

# California Pistachio Research Board

## 2019 Research Projects

Proposal Title	Principal Investigator	Amount Awarded
<b>Entomology Research</b>		
Improving and verifying quality of mass-reared navel orangeworm for sterile insect technique	Chuck Burks/Houston Wilson	\$51,384
Identification of Pistachio Associated Volatiles for the Control of Navel Orangeworm	Luisa W. Cheng	\$50,000
Comparing the feeding damage of the invasive brown marmorated stink bug to native large bugs	Kent Daane	\$21,192
The use of trap crops or hedgerows to monitor and suppress large bug damage	Kent Daane/ Houston Wilson	\$38,629
Another look at pheromonal or related attractants for leaf-footed bugs ( <i>Leptoglossus</i> spp.) infesting California nut crops	Jocelyn G. Millar	\$40,754
Comprehensive ecological and economic modeling of pesticide spray applications in pistachio orchards	Christian Nansen	\$71,500
Improved control of navel orangeworm: focus on increasing insecticide efficacy using adjuvants and improved timing	Joel Siegel	\$60,000
Chemical and physical characteristics of pistachio hull split associated with infestation by navel orangeworm ( <i>Amyelois transitella</i> )	May Berenbaum	\$35,000
<b>Food Safety</b>		
Factors Affecting the Efficacy of AF36, Improvement of the biocontrol Agent, and Establishing an Area-wide Long-term Mycotoxin Management Program	Themis J. Michailides	\$66,705
A survey of fungi producing Ochratoxin A in California pistachios and management of contamination	Themis J. Michailides	\$57,467
<b>Horticulture Research</b>		
Integrated Conventional and Genomic Approaches to Pistachio Rootstock Development	Malli Aradhya	\$112,475
Long Term Saline Irrigation Strategies for Pistachios on PGI Rootstock	Kaomine Vang/Gary Banuelos	\$60,000
Determining Pistachio Hull Susceptibility to Navel Orangeworm Oviposition as a Function of Degree-day Accumulation	Barbara Blanco-Ulate	\$70,000
Efficacy trials of new dormancy-breaking treatments for pistachios	Gurreet Brar	\$43,900
Cracking the Black-box of dormancy in Pistachios: Tracking biochemical changes in inflorescence buds from dormancy to bud break	Gurreet Brar	\$87,788
Monitoring the physiological status of pistachio trees by gene activity measurements to optimize the timing and improve our understanding of rest-breaking treatments	Patrick Brown/ Louise Ferguson	\$47,000
Pistachio Improvement Program	Pat J. Brown	\$59,822
Examination of Seedlings from Open-Pollinated Female <i>Pistachia atlantica</i> Parent Trees of UCB-1 Seed: Paternity Testing, Phenotypic Characterization and Development of Improved DNA Markers	Gerald Dangl	\$33,630
Characterization of root plasticity in pistachio rootstocks for improved nutrient uptake and stress response	Georgia Drakakaki	\$101,514
Evaluating new training systems for pistachio	Bruce Lampinen	\$57,336
Identification of Superior UCB-1 Rootstocks using DNA Markers: Phase 3, Year 1	Richard Michelmore/ Preece/Golino	\$122,340
Development of New, Reliable, Vigorous, Clonal Rootstocks	John Preece/ Deborah Golino	\$63,047
Clonal UCB-1 Pistachio Rootstock Micropropagation: Is pistachio Bushy top syndrome a variant that occurred in tissue culture?	John Preece/ Deborah Golino	\$27,541
Development of Tree Carbohydrate Budget Based Methods for Sustainable Management of Pistachio Orchards under Variable Central Valley Climatic Conditions	Maciej Zwieniecki	\$75,000
Pistachio Irrigation Training Module & Monitoring Demo Sites	Blake Sanden/Daniele Zaccaria	\$28,733
<b>Mechanics Research</b>		
Improving Pistachio Harvesting Machines Using a Tree-specific Feedback Loop	Reza Ehsani	\$77,032
<b>Pathology Research</b>		
Epidemiology and management of <i>Colletotrichum</i> species causing anthracnose, <i>Botryosphaeria</i> species and <i>Phoma fungicola</i> causing blight diseases on pistachio in California and Arizona (3rd year).	Themis J. Michailides	\$63,371
Complete <i>Rhodococcus</i> whole-genome sequence analyses	Florent Trouillas	\$49,965
Evaluating pistachio rootstock tolerance to soil borne diseases	Florent Trouillas	\$65,993
Characterizing pistachio rootstocks for host status to plant-parasitic nematodes	Andreas Westphal	\$53,408