NAU-UC DAVIS ONE HEALTH FOR FOOD SAFETY & ANIMAL HEALTH SYMPOSIUM

Pathogenesis, Prevention & Control Technologies of Important Transboundary Diseases

DAY ONE TUESDAY, MAY 28

	ADMINISTRATIVE		
8:30 – 9:00	Meet with the Chancellor Gary S. May, Chancellor, University California, Davis Participants: Michael Lairmore, Rob Atwill, Bennie Osburn, Feng Hu, Hongsheng Zhang, Jiqin Han, Jie Chen, Wei Wei, Yingjuan Qian, Wim van der Poel, Joanna McKenzie, Michael Lazzara	551 Mrak Hall	
9:30 – 10:15	Meet with UC Davis Office of Global Affairs Michael Lazzara, Associate Vice Provost, Academic Programs Linxia Liang, Director, Asian International Programs Fadi Fathallah, Associate Vice Provost, Global Education & Services, UC Davis Global Affairs Participants: Rob Atwill, Bennie Osburn, Xinbin Chen, Feng Hu, Hongsheng Zhang, Jiqin Han, Jie Chen, Wei Wei, Ruibing Cao, Yingjuan Qian	International Center 463 California Ave Davis	
10:15 – 11:45	Program Discussion on One Health Center for Food Safety & Animal Health Participants: Rob Atwill, Bennie Osburn, Xinbin Chen, Feng Hu, Hongsheng Zhang, Jiqin Han, Jie Chen, Wei Wei, Ruibing Cao, Yingjuan Qian	International Center 463 California Ave Davis	
11:45	Board Shuttle Van for Transportation Back to Campus	Parking Lot of Mrak Hall	
12:00	Arrive Valley Hall	Valley Hall	
ACADEMIC			
10:00 – 12:00	Workgroup Discussions Epidemiology & Biosecurity; Surveillance & Diagnostics; Environmental Impact; Pathogenesis & Disease Resistance; Prevention & Control Moderator: Dr. James MacLachlan, Emeritus Professor, UC Davis, School of Veterinary Medicine Participants: Jihui Ping, Lifan Zhang, Yong Sam Jung, Joanna McKenzie, Wim van der Poel, Ed van Klink, Kimberly Dodd, Bennie Osburn, Beatriz Martinez Lopez, UC Davis Faculty	1043 Valley Hall, Breakout Sessions 1043 & 1023 Valley Hall	

DAY ONE TUESDAY, MAY 28 cont.

ALL		
12:15	Board Van Participants: Bennie Osburn, Feng Hu, Hongsheng Zhang, Jiqin Han, Jie Chen, Wei Wei, Ruibing Cao, Yingjuan Qian, Yong Sam Jung, Lifan Zhang, Jihui Ping, Wim van der Poel, Ed van Klink, Joanna McKenzie, Chris Brunner, Sara Garcia, Heather Johnson	Parking Lot of Valley Hall
1:30 – 3:00	Lunch in Napa	Brix Restaurant 7377 Saint Helena Hwy Napa
3:00 – 4:30	Tour of Agricultural Region Napa Valley	Napa
4:30	Board Van	
5:30	Arrive at Hotel	Hallmark Inn 110 F St Davis

DAY TWO WEDNESDAY, MAY 29

ALL		
9:00 – 9:10	Welcome Remarks Feng Hu, Vice President Nanjing Agricultural University (NAU)	California Animal Health and Food Safety Laboratory System (CAHFS) Conf Room
9:10 – 9:20	Welcome Remarks Michael Lairmore, Dean, UC Davis School of Veterinary Medicine	CAHFS Conf Room
9:20 – 9:50	Lecture – "FADDL at the National Bio and Agro-Defense Facility" Kimberly Dodd, Director of the USDA APHIS Foreign Animal Disease Diagnostic Laboratory (FADDL), Plum Island	CAHFS Conf Room
9:50 – 10:20	Remarks – "Swine Production and ASF in China" Ruibing Cao, Vice Dean, College of Veterinary Medicine, NAU	CAHFS Conf Room
10:20 – 10:35	Break	
10:35 – 10:55	Remarks – "Introduction of International Grants in China" Ruibing Cao, Vice Dean, College of Veterinary Medicine, NAU	CAHFS Conf Room
10:55 – 11:00	Break	

DAY TWO WEDNESDAY, MAY 29 cont.

