USDA National Bio and Agro-Defense Facility
U.S. DEPARTMENT OF AGRICULTURE

KANSAS STATE UNIVERSITY

Symposium on Biomanufacturing for Mitigating Transboundary Animal Disease Threats

Session 5, Tuesday, June 9, 4:00 p.m.
Current State of Manufacturing of Veterinary Diagnostics

Dalton Burch

Manager, Technical Operations & Engineering, Thermo Fisher Scientific

Dalton Burch is a manufacturing leader at Thermo Fisher Scientific specializing in veterinary diagnostics and buffer manufacturing.

Mr. Burch earned his B.S. in Biochemistry from the University of Texas at Austin, where he developed a strong foundation in the life sciences and an interest in biotechnology and applied research. He joined Thermo Fisher Scientific in 2017 as a manufacturing scientist.

In his current role, Dalton leads the manufacturing sciences and engineering team supporting the production of USDA regulated veterinary diagnostic kits. His work focuses on scaling complex manufacturing processes, ensuring quality and regulatory compliance, root cause analysis of non-conforming material, and driving continuous improvement across production systems.

With hands-on experience in technical operations and cross-functional leadership, Dalton brings a practical, industry-focused perspective on the evolving landscape of veterinary diagnostics manufacturing.

His interests include advancing automation, strengthening supply chain resilience, and improving access to high-quality diagnostic solutions for animal health.

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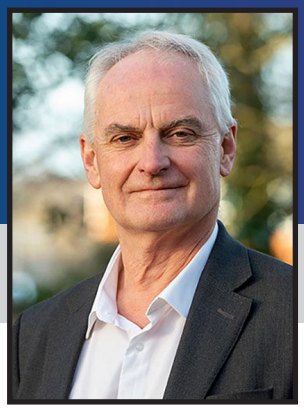

Symposium on Biomanufacturing for Mitigating Transboundary Animal Disease Threats

Keynote Speaker, Tuesday, June 9, 8:30 a.m.
Title: The Future of Biomanufacturing

Prof Bryan Charleston

Director and CEO, Pirbright Institute

Prof Bryan Charleston obtained a BVetMed from the Royal Veterinary College, University of London, UK in 1982. After a period of time in Large Animal Practice, he studied for a Masters degree in Molecular Biology at University College London in 1988, then a PhD degree, as a Wellcome Trust Scholar, from the University of London, UK, in 1991. He then carried out postdoctoral research, as a Wellcome Trust Post-doctoral fellow, at the Royal Veterinary College and the Babraham Institute, Cambridge for three years.

He joined The Pirbright Institute (formally known as the Institute for Animal Health) in 1994 and focused on studies of the immune response to viral infections in cattle. In addition, he has provided advice on studies of the immune response to viral infections in cattle. In addition, he has provided advice and expertise on the design of infectious disease challenge models for a wide range of pathogens in important agricultural species. His research group's efforts are focused on understanding the immune response to foot-and–mouth disease virus in cattle to develop novel vaccines.

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June 8 - 10, 2026

Dr. Alfonso Clavijo

NBAF Director

Dr. Alfonso Clavijo is a veterinarian and virologist with more than three decades of experience leading high containment laboratories, advancing diagnostic technologies, and strengthening national and international animal health systems. He earned his doctoral degree in veterinary microbiology/virology from the University of Guelph in Ontario, Canada, in 1995, and a Doctor of Veterinary Medicine degree from the National University in Bogotá, Colombia, in 1986. His academic training laid the foundation for a career focused on the diagnosis, prevention, and control of transboundary, emerging, and zoonotic diseases that threaten both animal and public health.

Before joining the National Bio and Agro Defense Facility (NBAF), Dr. Clavijo served as the laboratory executive director of the Canadian Food Inspection Agency's National Centre for Animal Disease, which operates high containment laboratories in Winnipeg and Lethbridge. In this role, he provided strategic and scientific leadership for national diagnostic services, research programs, and technology development initiatives. His responsibilities included overseeing BSL-3 and BSL-4 laboratory operations, ensuring scientific excellence, and guiding efforts to enhance Canada's capacity to detect and respond to animal health threats.

Earlier in his career, Dr. Clavijo worked for the Pan American Health Organization at the Pan American Foot and Mouth Disease Center in Brazil. As an advisor, he supported countries across the Americas in strengthening laboratory diagnostics, surveillance systems, preparedness strategies, and disease control programs targeting zoonoses and emerging pathogens. His work contributed to regional efforts to modernize FMD diagnostics and improve coordinated responses to animal health emergencies.

Dr. Clavijo also held leadership and scientific roles in the United States. At Texas A&M University, he served as Senior Science Advisor for the Institute for Infectious Animal Diseases. He also served as Associate Director for Scientific Programs at the Texas Veterinary Medical Diagnostic Laboratory, supporting the development and delivery of state and national diagnostic services.

In October 2019, Dr. Clavijo was appointed Director of the National Bio and Agro Defense Facility.

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June 8 - 10, 2026

Dr. Hans Coetzee

University Distinguished Professor
Vice President for Research, Kansas State University

Hans Coetzee is a university distinguished professor and vice president for research at Kansas State University. He previously served as head of the Department of Anatomy and Physiology and associate dean for research and graduate programs in the College of Veterinary Medicine at K-State.

He earned his Bachelor of Veterinary Science from the University of Pretoria, South Africa, in 1996. After graduation, he worked for four years in mixed animal practice in Northern Ireland, followed by two years in pharmaceutical research and development at Norbrook Laboratories Ltd. He was awarded a specialist Certificate in Cattle Health and Production from the Royal College of Veterinary Surgeons (London) in 2000 and earned a doctorate in veterinary microbiology from Iowa State University in 2005. He holds dual board certification in the American College of Veterinary Clinical Pharmacology and the American College of Animal Welfare. He is a European Animal Welfare Science, Ethics, and Law specialist.

His professional interests include developing pain assessment tools and identifying practical methods to relieve pain in livestock. He has published more than 230 peer-reviewed scientific papers and received more than $22 million in research funding. He was the first North American recipient of the World Veterinary Association Global Animal Welfare Award and the second recipient of the World Buiatrics Congress Ruminant Well-being Achievement Award. He was also recognized with the American Veterinary Medical Association Animal Welfare Award and the American Association of Bovine Practitioners Award of Excellence.

