainly is important in avocados, and in forested areas, was and, I suspect[,] still is [an] important pathogen of Ohia. Otherwise, it is really not that important of a pathogen in Hawaii. As long as protocols for proper disposal of laboratory items and greenhouse plants, which basically involves autoclaving, there is no risk of escaping from the lab or greenhouse. Zoospore escape is greatly exaggerated, and would occur with water movement over short distances. In addition, a susceptible host would need to be found within a short period of time...probably within a few hours. Zoospores are not long-lived. This pathogen can spread locally in-field along irrigation furrows. Zoospores are not involved with long distant movement. Long distance spread is most likely via sporangial being rain or wind-blown wind. *P. cinnamomi* is mainly a soil-borne pathogen, so dispersal is, for the most part, by man moving infected plants or infested soil from one location to another. In my opinion, laboratory and greenhouse trials are relatively low risk if protocols are followed. There is no need to be overly concern[ed] about this pathogen escaping the lab easily. Moreover, *P. cinnamomi* is distributed widely in most forest environments and is most important in avocado. Concerns about strain differences and types are theoretical, with almost no literature about important strain differences occurring with the *P. cinnamomi* populations."

Dr. Raquel Wong: Yes.

Comments: None

Dr. George Wong: Yes.

Comments: "...concerning that this species is the **“world’s most devastating plant pathogen!”** This is a comment made on the abstract of a paper and is an opinion not based on any evidence. I saw it as an overblown, exaggeration by the author and nothing else.”

V. Advisory Committee Review:

This request was submitted to the Advisory Committee at its meeting on December 10, 2021 via a Zoom virtual meeting. PQB Microorganism Specialist Wil Leon Guerrero provided a synopsis of the request.

Advisory Committee Member Robert Hauff asked Mr. Leon Guerrero if the applicant will be conducting inoculation of plants and if this is correct, will these plants be regulated and autoclaved. Mr. Leon Guerrero stated that the applicant will be inoculating plants in a secured laboratory within a biosafety cabinet and if destruction is necessary it will be done by autoclave. He also mentioned that this type of research is low risk when conducting research in the lab, as referenced by subcommittee comments.

Mr. Hauff asked why some applications have an Environmental Assessment (EA) exemption attached to it and some don't and does the Advisory Committee have the ability to authorize them. Advisory Committee Member Thomas Eisen said the trigger for this is primarily if State money or lands are involved, then an EA process is triggered. He said that because this is done at the University of Hawaii, as opposed to on private lands, the environmental review law pursuant to HRS 343 would be triggered. He noted that an agency, if so authorized, that had the ability to declare an exemption could do so. Jonathan Ho, PQB Inspection and Compliance Section Chief, mentioned that the Department has existing authority to issue EA exemptions for permits if outside consultation of experts, such as the Advisory Subcommittees and Advisory Committee occurs. He said if it is found to have minimal or no significant impact, including cumulative impact, an exemption can be generated by the PQB. Mr. Ho noted that PQB is aware that an agency can also issue an exemption for their own projects if they qualify.

Advisory Committee Member Kenneth Matsui asked if Avocado root rot is transmissible through the fruit and seeds because a large amount of avocado fruit is entering the State from South America and Mexico. The applicant, Dr. Miaoying Tian, introduced

herself and mentioned that based on her knowledge the root rot cannot be transmitted through the fruit or seed.

Advisory Committee Chairperson Dr. Helmuth Rogg asked if there were any further questions or discussions. Hearing no response, Dr. Rogg called for a motion. Mr. Eisen made a motion that the request be approved as presented by the PQB. Advisory Committee member Dr. Maria Haws seconded the motion. Dr. Rogg asked if there was additional public testimony or Committee discussion. Hearing none, Dr. Rogg called for a vote.

Vote: APPROVED 6/0 (Rogg, Matusi, Hauff, Eisen, Haws, Ching-Lee)

Motion passed.

VI. Proposed Permit Conditions

1. The restricted article(s), Avocado Root Rot, *Phytophthora cinnamomi*, shall be used for laboratory research including plant inoculation, a purpose approved by the Board of Agriculture (Board), and shall not be sold, given, or transferred in Hawaii, except as approved by the Board. Release of the restricted article(s) into the environment is prohibited.
2. The permittee, Miaoying Tian, Ph.D., University of Hawaii at Manoa, Department of Plant and Environmental Protection Sciences, 3190 Maile Way, St. John 304, Honolulu, Hawaii 96822, shall be responsible and accountable for all restricted article(s) imported, from the time of their arrival to their final disposition.
3. The restricted article(s) are subject to the pre-entry requirements of section 4-71A-8, Hawaii Administrative Rules (HAR), and the inspection requirements of section 4-71A-9, HAR.
4. Each shipment shall be accompanied by a copy of the Plant Quarantine Branch (PQB) permit for the restricted article(s) and an invoice, packing list, or other similar PQB approved document listing the scientific and common names of the restricted article(s), the quantity of the restricted article(s), the shipper, and the permittee for the restricted article(s).
5. The restricted article(s) shall be safeguarded at University of Hawaii at Manoa, 3190 Maile Way, St John 304 and 301, Honolulu, Hawaii 96819, sites inspected and approved by the PQB prior to importation. Removal of the restricted article(s) to another site or room shall require site inspection and approval by the PQB chief prior to movement.