ADMINISTRATIVE		
11:00 – 12:30	Tour of Veterinary Medical Teaching Hospital California and the Animal Health & Food Safety Laboratory System Tour Guides: John Angelos, Chair, Department of Medicine & Epidemiology, School of Veterinary Medicine, Michael Kent, Director, Center for Companion Animal Health, School of Veterinary Medicine, Bob Poppenga, Professor, California Animal Health & Food Safety Laboratory System Participants: Feng Hu, Hongsheng Zhang, Jiqin Han, Jie Chen, Wei Wei	CAHFS & VMTH
	ACADEMIC	
11:00 – 1:30	Workgroup Discussions – Working Lunch Epidemiology & Biosecurity; Surveillance & Diagnostics; Environmental Impact; Pathogenesis & Disease Resistance; Prevention & Control Moderator: Dr. James MacLachlan, Emeritus Professor, UC Davis, School of Veterinary Medicine Participants: Jihui Ping, Lifan Zhang, Yong Sam Jung, Joanna McKenzie, Wim van der Poel, Ed van Klink, Kimberly Dodd, Bennie Osburn, Jim MacLachlan, UC Davis Faculty	CAHFS Conf Room
1:30 – 3:00	Antibiotic Resistance and Vector-Borne Diseases Discussions Participants: Richard Pereira, Xunde Li, Chris Barker, Ruibing Cao, Yingjuan Qian, Jihui Ping, Lifan Zhang, Yong Sam Jung, Joanna McKenzie, Wim van der Poel, Ed van Klink, Kimberly Dodd, Bennie Osburn, Jim MacLachlan	CAHFS Conf Room
3:00 – 4:00	Optional Tours of CAHFS and VMTH Tour Guide: Dr. Bennie Osburn, Director, Outreach & Training, WIFSS	CAHFS & VMTH
4:00	Return to Hotel	Hallmark Inn 110 F St Davis
5:30	Group Dinner Participants: Bennie Osburn, Xinbin Chen, Ruibing Cao, Yingjuan Qian, Yong Sam Jung, Lifan Zhang, Jihui Ping, Wim van der Poel, Ed van Klink, Joanna McKenzie, Kimberly Dodd	Bistro 33 226 F St Davis

DAY THREE THURSDAY, MAY 30

ACADEMIC			
9:0	00 – 9:15	Summary Report Epidemiology & Biosecurity Workgroup	2030 Valley Hall
9:1	15 – 9:30	Summary Report Surveillance & Diagnostics Workgroup	2030 Valley Hall

DAY THREE THURSDAY, MAY 30 cont.

9:30 – 9:45	Summary Report Environmental Impact Workgroup	2030 Valley Hall
9:45 – 10:00	Break	
10:00 – 10:15	Summary Report Pathogenesis & Disease Resistance Workgroup	2030 Valley Hall
10:15 – 10:30	Summary Report Prevention & Control Workgroup	2030 Valley Hall
10:30 – 10:45	Break	
10:45 – 11:00	2020 New Zealand Symposium Remarks Wim van der Poel, Senior Scientist, Central Veterinary Institute of Wageningen University & Research Centre	2030 Valley Hall
11:00 – 11:15	2020 New Zealand Symposium Remarks Dean Jiang, College of Veterinary Medicine Yiingjuan Qian, Director, One Health Center, College of Veterinary Medicine, NAU	2030 Valley Hall
11:15 – 11:30	2020 New Zealand Symposium Remarks Bennie Osburn, Director, Outreach & Training, WIFSS	2030 Valley Hall
11:30 – 11:45	2020 New Zealand Symposium Remarks Joanna McKenzie, Senior Lecturer in One Health Epidemiology & International Development, Massey University	2030 Valley Hall
11:45 – 12:00	Closing Comments Dr. Bennie Osburn	2030 Valley Hall
12:00	Symposium Conclusion	2030 Valley Hall

THANK YOU FOR YOUR PARTICIPATION!

Partners include:







PARTICIPANTS



John Adaska

Dr. John Adaska is chief of the California Animal Health and Food Safety Laboratory System's (CAHFS) Tulare Branch. Adaska has served veterinarians, dairy farmers, and animal health stakeholders for more than 20 years. The Tulare facility is one of four laboratories within CAHFS, headquartered at UC Davis and operated for the state by the School of Veterinary Medicine to protect animal health and performance, and safeguard public health and the food supply.

jadaska@cahfs.ucdavis.edu



Robert Atwill

Dr. Robert 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.