He enjoys gardening, fly fishing, and spending time with his wife and twin daughters.

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Session 5, Tuesday, June 9, 4:00 p.m.
Current State of Manufacturing of Veterinary Diagnostics

Dr. Adam Contreras

Director of Protein Engineering, Senior Scientist
BioStone Animal Health

Dr. Adam Contreras is a distinguished biotechnologist and leader specializing in research and development of diagnostic reagents and recombinant vaccines for the global animal health sector. Since joining BioStone Animal Health in 2019, he has been instrumental in bridging the gap between bench-scale innovation and commercial reagent production.

Dr. Contreras started at BioStone as a Staff Scientist tasked with the development of molecular diagnostic reagents. He rapidly gained traction on new projects focusing on recombinant protein design for development of immunoassays and subunit vaccines. Over time, he expanded the breadth of BioStone's research strategies, including integration of monoclonal antibodies, epitope mapping, and advanced antigen engineering to enhance the sensitivity and specificity of the company's diagnostic offerings. Currently serving as Director of Protein Engineering and Senior Scientist, Dr. Contreras oversees a robust R&D pipeline dedicated to addressing some of the most challenging transboundary and zoonotic diseases facing the livestock industry today.

Dr. Contreras earned his Bachelor of Science from Texas State University before pursuing a Doctorate (PhD) at the University of California, Davis. His doctoral research focused on the intersection of biochemistry, molecular biology, and biotechnology. He completed a postdoctoral fellowship at the UC Davis School of Medicine, defined by specialized research in regenerative medicine and cellular biology. His training was further complimented with a Fellowship in innovation management through the University of California Davis Business Development Program.

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Dr. Elizabeth G. Davis

Professor of Equine Internal Medicine and the Interim Dean, College of Veterinary Medicine, Kansas State University

Dr. Elizabeth G. Davis is a Professor of Equine Internal Medicine and the Interim Dean of the College of Veterinary Medicine at Kansas State University.

Investigational research has focused on educational outcomes for veterinary students, enhanced characterization of immune responsiveness to vaccination, particularly with an aim to define age-specific responses. Immunologic investigations also include characterizing the influence of antigen exposure and development of adverse reactions. Investigations have evaluated endogenous host mechanisms that contribute to anaphylaxis. Infectious disease investigations have aimed at identification of host response through inflammatory mediator expression. Specific epidemiologic factors that contribute to disease development associated with Corynebacterium pseudotuberculosis infection have been identified. Collaborative investigations have involved pharmacokinetic evaluation of drug therapy in the equine host.

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Session 3, Tuesday, June 9, 1:30 p.m.
Impact of Veterinary Vaccines for Agricultural Systems

Dr. John El-Attrache

Ceva Animal Health
Head of US Livestock Technical Services

Dr. El-Attrache is an animal health virologist with over 30 years experience working with viruses at a clinical, classical and molecular level. He has amassed vast experience working with private sector groups as well as foreign governments. Working specifically with biological product development, clinical assessment, high throughput molecular and virological diagnostic development, laboratory review and design, personnel assessment and environmental and facility bio-security review.

Dr. El-Attrache has previously led an independently funded laboratory at Texas A&M University with projects focusing on high throughput diagnostics, rapid antigen detection, novel vaccine development and avian influenza surveillance in wildlife. Led and instructed professional veterinary students in all aspects of bio-security, clinical avian medicine and avian virology. Assisted government agencies such as Texas Animal Health Commission and Texas Veterinary Medical Laboratory, the United States Department of Agriculture Foreign Agriculture Service and Agriculture Research Services in the laboratory and in the field during outbreaks of exotic diseases as well as assisting local industry in disease diagnosis in the field and laboratory .

Over the past 15 years at Ceva Animal Health, Dr. El-Attrache has provided Global Direction at a corporate level through scientific support and innovation. Working strategically to coordinate and prioritize corporate initiatives and projects while facilitating the introduction and development of innovative diagnostics, R&D and business projects. Dr. El-Attrache currently leads veterinary services and scientific field investigations as the Head of US Livestock Technical Services.

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Session 4, Tuesday, June 9, 2:30 p.m.
Gaps in Veterinary Diagnostics

Marina Gaimard

Biotechnology Engineer, Innovative Diagnostics, France
Operations Manager, ID Vet Inc, NH, USA

Marina GAIMARD is an R&D Engineer specializing in veterinary in vitro diagnostics, with a dedicated focus on Poultry health. With a strong background in molecular biology and extensive field experience, she has developed in-depth expertise in the diagnosis and management of major Poultry diseases, particularly Infectious Laryngotracheitis (ILT), Avian Influenza (AI), and Infectious Bronchitis virus (IBV).

Throughout her career, Marina GAIMARD has built solid expertise in the development and optimization of molecular and serological diagnostic tools, including PCR-based assays and ELISA tests. She also demonstrates strong proficiency in innovative technologies applied to diagnostic kit development, contributing to the design of sensitive, reliable, and field-adapted solutions aligned with evolving industry needs.

Marina GAIMARD currently represents Innovative Diagnostics, a key player in the field of veterinary diagnostics where she contributes to advancing diagnostic solutions for animal health. Driven by a commitment to advancing early detection and improving disease control strategies, Marina GAIMARD focuses on delivering impactful diagnostic innovations for veterinary health management. Innovative Diagnostics is specialized in the development, production, and commercialization of serological and molecular biology tests, mainly ELISA and PCR kits, for the diagnosis of zoonotic diseases in humans and animals, and veterinary diseases in farm animals. Tests developed by Innovative Diagnostic are used worldwide to detect emerging and zoonotic diseases which pose new threats to animals and humans; and to control veterinary diseases as part of eradication program.

Marina GAIMARD holds a Master's degrees in biotechnologies (with further specialization in in vitro diagnostic), from the University of Grenoble Alps, a leading center of scientific excellence in France, and ranked among the top French universities in engineering. She has contributed to research projects and field studies, supporting the continuous evolution of veterinary diagnostic approaches.

