FlowTex

Welcome to the FlowTex 2024 Cytometry Conference

Tuesday, March 26, 2024

9:00 – 12:15	**Best Practices in Flow Cytometry Part 1** *Techniques in Flow Cytometry & Sample Prep*
1:15 – 4:30	**Best Practices in Flow Cytometry Part 2** *Panel Design, Compensation, Data Evaluation*

Wednesday, March 27, 2024

8:30 – 8:45	Opening Remarks
8:50 – 12:00	**Clinical Cytometry Session**
1:00 – 5:00	**Imaging Cytometry & Spatial Biology**

Thursday, March 28, 2024

8:40 – 11:40	**Cytometry in Immuno-Oncology**
11:40 – 12:10	**Emerging Scientists Part 1**
1:10 – 1: 40	**Emerging Scientists Part 2**
1:40 – 4:30	**Computation in Flow Cytometry**
4:30 – 5:00	Closing Remarks & Raffle

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Welcome to the 17th Annual

FlowTex

Cytometry Conference

Tuesday, March 26, 2024

Best Practices in Flow Cytometry

8:00-9:00	Registration & Breakfast
9:00-9:45	**David Haviland & Joel Sederstrom** *Overview and History of Flow Cytometry*
9:45-10:30	**Jacob Henderson** *Techniques in Flow Cytometry*
10:30-11:00	Coffee Break
11:00-11:45	**Sarah Schneider & Leroy Versteeg** *Preparing the Perfect Sample*
11:45-12:15	**Roundtable Discussion** *Led by Ville Meretoja*
12:15-1:15	**Lunch**
1:15-2:00	**Karen Clise-Dwyer** *Flow Cytometry Panel Design: 2-40 colors*
2:00-2:45	**Peter Mage** *Build your spectral intuition: best practices for unmixing, compensation, and spectral flow*
2:45-3:15	Coffee Break
3:15-4:00	**Lisa Nichols** *Controls and data evaluation*
4:00-4:30	**Roundtable Discussion** *Led by Ville Meretoja*

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Cytometry Conference

Wednesday, March 27, 2024

Clinical Cytometry

8:00-8:30 Registration & Breakfast

8:30-8:45 Opening Remarks by FlowTex President **Ville Meretoja**

8:50-9:35 **Jolene Cardinali** *Instrument Validation and the 7 Steps of Grief*

9:35-9:55 **Virginia Litwin** *Understanding and Reviewing Flow Cytometry Validation Data*

9:55-10:15 Coffee Break

10:15-10:50 **Oral Alpan** *Ethical and Constitutional Violations, Patient safety concerns & Price of Life. Re: Proposed Rule: Medical Devices; Laboratory Developed Tests (Docket No. FDA-2023-N- 2177)*

10:50-11:10 **Barbara Evans** *Constitutional Defects in FDA's proposed rule FDA-2023-N-2177*

11:10-11:25 **Jonathan Genzen** *ARUP urges FDA to withdrawal proposed rule regulating laboratory developed tests*

11:25-12:00 **Roundtable Discussion** *FDA's proposed rule FDA-2023-N-2177 and the future of laboratory medicine when applied to flow cytometry Led by Marsha Hartman*

12:00-1:00 **Lunch Sponsored by Leinco & Vendor Show**

1:00-1:15 **Bartek Rajwa** *Introduction to Cytometry Part A*

Imaging Cytometry & Spatial Biology

1:15-2:05 **Daniel Vocelle** *Label-free cell sorting of distinct microbial populations based on autofluorescent and morphological phenotypes derived from imaging flow cytometry.*

2:05-2:35 **Katy Patras** *Tamm-Horsfall protein augments neutrophil NETosis during urinary tract infection*

2:35-3:05 Coffee Break

3:05-3:55 **Joel Sederstrom & Yue Li** *Navigating the Future of Flow Cytometry: Integrating Novel Sorting Technologies*

3:55-4:45 **Kenneth Hu** *Adding Spatial and Temporal Context to Single Cell Transcriptomics to Identify Cell-cell Interactions*

4:45-5:00 **Roundtable Discussion** *Led by Joel Sederstrom*

Welcome to the 17th Annual

FlowTex

Cytometry Conference

Thursday, March 28, 2024

Cytometry in Immuno-Oncology

8:00-8:40 Registration & Breakfast

8:40-9:30 **Mauro Di Pilato** *Dissecting tumor immune microenvironment: from A(PC) to T.*

9:30-10:20 **Stephanie Watowich & Sarah Schneider** *Examining immune checkpoint inhibitor mediated colitis with spectral flow cytometry*

