

NO PERMIT WILL BE ISSUED TO MOVE AND USE LIVE INSECTS OR PLANT
PESTS OR NOXIOUS WEEDS UNTIL A COMPLETED APPLICATION IS RECEIVED.

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| DEPARTMENT OF FOOD AND AGRICULTURE PLANT HEALTH AND PEST PREVENTION SERVICES 1220 N STREET, ROOM 210 SACRAMENTO, CALIFORNIA 95814 APPLICATION AND PERMIT TO MOVE AND USE LIVE PLANT PESTS OR INSECTS OR NOXIOUS WEEDS (Attachments may accompany application if space is insufficient) | | SECTION A TO BE COMPLETED BY APPLICANT | | | |
| | | 1. NAME AND ADDRESS (Include organization name and Zip Code) Elizabeth Fichtner, PhD ; UCCE Tulare County 4437 S. Laspina St.; Suite B Tulare, CA 93274 | | | |
| | | 2. TELEPHONE NUMBER/FAX NUMBER/EMAIL Telephone: 559-684-3310; Fax: 559-685-3319; ejfichtner@ucanr.edu | | | |
| 3. TYPE OF ORGANISM <input type="checkbox"/> Arthropod <input checked="" type="checkbox"/> Pathogen <input type="checkbox"/> Noxious Weed <input type="checkbox"/> Nematode | | | | | |
| 4. SCIENTIFIC NAME OF ORGANISM | CLASSIFICATION (Order, Family, etc.) | LIFE STAGES | NUMBER OF SPECIMENS | MOVED OR SHIPPED FROM | WHAT HOST MATERIAL WILL ACCOMPANY PEST? |
| putative plant pathogenic | | | | | diagnostics from pistachio, |
| fungi, bacteria, Oomycetes | | | | | walnut, almond, prune, olive, |
| | | | | | grapes |
| 5. ADDRESS OF USE LOCATION IF DIFFERENT THAN ITEM 1. | | 6. NAME AND ADDRESS OF SUPPLIER We accept field samples from growers and often do diagnostic work, including culturing. Samples are from either Tulare County or neighboring counties. | | | 7. DESTINATION COUNTY Tulare/ |
| 8. APPROXIMATE DATE OF MOVEMENT throughout year | 9. NUMBER OF SHIPMENTS | 10. METHOD OF SHIPMENT <input type="checkbox"/> Mail <input type="checkbox"/> Freight <input type="checkbox"/> Baggage <input checked="" type="checkbox"/> Auto | | | |
| 11. INTENDED USE (Be specific; state whether use will be in a laboratory and/or greenhouse and/or in the field, and, in the case of pathogens, state whether use will include plant inoculation.) As Farm Advisors, Dr. Allison Ferry and Dr. Elizabeth Fichtner receive and collect plant disease samples from growers. Together, we work on the nut crops, olives, prunes, and grapes. As part of our routine job, we often isolate putative pathogens (generally fungi, Oomycetes, and bacteria) from field samples. We send unknowns either to CDFA or to campus-based Extension Specialists for molecular-level identification. We may retain cultures for completion of Koch's Postulates in greenhouse or growthchamber studies. | | | | | |
| 12. METHODS TO BE USED TO PREVENT ESCAPE OF THE ORGANISMS All infected plant material, infested soil, and cultures are autoclaved for 45 minutes prior to disposal. All countertops/plant pots/infested hardware are disinfested with either 10% bleach for 10 min or sprayed down with quarternary ammonium (ie. greenhouse benches). Large fruit bins are placed under greenhouse benches to catch flow-through of water. | | | 13. METHOD OF FINAL DISPOSITION Everything is autoclaved prior to final disposal. ***NOTE that Dr. E. Fichtner is submitting this permit, but adding Dr. Allison Ferry-Abee, another pathologist and co-worker in the UCCE Tulare office to permit application. As pathologists, feel the need to maintain a permit for diagnostics to remain in compliance with CDFA regulations. | | |

14. I/We agree to comply with the Standard Conditions of Permit, and understand that the permit is subject to other conditions which may be prescribed.

SIGNATURE OF APPLICANT

DATE



12/30/14

SECTION B - TO BE COMPLETED BY STATE OFFICIAL

PERMIT

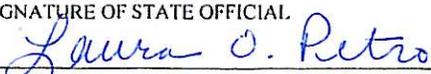
PERMIT NUMBER

(Permit not valid unless signed by an authorized official of Plant Health and Pest Prevention Services Division)

3123

Under authority of Section 6305 of the Food and Agricultural code, permission is hereby granted to the applicant named above to move and use the organisms described, except as deleted, subject to the conditions stated on, or attached to, this application.

VIOLATION OF ANY OF THE CONDITONS OF THIS PERMIT SHALL BE SUFFICIENT CAUSE FOR ITS IMMEDIATE REVOCATION.

