

NAU-UC Davis One Health Food Safety Workshop  
June 20-22, 2016  
University of California, Davis



## WORKSHOP PROGRAM

### June 20 – Monday

- 8:30 – 8:45  
*1043 Valley* Welcome by Patricia Conrad, Associate Dean for Global Programs, School of Veterinary Medicine, UC Davis, and Co-Director of the UC Global Health Institute
- 8:50 – 9:05  
*1043 Valley* Welcome by **Rob Atwill**, Director, Western Institute for Food Safety and Security, (WIFSS), UC Davis
- 9:10 – 9:25  
*1043 Valley* Welcome by **Yingjuan Qian**, Professor, Preventive Veterinary Medicine, and **Wei Zhang**, Deputy Director of the Office of International Relations, Nanjing Agricultural University (NAU)
- 9:25 – 9:40  
BREAK
- 9:40 – 10:20  
*1043 Valley* **Bennie Osburn**, Director, Outreach & Training, Western Institute for Food Safety and Security, (WIFSS), UC Davis
- 10:25 – 11:05  
*1043 Valley* **John Angelos**, Western Institute for Food Safety and Security, (WIFSS), UC Davis
- 11:05  
BREAK
- 11:15 – 11:50  
*1043 Valley* **Linxia Liang**, Director, Asian International Programs, Office of Global Affairs  
**Jacob Hosier**, Academic Director, Global Study Program, UC Davis Extension
- 12:00  
*2030 Valley* LUNCH
- 1:30 – 2:00  
*1043 Valley* Overview of Discussion Sessions and Laboratory Visits
- 2:00 – 4:30  
*Breakout Rooms* Workgroup Breakout Sessions
- Microbiology Workgroup – 1011 Valley
  - Epidemiology Workgroup – 1013 Valley
  - Comparative Oncology Workgroup – 2010 Valley
  - Food Science Workgroup – 1023 Valley
  - Prataculture, Rangeland & Soil Science Workgroup – 1013 Valley
  - Heavy Metals Workgroup – 2013 Valley
  - Nutrition/Metabolic Diseases Workgroup – 2011 Valley
- 4:30  
*1043 Valley* ADJOURN  
(Transportation back to Hallmark Inn)

**June 21 – Tuesday**

- 8:30 – 12:00      Workgroup Discussions and Laboratory Visits Continued
- 8:30 – 12:00      Curriculum/One Health Center Workgroup Meetings  
*TBD*
- 12:00 – 1:30      LUNCH  
*2030 Valley*
- 1:30 – 4:00      PREPARE REPORTS  
*Breakout Rooms*
- Microbiology Workgroup – 1011 Valley
  - Epidemiology Workgroup – 1013 Valley
  - Comparative Oncology Workgroup – 2010 Valley
  - Food Science Workgroup – 1023 Valley
  - Prataculture, Rangeland & Soil Science Workgroup – 1013 Valley
  - Heavy Metals Workgroup – 2013 Valley
  - Nutrition/Metabolic Diseases Workgroup – 2011 Valley
- 4:00              ADJOURN  
1043 Valley      (Transportation to Hallmark Inn Provided)
- 5:30 – 7:30      DINNER – Seasons Restaurant

**June 22 – Wednesday***1043 Gladys Valley Hall*

8:30-9:00	Coffee/Tea
9:00 – 9:15	Introduction to Reports <b>Bennie Osburn</b> , Director, Outreach & Training, WIFSS
9:15 – 9:30	BREAK
9:30 – 9:45	Microbiology Report
9:45 – 10:00	Epidemiology Report
10:00 – 10:15	Comparative Oncology Report
10:15 – 10:30	BREAK
10:30 – 10:45	Food Science Report
10:45 – 11:00	Prataculture, Rangeland & Soil Science
11:00 – 11:15	Heavy Metals Report
11:15 – 11:30	Nutrition/Metabolic Diseases Report
11:30 – 12:00	Closing Remarks <b>Bennie Osburn</b> , WIFSS <b>Yingjuan Qian</b> , NAU <b>Wei Zhang</b> , NAU

# NAU-UC Davis One Health for Food Safety Workshop

## June 20-22, 2016

### WORKSHOP PARTICIPANTS



**John Angelos**

Dr. John Angelos is an Associate 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 and development of improved vaccination/vaccine delivery strategies to support sustainable food production practices. Dr. Angelos is a Diplomate of the American College of Veterinary Internal Medicine (Large Animal).