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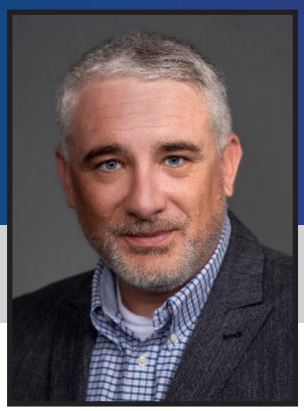

Session 7, Wednesday, June 10, 1:45 p.m.
University Efforts on Biomanufacturing

Dr. Darragh G. Heaslip

Director, Infectious Disease Research Centre (IDRC)
Assistant Professor, Department of Microbiology Immunology and Pathology, Colorado State University

Dr. Darragh Heaslip was appointed as the Director of the Infectious Disease Research Center (IDRC) at CSU in May of 2026, having previously served as Interim Director since June 2023. In this role, he oversees the strategic and operational programs of the IDRC complex, incluing high-containment BSL-3 laboratories and select agent spaces.

In addition, Dr. Heaslip oversees BioMARC, CSU's cGMP biomanufacturing facility. He has overall responsibility for the technical and cGMP manufacturing activities, ensuring regulatory compliance, and driving innovation in the production of biologics.

Prior to his appointment as Director, Dr. Heaslip held several key roles within BioMARC, including Associate Director for Technical Operations, where he spearheaded the development, analytical testing, and manufacturing of early clinical phase cGMP biologics, including vaccine candidates for SARS-CoV-2 and HIV (whole inactivated vaccine candidates), Rift Valley Fever Virus (attenuated vaccine candidate), as well utilizing a VEE VRP platform to develop vaccine candidates for VEE, Marburg and Sudan virus.

Before joining BioMARC, Dr. Heaslip worked as a research scientist investigating the role that post-translational modifications play in Mycobacterium tuberculosis pathogenesis.

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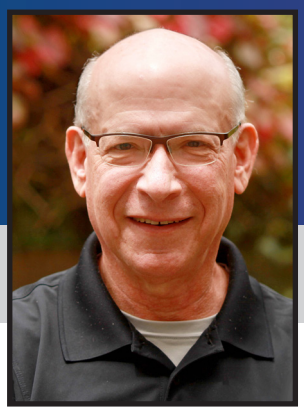

Session 2, Tuesday, June 9, 11:00 a.m.
Current State of Manufacturing of Veterinary Vaccines

Matt Kremer

Business Development at Univercells Technologies

Matt Kremer has over 35 years of experience in various aspects of pharmaceutical development — clinical development, pharmaceutics and technology adoption. Mr. Kremer is a principal with Matson Louise, LLC, which provides business development services.

Starting in 2008, he began working in the bioproduction space with fixed-bed bioreactors – 1st with the iCELLis bioreactor platform supplied by Cytiva, and now with the scale-X™ bioreactor platform supplied by Donaldson Life Sciences. The fixed-bed bioreactors are a recent technology and well suited for viral vaccine manufacturing replacing traditional roller bottles and microcarriers.

Mr. Kremer received his B.A. (Geography) and MBA from Temple University in Philadelphia, PA.

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Dr. Young Lyoo

Center on Emerging and Zoonotic Infectious Diseases, Kansas State University

Dr. Young Lyoo obtained a DVM from the College of Veterinary Medicine, Konkuk University in Seoul, Korea in 1983 and Ph.D. in Immunobiology from Iowa State University Ames, Iowa, in 1995.

Upon completion of his Ph.D., Dr. Lyoo joined Korean National Veterinary Research Institute as a senior research scientist then moved to Konkuk University in 1998. He served as a Dean for the College of Veterinary Medicine, Dean for the Graduate School of Veterinary Biosecurity and Protection and Vice-President of the Konkuk University.

His research focused on swine viral diseases and vaccine development include FMD, PRRS, PCV, JEV, PPV, CSF and pig picornaviruses. Currently, he joined and extended his research career at the CEZID, Kansas State University.

Symposium on Biomanufacturing for Mitigating Transboundary Animal Disease Threats

Session 4, Tuesday, June 9, 2:30 p.m.
Gaps in Veterinary Diagnostics

JJ McCallie

Vice President of Products, VMRD Inc.

JJ McCallie joined VMRD as the Vice President of Products in August of 2022. In his role, he oversees the manufacturing and commercial activities for all the diagnostic kits and reagents across the company. During his time at VMRD he has contributed to the expansion of the company's diagnostic offerings.

VMRD was founded in 1981 by D. Scott Adams, DVM, PhD, and currently employs over 60 researchers, lab technicians and support personnel. As a company, VMRD strives to preserve its family-focused culture and core values of integrity and quality. From its headquarters in Pullman, WA, VMRD develops and manufactures veterinary diagnostic test kits and related reagents for distribution in more than 77 countries. Additionally, VMRD's services division, performs specialized testing of raw materials, cells and seeds for the presence of adventitious agents to satisfy various regulatory requirements and quality assurance needs for the global serum, veterinary and pharmaceutical industries.

In January of 2025, VMRD expanded its operations to Fullerton, CA with the acquisition of the Fuller Laboratories, a diagnostics company specializing in vector borne human and animal diseases globally. JJ has over 20 years of experience in biotechnology manufacturing and sales across multiple areas of science, including microbiology, cell and protein analysis, organic chemistry, and serology. Prior to joining VMRD, he worked for ThermoFisher Scientific in a range of roles including leading manufacturing in two locations and leading a sales team in the clinical microbiology market.

Mr. McCallie is a graduate of the University of Central Missouri with a B.S. in Biology.

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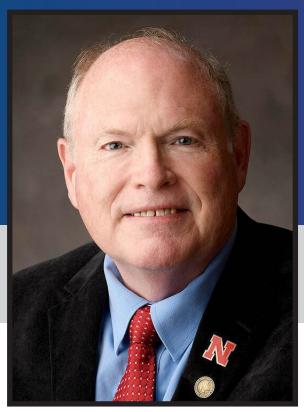

Session 1, Tuesday, June 9, 9:30 a.m.
Gaps in Veterinary Vaccine Development

Dr. David Scott McVey

Director of the University of Nebraska Lincoln School of Veterinary Medicine and Biomedical Sciences

Dr. David Scott McVey is the Director of the University of Nebraska Lincoln School of Veterinary Medicine and Biomedical Sciences and the Associate Dean of the Nebraska/Iowa Professional Program in Veterinary Medicine. He is a Fellow of the University of Nebraska National Strategic Research Institute and a Fellow of the Conference of Research Workers in Animal Diseases.