ratwill@ucdavis.edu



Christopher Barker

Dr. Christopher (Chris) Barker, Associate Professor in the Department of Pathology, Microbiology and Immunology, School of Veterinary Medicine, UC Davis, where he leads a laboratory which uses quantitative methods to understand the epidemiology and ecology of mosquito-borne viruses. Dr. Barker is co-director of the Pacific Southwest Regional Center of Excellence in Vector-Borne Diseases that conducts applied research to develop and validate effective prevention and control tools and methods to anticipate and respond to disease outbreaks.

cmbarker@ucdavis.edu



Ruibing Cao

Dr. Ruibing Cao is a professor of College of Veterinary Medicine at Nanjing Agricultural University. He is Vice Dean of the College of Veterinary Medicine. Dr. Cao's research focuses on flavivirus disease, especially on Japanese encephalitis which is a mosquito borne zoonosis that threat human and animals in east and south Asia. He leads several research projects funded by National Natural Science Foundation, Ministry of Science and Technology of China. His previous work includes diagnosis, infection and spread, prevention and control of swine Japanese encephalitis.

crb@njau.edu.cn



Tim Carpenter

Dr. Tim Carpenter is Professor Emeritus in the EpiCentre at Massey University in New Zealand and the Center for Animal Disease Modeling and Surveillance (CADMS) in the Veterinary School at UC Davis. While Director of CADMS, the Center was recognized as an FAO Reference Laboratory for Veterinary Epidemiology and Modeling and at the EpiCentre, when it was recognized as an OIE Collaborating Center for Veterinary Epidemiology and Public Health, in conjunction with the China Animal Health and Epidemiology Center (CAHEC) in Qingdao, China. His research and teaching have focused on a variety of diseases in animals and humans in more than 40 countries.

tecarpenter@ucdavis.edu



Jie Chen

Dr. Jie Chen is a professor of College of Animal Science and Technology at Nanjing Agricultural University. He is Director of Office of International Relations at Nanjing Agricultural University. Dr. Chen's research focuses on Animal Molecular Genetics and Breeding, such as molecular mechanism for the formation of important economic traits of livestock and poultry, and molecular breeding technology for livestock and poultry. He is interested in the genetic formation mechanism of disease resistance in animals. jiechen@njau.edu.cn



Beate Crossley

Dr. Beate Crossley is Associate Professor in the Department of Medicine and Epidemiology with the School of Veterinary Medicine, UC Davis, and Leader of the Virology and Biotechnology Sections, in the California Animal Health and Food Safety Laboratory. Her specialty focus is diagnostic virology and her research focus is on diagnostics of emerging viral infectious diseases.

bcrossley@ucdavis.edu



James Cullor

Dr. Jim Cullor, a professor emeritus in the Department of Population, Health and Reproduction at the School of Veterinary Medicine, works extensively throughout China talking to dairymen about how to maintain animal, public, and ecosystem health, and food safety. His research focus is mastitis, neonatal diseases, vaccines, novel antimicrobial compound development and testing, and studying novel methods for controlling pathogens in milk.

jscullor@ucdavis.edu



Kimberly Dodd

Dr. Kimberly Dodd is the Director of the USDA Foreign Animal Disease Diagnostic Laboratory (FADDL) on Plum Island. FADDL is the national reference laboratory for African swine fever, classical swine fever and foot and mouth disease (FMD), and also serves as a OIE/FAO international reference laboratory. It is currently the only laboratory in the U.S. in which work is allowed with specific high-consequence foreign animal diseases (FAD), including FMD and Rinderpest. Dr. Dodd received her DVM and PhD in comparative pathology from the University of California-Davis.

kimberly.a.dodd@usda.gov



Joanne Emerson

Dr. Joanne Emerson is an Assistant Professor in the Department of Plant Pathology. Her group studies soil viral communities and their impacts on soil microbiota, plants, and biogeochemistry. In addition to impacts on host health and mortality, these viruses are likely to contribute to food webs linked to organic matter decomposition, carbon and nutrient cycling, greenhouse gas emissions, and agricultural productivity. The Emerson lab uses metagenomic, metatranscriptomic, bioinformatic, and statistical approaches to reconstruct soil viral and microbial genomes and evaluate the role of viruses in natural and agricultural ecosystems. jbemerson@ucdavis.edu



Sara Garcia

Dr. Sara Garcia is a Project Scientist with WIFSS and earned her B.S. in Genetics and Ph.D. in Integrative Pathobiology at UC Davis. She has expertise in food safety, microbiology and molecular genetics and has worked domestically and internationally in these fields. Dr. Garcia has worked with academic and industry partners to influence best practices and guidelines for the application of technology in Food Safety and Food Systems to enhance the health of humans, animals and the ecosystem.