6. The restricted article(s) shall be maintained by the responsible person, Miaoying Tiang, Ph.D., University of Hawaii at Manoa, Department of Plant and Environmental Protection Sciences, 3190 Maile Way, St. John 317, Honolulu, Hawaii 96822, or by trained or certified personnel designated by the permittee.
7. The permittee shall adhere to the use, facility, equipment, procedures, and safeguards proposed and described in the permit application, as approved by the PQB Chief and Board.
8. The approved site(s), restricted article(s), and records pertaining to the restricted article(s) under permit shall be subject to post-entry inspections pursuant to section 4-71A-16, HAR. The permittee shall make the site(s), restricted article(s) and records pertaining to the restricted article(s) available for inspection upon request by a PQB inspector.
9. The permittee shall submit an annual report of all the restricted article(s) imported or possessed for the calendar year by January 31st of the following year. The report shall include:
 - a. The permit number, scientific name, and quantity of the restricted article(s) imported or possessed;
 - b. The status of use and possession of the restricted article(s);
 - c. A summary of any significant changes to the permittee's operation, personnel, and/or procedures; and
 - d. Any significant events that occurred at the permittee's site.
10. The permittee shall have available a procedural or biosafety manual for review and approval by the PQB at the time of initial site inspection and any subsequent post-entry inspection(s), which identifies the hazards that will or may be encountered, and which specifies practices and procedures designed to minimize or eliminate risks of theft, exposure, or contamination, and/or accidental release of the restricted article(s), including the risk of introduction and spread of pests that may be associated with the restricted article(s) into the environment. The permittee shall adhere to all practices and procedures as stated in this biosecurity manual.
11. It is the responsibility of the permittee to comply with any applicable requirements of municipal, state, or federal law pertaining to the restricted article(s). The permittee shall also comply with University of Hawaii Institutional Biosafety Committee instructions.

12. The permittee shall submit to the PQB Chief a copy of all valid licenses, permits, certificates or other similar documents required by other agencies for the restricted article(s) and operation of the facility where the restricted article(s) are safeguarded. The permittee shall immediately notify the PQB Chief in writing when any of the required documents are suspended, revoked, or terminated. This permit may be amended, suspended, or cancelled by the PQB Chief upon suspension, revocation, or termination of any license, permit, certificate, or other similar document required for the restricted article(s) or operation of the facility safeguarding the restricted article(s).
13. Upon completion or termination of the use of the restricted article(s), the restricted article(s) shall be destroyed by autoclaving. In the event autoclaving is not possible, the permittee shall obtain written authorization from the PQB Chief for an appropriate alternate method of destruction.
14. The permittee shall immediately notify the PQB Chief verbally and in writing under the following circumstances:
 - a. Any changes to the approved sites, facilities, procedures, or equipment used to contain the restricted article(s). Any such changes must be approved by the PQB and in compliance with permit conditions prior to implementation.
 - b. If any theft, accidental release, disease outbreaks outside of containment, or other exposure and/or pest emergence involving or suspected to involve the restricted article(s) under this permit, occurs.
 - c. If a shipment of the restricted article(s) is delivered to the permittee without a PQB "Passed" stamp, tag or label affixed to the article, container or delivery order that indicates that the shipment has passed inspection and is allowed entry into the State. Under this circumstance, the permittee shall not open or tamper with the shipment. Additionally, the permittee shall secure all restricted article(s), shipping containers, shipping documents and packing materials for the PQB.
 - d. If the permittee will no longer import and/or possess the restricted article(s) authorized under this permit. Under this circumstance, the permittee shall inform the PQB Chief of the final disposition for the restricted article(s), submit a final report on the method of destruction of the restricted article(s) to the PQB chief within 30 days of completion or termination of the use of the restricted article(s), and the permit will be cancelled.
15. Any violation of the permit conditions may result in citation, permit cancellation, and enforcement of any or all of the penalties set forth in Hawaii Revised

Statutes §150A-14.

16. A cancelled permit is invalid and upon written notification from the PQB chief, all restricted article(s) listed on the permit shall not be imported. In the event of permit cancellation, any restricted article(s) imported may be moved, seized, treated, quarantined, destroyed, or sent out of state at the discretion of the PQB Chief. Any expense or loss in connection therewith shall be borne by the permittee.
17. The permit conditions are subject to cancellation or amendment at any time due to changes in statute or administrative rules restricting or disallowing import of the microorganisms or due to Board action disallowing a previously permitted use of the restricted article(s).
18. The permittee is responsible for costs, charges, or expenses incident to the inspection, treatment or destruction of the restricted article(s), as provided in Act 173, Session Laws of Hawaii 2010, Section 13, including, if applicable, charges for overtime wages, fixed charges for personnel services, and meals.
19. The permittee shall comply with the Centers for Disease Control and Prevention and National Institutes of Health Biosafety Level 2 guidelines for laboratory facility for safety equipment, standard microbiological practices and special practices as found in the current edition of the *Biosafety in Microbiological and Biomedical Laboratories*.
20. These permit conditions are subject to amendment by the PQB Chief to conform to more recent Board approved permit conditions for the restricted article(s), as necessary to address scientifically validated risks associated with the restricted article(s).
21. The permittee shall agree in advance to defend and indemnify the State of Hawaii, its officers, agents, employees, and the Board of Agriculture members for any and all claims against the State of Hawaii, its officers, agents, employees or Board of Agriculture members that may arise from or be attributable to any of the restricted article(s) that are introduced under this permit. This permit condition shall not apply to a permittee that is a federal or State of Hawaii entity or employee, provided that the federal or state employee is a permittee in the employee's official capacity.

