Strategic Biocontainment Laboratory Planning and Operations Workshop: The ABCs of High Containment Operations
November 17-21, 2025
Toronto, ON

2025 Faculty

Ayoob Ghalami, University of Toronto

Ayoob Ghalami brings over 20 years of biosafety expertise, supported by academic credentials in molecular biology from the University of Toronto and occupational health from Toronto Metropolitan University. He began his career as a district manager in industry before moving into academia, starting as a radiation safety officer and then serving as a biosafety officer for the past 19 years. He has been pivotal in building the university's biosafety program—including its medical surveillance system with pre- and post-exposure prophylaxis—and developing high-impact training now embedded in programs like dentistry and forensic science. Ayoob also created the Principles and Practices of BioRisk Management (Canadian version) course for biosafety professionals. He is currently supporting the design of a new CL3 facility and advancing the university's sustainability efforts by integrating safety with emerging technologies like self-driving laboratories.

Paul Jennette, Cornell College of Veterinary Medicine

Paul Jennette holds Bachelor's and Master's Degrees in Environmental Engineering from Cornell and the University of Massachusetts, respectively, and is both a Registered Professional Engineer and a Certified Biological Safety Professional. Since 1999, he has held the position of Biosafety Engineer at the Cornell College of Veterinary Medicine and is now also the Director of Biocontainment Operations there. A few of Paul's duties

include design, verification, operation, decontamination, training, and program management related to the College's BSL-3, ABSL-3, and ACL-3 facilities, and directing the College's medical waste management program which includes onsite treatment of Cornell's medical and pathological waste. Paul also serves on the biosecurity team that sets up and operates the College's Select Agent labs. He directs the College's rabies risk management program and is a member of Cornell's Institutional Biosafety Committee. Paul served as the American Biological Safety Association's representative on the ANSI committee to develop a national standard for the verification of BSL-3 facility performance, is a reviewer for the Applied Biosafety journal, and is a member of ABSA's Professional Development Team. He is an instructor and co-chair of ABSA's Principles & Practices of Biosafety class as well as a regular instructor for BSL-3 and other biosafety courses offered by the Eagleson Institute and ABSA. Paul's external consulting projects have ranged from small academic & diagnostic labs to very large federal biocontainment facilities ranging from (A)BSL-2 to (A)BSL-4, including ABSL-3Ag.

Carrie Smith, Merrick & Company

Carrie Smith is a seasoned biosafety professional with over fifteen years of experience spanning academia, government, and the private sector. She earned her undergraduate degree in Biology with a concentration in Biotechnology from the University of Delaware and went on to complete her Ph.D. in Genetics at North Carolina State University. As a Senior Scientist at Merrick & Company, she specializes in biosafety and laboratory operations planning, helping clients design and transition laboratories through new constructions, renovations, and strategic upgrades. Her expertise also extends to assisting clients with training, compliance inspection preparedness, biosafety program development, decontamination strategies, documentation development, and other critical biosafety initiatives.

Throughout her career, Carrie has successfully led both small and large biosafety programs, demonstrating expertise in BSL-3/ABSL-3 oversight, atypical animal biocontainment, select agent program management, recombinant technology, plant biosafety, diagnostic laboratory protocols, and the development of online and in-person training. In addition to her professional contributions, she is deeply involved in educational initiatives, serving as an instructor for ABSA's Principles & Practices of Biosafety Course, teaching the ABSA BSL-3 Operations and Management professional development course, and actively participating in the Preconference Course Committee.

Aurel Tamburri, Merrick Canada

Aurel Tamburri is a science facilities strategist and operations planner with over 25 years of experience guiding the design, commissioning, and start-up of high-performance laboratory environments, specializing in laboratory start-up, operational planning, and regulatory readiness. He has led major initiatives across Canada, helping public health and research labs align facility design with regulatory compliance, workflow optimization, equipment procurement, and biosafety integration. Aurel brings wealth of expertise in guiding institutions through the complex transition from concept to fully operational labs. Aurel has led major public health and research lab initiatives across Canada, guiding institutions through the complex transition from concept to fully operational facilities. His work bridges the gap between strategy and execution, helping laboratories achieve operational excellence and regulatory compliance. Since 2000, Aurel has held senior leadership roles with the Ontario Ministry of Health, Public Health Ontario, University of Toronto, and most recently with Merrick & Company. He holds a Master's Degree in Health Management and a Graduate Diploma in Occupational Health, Safety, and Environmental Medicine from McMaster University, as well as a Diploma in Medical Laboratory Science from the Michener Institute. He is also a Canadian Registered Safety Professional (CRSP). Throughout his career, Aurel has overseen clinical and service-based programs, led process and quality improvement initiatives, and developed transition plans aimed at enhancing laboratory operations and long-term sustainability.