sargarcia@ucdavis.edu



Tracey Goldstein

Tracey Goldstein, PhD, is Associate Director and Professor at the University of California Davis, One Health Institute, where she developed and oversees the One Health Institute Laboratory and the Marine Ecosystem Health Diagnostic and Surveillance Laboratory. She is Co-Principle Investigator and Pathogen Detection lead for the USAID Emerging Pandemic Threats PREDICT project. Her background is in wildlife diseases, developing disease diagnostics to detect novel and known pathogens for viral detection in developing countries.

tgoldstein@ucdavis.edu



Jiqin Han

Dr. Jiqin Han is Dean of the College of International Education and Professor of Agricultural Economies and Management at Nanjing Agricultural University. She obtained her PhD degree at the Wageningen University of the Netherlands. Her main research interests are quality and governance of agrifood supply chain management and international development. Dr. Han has chaired more than 10 national and international research projects focusing on quality management and consumer behavior along agrifood chains in developing countries.

<u>jhan@njau.edu.cn</u>



Feng Hu

Dr. Feng Hu is Vice President of Nanjing Agricultural University. He has held the position professor in the Department of Soil Science and Ecology for the past two decades. Vice President Hu was Dean of the College of Resources and Environmental Sciences for six years. He has 16 years teaching experience in graduate and undergraduate programs where he taught classes in soil ecology, advance ecology, fundamentals of ecology, and ecological engineering of agriculture.

fenghu@njau.edu.cn



Jihui Ping

Dr. Jihui Ping is a professor of College of Veterinary Medicine at Nanjing Agricultural University. His research mainly focuses on the determination of the antigenic evolution and pathogenicity pathogenesis of influenza virus, especially on the selection of antigenically advanced variants of seasonal influenza viruses, molecular mechanisms for the replication of avian influenza virus in mammalian host to overcome the host species barrier at the level of ribonucleoproteins, and also on the development of high yield influenza vaccine viruses.

jihui.ping@njau.edu.cn



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. heajohnson@ucdavis.edu



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 various viruses (such as influenza A virus, PEDV, PRV, and ASFV).

ysjung@njau.edu.cn, yongsjung@gmail.com



Xunde Li

Dr. Xunde Li is a research microbiologist who works on food and waterborne pathogens in the Atwill Water and Foodborne Zoonotic Disease Laboratory at WIFSS. His research focuses on survival and transmission of zoonotic pathogens, molecular epidemiology of protozoal pathogens and dynamics of antibiotic resistant bacteria in animal production systems.

xdli@ucdavis.edu



Beatriz Martinez López

Dr. Beatriz Martinez López is Associate Professor in the Department of Medicine and Epidemiology, Agricultural Experiment Station faculty, and Director of the UC Davis Center for Animal Disease Modeling and Surveillance (CADMS). Her specialty focus is on Quantitative Epidemiology: Spatial analysis, Risk analysis, Disease spread models, social network analysis, statistical analysis (both Frequentists and Bayesian). She researches epidemiological modeling and risk assessment for the evaluation of the potential introduction and/or spread of diseases affecting domestic and/or wild animal populations.

beamartinezlopez@ucdavis.edu



Jim MacLachlan

Dr. N. James (Jim) Maclachlan is Distinguished Professor Emeritus in the Department of Pathology, Microbiology and Immunology at the School of Veterinary Medicine at UC Davis. He also holds a faculty position in the Department of Veterinary Tropical Diseases at the university of Pretoria in South Africa. His interests are focused on animal diseases such as bluetongue and African horse sickness that impact international trade.

njmaclachlan@ucdavis.edu



Joanna McKenzie

Dr. Joanna McKenzie is a Senior Lecturer in One Health Epidemiology and International Development in the School of Veterinary Science, Massey University, New Zealand. She is currently providing One Health epidemiological expertise to the UK Department of Health and Social Care's Fleming Fund AMR program in Africa and Asia. Her major interest and expertise are in research that informs policy for controlling endemic and emerging zoonotic diseases, and the ecology and epidemiology of diseases involving wildlife reservoirs. She also has expertise and experience in implementing AMR and infectious disease surveillance in resource-limited settings.

j.s.mckenzie@massey.ac.nz



Michael Payne

Dr. Michael Payne is a researcher and outreach coordinator at WIFSS. Dr. Payne has worked as a veterinarian in extension, academics and private practice. He is director of the California Dairy Quality Assurance Program, an industry, academic regulatory partnership which promotes the health and welfare of livestock, consumers and the environment through outreach, education and research.