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**Robert Atwill**

Dr. Rob Atwill is Director of the Western Institute for Food Safety and Security, and Director of Veterinary Medicine Extension. He is a professor of epidemiology and medical ecology in the Department of Population Health and Reproduction, School of Veterinary Medicine, UC Davis. His academic program focuses on identifying strategies for minimizing microbial contamination of food and water.

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**Daniela Barile**

Dr. Daniela Barile is Assistant Professor and Chemist, in the Department of Food Science & Technology, UC Davis. Her areas of interest include the study of complex carbohydrates in foods by using advanced mass spectrometry. She discovered that dairy by-products are a potentially excellent source of these unique molecules previously only found in human milk.

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**Xinbin Chen**

Dr. Xinbin Chen is Professor at UC Davis Schools of Medicine and Veterinary Medicine. He is leader of the Comparative Oncology Program at the two schools. Dr. Chen's research focuses on the function of the p53 family in tumor suppression, development, and aging.

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**Patricia Conrad**

Dr. Patricia Conrad is the associate dean for Global Programs, School of Veterinary Medicine, UC Davis, and co-director of the UC Global Health Institute, One Health Center of Expertise: Water, Animals, Food and Society. Her publications emphasize the value of collaborative research and education that considers the interconnectedness of humans, animals and environmental change worldwide.

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**Peter Green**

Dr. Peter Green, a professional research engineer in the Department of Civil and Environmental Engineering, has research interests in air quality, especially photochemical ozone formation and agricultural sources and sinks. His research also focuses on water quality, including toxics, tracers, particles, dissolved organic matter, ecological impacts, and elemental speciation.  
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**Ashley Hill**

Dr. Ashley Hill is the Chair of the MPVM Program at UC Davis, where she is also Associate Professor of Clinical Diagnostic Epidemiology at the California Animal Health and Food Safety Laboratory, and Section Head for Immunology. Her research interests are varied and currently include diagnostic testing for livestock diseases and the epidemiology of musculoskeletal injuries in thoroughbred racehorses.  
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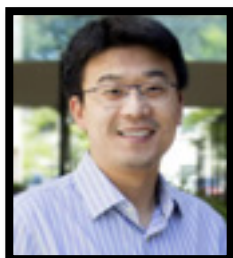
**Jacob Hosier**

Jacob Hosier is the academic director of the Global Study Program at the University of California, Davis. Hosier is a specialist in international education, particularly the development and implementation of study and research programs. An Aggie himself, he received his B.A. in Religious Studies at UC Davis and an M.A. in Liberal Studies from the University of North Carolina.  
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**Kehe Huang**

Dr. Huang is a professor and Head of the Department of Clinical Sciences in the College of Veterinary Medicine and Director of Institute of Nutritional and Metabolic Disorders in Animals at Nanjing Agricultural University. Dr. Huang's current research is focused on the nutritional and metabolic disorders in animals, with an emphasis in understanding the interaction and mechanisms of nutrients and immunity.  
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**Peng Ji**

Dr. Peng Ji, Department of Animal Science, University of California, Davis, is interested in the high rate of metabolic disorders, infectious disease, reproductive failure and early culling which challenges the profit of high producing herds and renders overall nutrient inefficiency. Dr. Peng explores nutrition and management strategies to optimize metabolic adaptation, nutrient efficiency and welfare in dairy cows during periparturient and early lactation period.  
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**Heather Johnson**

Ms. Heather Johnson is Acting 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.