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| 15. SIGNATURE OF STATE OFFICIAL  | 16. DATE ISSUED January 7, 2015 | 17. EXPIRATION DATE January 31, 2017 |
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Copy to: County Agricultural Commissioner
 Pest Exclusion
 Plant Pest Diagnostics Center
 Supplier
 File

E. Fichtner Isolate Collection and Proposed Studies

January 2015

| Isolate | Organism type | Host Plant | Associated Symptom | County of origin |
|--------------------------------------|---------------|------------|---------------------|------------------|
| <i>Phytophthium helicoides</i> | Oomycete | pistachio | root rot | Kern |
| <i>Phytophthora parsiana</i> | Oomycete | pistachio | crown rot | Kern |
| <i>Phytophthora taxon walnut</i> | Oomycete | pistachio | bleeding canker | Kern |
| <i>Rhodococcus fascians</i> (orange) | Bacterium | walnut | stem proliferation | Tulare |
| <i>Rhodococcus fascians</i> (yellow) | Bacterium | walnut | stem proliferation | Tulare |
| <i>Rhodococcus fascians</i> (yellow) | Bacterium | walnut | Leafy gall | Fresno |
| <i>Rhodococcus fascians</i> (yellow) | Bacterium | pistachio | Pistachio bushy top | Tulare |

Proposed work for each set of isolates:

All proposed studies will be conducted in the greenhouse and growth chamber/incubator at Lindcove Research and Extension Center, Exeter, CA

Phytophthium helicoides: Completion of Koch's postulates to prove pathogenicity on pistachio. Plants, seeds, and seedlings will be inoculated with *P. helicoides* for determination of influence of plant age on susceptibility. Additional studies may be designed to address influence of salinity on host susceptibility, as well as potential for phosphites to protect plants from disease development.

Phytophthora parsiana and *Phytophthora taxon walnut*: Completion of Koch's postulates to prove pathogenicity on pistachio. Additional studies are proposed to determine susceptibility of commercial pistachio rootstocks to these putative pathogens.

Rhodococcus fascians: Completion of Koch's postulates to prove pathogenicity on walnut. Additionally, tests are planned to investigate pathogenicity of walnut isolates on pistachio and vice versa.

STANDARD CONDITIONS OF STATE DIAGNOSTIC PERMIT

1. This permit is authorized for the isolation and culturing of plant pathogens only, excluding citrus canker, citrus variegated chlorosis, or any plant pathogen not known to occur in California. Isolation and culturing of animal pathogens, such as anthrax, hoof and mouth disease and exotic Newcastle disease, is prohibited and must be reported to State regulatory officials if found; all animal pathogens must be destroyed.
2. New exotic pathogens must be reported immediately to CDFA. The CDFA must also be notified immediately if any plant pathogen found is not known to occur in California, regardless of the origin. These pathogens must be destroyed. No maintenance of these isolates is allowed.
 3. **A written report of pathogens identified (including host information) must be provided semi-annually to CDFA**, Stephen Brown, Permits and Regulations, Plant Health and Pest Prevention Services, 1220 N Street, Room 210, Sacramento, CA, 95814, or e-mailed to Permits@cdfa.ca.gov **If a culture collection is authorized under this permit, a list of the cultures kept in storage must also be included in this report sent to CDFA.**
4. All organisms or infected plant material shall be shipped in sturdy, escape-proof containers and a copy of this permit shall accompany each shipment.
5. Arrival of each shipment shall be immediately reported to the office of the County Agricultural Commissioner at telephone: (Tulare 559-684-3350). **Note: The Commissioner may waive this requirement through written notification to the permittee, and this office, that it is not required.**
6. All packages shall be opened in a laminar flow biosafety cabinet, Class II, Type A or other safe manner in a secure room to prevent the escape of pathogens and insect pests. All isolations and culture transfers shall be conducted in a laminar flow biosafety cabinet that meets or exceeds Class II, Type A or other safe manner. Organisms, and infected plant material if any, shall be kept and used only within the laboratory or designated area at the permittee's address and/or the address specified in Item 5, Section A.
7. No living organisms kept under this permit, inoculated plants, or infected plant material, shall be removed from the confined, designated area except by prior approval from the permit office and shall be maintained within the area(s) approved under this permit.
8. Without prior notice and during regular business hours, State and county agricultural regulatory officials shall be allowed to inspect the conditions under which the organisms are kept and used.
9. All necessary precautions must be taken to prevent escape of pests. In the event of pest escape, this office shall be immediately notified at (916) 654-1017.
10. Upon identification of pathogen, all infected plant materials must be destroyed. All other materials (including containers, pots, soil, growing media, equipment, etc.) must be decontaminated by autoclave, incineration, or other equivalent methods.
11. No plant inoculations are allowed except for what is necessary for identification purposes. Whenever possible, plant inoculations must be performed in growth chambers. If greenhouse studies are necessary, and have been authorized under this permit, access to the greenhouse must be limited to the permittee and only trained staff. Greenhouse doors must be kept closed and locked at all times. Greenhouse studies are only authorized for organisms previously confirmed in the laboratory and by CDFA as not being quarantine pests or new records for the state. You must request approval from CDFA prior to moving to the greenhouse.
12. Greenhouse must be screened to prevent vector entry or escape. Ongoing monitoring of potential vectors is mandatory. Insect control must be in practice at all times including insect spraying, and sticky traps.
13. No vector transmission permitted. If necessary for virus diagnostics, only mechanical inoculation is allowed.
14. According to Food and Agricultural Codes, the movement of plant material from areas under interior quarantine regulations in California is prohibited, except under a special permit specifically written for the quarantined pest. All regulations concerning the movement of plants and plant parts from areas under interior quarantine

must be followed. For a current list of California Interior Quarantines, please access the Plant Quarantine Manual at the following Web site: <http://www.cdfa.ca.gov/phpps/Manuals.html>

15. This permit is issued only for the named permit holder at the address identified on this permit and cannot be transferred or assigned. If the permit holder ceases to be employed at the location where the organisms received under this permit are kept, the permit holder must destroy the organisms, unless a new individual submits a Form 66-026, obtains a permit prior to the permittee's departure, and assumes responsibility for the continued maintenance of the authorized organisms.