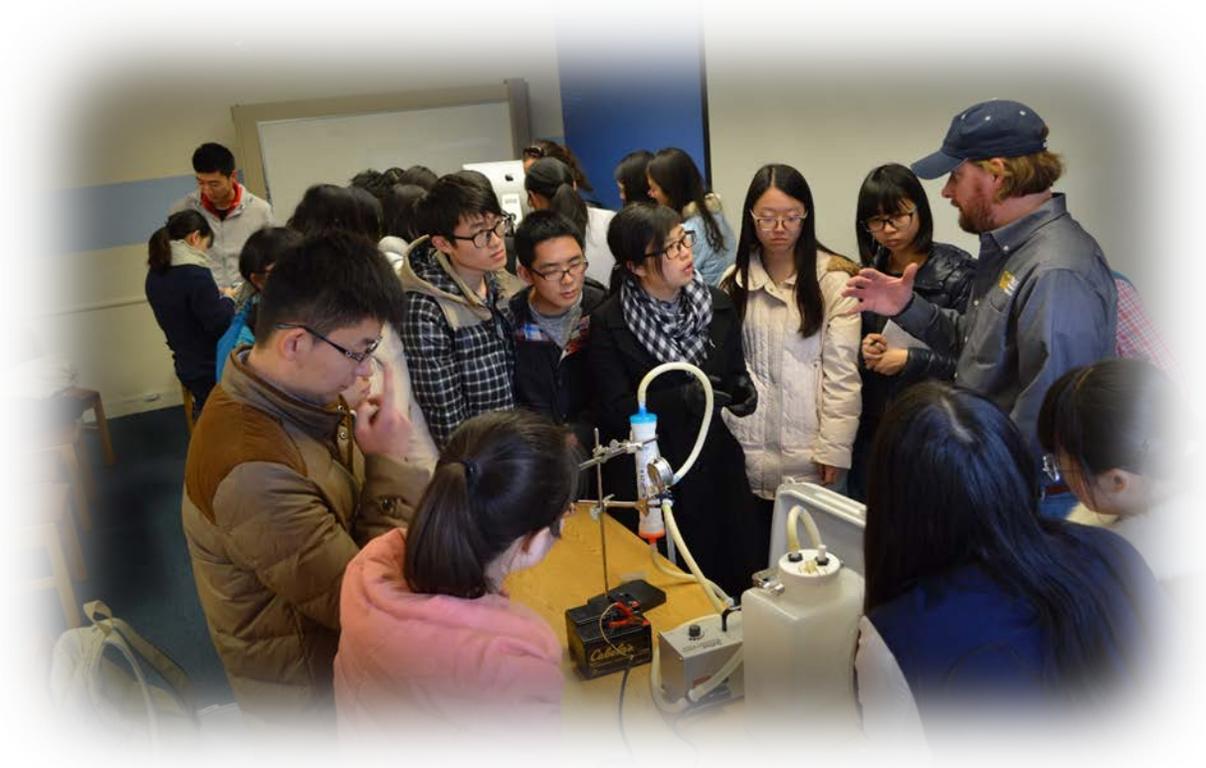


# NAU-UC Davis Graduate Education Conference on One Health

University of California, Davis  
January 25 – February 12, 2016

Sponsored by: Nanjing Agricultural University

Hosted by:  
University of California, Davis  
Western Institute for Food Safety and Security



## Conference Description

The Western Institute for Food Safety and Security is hosting the NAU-UC Davis Graduate Education Conference on One Health at the University of California, Davis campus for Nanjing Agricultural University (NAU) undergraduate students who have an interest in graduate programs at UC Davis as part of the NAU-UC Davis One Health Center for Food Safety joint program. The conference will take place between January 25 and February 12, 2016.