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**Yong Sam Jung**

Dr. Yong Sam Jung is Professor in Preventive Veterinary Medicine at Nanjing Agricultural University. Dr. Jung had completed the postdoctoral research fellow in Comparative oncology center at UC Davis. Dr. Jung's current research is focused on the links between virus and host pathogenic trait using comparative interactomics. He is currently implementing a UPS (ubiquitin proteasome system) dedicated interactomic study mapping interactions between UPS ORFs and a representative collection of oncogenic virus.

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**Michael Kent**

Dr. Michael Kent, a professor and researcher in the Department of Surgical and Radiological Sciences, at the UC Davis School of Veterinary Medicine, serves as the director of the Center for Companion Animal Health. He is also co-director of the Comparative Cancer Center, and co-program leader for the UCDMC Comprehensive Cancer Center's Comparative Oncology Program.

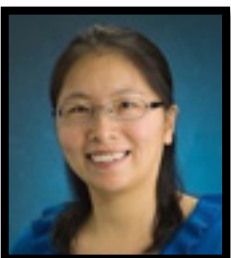
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**Linxia Liang**

Linxia Liang is director of Asian International Programs in the Office of Global Affairs, UC Davis. Dr. Liang, has interest in the Chinese legal system, traditional Chinese legal culture especially on the civil justice system in the late imperial China, and comparative legal philosophy. She is currently researching on the Chinese reception of Western law-IP as an example.

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**Yanhong Liu**

Dr. Yanhong Liu is an assistant professor in the Department of Animal Science, at the University of California, Davis. She focuses her research on improving disease resistance in pigs and increasing the sustainability of swine production. Liu is interested in nonruminant nutrition, feed ingredients, gut health, gut physiology, immunology, gut microbiome, and alternatives to antibiotics in animal feed.

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**Beatriz Martinez-Lopez**

**Dr. Beatriz Martínez López** is Assistant Professor in the School of Veterinary Medicine Department of Medicine and Epidemiology, and Director of the UC Davis Center for Animal Disease Modeling and Surveillance (CADMS). Her research is focused on the development and application of epidemiological tools for supporting more cost-effective and risk-based surveillance and control strategies. She has primarily been working on epidemiological modeling and risk assessment for the evaluation of the potential introduction and/or spread of diseases affecting domestic and/or wild animal populations.

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**Stephen McSorley**

Dr. Stephen McSorley is a Professor in the Center for Comparative Medicine and Department of Anatomy, Physiology, and Cell Biology, in the School of Veterinary Medicine. His research focuses on innate and adaptive immune responses to bacterial infection and the generation of new vaccines for salmonellosis and chlamydia infections. His research program applies cutting edge immunological tools to study bacterial infection. Dr. McSorley is an Elected Fellow in the American Academy of Microbiology.

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**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.

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**Sanjai Parikh**

Dr. Sanjai Parikh, is an Associate Professor of Soil Chemistry, in the Department of Land, Air and Water Resources. The Environmental Soil Chemistry Group conducts research which deepens the understanding of soil biogeochemical processes that influence environmental quality. Researchers in the lab focus on interfacial processes occurring at mineral surfaces to investigate the sorption and transport of environmental contaminants, biomolecules, and bacteria.

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**Helen Raybould**

Dr. Helen Raybould, a professor and researcher in the School of Veterinary Medicine's Department of Anatomy, Physiology and Cell Biology is an integrative physiologist with training in neurophysiology and gastrointestinal physiology. Her research focuses on understanding the mechanisms by which gut luminal contents are sensed by chemosensing cells in the epithelium and activation of the vagal afferent (gut-brain) pathway. The research focuses on how both nutrients and bacterially-derived factors activate gut endocrine cells and how this information is transmitted to the brain to alter GI function and food intake.

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### **Jorge Rodrigues**

Dr. Jorge Luiz Mazza Rodrigues, an associate professor in the Department of Land, Air and Water Resources, specializes in soil microbiology. Dr. Rodrigues's research focuses on microbial ecology, tropical forests, land use change, biodiversity, metagenomics, metaproteomics, ecological genomics, lignocellulose conversion, microbial physiology. Rodrigues's current projects include studying the microbial diversity of tropical forest soils under land use change, and the effects of climate change on biological nitrogen fixation in agricultural soils.

