

enterprise

Melons have their moment, but be sure to buy yours soon

UCD entomologist selected as ESA Fellow

By Kathy Keatley Garvey
SPECIAL TO THE ENTERPRISE

Chemical ecologist Walter Leal, professor of entomology at UC Davis, and internationally known for his pioneering and innovative work in insect communication, is a newly selected Fellow of the Entomological Society of America.

"This is a highly prestigious honor and richly deserved," said Michael Parrella, professor and chair of the UCD entomology department and one of 10 other UCD entomologists named ESA Fellows since 1947.

The 6,000-member organization selects up to 10 members each year as a Fellow, recognizing outstanding contributions in research, teaching, extension and administration. This year's 10 Fellows will be recognized at the ESA annual meeting, Dec. 13-16 in Indianapolis.

"Dr. Leal is an acknowledged leader nationally and internationally in the field of insect chemical ecology," said May Berenbaum, professor and head of the entomology department, University of Illinois, Urbana-Champaign.

Lauding his research, publications and leadership, she praised him as a "trail blazer" and "world authority on chemical communication."

As chair of the entomology department, he shepherded the department to the No. 1 status in the nation (Chronicle of Higher Education). Among his other leadership activities: past president of the International Society of Chemical Ecology and the first chair of the ESA's section on Integrative Physiological and Molecular Insect Systems.

Chemical ecologist Wendell Roelofs, a newly retired Cornell University professor, described Leal as "a world leader on the identification of complex chemical signals (pheromones) of major pest species and on the molecular interactions involved in their transduction to behavior."

"His research projects are world-class and have been making pioneering breakthroughs for many years," Roelofs said.

Entomologist Bruce Hammock, UCD distinguished professor of entomology, said Leal's research has "practical implications in explaining how insects communicate within species, how they detect host and non-host plants, and how insect parasites detect their prey."

Pheromones are a major "green" approach to insect control, a movement away from pesticides, Hammock said.

"His work on multiple pheromones will greatly benefit not only California and the nation, but international agriculture. His navel orangeworm work alone is certain to result in a multi-million dollar beneficial impact on crops ranging from almonds to citrus."

Leal has identified and synthesized complex pheromones from such insects as scarab beetles, true bugs, longhorn beetles, moths and the naval orangeworm. He and his laboratory discovered the secret mode of the insect repellent DEET. The groundbreaking research, published Aug. 18, 2008, in the Proceedings of the National Academy of Sciences, is among the most widely downloaded and cited PNAS documents. His pheromone work has graced the cover of several journals, including Structure, and has been showcased in the popular press, including the BBC, The New York Times, and National Public Radio.

Entomologist and distinguished professor Coby Schal of the North Carolina State University described Leal's research program as "one of the best in the world" and Leal "is one of the most energetic and collaborative scientists I know."



KATHY KEATLEY GARVEY/COURTESY PHOTO

Chemical ecologist Walter Leal, professor of entomology and former chair of the UC Davis entomology department, is a newly selected Fellow of the Entomological Society of America, an honor given to only 10 or fewer members of the 6,000-member ESA each year.

Recipient of many prestigious awards, Leal received the 2008 ESA Recognition Award in Insect Physiology, Biochemistry and Toxicology, and the 2007 Silverstein-Simeone Award from the International Society of Chemical Ecology. His native Brazil awarded him its Medal of the Entomological Society of Brazil, and the Medal of Science (equivalent of ESA Fellow). The Japanese Society of Applied Entomology

and Zoology granted him its highest honor, Gakkai-sho. Educated in Brazil and Japan, Leal holds a doctorate in applied biochemistry from Tsukuba University, Japan, with other degrees in chemical engineering and agricultural chemistry. He is Fellow of the American Association for the Advancement of Science. Leal is the 11th UCD entomologist to be named an ESA Fellow. Richard M. Bohart

(1917-2007), for whom the Bohart Museum of Entomology is named, was the first UCD entomologist to be selected an ESA Fellow (1947). Others include Donald McLean, 1990; Harry H. Laidlaw Jr. (1907-2003), 1991; John Edman, 1994; Robert Washino, 1996; Bruce Eldridge, 2001; William Reisen, 2003; Harry Kaya, 2007; Michael Parrella and Frank Zalom, 2008; and Walter Leal, 2009.