Previously, Dr. McVey was the Center Director for the USDA ARS Center for Grain and Animal Health Research in Manhattan, Kansas (2017-2020). He was also a Supervisory Veterinary Medical Officer and member of the USDA Senior Science and Technology Service. He was previously the Research Leader for the Arthropod Borne Animal Disease Research Unit at the Center from 2011 through 2016. Dr. McVey is also an Adjunct Professor of Immunology in the Department of Diagnostic Medicine, and Pathobiology in the College of Veterinary Medicine at Kansas State University. He was also a Fellow of the Biosecurity Research Institute at Kansas State University.

Dr. McVey's previous positions were in the biopharmaceutical industry, academia, and private practice. Dr. McVey has been recognized as the 2020 Distinguished Veterinary Immunologist by the American Association of Veterinary Immunologists. Dr. McVey was recipient of the Distinguished Alumni Award from the University of Tennessee College of Veterinary Medicine in 2007. He also has been President of the American College of Veterinary Microbiologists and has also a served on the Blue-Ribbon Panel for Counter Measures for Terrorist Threats to Agriculture for the President of the United States (2003-2004).

Dr. McVey's research interests include comparative immunology of infectious diseases, vector transmission of arboviruses and associated control measures. He has published numerous research papers and was a co-editor of Veterinary Microbiology, 4th Edition. Dr. McVey is Editor-in-Chief of the Journal of Animal Health Research Reviews. Dr. McVey is also the Executive Director of the Conference of Research Workers in Animal Diseases. Dr. McVey has leadership experience in basic research, commercial vaccine research and development, corporate leadership, diagnostic medicine, and graduate and veterinary professional education.

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Session 7, Wednesday, June 10, 1:45 p.m.
University Efforts on Biomanufacturing

Dr. Beth Montelone

Senior Associate Vice President for Research, Kansas State University

Dr. Beth Montelone is a Professor of Biology currently serving as the Senior Associate Vice President for Research at Kansas State University (K-State). She directs the Office of Research Development, which supports and facilitates the research efforts of K-State's faculty, staff, and students, by helping to coordinate multi-investigator research collaborations, professional development activities for new and continuing researchers, and university-wide research initiatives.

She has conducted research in DNA repair and mutagenesis, increasing the participation of underrepresented groups in STEM, and improving science education. Her work has been funded by multiple agencies, including the National Science Foundation, the National Institutes of Health, the USDA and the Kansas Health Foundation. She is currently Principal Investigator on an NSF Engines Development Award on advancing economic development by capitalizing on regional expertise in biosecurity, biodefense, and biomanufacturing and is managing all biomanufacturing initiatives for K-State.

Dr. Montelone served as Associate Dean for Research in the College of Arts & Sciences from 2004 to 2017. In this role, she had responsibilities for research compliance, safety, instructional technology, space planning, renovations, and infrastructure, as well as supporting research efforts and collaborations across the college. She directed the Faculty Enhancement Program, the Undergraduate Research Program, and the Student Research Travel Program.

She served as Interim Research Director of the Biosecurity Research Institute and held the Peine Professorship of Biosecurity from 2008-2011.

Dr. Montelone received the B.S. from Rensselaer Polytechnic Institute and the Ph.D. from the University of Rochester, both in New York. She carried out postdoctoral research at the University of Miami School of Medicine and the University of Iowa.

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Session 3, Tuesday, June 9, 1:30 p.m.
Impact of Veterinary Vaccines for Agricultural Systems

Dr. Scott T. Nordstrom

Director of New Product Development, Merck Animal Health, US Livestock Business

Dr. Scott Nordstrom is the Director of New Product Development at Merck Animal Health, US Livestock Business. Prior to this role, Dr. Nordstrom served for 14 Years as the Director of Technical Services. He brings with him over 30 years of experience in the veterinary profession via the animal health industry and private practice.

Dr. Nordstrom specializes in immunology, vaccine research and development, as well as post-approval pharmaceutical and vaccine studies in cattle. He also provides training in the areas of infectious diseases, vaccinology, immunology and diagnostics. Dr. Nordstrom played principal roles in bringing numerous products to the US and Global cattle industry including Banamine® Transdermal and the Vista® vaccine line. He was also responsible for bringing numerous intranasal vaccines to market in the cattle industry Including Nasalgen 3PMH. After practicing dairy and equine medicine privately for ten years, he joined Merck Animal Health Cattle Technical Services in 2001.

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Session 5, Tuesday, June 9, 4:00 p.m.
Current State of Manufacturing of Veterinary Diagnostics

Max Perelman

Co-Founder, President and Chief Executive Officer, Biomeme

Max Perelman is the President and Chief Executive Officer at Biomeme, a global leader in mobile molecular detection solutions. Prior to founding Biomeme over 10 years ago, Max spent 15 years in a range of industries, including: environmental consulting and green building technology, eCommerce and enterprise systems development, and management consulting.

After launching his career in San Francisco, Max lived in Asia for almost a decade, leading projects in Hong Kong, Beijing, Bangkok, and Tokyo.

He has a BA from Cornell University and an MBA/MAIEP from the Monterey Institute of International Studies.

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Session 2, Tuesday, June 9, 11:00 a.m.
Current State of Manufacturing of Veterinary Vaccines

Dr. Teguh Yodiantara Prajitno

Senior Vice President, Japfa Comfeed

As Senior Vice President at Japfa Comfeed Indonesia, Dr. Prajitno has been assigned as animal health director, to lead the livestock veterinary department, which monitors flock health and biosecurity, prevention programs, such as vaccination and treatments to prevent and cure diseases.