The School of Veterinary Medicine (SVM), College of Agricultural and Environmental Sciences (CAES) and the Western Institute for Food Safety and Security (WIFSS) have formed an educational exchange program with Nanjing Agricultural University (NAU) directed at establishing a One Health Center for Food Safety at NAU. Research at the Center will focus on understanding food safety and water quality issues across Asia. Corresponding educational programs will promote progress toward safer, better quality food systems in China. The vision of the One Health Center for Food Safety at NAU is to house a multidisciplinary faculty working on a wide array of projects related to food and water safety using a One Health approach. The primary focus of the One Health Center for Food Safety is to build capacity for education and research expertise at NAU relative to One Health for Asia and globally.

Special thanks to our speakers and the people who gave so generously of their time to help this be a successful conference, including:

- John Angelos, Associate Professor of Veterinary Medicine, WIFSS
- Chris Brunner, Conference Coordinator, WIFSS
- Jenny Chen, College of Agricultural and Environmental Sciences
- Heather Johnson, Instructional Systems Designer, WIFSS
- Nicole Nisson, Program and Financial Assistant, WIFSS
- Bennie Osburn, Director of Outreach and Training, WIFSS

## MONDAY – JANUARY 25

Welcome Center, UC Davis

1:30 – 2:30 pm	Walking Tour	<i>Meet at UC Davis Welcome Center</i>
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## TUESDAY – JANUARY 26

1041 Gladys Valley Hall

9:00 – 9:45 am	WIFSS Overview	<i>Robert Atwill, Director, Western Institute for Food Safety and Security</i>
9:45 – 10:00 am	BREAK	
10:00 – 10:45 am	The UC Davis Global Study Program	<i>Beth Greenwood, Center for International Education, UC Davis Extension</i>
10:45 – 11:00 am	BREAK	
11:00 – 11:45 am	One Health Overview	<i>Bennie Osburn, Western Institute for Food Safety and Security</i>
11:45 – 1:30 pm	LUNCH	
1:30 – 2:15 pm	Training for One Health in Food Safety: Antibiotics in Plants?	<i>John Angelos, Western Institute for Food Safety and Security</i>
2:15 pm	ADJOURN	

## WEDNESDAY – JANUARY 27

170 Schalm Hall

9:00 – 9:45 am	The Cytoskeletal Microtubules and Plant Cell Growth Side	<i>Bo Liu, Department of Plant Biology, College of Biological Sciences</i>
9:45 – 10:15 am	BREAK	
10:15 – 11:00 am	From Bench to Bedside -- Sharing First Hand Experience	<i>Somen Nandi, Department of Molecular and Cellular Biology</i>
11:00 – 1:30 pm	LUNCH	
1:30 – 2:15 pm	Veterinary Toxicology	<i>Birgit Puschner, Department of Molecular Biosciences, School of Veterinary Medicine</i>
2:30 – 3:15 pm	Graduate Group in Horticulture and Agronomy	<i>Theodore DeJong, Department of Plant Sciences, College of Agricultural &amp; Environmental Sciences</i>
3:15 pm	ADJOURN	

## THURSDAY – JANUARY 28

170 Schalm Hall

9:00 – 9:45 am	Biology and Control of a Plant Pathogenic Fungus on Celery	<i>Lynn Epstein, Department of Plant Pathology, College of Agricultural &amp; Environmental Sciences</i>
9:45 – 10:15 am	BREAK	
10:15 – 11:00 am	A Do-it-Yourself Guide to Disrupt Microbial Communities in Large and Small Ecosystems	<i>Jorge Rodrigues, Department of Land, Air and Water Resources, College of Agricultural &amp; Environmental Sciences</i>
11:00 – 11:10 am	BREAK	
11:10 – 12:00 pm	"Bad Metal" Primer: Examples of Metals that Pollute Our Environment and Adversely Affect Human and Animal Health	<i>Robert Poppenga, California Animal Health and Food Safety Laboratory</i>
12:00 – 1:30 pm	LUNCH	
1:30 – 2:15 pm	Hyperspectral Imaging, Phenomics, and Agricultural Innovation	<i>Christian Nansen, Department of Entomology and Nematology</i>
2:20 – 3:00 pm	The Role of One Health in Veterinary Education and Food Safety	<i>Michael Lairmore, Dean, School of Veterinary Medicine</i>
3:00 pm	ADJOURN	