Tom Walus, CABS-ACSB and Arcoplast

Tom Walus is the Account Executive and Biosafety professional for Arcoplast. He is also the Past President/Finance for the Canadian Association for Biological Safety. He earned his undergraduate degree from the University of Winnipeg. He has over 35 years of experience in clinical microbiology having worked at the Health Sciences Centre and St. Boniface Hospital in Winnipeg. He also spent 3 years as the lab manager for microbiology at the Royal University Hospital in Saskatoon. He also worked at the International Centre for Infectious Diseases, in Winnipeg, as program director for biosafety. He also worked 7 years as the Biosafety Officer for Shared Health in Winnipeg.

Throughout his career, Tom has had a passion for teaching microbiology and advocating for biosafety/biosecurity. He has presented at many different conferences and symposiums on topics of biosafety and microbiology.

Kurt A. Zuelke, Texas A&M University

Dr. Zuelke is an accomplished research scientist, veterinarian and Director of three maximum bio-containment infectious disease research facilities in the U.S. and Australian global health sectors.

Since 2019, Dr. Zuelke has served as the inaugural Executive Director of the Texas A&M University Global Health Research Complex (GHRC). The GHRC is a state-of-the-art, biocontainment (BSL-2/3/3Ag) large animal holding and laboratory research facility purpose-built to combat existing and emerging diseases posing the gravest threat to Texas public health and its $100 billion agricultural economy. Dr. Zuelke developed GHRC's business model and led strategic planning to initiate facility operations, commence research and training programs, and secure Select Agent registration approval. GHRC's teams deliver biosafety and biosecurity, large animal handling in high level biocontainment, emerging infectious disease research, and professional development and training to Texas A&M faculty and academic and industry partners from across the US and around the world. Dr. Zuelke secured USDA funding to create and lead the Research Alliance of Veterinary Science and Biodefense BSL-3 Network (RAV3N). RAV3N is a collaborative network of 20 U.S. Federal and University member institutions respectively performing agricultural, wildlife and public health biodefense research and high level biocontainment facility operations across the U.S. and Canada.

In 2018, Dr. Zuelke founded an independent consultancy delivering executive level strategic biosecurity, biocontainment facility management, and One Health solutions to a global clientele. Notable clients included Texas A&M University, Merrick, and the Department of Homeland Security/USDA National Bio and Agro-Defense Facility (NBAF) in Manhattan KS.

Dr. Zuelke previously (2013 – 2017) served as the Director of the Australian Centre for Disease Preparedness (ACDP) in Geelong. ACDP protects Australia's $20B livestock and animal products export industries by delivering diagnostic testing, global disease surveillance services, and outbreak response support against emergency animal diseases. ACDP is one of few global facilities routinely performing BSL-4 level research and diagnostics programs in large animal species.

Dr. Zuelke previously (2006 – 2012) served as the Director of the USDA ARS National Animal Disease Center (NADC) in Ames IA, where he led NADC's strategic business reorganization and relocation into new $470M facilities supporting BSL-2/3/3Ag level research in livestock and wildlife species.

From 2001 – 2006, Dr. Zuelke served as a USDA ARS Research Leader in Beltsville, MD. During 2005 – 2006, Dr. Zuelke was a USDA representative to the White House Office of Science and Technology Policy coordinating and managing OSTP's portfolio of interagency biotechnology, agricultural and life science programs, and leading the U.S. Delegation to the OECD Working Party on Biotechnology.

Dr. Zuelke received a B.S. in Animal Science from the University of Wisconsin-River Falls, a DVM from the University of Minnesota, and a Ph.D. in Physiology from the University of Georgia.

He has pursued career-long research, science policy, and business interests in agriculture, comparative medicine, genomics, biotechnology, global health and biosecurity, biocontainment facility business and engineering leadership, and the ecology of emerging infectious zoonotic diseases.