In his daily function, Dr. Prajitno leads and manages all veterinary operations across the integrated poultry value chain, from breeding and hatchery operations through grow-out, processing, and animal health product manufacturing and distribution. Further Dr, Prajitno serves as focal point for the communication with primary genetic companies in the US and Europe and represents as the primary contact for government and international institutions, such as WOAH, FAO, OFFLU and various universities to improve the capacity and capability of his team in managing animal disease, to enhance laboratory services and to perform research and development of vaccine solutions, required to safeguard the operations.

Dr. Prajitno frequently organises training, seminars and workshops to upgrade skills and knowledge of his team and his customers.

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Session 7, Wednesday, June 10, 1:45 p.m.
University Efforts on Biomanufacturing

Dr. Trina Racine

Director of Vaccine Development, Vaccine and Infectious Disease Organization (VIDO)

Dr. Trina Racine possess a PhD in Microbiology and Immunology from Dalhousie University (Halifax, Nova Scotia, Canada) and is currently the Director of Vaccine Development at VIDO.

Upon completion of her PhD, Dr. Racine joined the Special Pathogens Program at the National Microbiology Laboratory (NML), part of the Public Health Agency of Canada. While at the NML Dr. Racine worked on the development of vaccines and therapeutics for various emerging and re-emerging infectious diseases, including Ebola, Zika and MERS. Dr. Racine coordinated clinical trials and provided diagnostic support to the Ebola outbreak in West Africa in 2014-2016. Prior to joining VIDO, Dr. Racine was a Scientific and Regulatory Affairs Consultant for GeneOne Life Science, Inc., a South Korean based biopharmaceutical company.

As Director of Vaccine Development at VIDO, Dr. Racine is responsible for guiding the development, manufacturing, and clinical/field testing of VIDO's internal products using a Stage Gate process. Dr. Racine is also responsible for VIDO's Vaccine Development Centre (VDC), a pilot scale, Containment Level 3 capable, GMP biomanufacturing facility capable of producing veterinary vaccines to North American licensure and human vaccines to Phase II clinical trials.

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Session 4, Tuesday, June 9, 2:30 p.m.
Gaps in Veterinary Diagnostics

Rolf Rauh

Veterinary Diagnostics R&D Manager, Tetracore, Inc.

Rolf Rauh is a scientist and manager at Tetracore, Inc. in Rockville, MD, specializing in the development of diagnostic assays for infectious diseases, particularly in swine and emerging pathogens.

Rauh joined Tetracore in 2007 and has been instrumental in advancing veterinary diagnostic capabilities, focusing on developing and optimizing molecular assays. His work at Tetracore has involved leading the development of novel viral diagnostic multiplex assays, specifically for real-time PCR platforms. This includes the development of assays for multiple instruments, including Bio-Rad, Rotor-gene, Roche and ABI, demonstrating broad technical proficiency.

Rauh's expertise extends to evaluating new diagnostic technologies, including instruments, reagents, and consumables, ensuring Tetracore remains at the forefront of innovation. He also plays a key role in fostering collaborations with industry partners, universities, and reference laboratories worldwide to validate new technologies and assays. This collaborative approach has been crucial for the global verification and adoption of their diagnostic solutions.

Further contributions include research and development for veterinary products, specifically focusing on Point of Care with the Tetracore T-COR 8 real-time PCR Instrument, detecting animal pathogens in the field. This involved work with Foot-and-Mouth Disease, Peste des Petits Ruminants and African Swine Fever. This work was performed in collaboration with the USDA and other Government entities and Universities worldwide.

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June 8 - 10, 2026

Dr. Juergen Richt

Regents and University Distinguished Professor, Kansas State University.
Director, Center of Excellence for Emerging and Zoonotic Animal Diseases.
Director, NIH COBRE Center on Emerging and Zoonotic Infectious Diseases.

Dr. Juergen Richt came to Kansas State University in 2008 as The Regents and University Distinguished Professor and Kansas Bioscience Eminent Scholar. In 2010, he became Director of the Department of Homeland Security Center of Excellence for Emerging and Zoonotic Animal Diseases and in 2020 Director of the National Institutes of Health Center on Emerging and Zoonotic Infectious Diseases.

He received his Doctorate in Veterinary Medicine from the University of Munich and a PhD in Virology and Immunology from the University of Giessen, both in Germany. After coming to the United States in 1989, he completed three years of postdoctoral/residency studies at The Johns Hopkins University and later served for eight years as a Veterinary Medical Officer at the National Animal Disease Center in Ames, Iowa. He has edited several books, obtained several patents, published more than 330 peer-reviewed manuscripts, and raised more than $65 million in grants for veterinary research.

Dr. Richt is a pioneer in veterinary science, most notably in the “One Health” field. His work on high-consequence pathogens with zoonotic and transboundary potential led to strategies to identify, control, and/or eradicate such agents. His basic and applied research includes studies on animal influenza viruses (swine, bat and avian), animal prion diseases including bovine spongiform encephalopathy, Rift Valley Fever virus, African Swine fever virus, Mpox virus, SARS-CoV-2 and Borna Disease virus. Dr. Richt established the first reverse genetics system for swine influenza virus and made seminal contributions to the development of a modified live SIV vaccine (“Ingelvac Provenza™”) as well as to understanding the virulence of the reconstructed 1918 “Spanish Flu” virus in livestock.

He is holder of an A-rating from the National Research Foundation. In 2024 he was elected to the National Academy of Medicine (NAM), and in 2025 he became a member of the National Association of Virology. Currently the Associate Editor of “Animal Diseases,” he received the 2024 “Roots of Research” Award. In 2025 Dr. Richt was the inaugural recipient of the President’s Recognition of Excellence Award at Kansas State University.

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Keynote Speaker, Wednesday, June 10, 1:15 p.m.
Transition from Bench to Production - Pitfalls and Challenges

Dr. Luis L. Rodriguez

Retired

Dr. Luis L. Rodriguez, a veterinarian with a Ph.D. in virology, joined the U.S. Department of Agriculture Agricultural Research Service in 1997. From 2002-2024 was the research leader of the Foreign Animal Disease Research Unit at the Plum Island Animal Disease Center, which focuses on foot-and-mouth disease, African swine fever, classical swine fever, and vesicular stomatitis research.