## FRIDAY – JANUARY 29

1041 Gladys Valley Hall

9:00 – 9:45 am	Rangeland Management for Livestock Production and Conservation	<i>Kenneth Tate, Department of Plant Sciences, College of Agricultural &amp; Environmental Sciences</i>
9:45 – 10:15 am	BREAK	
10:15 – 11:00 am	Understanding and Manipulating Phenolic and Carotenoid Pathways for Crop Improvement	<i>Li Tian, Department of Plant Sciences, College of Agricultural &amp; Environmental Sciences</i>
11:00 – 1:15 pm	LUNCH	
1:15 – 2:00 pm	Plastid Biogenesis	<i>Kentaro Inoue, Department of Plant Sciences, College of Agricultural &amp; Environmental Sciences</i>
2:00 – 3:00 pm	On-line Blended Learning Courses	<i>Heather Johnson, Western Institute for Food Safety and Security</i>
3:00 pm	ADJOURN	

## Week Two – Monterey/Hilmar/Davis

### MONDAY – FEBRUARY 1

#### Monterey

8:00 am	Board Bus UC Davis Campus	<i>VM3B Parking Lot</i>
12:00 pm	Arrive Monterey	
12:00 – 1:30 pm	LUNCH	<i>Location in Monterey TBD</i>
2:00 pm	Arrive USDA ARS Field Station	<i>1636 E. Alisal Street, Salinas</i>
2:00 – 2:30	ARS Overview	<i>Sharon Benzen, USDA-Ag Research Service</i>
2:30 – 2:45 pm	BREAK	
2:45 – 4:00 pm	Ecology of Pathogens in Salinas Valley	<i>Robert Atwill, Director, Western Institute for Food Safety and Security</i>
4:00 pm	Board Bus	
5:00 pm	Check into Hotel	<i>Casa Munras Garden Hotel &amp; Spa</i>
6:00 pm	DINNER	<i>Location TBD</i>

### TUESDAY – FEBRUARY 2

#### Monterey

8:00 am	Board Bus	<i>Casa Munras Garden Hotel &amp; Spa</i>
8:30 am	Arrive ARS Field Station	<i>1636 E. Alisal Street, Salinas</i>
8:45 – 9:30	FDA Foodborne Outbreak Investigation	<i>Bennie Osburn, Western Institute for Food Safety and Security</i>
9:30 – 9:45 am	BREAK	
9:45 – 10:30 am	Food Safety Environmental Investigations	<i>Ronny Bond and Missy Partyka, Western Institute for Food Safety and Security</i>
10:30 – 12:00 pm	Outdoor Demonstration of Environmental Sampling Techniques for Food and Waterborne Pathogens	<i>Ronny Bond, Missy Partyka, Heather Johnson, Bennie Osburn, Western Institute for Food Safety and Security</i>
12:00 – 1:00 pm	LUNCH	<i>Catered lunch at ARS building</i>
1:00 – 3:00 pm	Demonstration of Novel Water Sampling Techniques for Detection of Bacteria	<i>Ronny Bond and Missy Partyka, Western Institute for Food Safety and Security</i>
3:00 pm	Board Bus	<i>Return to Hotel</i>
6:00 pm	DINNER	<i>Location TBD</i>

### WEDNESDAY – FEBRUARY 3

#### Monterey/Stanislaus County

8:00 am	Depart Hotel	<i>Casa Munras Garden Hotel &amp; Spa</i>
10:30 am	Dairy Tour	<i>Ahlem Dairy, Hilmar</i>
2:00 pm	Depart Dairy	
4:00 pm	Arrive UC Davis Campus	<i>VM3B</i>