10:20-10:50 Coffee break

10:50-11:40 **Will Hudson & Sean Hyslop** *Studying exhausted CD8 T cells with spectral flow cytometry*

Emerging Scientists

11:40-11:55 **Matilda Moström** *The cytotoxic immune system's role in control of rhesus cytomegalovirus against reactivation and congenital cytomegalovirus infection in rhesus macaque dams*

11:55-12:10 **Elizabeth Park** *Treatment with metronidazole improves response to immune checkpoint blockade therapy*

12:10-1:10 **Lunch & Vendor Show**

1:10-1:25 **Joana Bianchi,** *Using flow cytometry to find and characterize cells expressing IDO protein and mRNA*

1:25-1:40 **Jayanta Mondal** *Neutrophils conspire with exhausted T cells to promote breast cancer lung metastasis upon loss of the epigenetic regulator-BRD7*

Computation in Flow Cytometry

1:40-2:20 **Bartek Rajwa** *Deciphering the Spectral Code: How the Mathematics of Signal Unmixing Established Modern Cytometry*

2:20-2:50 Coffee break

2:50-3:40 **Anna Belkina** *TBD*

3:40-4:30 **Bill Telford** *Deep UV lasers for flow cytometry: How low can we go?*

4:30-5:00 Closing Remarks & Raffle Prizes

www.flowtex.org

Speaker Biographies

Oral Alpan, MD, *Ethical and Constitutional Violations, Patient safety concerns & Price of Life. Re: Proposed Rule: Medical Devices; Laboratory Developed Tests (Docket No. FDA-2023-N- 2177)*

Oral Alpan, MD, is the Laboratory and Medical Director of Amerimmune in McLean, Virginia. He received his medical degree in 1990 from Hacettepe University Faculty of Medicine in Ankara, Turkey. Dr. Alpan continued his education with an internship and residency in Pediatrics at Stony Brook University in New York and a fellowship in Allergy/Immunology at the National Institute of Allergy and Infectious Diseases in Bethesda, Maryland. Board-certified in Allergy and Immunology, Dr. Alpan is a member of the American Academy of Allergy, Asthma & Immunology . He is a Principal Investigator on numerous research studies in the field of immunology asthma and allergic disorders, and he has published a numerous articles and abstracts in peer-reviewed journals. His main interests are in immune diseases and immune dysregulation and development of assays to measure such immune responses.

Anna Belkina, *TBD*

Anna C. Belkina is an Assistant Professor of Pathology and Laboratory Medicine and the Associate Director of the Flow Cytometry Core Facility at Boston University School of Medicine. She received her M.D. from Russian State Medical University in Moscow and her Ph.D. from Boston University School of Medicine investigating the epigenetic regulation of inflammatory responses driven by bromodomain proteins. Anna's research is focused on the intersection of immunology and computational biology, for her current research efforts include investigating the immune landscape of chronic inflammatory diseases and developing computational techniques to assess high-parameter single cell cytometry data. Anna is an active member of ISAC (International Society for the Advancement of Cytometry) and has been named 2015-2019 ISAC SRL Emerging Leader.

Jolene Cardinali, *Instrument Validation and the 7 steps of grief*

Jolene Cardinali graduated from University of Connecticut with BS in the Allied Sciences Honors Program. She has led the flow cytometry lab at Hartford Hospital for 28 years. Besides performing several different clinical applications, she is also responsible for research, development, and validation of new instruments and assays including 12 color panels, B-ALL MRD and high sensitivity PNH. Jolene has been an active CAP flow cytometry inspector, and she is the ICCS liaison to the CAP Diagnostic Immunology and Flow Cytometry Committee. Jolene is a member of the International Clinical Cytometry Society and was voted to the Executive Board as Treasurer/Secretary. As an experienced flow cytometrist, she has contributed numerous flow cytometry educational videos, modules, webinars, journal articles and book chapters.

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Karen Clise-Dwyer, PhD, *Flow Cytometry Panel Design: 2-40 colors*

Dr. Karen Clise-Dwyer, PhD is a Professor in the Department of Hematopoietic Biology and Malignancy at the University of Texas MD Anderson Cancer Center where she directs the Advanced Cytometry and Sorting Facility and is co-director of the Flow Cytometry and Cellular Imaging Core Facility. She earned her PhD in Biochemistry and Immunology at University of Wisconsin-Madison where she began her work in Cytometry. Under her leadership, ACSF has grown from a lab with 4 instruments to 16 major systems including a robust spectral cytometry service and a new service in scMultiomics. She is an author of more than 50 publications and leads a research lab focused on the application of cytometry and cell sorting to the study of leukemia and cancer immunotherapy. She is Co-Founder and Scientific Director of FlowTex, the Texas cytometry professional society.