Dr. Rodriguez has worked extensively on vesicular stomatitis virus, an insect-borne zoonotic virus that causes economically important disease in domestic livestock. He also has worked both in field and biosafety level 4 (BSL-4) laboratories with other zoonotic and emerging viruses such as hantaviruses (Sin Nombre), filoviruses (Ebola) and nairoviruses (Crimean-Congo Hemorrhagic Fever) at the Centers for Disease Control and Prevention in Atlanta, Georgia.

Dr. Rodriguez's research focused on pathogenesis, countermeasure development, and disease ecology of foreign and emerging diseases. He developed a controlled FMD virus (FMDV) aerosol exposure method to characterize of the primary replication sites of FMDV in cattle. Dr. Rodriguez has described the use of infrared thermography for pre-clinical detection of FMD-infected cattle. He was part of the leadership team responsible for the development of a novel safe and effective FMDV platform that allows safe production in the United States.

Major accomplishments during his scientific career include his leadership of the USDA-ARS Foot-and-Mouth Disease research program with 73 FMD scientific peer-reviewed articles. In 2022, Dr. Rodriguez was awarded a National Federal Laboratory Consortium award for the successful technology transfer, development, and manufacturing of the first FMD virus vaccine on the U.S mainland since 1929.

Dr. Rodriguez was part of the team that conceived the program of requirements and was part of the design team for the National Bio And Agro-Defense Facility. He played a key role in the stand-up of the FADRU research at NBAF. Dr. Rodriguez has authored over 190 peer-reviewed scientific publications, scientific reviews, and book chapters. Since retiring, he is dedicated to regenerative cattle farming in Costa Rica.

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Session 3, Tuesday, June 9, 1:30 p.m.
Impact of Veterinary Vaccines for Agricultural Systems

Dr. James Roth

Distinguished Professor Emeritus, Department of Microbiology and Preventive Medicine, College of Veterinary Medicine, Iowa State University

Dr. Jim Roth is a Distinguished Professor Emeritus in the Department of Veterinary Microbiology and Preventive Medicine in the College of Veterinary Medicine at Iowa State University. He received the DVM (1975) and PhD (1981) degrees from ISU and is a Diplomate in the American College of Veterinary Microbiologists.

Dr. Roth worked as a veterinarian in a mixed animal practice from 1975 until 1977. He served as the founding Director of the Center for Food Security and Public Health and the Institute for International Cooperation in Animal Biologics. He received five teaching awards and was named Clarence Hartley Covault Distinguished Professor in 1995.

Dr. Roth's primary area of research expertise is immunity to infectious diseases of food producing animals. He has served as the major or co-major professor for 52 MS and PhD students. He has authored or co-authored more than 210 refereed journal articles and book chapters and has edited 16 monographs. Dr. Roth received the Distinguished Veterinary Immunologist Award from the American Association of Veterinary Immunologists, the Distinguished Veterinary Microbiologist Award from the American College of Veterinary Microbiologists, the Public Service Award from the American Veterinary Medical Association (AVMA), the International Veterinary Congress Prize from the AVMA, and the USDA APHIS Administrator's award for lifetime achievements in animal health. Dr. Roth was elected to the National Academy of Medicine in 2016 and is an AAAS Fellow. Dr. Roth served on the Interagency Weapons of Mass Destruction Counter Measures Working Group – Animal Pathogens Research and Development Subgroup, and the White House Office of Science and Technology Policy Blue Ribbon Panel on the Threat of Biological Terrorism Directed Against Livestock. He has testified before Congressional committees on biosecurity preparedness, on efforts to address bioterrorism and agroterrorism, and on the need for vaccines for foreign animal diseases.

Dr. Roth served on the National Science Advisory Board for Biosecurity from its inception in 2005 until 2014.

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Keynote Speaker, Tuesday, June 9, 1:00 p.m.
Title: The Role of Vaccination in the Process of Eradicating Foot and Mouth Disease in South America: Lessons Learned

Dr. Manuel J. Sánchez Vázquez

Veterinary Epidemiologist Specialist
Director – Pan American Foot-and-Mouth Disease Center and Veterinary Public Health Pan American Health Organization, Rio de Janeiro, Brazil

Dr. Manuel J. Sánchez Vázquez has over 25 years of professional experience across the private sector, academia, and international organizations, with work and collaboration spanning Europe, Africa, Asia, and, for the past 13 years, the Americas. He has developed extensive expertise in veterinary public health, epidemiology, transboundary animal diseases, and One Health, and has led multidisciplinary teams supporting the design and implementation of health and epidemiological programmes at global, regional, and national levels.

Dr. Sánchez Vázquez holds a PhD in Epidemiology from the Faculty of Veterinary Medicine, Utrecht University (The Netherlands). He also holds a Master's degree in Veterinary Epidemiology from the Royal Veterinary College and the London School of Hygiene & Tropical Medicine, University of London (United Kingdom), as well as a Master's degree in Public Policy and Management from the University of York (United Kingdom). He obtained his degree in Veterinary Medicine from the Complutense University of Madrid (Spain) in 1999.

Since April 2026, Dr. Sánchez Vázquez serves as Director of PANAFTOSA, the PAHO Centre for Foot-and-Mouth Disease and Veterinary Public Health. He has worked at PANAFTOSA-VPH, based in Rio de Janeiro Brazil, since 2013, where he coordinated the Epidemiology Area until his appointment as Director.

Prior to joining PANAFTOSA, he served as Deputy Head of the Information Department at the World Organisation for Animal Health (WOAH) at its headquarters in Paris, France, from 2011 to 2013. From 2007 to 2011, he worked as an epidemiologist at the Epidemiology Research Unit of the Scottish Agricultural College (now Scotland's Rural College – SRUC) in Inverness, United Kingdom. Earlier in his career, in Spain and the United Kingdom, he worked in veterinary laboratory diagnostics, served as an official veterinarian, and practiced companion animal clinical medicine.

Since 2016, Dr. Sánchez Vázquez has been a member of the WOAH ad hoc Group on Foot-and-Mouth Disease Status Evaluation. He is the co-author of more than 50 scientific articles, book chapters, and technical documents, and collaborates actively with several universities and research institutions.