## THURSDAY – FEBRUARY 4

1041 Gladys Valley

9:00 – 10:30 am	Protecting Produce Safety Through Preventing Microbial Pathogens	<i>Xunde Li, Western Institute for Food Safety and Security</i>
10:30 – 11:00 am	BREAK	
11:00 – 11:45 am	Food Safety Risks from Wildlife: Challenges in Agriculture, Conservation and Public Health	<i>Michele Jay-Russell, Western Center for Food Safety</i>
11:45 – 1:30 pm	LUNCH	
1:30 – 2:25 pm	Pathogen Challenge of Animal and Foodwaste	<i>Pramod Pandey, UC Cooperative Extension/Department Population Health and Reproduction</i>
2:30 – 3:30 pm	St. Patrick's Day Revenge	<i>David Goldenberg, Western Institute for Food Safety and Security</i>

## FRIDAY – FEBRUARY 5

1041 Gladys Valley Hall

10:15 – 11:00 am	Improving Food Security in Africa by Enhancing Resistance to Newcastle Disease and Heat Stress in Chickens	<i>Huaijun Zhou, Department of Animal Science, College of Agricultural &amp; Environmental Sciences</i>
11:15 – 12:00	Sustainable Solutions for Agriculture and Chemistry from Microbial Systems	<i>Matthias Hess, Department of Animal Science, College of Agricultural &amp; Environmental Sciences</i>
12:00 – 2:00 pm	LUNCH	
2:00 – 2:45 pm	Reproduction in Swine	<i>Trish Berger, Department of Animal Science, College of Agricultural &amp; Environmental Sciences</i>
3:00 – 3:30 pm	Discussion Session	<i>David Goldenberg, James Cullor, Bennie Osburn, Chris Brunner, WIFSS</i>

## MONDAY – FEBRUARY 8

Chinese New Year

## TUESDAY – FEBRUARY 9

1041 Gladys Valley Hall

9:00 – 9:45 pm	Addressing Issues in Equine Pharmacology – Research in the K.L. Maddy Equine Pharmacology Laboratory	<i>Heather Knych, Department of Molecular Biosciences, School of Veterinary Medicine</i>
10:00 – 10:45 am	Life as Research Veterinarians	<i>Isaac Pessah, Department of Molecular Biosciences, School of Veterinary Medicine</i>
10:45 – 11:15 am	BREAK	
11:15 – 12:00 pm	Overview of Air Quality Program	<i>Kent Pinkerton, Center for Health and the Environment</i>
12:00 – 1:30 pm	LUNCH	
1:30 – 2:30 pm	Discussion Session	<i>Bennie Osburn, Chris Brunner, WIFSS</i>
3:00 – 4:00 pm	Tour of Veterinary Medical Teaching Hospital	<i>Kristi Bowers, Daniela Yuschenkoff School of Veterinary Medicine Class of 2018</i>

## WEDNESDAY – FEBRUARY 10

1023 Gladys Valley Hall

9:00 – 10:30 a.m.	Graduate Programs Breakfast Fair	<i>Nicole Rabaud, Food Sciences Jennifer Gouine, Integrative Pathobiology Theresa Costa, Plant Sciences International Agricultural Development Tami Ali, Epidemiology</i>
11:00 – 5:00	Free Time	<i>Students</i>

## THURSDAY – FEBRUARY 11

1041 Gladys Valley Hall

9:00 – 9:45 am	Comparative Oncology	<i>Xinbin Chen, Comparative Oncology Program</i>
10:00 – 10:45 am	Environmental Contamination of Dairy Cattle	<i>Michael Payne, Western Institute for Food Safety and Security</i>
11:00 – 12:00 pm	Discussion Session	<i>Team Green – 1011 Valley Teams Blue &amp; Gray – 2010 Valley Team Yellow – 2011 Valley Team Red – 2013 Valley</i>
12:00 – 1:00 pm	LUNCH	
1:00 – 4:00 pm	Preparation for Closing Presentations	<i>Team Green – 1011 Valley Teams Blue &amp; Gray – 2010 Valley Team Yellow – 2011 Valley Team Red – 2013 Valley</i>

