

# Department Seminar Series

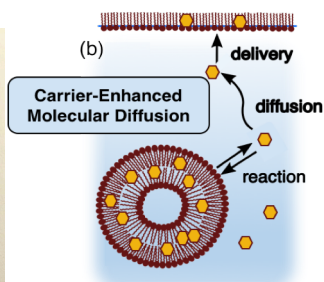
**UC DAVIS**  
**FOOD SCIENCE AND  
TECHNOLOGY**

**4:10 PM, Wednesday Nov. 17, 2021**

**FST290 students meet in person in Room 1207 RMI-South**

**Others may attend remotely by Zoom:**

**<https://ucdavis.zoom.us/j/92208083430>**



**Phospholipids as Carriers of Water-Insoluble Compounds**

**Stephanie Dungan, Ph.D.**

Professor and Engineer

Food Science and Technology; Chemical Engineering  
UC Davis

*Dr. Dungan received her Ph.D. in Chemical Engineering from MIT. Her research focuses on how amphiphilic molecules affect properties of food materials, including interfacial tension, emulsion formation and stability, and the solubility of bioactive lipids. Amphiphiles can self-assemble to form nano-sized carriers, and most recently her group is studying how these carriers can host and transport hydrophobic solutes.*

**SUMMARY:** As the food ingredient lecithin, phospholipids are used extensively in food formulations. They also self-assemble to construct various biological structures, such as membranes, lipoproteins, and bile salt micelles. I will talk about how, by varying the acyl chain length of phospholipids, we can create carrier particles of various sizes and shapes, and then develop sophisticated tools to probe their properties as hosts and as delivery vehicles for valuable lipid ingredients.



**Epidemiological approaches to better understand foodborne pathogen dynamics in alternative agricultural systems**

**Alda Pires, DVM, MPVM, Ph.D.  
DACVPM**

Associate Professor for Cooperative Extension  
School of Veterinary Medicine  
UC Davis

*Dr. Pires obtained her DVM from UTAD, Portugal. She received her PhD from Michigan State University with an emphasis in veterinary epidemiology. Dr. Pires' research focuses on epidemiological tools to monitor food safety hazards and identify mitigation strategies to reduce the dissemination of foodborne pathogens in pre-harvest and the spread of infectious diseases in alternative agricultural systems (diversified, small-scale, backyard, and organic farms).*

**SUMMARY:** Dr. Pires works directly with Extension Specialists and educators, producers, stakeholders, and policy makers on various produce food safety issues to minimize the introduction and dissemination of foodborne pathogens within the pre-harvest farm environment, both at statewide and nationwide level. An overview of past and current research and extension in organic and diversified farms will be covered.