STAFF RECOMMENDATION: Based upon the internal review, the recommendations and comments of the Advisory Subcommittee on Fungi, and the Advisory Committee on Plants and Animals' unanimous recommendation to approve this request, the Plant

Phytophthora cinnamomi
Miaoying Tian - UHM
January 25, 2022

Quarantine Branch recommends approval of this request with the proposed import permit conditions.

Respectfully Submitted,

BECKY AZAMA
Acting Manager, Plant Quarantine Branch

CONCURRED:

HELMUTH W. ROGG, Ph.D.
Administrator, Plant Industry Division

APPROVED FOR SUBMISSION:

PHYLLIS SHIMABUKURO-GEISER
Chairperson, Board of Agriculture

Miaoying Tian
College of Tropical Agriculture and Human Resources
 (Department of Plant and Environmental Protection Sciences)
 FTE Distribution: 30% I; 70% R

Education

<u>Degree</u>	<u>University</u>	<u>Major</u>
Bachelors	Agricultural University of Hebei	Plant Protection
Masters	Chinese Academy of Agricultural Sciences	Plant Pathology
PhD	The Ohio State University	Plant Pathology

Lifetime and Fellow Achievement Awards (peer nominated and endorsed national and International-important for those without accreditation that is peer nominated and endorsed, recognized)

Professional Appointments

<u>Title</u>	<u>Employer</u>	<u>Dates Employed</u>
Associate Researcher	University of Hawaii at Manoa	08/01/2019
Assistant Researcher	University of Hawaii at Manoa	01/02/2014
(Senior) Research Associate	Boyce Thompson Institute	04/2009
Postdoctoral Associate	Michigan State University	04/2006
Postdoctoral Associate	Boyce Thompson Institute	04/2005

Courses TaughtCourse Number and Title (credits)

- PEPS/TPSS 371 Genetics: Theory to Application, 3 credits (yearly, since 2014)
- PEPS/MBBE 652 Molecular Plant-Fungal Interactions, 3 credits (every 2 years, since 2015)
- PEPS 605 Biology of Plant Pathogens: Fungi and Nematodes (Fungi section, 2 credits) (yearly, since 2017)
- PEPS 600 Seminar in Plant Pathology (in rotation, 2014 and 2019)
- PEPS 499 and 699 Direct Research for Undergraduate and Graduate Students (all semesters)

Publications (reverse chronological order)BooksBook Chapters

Tian M., Navet N., and Wu D. (2020) CRISPR/Cas9-mediated gene editing of the plant pathogenic oomycete *Phytophthora palmivora*. Book chapter in **CRISPR-Cas Methods**. Springer Protocols Handbooks <https://link.springer.com/book/10.1007%2F978-1-0716-0616-2>, Page 87-98.

Conference Proceedings (Since 2014)

Note: Graduate students or researchers under my direct supervision are underlined.

Standish J. R., Purayannur, S., Bowman M., Childs K. L., Tian M., Quesada L. M. (2020) Predicting the *Peronospora belbahrii* secretome for in silico identification of effector proteins. (Abstr.) *Phytopathology* 110: S1.18. <https://doi.org/10.1094/PHYTO-110-7-S1.1>

Standish J. R., Bowman M. J., Childs K. L., Tian M., Quesada-Ocampo L. M. (2020) Utilizing comparative genomics to develop species-specific diagnostic markers for basil downy mildew. APS annual meeting 2020 abstract.

Johnson E. T., Quesada-Ocampo L., Bowman M., Childs K., Tian M. (2020) Differential expression of genes encoding sugar transporters in the basil pathogen *Peronospora belbahrii*. APS annual meeting 2020 abstract.

Navet N., Tian M. (2019) Targeted mutagenesis of basil candidate susceptibility gene DMRI using CRISPR/Cas9.

(Abstr.) *Phytopathology* 109: S2.22. <https://doi.org/10.1094/PHYTO-109-10-S2.1>

Cai Z., Navet N., Uchida J., and Tian M. (2018) A host-specific RxLR effector of *Phytophthora palmivora* contributes to virulence on cacao. (Abstr.) *Phytopathology* 109: S2.58. <https://doi.org/10.1094/PHYTO-108-12-S2.1>

Tian M., Gumtow R., Navet N., Wu D., Schornack S. and Uchida J. (2017) Dissecting the pathogenicity mechanisms of *Phytophthora palmivora*. (Abstr.) *Phytopathology* 107: S5.25

Wu D., Win J., Shao D., and Tian M. (2015) Dissecting the molecular basis of basil *Peronospora belbahrii* interactions. (Abstr.) *Phytopathology* 105(Suppl. 4): S4.150

Refereed Journal Publications

Notes: Corresponding author suggests the project leadership of the study and contribution to all aspects, including concept development, supervision, manuscript writing and editing; Graduate students or researchers under M. Tian's direct supervision are underlined.