## FRIDAY – FEBRUARY 12

1041 Gladys Valley Hall

9:00 – 9:30 am	Closing Remarks	<i>Bennie Osburn, Western Institute for Food Safety and Security</i>
9:30 – 9:45 am	BREAK	
9:45 – 12:00	Reports on Issues of One Health Problems in China	<i>Nanjing Agricultural University Students</i>
12:00 – 1:30 pm	LUNCH	<i>Pizza Party</i>
1:30 – 1:40 pm	GROUP PHOTO	<i>Don Preisler, Photographer, School of Veterinary Medicine</i>
1:40 – 2:30 pm	Presentation of Certificates	<i>Robert Atwill, Director, Western Institute for Food Safety and Security</i>



### John Angelos

Dr. John Angelos is a professor in the Department of Medicine and Epidemiology at the School of Veterinary Medicine and WIFSS. His professional interests include internal medicine and infectious diseases of food producing animals, development of improved vaccination/vaccine delivery strategies to support sustainable food production practices, and development of curricula related to One Health in Food Safety. Dr. Angelos is a Diplomate of the American College of Veterinary Internal Medicine (Large Animal).



### Robert Atwill

Dr. Robert Atwill is Director of the Western Institute for Food Safety and Security (WIFSS), and Director of Veterinary Medicine Extension, UC Davis School of Veterinary Medicine. He is a professor of epidemiology and medical ecology in the Department of Population Health and Reproduction. Dr. Atwill's major research focus is on the epidemiology and medical ecology of infectious diseases potentially transferred between livestock, wildlife and humans.



### Trish Berger

Dr. Trish Berger is a professor in the Department of Animal Science, College of Agricultural and Environmental Sciences. Her research interests focus on fertilization emphasizing receptor-ligands involved in sperm-oocyte plasma membrane interactions; subfertility and reproductive toxicant models.



### Ronald Bond

Ronald Bond, a water quality technician with the Atwill Water and Foodborne Zoonotic Disease Laboratory, with the Western Institute for Food Safety and Security, (WIFSS), is interested in researching the correlation of indicator bacteria on freshwater systems and the ways these bacteria signify the presence of pathogenic bacteria. I have been interested in new methods of looking at agricultural water as a point source and the ways to reduce the risk of pathogen transport out of these systems.



### Xinbin Chen

Dr. Xinbin Chen, a professor at UC Davis Schools of Medicine and Veterinary Medicine, is leader of the Comparative Oncology Program at the two schools. The comparative oncology program has the goal of drawing on key strengths of UC Davis in animal research pertaining to the disease mechanisms that are implicated in the genesis and progression of cancer. His research focuses on the function of the p53 family in tumor suppression, development, and aging.



### Theodore DeJong

Dr. Theodore DeJong, a professor and pomologist in the Department of Plant Sciences, and a specialist with UC Cooperative Extension is interested in environmental physiology. He specializes in tree crop physiology; carbon partitioning and crop modeling; pomology; physiology and management of fruit tree crops; peach rootstock development and physiology; dried plum breeding. Currently he is the faculty advisor for the Plant Sciences graduate programs.



### Lynn Epstein

Dr. Lynn Epstein is a professor in the Department of Plant Pathology, College of Agricultural and Environmental Sciences. Dr. Epstein's interests are in sustainable and organic agriculture, she is willing to assist in the selection and breeding of disease-resistant varieties. She's a specialist in Integrated Pest Management with UC Agriculture and Natural Resources.



### David Goldenberg

David Goldenberg is an instructor in food safety with the Western Institute for Food Safety and Security. He contributes to food safety projects for the U.S. Food and Drug Administration (FDA) Integrated Food Safety System (IFSS). He is involved in the produce investigations course and is working on integrating video and table top exercises to enhance adult learning principles.