Mauro Di Pilato, PhD, *Dissecting tumor immune microenvironment: from A(PC) to T.*

My research program at Department of Immunology of M.D. Anderson Cancer Center aims at defining the mechanisms that regulate T cell stability and infiltration in cancer. Specifically, we want to understand how antigen-presenting cells control T cell function and survival within the tumor microenvironment. Our final goal is to develop new strategies for patients that do not respond to current cancer immunotherapies.

As a PhD student at the Spanish National Biotechnology Centre in Madrid, I mainly worked in two different projects directed towards understanding the poxvirus-dependent mechanisms involved in the generation of antigen-specific T cell responses and to improving the virus's capacity to induce these responses (4 first-author original papers in J. Virol, J. Gen. Virol., PNAS, and J. Gen.Virol.)

As a Post-doctoral fellow (Massachusetts General Hospital and Harvard Medical School in Boston and Institute for Research in Biomedicine of Bellinzona in Switzerland) my main research work focused on how regulatory and cytotoxic T cells exert their functions in tumor mouse models and how neutrophils shape antigen-specific T cell activation upon poxvirus vaccination (4 first-author original papers in Nature, Cell, Npj Vaccines, JIPO).

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Barbara J. Evans, PhD, JD *Constitutional Defects in FDA's proposed rule FDA-2023-N-2177*

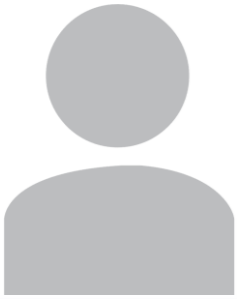
Barbara J. Evans is Professor of Law and Stephen C. O'Connell Chair at the University of Florida Levin College of Law and holds a joint appointment as Professor of Engineering and Glenn and Deborah Renwick Faculty Fellow in AI and Ethics at UF's Herbert Wertheim College of Engineering. Her work focuses on data privacy and the regulation of AI/ML medical software, genomic technologies, and diagnostic testing. Currently she is part of the ethics and legal studies team for the NIH Bridge to Artificial Intelligence *Patient-Focused CHoRUS for Equitable AI* project to develop a national data infrastructure for AI in critical care.

She is an elected member of the American Law Institute, a Senior Member of the Institute of Electrical and Electronics Engineers and was named a Greenwall Foundation Faculty Scholar in Bioethics for 2010-2013. Before coming to academia, she was a partner in the international regulatory practice of a large New York law firm and is admitted to the practice of law in New York and Texas. She holds a BS in electrical engineering from the University of Texas at Austin, an MS & PhD from Stanford University, a JD from Yale Law School, an LLM in Health Law from the University of Houston Law Center, and she completed a post-doctoral fellowship in Clinical Ethics at the MD Anderson Cancer Center.

Jonathan Genzen, MD, PhD, *ARUP urges FDA to withdrawal proposed rule regulating laboratory developed tests*

Dr. Jonathan Genzen is a professor at the University of Utah Department of Pathology. He serves as Chief Medical Officer and Senior Director of Government Affairs at ARUP Laboratories, a not-for-profit enterprise of the University of Utah. He previously served as ARUP's Chief Operations Officer. Dr. Genzen completed his undergraduate education at Northwestern University, and then both his Ph.D. and M.D. training at the University of Chicago. He joined ARUP Laboratories in 2013.

Dr. Genzen is a medical director in ARUP's chemistry division and is medical director of ARUP's laboratory automation team. His clinical and research focus is on automated clinical chemistry, process improvement initiatives, and the impact of laboratory regulatory proposals on patient care.



David Haviland, PhD, *Overview and History of Flow Cytometry*

TBD.

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Jacob Henderson, PhD, *Techniques in Flow Cytometry*

Jacob Henderson graduated from Saint Louis University with his Ph.D. in Molecular Microbiology and Immunology studying the role of CD5 in the differentiation of peripheral T regulatory cells. He has run the flow cytometry core at UT Dallas since 2017. In addition to his duties at the core, he serves on the FlowTex committee.

Ken Hu, PhD, *Adding Spatial and Temporal Context to Single Cell Transcriptomics to Identify Cell-cell Interactions*

I completed my PhD at Stanford with Dr. Manish Butte in 2017, using atomic force microscopy to probe force generation by live single cells. Our discoveries there shed light on the role of mechanotransduction and cellular material properties in modulating T cell activation and priming.