34. Navet N. and Tian M.* (2020) Efficient targeted mutagenesis in allotetraploid sweet basil by CRISPR/Cas9. *Plant Direct*, 4(6): e00233. (*Corresponding author)
33. Navet N. and Tian M.* (2020) *Agrobacterium*-mediated transformation of sweet basil (*Ocimum basilicum*) *Bio-protocol*, 10(22): e3828. (*Corresponding author)
32. Petongkhao S., Navet N., Schornack S., Tian M.*, Churngchow N* (2020). A secreted protein of 15 kDa plays an important role in *Phytophthora palmivora* development and pathogenicity. *Scientific Reports*, 10: 2319 (*Corresponding author)
31. Shao D. and Tian M.* (2018) A qPCR approach to quantify the growth of basil downy mildew pathogen *Peronospora belbahrii* during infection. *Current Plant Biology*, 15:2-7. (*Corresponding author)
30. Gumtow R., Wu D., Uchida J. and Tian M.* (2018) A *Phytophthora palmivora* extracellular cystatin-like protease inhibitor targets papain to contribute to virulence on papaya. *Molecular Plant-Microbe Interactions*, 31(3):363-373. (*Corresponding author) (Cover page article)
29. Mishra S., Wang K. H., Sipes B. S. and Tian M. (2018) Induction of host-plant resistance in cucumber by vermicompost tea against root-knot nematode. *Nematropica*, 48(2):164-171.
28. Ekchaweng K., Evangelisti E., Schornack S., Tian M.* and Churngchow N*. (2017) The plant defense and pathogen counterdefense mediated by *Hevea brasiliensis* serine protease HbSPA and *Phytophthora palmivora* extracellular protease inhibitor PpEPI10. *PLoS One*, 12(5):e0175795. (*Corresponding author)
27. Mishra S., Wang K. H., Sipes B. S. and Tian M. (2017) Suppression of root-knot nematode by vermicompost tea prepared from different curing ages of vermicompost. *Plant Disease*, 101(5): 734-737.
26. Wu D., Navet N., Liu Y., Uchida J. and Tian M.*. (2016) Establishment of a simple and efficient *Agrobacterium*-mediated transformation system for *Phytophthora palmivora*. *BMC Microbiology*, 16:204 (*Corresponding author)
25. Khunjan U., Ekchaweng K., Panrat T., Tian M., and Churngchow N. (2016) Molecular cloning of HbPR-I gene from rubber tree, expression of HbPR-1 gene in *Nicotiana benthamiana* and its inhibition of *Phytophthora palmivora*. *PLoS One*, 11(6): e0157591.
24. Klessig D. F., Tian M., and Choi H. W. (2016) Multiple targets of salicylic acid and its derivatives in plants and animals. *Front Immunol.* 7:206.
23. Choi H. W., Manohar M., Manosalva P., Tian M., Moreau M., and Klessig D. F. (2016) Activation of plant innate immunity by extracellular high mobility group box 3 and its inhibition by salicylic acid. *PLoS Pathogens*, 12(3): e1005518.
22. Choi H. W.*, Tian M.*, Manohar M., Harraz M. M., Park S. W., Schroeder F. C., Snyder S. H., and Klessig D. F. (2015) Human GAPDH is a target of aspirin's primary metabolite salicylic acid and its derivatives. *PLoS One*, 10(11): e0143447. (*Co-first author)
21. Choi H. W., Tian M., Song F., Venereau E., Preti A., Park S. W., Hamilton K., Swapna G. V., Manohar M., Moreau M., Agresti A., Gorzanelli A., De Marchis F., Wang H., Antonyak M., Micikas R. J., Gentile D. R., Cerione R. A., Schroeder F. C., Montelione G. T., Bianchi M. E., and Klessig D. F. (2015) Aspirin's active metabolite salicylic

acid targets high mobility group box 1 to modulate inflammatory responses. *Mol. Med.* 18(21):526-35.

20. Manohar M.*, **Tian M.***, Moreau M.*, Park, S. W., Choi H. W., Fei Z., Friso G., Asif M., Manosalva P., von Dahl C. C., Shi K., Ma S., Dinesh-Kumar S. P., O'Doherty I., Schroeder F. C., van Wijk K. J. and Klessig D. F. (2015) Identification of multiple salicylic acid-binding proteins using two high throughput screens. *Frontiers in Plant Science*, 5:777. (*Co-first author)

19. **Tian M.**, Sasvari Z., Gonzalez P., Friso G., Rowland E., Liu X., van Wijk K. J., Nagy P. D. and Klessig D. F. (2015) Salicylic acid inhibits the replication of Tomato Bushy Stunt Virus by directly targeting a host component in the replication complex. *Molecular Plant-Microbe Interactions*, 28(4):379-86. (Highlighted in MPMI as *MPMI* Editor's Pick, April 2015)

18. Liao Y., **Tian M.**, Zhang H., Li X., Wang Y., Xia X., Zhou J., Zhou Y., Yu J., Shi K., and Klessig D. F. (2015) Salicylic acid binding of mitochondrial alpha-ketoglutarate dehydrogenase E2 affects mitochondrial oxidative phosphorylation and electron transport chain components and plays a role in basal defense against tobacco mosaic virus in tomato. *New Phytologist*, 205(3):1296-1307.

17. Dong S., Stam R., Cano L. M., Song J., Sklenar J., Yoshida K., Bozkurt T. O., Oliva R., Liu Z., **Tian M.**, Win J., Banfield M. J., Jones A. M. E., van der Hoorn R. A. L. and Kamoun S. (2014) Effector specialization in a lineage of the Irish potato famine pathogen. *Science*, 343(6170):552-5.

16. Moreau M., Westlake T., Zampogna G., Popescu G., **Tian M.**, Noutsos C., and Popescu S. (2013) The Arabidopsis oligopeptidases TOP1 and TOP2 are salicylic acid targets that modulate SA-mediated signaling and the immune response. *Plant Journal*, 76(4):603-614.