### Beth Greenwood

Beth Greenwood, J.D., is the Associate Dean of UC Davis Extension's Center for International Education and of International Programs at the UC Davis School of Law. With more than 30 years of leadership experience in international education, she has pioneered a range of innovative programs, which have been successful in attracting the best students from Asia and Europe to enroll in UC Davis courses.



### Matthias Hess

Dr. Matthias Hess, professor in the Department of Animal Sciences, College of Agricultural and Environmental Sciences, is interested in systems microbiology, microbial processes in natural and artificial ecosystems, microbes and microbial enzymes for agricultural, medical, and industrial applications, microbe-host interaction, gastrointestinal microbiology, biofuels, bioproducts, bioremediation, and microbial dark matter.



### Kentaro Inoue

Dr. Kentaro Inoue is a professor in the Department of Plant Sciences, and Chair of Plant Biology Graduate Group at UC Davis. His research interests are in cellular functions, including energy conversions systems and organelle biogenesis.



### Michele Jay-Russell

Dr. Michele Jay-Russell is program manager for the Western Center for Food Safety and liaison to WIFSS. Her research interests are in food safety and veterinary public health with an emphasis on the molecular epidemiology of enteric zoonotic foodborne pathogens. Recent work aims to understand the role of wildlife and domestic animals in the environmental dissemination of *Campylobacter* and *E. coli* O157 on dairy and produce farms.



### Heather Johnson

Heather Johnson is an instructional systems designer and educational specialist at WIFSS. She oversees the instructional design component of WIFSS training and educational projects in accordance with certification standards that meet local, state and federal agency requirements. She designs blended - learning educational materials specifically using principles of adult education.



### Michael Lairmore

Dr. Michael Lairmore is Dean of the School of Veterinary Medicine and oversees all teaching, research and service activities, personnel, facilities and funding resources. Dean Lairmore's goals include building mission-focused programs that will continue to provide outstanding education for society-ready veterinarians and produce innovative research findings to address important problems ranging from clinical veterinary medicine to public health.



### Xunde Li

Dr. Xunde Li, a researcher in the Atwill Water and Foodborne Zoonotic Disease Laboratory, with the Western Institute for Food Safety and Security. His research interests are in waterborne and food borne infection diseases with a focus on experimental and field-based studies on the survival, quantitative shedding, and environmental loading of pathogenic bacteria and protozoal parasites in the production environment



### Bo Liu

Dr. Bo Liu is a professor in the Department of Plant Biology, UC Davis College of Biological Sciences. His research interests include the study of cell biology of the cytoskeleton and intracellular motility in plant and fungal cells. In the Liu Lab the team works on how plant and fungal cells organize their cytoplasmic contents by use of microscopic and imaging tools to watch how cells divide and enlarge themselves.



### **Somen Nandi**

Dr. Somen Nandi currently serves as Managing Director of Global HealthShare® Initiative (GHS) at UC Davis. Before joining GHS, he spent 12 years at Ventria Bioscience as Senior Scientist & Director. During his time at Ventria, he developed and directed their molecular breeding team expressing exceptionally high recombinant therapeutic protein levels in rice seeds.



### **Christian Nansen**

Dr. Christian Nansen, professor in the UC Davis Department of Entomology and Nematology, specializes in applied insect ecology, IPM and Remote Sensing. His research interests are in insect ecology, host plant stress detection, host selection by arthropods, pesticide performance, and use of reflectance-based imaging in a wide range of research applications.



### **Dr. Bennie Osburn**

Dr. Bennie Osburn is Director of Outreach and Training at the Western Institute for Food Safety and Security. He is Dean Emeritus of the School of Veterinary Medicine, UC, Davis.

Dr. Osburn's research has focused on infectious diseases of livestock, zoonotic diseases, including foodborne pathogens, and the ecology of infectious agents. He is interested in applying a One Health approach to food safety.