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### **Heidi Rossow**

Dr. Heidi Rossow is an Associate Professor in the Department of Population Health and Reproduction in the School of Veterinary Medicine. Dr. Rossow is interested in ruminant nutrition, feed management and computer modeling. Her research focuses on a systems approach to explore interactions between nutrition, metabolism and disease and their effects on beef and dairy production.

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### **Yingjuan Qian**

Dr. Qian is a professor in preventive veterinary medicine in College of Veterinary Medicine, at Nanjing Agricultural University. Dr. Qian received a Master degree in preventive veterinary medicine from Nanjing Agricultural University, a PhD degree in cell biology from University of Alabama at Birmingham, and postdoctoral training in University of California at Davis. Dr. Qian's current research is focused on virus-host interactions to understand how viruses escape host immune surveillance, establish latency and cause transformation of infected cells.

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### **Zhihong Xin**

Dr. Zhihong Xin is a professor of food nutrition and chemist in the Department of Food Quality & Safety, at Nanjing Agricultural University. Dr. Xin's current research is focused on the Food Nutrition and Safety, with an emphasis in finding new bioactive compounds from metabolites of microorganisms, and fruits and vegetables, developing new assay methods for pesticide and veterinary residues in agro-product.

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### **Jiarong Xu**

Dr. Xu is a professor in Preventive Veterinary Medicine, at Nanjing Agricultural University. Dr. Xu got her Master of Science Degree and Ph.D. in Preventive Veterinary Medicine from Nanjing Agricultural University. Dr. Xu's research is focused on animal infectious diseases and epidemiology including identifying emerging and re-emerging pathogens as well as risk analysis.





### **Gaowen Yang**

Dr. Yang is a lecturer in College of Agro-grassland Science, at Nanjing Agricultural University. Dr. Yang received a doctor degree in grassland science at China Agricultural University in 2014. Yang's current research is focused on (1) understanding mechanisms of soil biota, such as arbuscular mycorrhizal fungi, influence ecosystem functioning, especially soil carbon sequestration, forage productivity, quality and plant diversity (2) using mycorrhizal symbiosis to sustain the rangeland and artificial grassland.

[https://www.researchgate.net/profile/Gaowen\\_Yang](https://www.researchgate.net/profile/Gaowen_Yang)



### **Huochun Yao**

Dr. Yao is Director of OIE Reference Laboratory for Swine Streptococcosis. He is a professor of veterinary microbiology and immunology in the College of Veterinary Medicine, Nanjing Agricultural University. His academic program focuses on zoonotic pathogens such as *Streptococcus suis*, pathogenic *E. coli*.



### **Wei Zhang**

Dr. Wei Zhang is Deputy Director of the Office of International Relations, Nanjing Agricultural University (NAU). He is a professor of Biochemistry in the Department of Biochemistry & Molecular Biology, College of Life Science, NAU. He earned a PhD in genetics from Fudan University, China, and did postdoctoral research training in HHMI, UCLA. Dr. Zhang's research focus is on Plant proteomics and protein engineering, especially on the identification and structure-function relationship of metal tolerance proteins (MTPs) in plants.

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### **Fangjie Zhao**

Dr. Fangjie Zhao is a National "1000-Plan" Scholar and Professor of environmental biology in Nanjing Agricultural University. His current research focuses on soil contamination and the impacts on food safety, an issue that has attracted much public attention in China. He leads a number of research projects funded by National Natural Science Foundation, Ministry of Agriculture and Ministry of Education of China. His research group uses multidisciplinary approaches to understand the factors that control the transformation and bioavailability of contaminants in soils and the pathways of contaminant accumulation by food crops. His previous work includes crop nutrition and the impacts on grain yield and quality, and biofortification of micronutrients for human nutrition.

## WORKSHOP STAFF



**Chris Brunner**  
Workshop Coordinator  
Public Relations Officer, WIFSS



**Jenny Chen**  
Workshop Staff Support, UCD