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June 8 - 10, 2026

Dr. Jeff Silverstein

Associate Administrator, Office of National Programs
U.S. Department of Agriculture

Dr. Jeff Silverstein started his career with USDA and the Agricultural Research Service in 1997 as a geneticist and breeder with the catfish aquaculture program in Stoneville, Mississippi. He moved to the Office of National Programs in 2007 and subsequently served as Associate Director in the Southeast Area Office and then as the Deputy Administrator for Animal Production and Protection in the Office of National Programs. In December 2024, he was selected as the Associate Administrator for National Programs.

Silverstein led ARS teams in the launch of the ARS Grand Challenge-Synergies program and ARSX, the breakthrough innovation platform. He has worked with leading scientists from ARS and around the world as the co-chair of the Biosafety Level 4 Zoonotic Laboratory Network (BSL4ZNet), the White House Office of Science and Technology Policy (OSTP) Transboundary Animal Disease Threats working group, and the OSTP Subcommittee on Aquaculture. As Associate Administrator, working with expert colleagues across agricultural research fields covering animal and crop science, natural resources, human nutrition and food safety, he leads program development and research prioritization for the agency.

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Session 2, Tuesday, June 9, 11:00 a.m.
Current State of Manufacturing of Veterinary Vaccines

Dr. Zulma Rocío Suárez-Moreno

Head of Research & Development, VECOL S.A., Colombia

Dr. Zulma Rocío Suárez-Moreno is a scientist with over 20 years of experience across academic research and corporate leadership. Her career is dedicated to R&D in pharmaceutical products and vaccines for animla health. Combining deep scientific rigour with results-oriented management, Zulma currently oversees a pipeline of more than 20 projects for a government veterinary company in Colombia. Her role includes managing all laboratory staff, developing budhets, and overseeing the transition of products from early-stage development to production facilities.

Dr. Suárez-Moreno holds a BSc in Pharmaceutical Sciences from the Universidad Nacional de Colombia and an MSc in Microbiology. In 2010, she earned her PhD in Molecular Genetics and Biotechnology from an International Centre for Gentic Engineering and Biotechnology (ICGEB) in Italy.

Dr. Suárez-Moreno completed two major post-doctoral terms: one at the Public Health Research Institute (PHRI) in New Jersey, USA, and another with the company BIOCULTIVOS in collaboration with the Universidad Nacional de Colombia. She served as an Assistant Professor at the Universidad de La Sabana and as a lecturer in graduate microbiology programmes. She has also served as a Young Ambassador to Colombia for the American Society for Microbiology (ASM).

Her areas of interest include bacterial genetics, bioprocessing, and high-level collaboration with Colombia's Science and Health Ministries. For the past four years, Zulma has been part of the task force of VECOL and the Colombian government, aiming to build capacity for human vaccine production in Colombia within the framework of the programme COLOMBIAVAC.

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Session 6, Wednesday, June 10, 11:30 a.m.
Federal Partnerships and Collaborations with Industry

Jeff Thurston

Technology Transfer Coordinator, USDA-ARS, Plains Area
Acting Technology Transfer Coordinator, USDA-ARS, Northeast Area
Registered Patent Attorney

Jeff Thruston received his B.S. with honors in Biology from the University of Missouri-Columbia in 2008. In 2012, he received his J.D. from the University of Missouri-Columbia, School of Law, where he was a Member of the Missouri Law Review. After practicing law for a year, Jeff received his M.S. in Biochemistry & Molecular Biology from Georgetown University School of Medicine and served as a Patent Examiner Extern at the United States Patent and Trademark Office (USPTO) – Art Unit 1634 - Biotechnology, Molecular Biology, Microbiology, and Organic Compounds.

After graduation, he worked at Georgetown University's Office of Technology Commercialization and in antibody manufacturing at MedImmune. In 2016, Jeff joined the National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), as an ORISE Fellow and Technology Transfer and Patent Specialist in the Technology Transfer and Intellectual Property Office. He represented the Rocky Mountain Laboratories, Vaccine Research Center, and Integrated Research Facility, where he executed hundreds of technology transfer agreements to develop vaccines for SARS-CoV-2, Ebola, and Zika viruses.

After six years of service, Jeff joined the United States Department of Agriculture – Agricultural Research Service (USDA-ARS) in 2022 as the Technology Transfer Coordinator for the Plains Area. As of April 2025, Jeff assumed the additional role of Acting Technology Transfer Coordinator for the Northeast Area. In these roles, Jeff directly represents the National Bio and Agro-Defense Facility (NBAF) and over thirty additional locations across twenty-three states.

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Session 6, Wednesday, June 10, 11:30 a.m.
Federal Partnerships and Collaborations with Industry

Willy Valdivia

CEO, Orion Integrated Biosciences, Inc., USA

Willy A. Valdivia is the founder and CEO of Orion Integrated Biosciences, Inc. Since 2005, his efforts have focused on developing algorithms to analyze genomic, metagenomic information and its translation to diagnostic, prophylactic, and therapeutic products.

With a background in molecular and computational Biology, Mr. Valdivia has a broad view of biotechnology's technology development. He currently supports biodefense and national security efforts using genomics, data analytics, and artificial intelligence technology to solve human, veterinary, and plant health issues.

He is the author of several publications on data mining, genomics, national security, and bioterrorism. He is also adjunct faculty of the Department of Diagnostic Medicine/Pathobiology at Kansas State University and serves as a subject matter expert for the U.S. government and the European Union.

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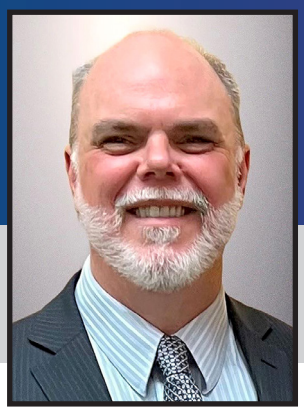

Keynote Speaker, Wednesday, June 10, 9:30 a.m.
Vaccines for Emerging Animal Diseases - Regulatory Tools for Approval of Veterinary Biologics

Dr. David White

Director of Policy, Evaluation, and Licensing
USDA's Center for Veterinary Biologics

Dr. David White is the Director of Policy, Evaluation, and Licensing at the USDA's Center for Veterinary Biologics. He was previously the Safety and Security Unit Lead, and was formerly the Biosafety Manager, of the National Centers for Animal Health in Ames, IA. Previously, Dr. White worked as a researcher in containment facilities for the USDA-Agricultural Research Service and the Centers for Disease Control and Prevention. Before leaving the CDC, he was a Team Lead at CDC's Division of Select Agents and Toxins.