mpayne@wifss.ucdavis.edu



Bennie Osburn

Dr. Bennie Osburn is Director of Outreach and Training at the Western Institute for Food Safety and Security. He is Dean Emertius 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.

biosburn@ucdavis.edu



Richard Pereira

Dr. Richard Pereira is an Assistant Professor of Clinical Livestock Herd Health at UC Davis, providing inhouse and ambulatory veterinary herd health and reproduction services to dairy farm, ranches and breeding operations. His research interest is on antimicrobial resistant and zoonotic bacteria in livestock and herd health, with the aim of developing effective and feasible interventions to reduce and prevent the spread of disease and drug resistance.

rvpereira@ucdavis.edu



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 serves to California animal owners, producers and state agencies. He has a interest in the effects of environmental contaminants on wildlife and chemical food safety.

rhpoppenga@ucdavis.edu



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 viral pathogenesis and development of control methods for emerging/reemerging and exotic animal diseases, such as ASFV and BTV. yqian@njau.edu.cn



Jorge Rodrigues

Dr. Jorge Rodrigues is a professor in the Department of Land, Air and Water Resources. The research theme in his laboratory is to understand the nature and ecology of microbial processes of importance in nature and of value to mankind. His particular interests span from biological regulation of biogeochemical cycles and natural and agricultural ecosystems to microbial diversity and functionality in termite hindguts. His areas of expertise are microbial community analyses, metagenomics, metatranscriptomics and soil microbiology. jmrodrigues@ucdavis.edu



Ed G.M. van Klink

Dr. Ed van Klink is a Senior Veterinary Epidemiologist at Wageningen Bioveterinary Research (WBVR) of Wageningen University and Research and senior lecturer in Veterinary Public Health at University of Bristol Veterinary School. His research concentrates largely on the epidemiology of notifiable diseases and policy relevant animal health issues. He coordinates the research at WBVR that is carried out to support animal health and antimicrobial resistance policy. In his teaching of veterinary public health, he concentrates on subjects that have to do with everything that comes from animals and can influence human's lives. ed.vanklink@wur.nl



Wim H.M. van der Poel

Dr. Wim H.M. van der Poel is senior scientist at Wageningen Bioveterinary Research and special Professor of Emerging and Zoonotic viruses at Wageningen University. He is a principal investigator within the Netherlands Centre of One Health (NCOH), member of the Project Management Board of the European Joint Program One Health (EJP One Health) and coordinator of the EPIZONE European Research Group, the network on epizootic animal diseases research. His research work involves at least three main areas: New and emerging viruses, Foodborne and Zoonotic viruses, including Hepatitis E virus, and Global One Health. wim.vanderpoel@wur.nl



Wei Wei

Wei Wei is Deputy Director of the Office of International Relations at Nanjing Agricultural University. She obtained her MA degree in English literature at the Soochow University of China. Ms. Wei has worked in the Office of International Relations for over 11 years. Her main research interests are higher education internation and country/regional studies.

weiwei@njau.edu.cn



Hongsheng Zhang

Dr. Hongsheng Zhang is Director of the Office of University Development Committee and Professor of Crop Genetics and Plant Breeding at Nanjing Agricultural University. Dr. Zhang obtained his PhD degree in Plant Pathology at Nanjing Agricultural University, and used to be a visiting scholar at Cornell University and Wageningen University and Research. His main research interests are rice genetics and breeding, and seed science and technology.

hszhang@njau.edu.cn



Lifan Zhang

Dr. Lifan Zhang is an associate professor of College of Animal Science and Technology at Nanjing Agricultural University. His research interest focuses on swine genetics and breeding, such as fat biology, comparative genome biology, functional genomics, and molecular marker-assisted selection. He is interested in the genetics of disease resistance in pigs.

lifanzhang@njau.edu.cn



Huaijun Zhou

Dr. Huaijun Zhou is Associate Professor, Chancellor's Fellow in Department of Animal Science, at University of California, Davis; and Director of USAID Feed the Future Innovation Lab for Genomics to Improve Poultry, and Director of Animal Systems Biology Analysis and Modeling Center. Dr. Zhou is a leading expert in functional genomics, avian immunology and bioinformatics.

hzhou@ucdavis.edu

STAFF SUPPORT



Chris Brunner

Communications and International Programs Coordinator, WIFSS



Jenny Chen

International Programs Assistant, WIFSS



Nicole Nisson

Program and Financial Assistant, WIFSS