15. **Tian M.**, von Dahl C. C., Liu P. P., Friso G., van Wijk K. J., and Klessig D. F. (2012) The combined use of photoaffinity labeling and surface plasmon resonance-based technology identifies multiple salicylic acid-binding proteins. *Plant Journal*, 72(6):1027-1038.

14. Porter K., Shimono M., **Tian M.**, and Day B. (2012) Arabidopsis actin-depolymerizing factor-4 links pathogen perception, defense activation and transcription to cytoskeletal dynamics. *PLoS Pathogens*, 8(11):e1003006.

13. Moreau M.*, **Tian M.***, and Klessig D. F. (2012) Salicylic acid binds NPR3 and NPR4 to regulate NPR1-dependent defense responses. *Cell Research*, 22(12):1631-1633. (*Co-first author)

12. **Tian M.**, Win J., Savory E., Burkhardt A., Held M., Brandizzi F., and Day B. (2011) 454 genome sequencing of *Pseudoperonospora cubensis* reveals effector proteins with a QXLR translocation motif. *Molecular Plant-Microbe Interactions*, 24(5):543-553. (Top 10 paper of MPMI in 2011)

11. Chinnapun D., **Tian M.**, Day B., and Churngchow N. (2009) Inhibition of a *Hevea brasiliensis* protease by a Kazal-like serine protease inhibitor from *Phytophthora palmivora*. *Physiological and Molecular Plant Pathology*, 74:27-33.

10. **Tian M.**, Chaudhry F., Ruzicka D. R., Meagher R. B., Staiger C. J., and Day B. (2009) Arabidopsis actin depolymerizing factor AtADF4 mediates defense signal transduction triggered by the *Pseudomonas syringae* effector AvrPphB. *Plant Physiology*, 150(2):815-824.

9. Song J., Win J., **Tian M.**, Schornack S., Kaschani F., Ilyas M., van der Hoorn R., and Kamoun S. (2009) Apoplastic effectors secreted by two unrelated eukaryotic plant pathogens target the tomato defense protease Rcr3. *Proc. Natl. Acad. Sci. U.S.A.*, 106(5):1654-1659.

8. Zhou F., Mosher S., **Tian M.**, Sassi G., Parker J., and Klessig D. F. (2008) The Arabidopsis gain-of-function mutant *ssi4* requires RAR1 and SGT1b differently for defense activation and morphological alterations. *Molecular Plant-Microbe Interactions*, 21(1):40-49.

7. **Tian M.**, Win J., Song J., van der Hoorn R., van der Knaap E., and Kamoun S. (2007) A *Phytophthora infestans* cystatin-like protein targets a novel tomato papain-like apoplastic protease. *Plant Physiology*, 143:364-377.

6. **Tian M.**, and Day B. (2006) Domain switching and host recognition. *Molecular Microbiology*, 61(5):1091-1093.

5. **Tian M.** and Kamoun S. (2005) A two disulfide bridge Kazal domain from *Phytophthora* exhibits stable inhibitory activity against serine proteases of the subtilisin family. *BMC Biochemistry*, 6:15.

4. Torto-Alalibo T., **Tian M.**, Gajendran K., Waugh M. E., van West P., and Kamoun S. (2005) Expressed sequence tags from the oomycete fish pathogen *Saprolegnia parasitica* reveal putative virulence factors. *BMC Microbiology*,

5:46.

3. **Tian M.**, Benedetti B., and Kamoun S. (2005) A second Kazal-like protease inhibitor from *Phytophthora infestans* inhibits and interacts with the apoplastic pathogenesis-related protease P69B of tomato. *Plant Physiology*, 138:1785-1793.
2. **Tian M.**, Huitema E., da Cunha L., Torto T., and Kamoun S. (2004) A Kazal-like extracellular serine protease inhibitor from *Phytophthora infestans* targets the tomato pathogenesis-related protease P69B. *Journal of Biological Chemistry*, 279(25):26370-26377.
1. Huitema E., Bos J. I. B., **Tian M.**, Win J., Waugh M. E., and Kamoun S. (2004) Linking sequence to phenotype in *Phytophthora*-plant interactions. *Trends in Microbiology*, 12(4):193-200.

Extension Publications

Creative Works (i.e., Extension Videos, Websites, Blogs, Creative Designs and Exhibitions, etc.)

Leadership Roles (Committees, Boards, Advisory, etc.)

Committees in college and department:

- a. PEPS departmental personnel committee (DPC) (2019-present)
- b. College of Tropical Agricultural and Human Resources (CTAHR) faculty senate (2015-2019)
- b. PEPS faculty search committee (2015-2016, Environmental Microbiologist; 2017, Pollinator biologist; 2019, Entomologist)
- c. Curriculum committee for the joint undergraduate program of PEPS and TPSS (2016-2017, 2020-present)
- d. Undergraduate student advisor for Invasive Species specialization of Tropical Agriculture and the Environment undergraduate program (2017-present)

Conference session chair/moderator:

- a. "Pathogen Virulence and Effectors" session of American Phytopathological Society annual meeting at San Antonio, Texas (August 2017)
- b. "Effectors" session of Oomycete Molecular Genetics Network annual meeting at Asilomar, California (March 2017)
- c. "Oomycete Biology" session of Oomycete Molecular Genetics Network annual meeting at Asilomar, California (March 2015)

Committee member of national and international scientific communities:

- a. Steering Committee of Oomycete Molecular Genetics Network (2018-)
- b. Molecular and Cellular Phytopathology Committee the American Phytopathological Society (2014-2016)
- c. Mycology Committee of the American Phytopathological Society (2014-2016).