Dr. White received his B.S. (Environmental Health), DVM, and PhD (Virology) from Colorado State University, and is a Diplomate of the American College of Veterinary Microbiologists and was a Registered Biosafety Professional from 2017-2023.

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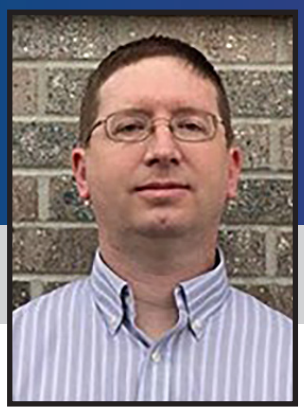

Session 1, Tuesday, June 9, 9:30 a.m.
Gaps in Veterinary Vaccine Development

Nick Wills

Associate Director, Regulatory Affairs – Biologicals
Boehringer Ingelheim Animal Health, USA

Nick Wills is an Associate Director in Regulatory Affairs for Biologicals at Boehringer Ingelheim Animal Health, based in St. Joseph, Missouri. In this role, he provides strategic regulatory leadership for veterinary biologics with a primary focus on vaccine development and licensure for new products, while also contributing to lifecycle management, and compliance with U.S. Department of Agriculture Center for Veterinary Biologics requirements.

Mr. Wills leads regulatory strategy and execution for high-priority vaccine innovation programs spanning swine, cattle, avian, and companion animal portfolios. His responsibilities cover early development through licensure, including master seed approvals, safety and efficacy studies, pre-licensing serial submissions, and potency and inactivation assays. He works cross-functionally with Research and Development, Clinical, Global Supply, Quality, and CMC teams to develop science-based regulatory positions, with particular emphasis on complex areas such as antimicrobial resistance risk in biologics manufacturing platforms, reasonable expectation of efficacy strategies, advanced potency assay alignment, and risk-based justification for legacy and next-generation vaccine technologies.

As part of a global company, Mr. Wills also supports global regulatory harmonization efforts, contributing to regulatory strategy discussions for product expansions beyond the United States, including alignment with EU and other international regulatory frameworks when relevant. His responsibilities include coordination of internal governance interactions, preparation of regulator-facing briefing materials, and engagement with regulatory authorities to address novel scientific or policy-driven challenges.

Before joining Boehringer Ingelheim Animal Health, Mr. Wills held roles at Benchmark Biolabs, Huvepharma, and knoell Animal Health, bringing approximately 17 years of experience across a wide range of animal health products and regulatory functions.

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Keynote Speaker, Wednesday, June 10, 11:00 a.m.
NBAF Efforts on Biomanufacturing

Steven B. Witte

Director, NBAF Biologics Development Module

Mr. Steve Witte is the Biologics Development Module Director for the National Bio and Agro-Defense Facility (NBAF), which is owned and operated by the U.S. Department of Agriculture (USDA).

In this role, he and his team will directly support and accelerate technology transfers of veterinary biological products, such as vaccines, diagnostics and biotherapeutics, to commercial manufacturers and other partners. At NBAF, he is responsible for planning, coordinating, and directing BDM operations with emphasis on strategic direction. He also is tasked to provide leadership for the development, production, and testing of vaccines and biologicals for use in animals.

Mr. Witte has worked in the biological development, research, and animal health fields for nearly 30 years. Prior to joining NBAF, Mr. Witte was a research scientist and most recently a senior research scientist team leader at Elanco in Indiana, where he managed the analytical and process development research team for food and companion animal vaccines and biotherapeutics.

Prior to his time at Elanco, Mr. Witte worked as a senior scientist, scientist, and senior associate scientist for Pfizer Animal Health in Michigan and in Connecticut. In that role, Mr. Witte developed analytical tools and assays for vaccines for food and companion animals and was part of several teams that licensed cattle vaccines such as CattleMaster Gold, BoviShield Gold and Inforce 3.

Mr. Witte earned a Master of Science in pathobiology from Kansas State University in 1999 and a Bachelor of Science in biology from the University of Kansas in 1994. While at KSU, Mr. Witte worked full-time at the College of Veterinary Medicine in the Department of Diagnostic Medicine/Pathobiology as a microbiologist in the Virus Serology lab.

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Keynote Speaker, Wednesday, June 10, 8:30 a.m.
Regulatory Hurdles & Issues for Licensure

Dr. Alan Young

Chief Technology Officer, Medgene Labs

Dr. Alan Young received his Bachelor of Science from the inaugural class of the Immunology Specialist Program at the University of Toronto, before earning his PhD in Immunology and Pathology with a focus on Comparative Immunology. Upon graduation, he accepted a position as Scientific Member of the prestigious Basel Institute for Immunology, before starting his academic career as Faculty at Harvard Medical School Department of Surgery.

In 2001, Dr. Young moved to a Faculty position at South Dakota State University in the Department of Veterinary and Biomedical Science where he has served as mentor to numerous Graduate and Undergraduate researchers, as well as Departmental Research Coordinator and Assistant Director of the 2+2 DVM program. As a university professor, Dr. Young has been instrumental in helping new and future veterinary leaders prepare for the animal health challenges to come, in addition to those currently affecting agricultural and companion animals.

In 2001, Dr. Young co-founded Medgene to develop immunological solutions for both animal and human health, with a focus on platform vaccines. As a commercial scientist, Dr. Young has lead numerous animal health firsts, and sustained successes, in Subunit, and Platform Vaccine technology, applied Bioinformatics, and commercial vaccines that address critical enteric, respiratory, and parasitic infections. Medgene currently provides immunological solutions to meet the needs of cattle, swine, and companion animals, and has also developed vaccine solutions for a number of zoonotic diseases including Rift Valley Fever and High Path Avian Influenza.

Dr. Young has served on numerous academic and industry organizations, as past-President of the America Association of Veterinary Immunologists and current Chair of the United States Animal Health Association Committee on Biologics and Biotechnology.