As a postdoctoral fellow in Dr. Matthew Krummel's lab at UCSF from 2017 to 2023, I developed a technique termed 'ZipSeq' for applying DNA barcodes or zipcodes to defined regions of tissues, allowing us to provide spatial context to single cell RNA Seq data. By imaging a variety of tissues from lymph nodes to tumors and then delineating regions of interest, we were able to demonstrate the utility of the method in dissecting how gene expression can depend on spatial location in the tissue.

As of 2023, I am currently an assistant professor in the Department of Immunology at MDACC, an assistant member of the James P Allison Institute and CPRIT Scholar. My research group focuses on developing new genomic and imaging tools aimed at tying together space/time information with the high dimensional space of genomics. Our goal is to examine how intratumoral spatial heterogeneity responds to immune checkpoint blockade to identify targets for new combination therapies and provide prognostic metrics for responsiveness.

Will Hudson, PhD, *Studying exhausted CD8 T cells with spectral flow cytometry*

Will Hudson began his career with a Bachelor of Science degree in Biomedical Engineering from Georgia Tech. He then earned his PhD in Pharmacology at Emory University and continued there for his postdoctoral work on T cell exhaustion in the laboratory of Rafi Ahmed. In 2022, he established his laboratory at Baylor College of Medicine. His work studying exhausted T cell responses in viral infection and cancer has earned him several awards, including the NIH K99 Pathway to Independence Award and the CPRIT Scholar in Cancer Research.

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Sean Hyslop, *Studying exhausted CD8 T cells with spectral flow cytometry*

Second year graduate student in the Immunology and Microbiology and MSTP program at BCM, graduated from Michigan State University in four years with 2 bachelors degrees in Biochemistry and Genetics. Did research throughout undergrad in the lab of Andrea Amalfitano, 3 publications from my work, 1 co-first author. Joined BCM as a member of the MD-PhD program in 2020. After a 2-year hiatus from research (med school + pandemic making it difficult to get involved), I joined Will's lab in my first year of graduate school training in 2023, where I work with mouse models and human tumor samples to study T cell exhaustion. Interested in oncology and pathology as a future medical specialty.

Yue Li, PhD, *Navigating the Future of Flow Cytometry: Integrating Novel Sorting Technologies*

Yue Li received her Ph.D. in Cell & Molecular Biology from the University of Texas at Austin, where she studied the cellular mechanisms of neuromuscular regeneration in response to muscle injury and in aging. From 2011 to 2019, she served as the director of all three core facilities (Flow Cytometry Core, Confocal Imaging Core, Histology & Tissue Processing Core) at Dell Pediatric Research Institute at the University of Texas at Austin. She then moved to University of Pennsylvania to study the function of cancer associated fibroblasts in tumor initiation, progression and metastasis. Currently, she is a faculty in the department of Microbiology, Immunology & Molecular Genetics at the University of Texas Health Science Center at San Antonio and the director of the Flow Cytometry Shared Resource. Her research interest focuses on modifying tumor microenvironment to increase the efficacy of CAR T cell treatment in solid tumors.

Virgina Litwin, PhD *Understanding and Reviewing Flow Cytometry Validation Data*

Virginia Litwin is a thought-leader in validation and standardization for flow cytometry. Bringing "Cytometry from Bench-to-Bedside" has been the focus of her professional activities since 1999 when she started working in translational medicine at Bristol-Myers Squibb.

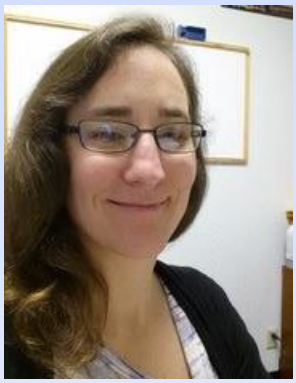
Virginia holds leadership roles in several scientific societies. She is the President-Elect of the International Society for the Advancement of Cytometry (ISAC) and was the 2023 recipient of the International Clinical Cytometry Society (ICCS) Wallace H. Coulter award in recognition of her contributions to the science, education and practice of Clinical. Cytometry. She is a member of the National Institute of Standards and Technology (NIST) Flow Cytometry Standards Consortium as well as the ICCS Advocacy Committee whose mission is to interface with regulatory agencies. She has been an invited speaker at FDA/NIST on many occasions.

Virginia serves on the Clinical and Laboratory Standards Institute (CLSI) Expert Panel and is chair of the CLSI Document Development Committees for H62 and H42. She is an Associate Editor for Cytometry Part B: Clinical Cytometry and has been a guest editor of several special issues addressing translational cytometry. She co-founded the Flow Cytometry Community within the American Association of Pharmaceutical Scientists (AAPS).