Currently Active Grant Support

Tian M. and Christopher D. (08/01/2020-07/31/2022) Genome editing of papaya for functional analysis, metabolic engineering and crop improvement. USDA NIFA, \$299,895.

Manosalva, P., Kim H., Cano L., Schafer B., Crane J., Karen G., **Tian M.** et al. (09/01/2020-08/31/2024) Reducing avocado losses to major challenges by improving resistance selection and disease management using next generation technologies. USDA SCRI, \$4,401,036 (Portion to **Tian M.** and Wages S at UH: \$356,754).

Tian M. (07/01/2020-06/30/2021) Statewide survey for *Fusarium oxysporum* f. sp. *cubense* tropical race 4. USDA APHIS, \$42,385.

Tian M. 2019-2024, Pathogenicity mechanisms and control of economically important plant pathogenic oomycetes, NIFA HATCH project, project no HAW09049-H.

Presentations at Conferences (Since 2014)

Note: Graduate students or researchers under my direct supervision are underlined.

Title: Differential expression of genes encoding sugar transporters in the basil pathogen *Peronospora belbahrii*.
Authors (put an asterisk on the presenter): Johnson E. T.*, Quesada-Ocampo L., Bowman M., Childs K., **Tian M.**
Name of Conference: American Phytopathological Society Annual Meeting 2020
 Location: on-line
 Date of Presentation: Aug 10-14, 2020

Title: Utilizing comparative genomics to develop species-specific diagnostic markers for basil downy mildew.
Authors (put an asterisk on the presenter): Standish J. R.*, Bowman M. J., Childs K. L., **Tian M.**, Quesada-Ocampo L. M.
Name of Conference: American Phytopathological Society Annual Meeting 2020
 Location: on-line
 Date of Presentation: Aug 10-14, 2020

Title: Predicting the *Peronospora belbahrii* secretome for *in silico* identification of effector proteins.
Authors (put an asterisk on the presenter): Standish J. R.*, Purayannur S., Bowman M., Childs K., **Tian M.**, and Quesada-Ocampo L. M.
Name of Conference: 97th Annual meeting of American Phytopathological Society Southern Division
 Location: Charleston, South Carolina
 Date of Presentation: Feb 9-12, 2020

Title: Targeted mutagenesis of basil candidate susceptibility gene DMRI using CRISPR/Cas9.
Authors (put an asterisk on the presenter): Navet N.*, **Tian M.**
Name of Conference: American Phytopathological Society annual meeting
 Location: Cleveland, Ohio
 Date of Presentation: 08/06/2019

Title: Dissection of the pathogenicity mechanisms of *Phytophthora palmivora* using CRISPR/Cas9 gene editing
Authors (put an asterisk on the presenter): **Tian M.***
Name of Conference: The Third HOKU (Honolulu Office of Kobe University) Symposium
 Location: Honolulu, Hawaii
 Date of Presentation: 11/16/2018

Title: A host-specific RxLR effector of *Phytophthora palmivora* contributes to virulence on cacao
Authors (put an asterisk on the presenter): Cai Z., Navet N., Uchida J., and **Tian M.***
Name of Conference: Joint Meeting of the American Phytopathological Society Pacific Division and Conference on Soil-borne Plant Pathogens
 Location: Portland, Oregon
 Date of Presentation: 06/27/2018

Title: Dissecting the pathogenicity mechanisms of *Phytophthora palmivora*.
Authors (put an asterisk on the presenter): **Tian M.***, Gumtow R., Navet N., Wu D., Schornack S. and Uchida J.
Name of Conference: American Phytopathological Society annual meeting
 Location: San Antonio, Texas
 Date of Presentation: 08/08/2017

Title: A *Phytophthora palmivora* cystatin-like protease inhibitor targets papain to contribute to virulence on papaya.
Authors (put an asterisk on the presenter): Gumtow R., Wu D., Schornack S., Uchida J., and Tian M.*
Name of Conference: Oomycete Molecular Genetics Network annual meeting
 Location: Asilomar, California
 Date of Presentation: 03/12/2017

Title: Functional characterization of a cytoplasmic effector gene highly conserved in plant pathogenic oomycetes.
Authors (put an asterisk on the presenter): Navet N*., Wu D., Shao D., and Tian M.
Name of Conference: Oomycete Molecular Genetics Network annual meeting
 Location: Asilomar, California
 Date of Presentation: 03/12/2017

Title: Vermicompost tea mediated host plant resistance against root-knot nematodes, *Meloidogyne spp.*
Authors (put an asterisk on the presenter): Mishra S.*, Sipes B. S., **Tian M.** and Wang K. H.
Name of Conference: Society of Nematologists / The Organization of Nematologists of Tropical America annual meeting
 Location: Montreal, Canada
 Date of Presentation: 2016

Title: Functional characterization of putative effector genes of basil downy mildew pathogen *Peronospora belbahrii*
Authors (put an asterisk on the presenter): Shao D.* and **Tian M.**
Name of Conference: International Society for Molecular Plant-Microbe Interactions XVII Congress
 Location: Portland, Oregon
 Date of Presentation: 07/20/2016