### **Pramod Pandey**

Dr. Pramod Pandey is a UC cooperative extension specialist in the Department of Population Health and Reproduction in the School of Veterinary Medicine. His research interests include evaluating pathogenic microorganisms in rendering products, and assessing impacts of feedstock of dairy cows on animal waste pathogens.



### **Melissa Partyka**

Melissa Partyka is a doctoral student in the Graduate Group in Ecology with a BS in marine biology and an MS in coastal ecology. Melissa is a staff research associate with the Atwill Water and Foodborne Zoonotic Disease Laboratory. She is interested in the spatial dynamics and networks of waterborne pathogens and their transmission through marine benthic communities to humans via recreational activities.



### **Issac Pessah**

Dr. Isaac Pessah is a professor and researcher in the Department of Molecular Biosciences in the School of Veterinary Medicine, and the Associate Dean for Research and Graduate Education Programs in the Dean's Office. Dr. Pessah's research focuses on a genetic condition which occurs in animals and people known as malignant hyperthermia and is triggered by certain drugs. His research on neurological development is influenced by interactions of toxins on both genetic and environmental factors leading to conditions such as autism.



## Robert Poppenga

Dr. Robert Poppenga is a veterinary toxicologist and head of the toxicology section of the California Animal Health and Food Safety Laboratory System. He supervises 12 analytical chemists using state of the art analytical platforms and providing toxicology diagnostic services to California animal owners, producers and state agencies. He has a particular interest in the effects of environmental contaminants on wildlife and chemical food safety.



## Birgit Puschner

Dr. Birgit Puschner, Professor, and Chair, of the Department of Molecular Biosciences, School of Veterinary Medicine, focuses her research on diagnostic veterinary toxicology; poisonous plants; algal toxins; and natural toxins.



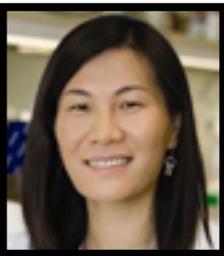
## Jorge Rodrigues

Dr. Jorge Rodrigues, a professor in the Department of Land, Air and Water Resources Soil has research interests in microbiology, biological regulation of biogeochemical cycles, microbial diversity, land use change, tropical forest conservation and ecology.



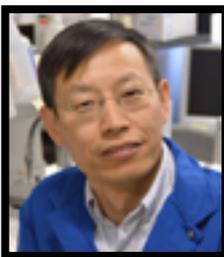
## Kenneth Tate

Dr. Kenneth Tate, Professor and Rangeland Watershed Specialist in Cooperative Extension, UC Davis Department of Plant Sciences is interested in research-based outreach to enhance natural resources and sustain productive agricultural enterprises on rangelands.



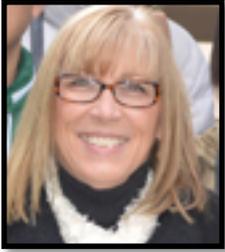
## Li Tian

Dr. Li Tian, a professor in the Department of Plant Sciences, UC Davis College of Biological Sciences, has research interests in phytonutrient biochemistry and physiology; Biosynthesis, accumulation and function of carotenoids and polyphenols in plants; Targeted improvement of crop phytonutrient composition and content for enhanced nutritional and medicinal values.



## Huaijun Zhou

Dr. Huaijun Zhou, Professor, and Chancellor's Fellow, in the Department of Animal Science, College of Agricultural and Environmental Science, has research interests in immunogenetics, molecular genetics, functional genomics, and bioinformatics in poultry. His research group is focused on discovering the molecular and cellular mechanisms of the interaction between poultry and pathogens.



**Chris Brunner**  
Conference Coordinator  
Marketing and Public Relations  
Coordinator, WIFSS



**Jenny Chen**  
Conference Staff Support  
BFTV Cluster, UCD



**Nicole Nisson**  
Conference Staff Support  
Program and Financial Assistant,  
WIFSS