Title: Establishment of a simple and efficient Agrobacterium-mediated transformation system for *Phytophthora palmivora*
Authors (put an asterisk on the presenter): Wu D., Navet N. and **Tian M.***
Name of Conference: International Society for Molecular Plant-Microbe Interactions XVII Congress
 Location: Portland, Oregon
 Date of Presentation: 07/20/2016

Title: *De novo* assembly and analysis of transcriptome of *Peronospora belbahrii*
Authors (put an asterisk on the presenter): **Tian M.***, Wu D., and Shao D.
Name of Conference: Oomycete Molecular Genetics Network annual meeting
 Location: Asilomar, California.
 Date of Presentation: 03/16/2015

Title: Functional characterization of putative extracellular cystatins in *Phytophthora palmivora* pathogenicity on papaya.
Authors (put an asterisk on the presenter): Gumtow R.*, Dragich M., Uchida J., Schornack S., **Tian M.**
Name of Conference: Oomycete Molecular Genetics Network annual meeting
 Location: Asilomar, California
 Date of Presentation: 03/16/2015

Title: Dissecting the molecular basis of basil *Peronospora belbahrii* interactions.
Authors (put an asterisk on the presenter): Wu D., Win J., Shao D., and **Tian M.***
Name of Conference: American Phytopathological Society annual meeting
 Location: Pasadena, California
 Date of Presentation: 08/02/2015

Title: Toward understanding the molecular basis of basil-*Peronospora belbahrii* interactions
Authors (put an asterisk on the presenter): **Tian M.***
Name of Conference: CTAHR/Tokyo University of Agriculture and Technology (TUAT) meeting
 Location: Honolulu, HI.
 Date of Presentation: 05/15/2015

United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection & Quarantine
4700 River Road
Riverdale, MD 20737

Permit to Move Live Plant Pests, Noxious Weeds, and Soil
Interstate Movement
Regulated by 7 CFR 330

This permit was generated electronically via the ePermits system

PERMITTEE NAME: Dr. Miaoying Tian	PERMIT NUMBER: P526P-21-00350
ORGANIZATION: University of Hawaii at Manoa	APPLICATION NUMBER: P526-201216-006
ADDRESS: 3190 Maile Way, St. John 317 Honolulu, HI 96822	DATE ISSUED: 01/25/2021
MAILING ADDRESS: 3190 Maile Way, St. John 317 Honolulu, HI 96822	EXPIRES: 01/25/2024
PHONE: 808-956-5305	FACILITY NUMBER: N/A
ALT. PHONE: 330-317-5390	HAND CARRY: Yes
EMAIL: mtian@hawaii.edu	
FAX:	
DESTINATION: 3190 Maile Way, St. John 317, Honolulu, HI 96822	
RELEASE: No	


Under the conditions specified, this permit authorizes the following:

Regulated Article	Life Stage(s)	Intended Use	Shipment Origins	Originally Collected	Culture Designation
Phytophthora cinnamomi	Mycelia	Research - Greenhouse (growth chamber and lab included)	CA	Originally Collected from Within the Continental U.S.	

PERMIT GUIDANCE

- 1) Importation, interstate movement, and environmental release of the listed regulated organisms that have been genetically engineered may require a different permit issued under regulations at 7 CFR part 340. Any unauthorized importation, interstate movement, or environmental release (including accidental release) of a regulated GE organism would be a violation of those regulations. Before moving genetically engineered organisms, contact APHIS Biotechnology Regulatory Services (BRS) at: <https://www.aphis.usda.gov/aphis/ourfocus/biotechnology>. If BRS does not require a permit, contact the Pest, Pathogen, and Biocontrol permit unit for further guidance at: pest.permits@usda.gov
- 2) If an animal pathogen is identified in your shipment, to ensure appropriate safeguarding, please refer to http://www.aphis.usda.gov/import_export/animals/animal_import/animal_imports_an_products.shtml
- 3) If a human pathogen is identified, please refer to the CDC Etiologic Agent Import Permit Program at <http://www.cdc.gov/od/eaipp/>
- 4) This permit DOES NOT fulfill the requirements of other federal or state regulatory authorities. Please contact the appropriate agencies, such as the U.S. Environmental Protection Agency, the U.S.

Permit Number P526P-21-00350

THIS PERMIT HAS BEEN APPROVED ELECTRONICALLY BY THE FOLLOWING PPQ HEADQUARTER OFFICIAL VIA EPERMITS.	DATE
 Vickie Brewster	01/25/2021

WARNING: Any alteration, forgery or unauthorized use of this Federal Form is subject to civil penalties of up to \$250,000 (7 U.S.C.s 7734(b)) or punishable by a fine of not more than \$10,000, or imprisonment of not more than 5 years, or both (18 U.S.C.s 1001)



this permit,

- notify the Pest Permit Staff as soon as possible of any change in the permit holder's work assignment, residence, or affiliation,
- notify the Pest Permit Staff of the receipt of unauthorized and/or misdirected shipments of regulated materials/organisms,
- adequately mitigate environmental impacts resulting from unauthorized release of regulated materials/organisms and notify the Pest Permit staff immediately if one occurs,
- notify the Pest Permit Staff if the facility is damaged/destroyed or if you wish to decommission the facility,
- destroy all regulated materials/organisms prior to departure from the organization unless other arrangements are confirmed by the Pest Permit Staff.


Notifications to the Pest Permit Staff must be made via 866-524-5421 or pest.permits@usda.gov within one business day of the event triggering a notification.

3. This permit does not authorize movement or use of organisms listed in the Public Health Security and Bioterrorism Preparedness and Response Act of 2002. If any organism listed as a Select Agent is identified from materials associated with this research, the permit holder is required to notify APHIS, Agriculture Select Agent Services (AgSAS) immediately by phone at 301-851-3300 option 3, and within seven (7) days submit APHIS/CDC Form 4A (Report of Identification of a Select Agent or Toxin in a Clinical or Diagnostic Laboratory) to APHIS, AgSAS; 4700 River Rd, Unit 2, Riverdale, MD 20737 (see instructions at: https://www.selectagents.gov/resources/APHIS-CDC_Form_4_Guidance_Document.pdf). Failure to comply with this requirement is a violation of the Agricultural Bioterrorism Protection Act of 2002. For a complete list of Select Agents please visit: <https://www.selectagents.gov/selectagentsandtoxinslist.html>

Select agents include: *Peronosclerospora philippinensis* (*Peronosclerospora sacchari*), *Coniothyrium glycines* (formerly *Phoma glycinicola* and *Pyrenochaeta glycines*), *Ralstonia solanacearum*, *Rathayibacter toxicus*, *Sclerophthora rayssiae*, *Synchytrium endobioticum*, *Xanthomonas oryzae*, *Bacillus anthracis*, *Brucella abortus*, *Brucella melitensis*, *Brucella suis*, *Burkholderia mallei*, and *Burkholderia pseudomallei*.

For applicants applying for a permit for Ralstonia solanacearum non-race 3 biovar 2, an exclusion letter will need to be submitted along with the application

Permit Number P526P-21-00350

<p>THIS PERMIT HAS BEEN APPROVED ELECTRONICALLY BY THE FOLLOWING PPQ HEADQUARTER OFFICIAL VIA EPERMITTS.</p> <p style="text-align: center;"> Vickie Brewster</p>	<p>DATE</p> <p style="text-align: center;">01/25/2021</p>
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WARNING: Any alteration, forgery or unauthorized use of this Federal Form is subject to civil penalties of up to \$250,000 (7 U.S.C.s 7734(b)) or punishable by a fine of not more than \$10,000, or imprisonment of not more than 5 years, or both (18 U.S.C.s 1001)

4. All persons working with the listed regulated materials/organisms must be informed of these permit conditions. Anyone working with these materials/organisms must agree to adhere to and sign/initial these conditions before beginning work. These signed conditions do not need to be submitted to USDA/APHIS but must be readily accessible and made available to Federal and State regulators upon request.

Note: these conditions may be copied and stored electronically for electronic signature and initialing provided that the permit number, authorized materials/organisms and life stages, release locations if applicable, and authorization statement all appear on the document with the permit number. Signing these conditions only indicates that the person working under this permit has read them; the permit holder is the sole responsible party under this permit.

5. All packages for transport must minimally consist of both inner/primary and outer/secondary packages securely sealed so that both are effective barriers to escape or unauthorized dissemination of the listed materials/organisms. The inner/primary package(s) will contain all regulated materials/organisms and must be cushioned and sealed in such a way that it remains sealed during shock, impact, and pressure changes that may occur. The outer/secondary shipping container must be rigid and strong enough to withstand typical shipping conditions (dropping, stacking, impact from other freight, etc.) without opening.
6. Upon receipt, all packages must be opened within a Class II or III biosafety cabinet, or within a still-air environment (e.g. a transfer hood with the air turned off), located within the facilities at the destination address identified above to prevent the potential dissemination of the package contents. Cultures must be in a sealed container during transport to or within the permit holder's assigned research facilities.
7. All research activities, plant inoculations and subsequent disease development must occur at the destination location identified above. This location must have facilities that are adequate to prevent the unauthorized dissemination of the regulated articles received under this permit. Access to this facility must not be accessible to the general public.
8. The regulated materials/organisms listed on this permit are strictly for research in a controlled environment such as a laboratory, growth chamber, or greenhouse. This permit is not valid if the regulated materials/organisms will be used for field research or release into the environment.
9. Records must be kept of all organisms maintained under this permit. Minimally the record will consist of the name of the organism identified to the lowest taxon possible, the country, or US state/territory, where each isolate was collected, the date the isolate was received, and the date and how the organism was devitalized. These records must be made available to Federal and State regulators upon request.
10. Regulated materials/organisms must be stored or maintained in an area that is not accessible to the general public.

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11. DEVITALIZATION AND WASTE DISPOSAL

Upon completion of research, all organisms, inoculated plants, plant material, soil and/or growing media must be treated by heat or chemical means sufficient to kill, destroy, or otherwise deactivate plant pathogens. Glassware and other materials used to conduct research must be decontaminated prior to reuse or disposal.

- 12. As an alternative to the DEVITALIZATION AND WASTE DISPOSAL requirements listed above, devitalization/destruction of organisms and infected material may be conducted off site by a facility holding a valid PPQ compliance agreement prior to disposal. Vendor may or may not be in the same state. All organisms, contaminants and/or packaging materials must be in sealed containers during transport to this waste management facility in order to prevent any unauthorized dissemination of the regulated articles.
- 13. There is to be no further movement or distribution of the listed regulated materials/organisms within the United States and its territories unless the recipient holds, or is named as a responsible party on a valid PPQ526 permit for receipt of such materials/organisms.

END OF PERMIT CONDITIONS

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