After obtaining a Ph.D. in Virology/Immunology from the University of Iowa, Virginia joined Lewis Lanier at DNAX as a post-doctoral fellow where she identified the KIR receptor, KIR3DL1 (CD158E1). She has held leadership roles in several contract research organizations. Currently she is Scientific Affairs Director at Eurofins BioPharma Services.

Peter Mage, PhD, *Build your spectral intuition: best practices for unmixing, compensation, and spectral flow*

Peter Mage is a Principal Engineer and ISAC International Innovator in the Advanced Technology Group at BD Biosciences, where he is responsible for inventing and commercializing new tools for understanding biology at the single-cell level. Peter's work focuses on computational techniques in the areas of spectral cytometry, panel design, and ultra-high parameter flow. Prior to joining BD in 2018, he developed biosensor technologies for personalized medicine as a postdoc at Stanford University. Peter earned his PhD in Materials from the University of California, Santa Barbara, and holds bachelor's degrees in physics and math.



Lisa Nichols, PhD, *Controls and Data Evaluation*

As current director of the Stanford Shared FACS facility, Lisa Nichols, PhD, brings more than 20 years of flow cytometry application and technical service expertise for a variety of cytometry platforms. With a background that spans both academia and industry, she has provided flow cytometry training and instrumentation support to wide array of cytometry users – from novices to experts. Throughout, her focus has been excellence in technical instrumentation support to optimize instrument configurations and performance as well as providing education to enable researchers in their experiments and the acquisition of high-quality, reproducible scientific data. Her scientific background in tumor immunology and virology included development and implementation of both human and murine disease model systems. This strong scientific background allows her to help researchers apply the current cytometry technology to a variety of research projects aimed at increasing our understanding of health and disease.

Katy Patras, PhD, *Tamm-Horsfall protein augments neutrophil NETosis during urinary tract infection.*

Katy Patras is an Assistant Professor at Baylor College of Medicine with appointments in Molecular Virology and Microbiology and the Alkek Center of Metagenomics and Microbiome Research. The goal of her research program is to study host-pathogen-microbiota interactions in the urogenital tract with a particular focus on group B Streptococcus and uropathogenic E. coli. Her group uses newly developed models to study why individuals with certain conditions, such as pregnant or diabetes, are more susceptible to urogenital infection, to test novel therapies, and to establish the functional role of the urogenital microbiota with ultimate applications to both disease pathogenesis and overall human health.

Bartek Rajwa, PhD *Deciphering the Spectral Code: How the Mathematics of Signal Unmixing Established Modern Cytometry*

Bartek Rajwa is a Research Professor of Computational Biology and Bioinformatics at Bindley Bioscience Center, Purdue University. His expertise lies in the rapidly evolving field of biological data science, which spans across bioinformatics, biostatistics, and multi-omics data analysis. The discipline seeks to integrate information from the various advanced measurement technologies employed in the life sciences, including proteomics, metabolomics, genomics, biological imaging, lipidomics, and cytometry. In his studies, Bartek employs applied mathematics, computer science, and machine learning to decipher and interpret complex phenotypic patterns observed using quantitative single-cell cell analysis. By addressing the issues of automated classification of phenotypes in the presence of incomplete and noisy information, his projects have a direct impact on the fields of clinical cytometry (hematology, immunology, and oncology), high-content screening and drug discovery, toxicology, neuroscience, and agriculture (food fraud detection, biosecurity, and biosurveillance). Bartek, with fellow researchers, has been involved in the creation of multiple innovative technologies. These include spectral flow cytometry, automated pipelines for clinical flow cytometry analysis, algorithms for identifying food-borne pathogens, and spectral information processing approaches for fluorescence and Raman cytometry and imaging. In January 2024, Bartek was appointed by ISAC as the new Editor-in-Chief of *Cytometry Part A: Journal of Quantitative Cell Science*.

Joel Sederstrom, PhD, *Overview and History of Flow Cytometry & Navigating the Future of Flow Cytometry: Integrating Novel Sorting Technologies*

Joel M. Sederstrom is the Director of Flow Cytometry at Baylor College of medicine with expertise in flow cytometry and related instrumentation, applications, and techniques. He has over twenty-five years of flow cytometry experience and been director of a core facility since 2006. He attended graduate school in immunology and cancer biology at the University of Minnesota leading to cell therapy model research. Joel worked on the isolation and differentiation of antigen presenting cells for potential cancer vaccines. He was one the first to differentiate, expand, and isolate a novel second dendritic cell subtype, pDC, using human hematopoietic progenitor cells. He trained on multicolor flow cytometry and cell sorting at the University of Minnesota Cancer Center's Flow Cytometry Facility for analyzing and isolating numerous cell types. His work on isolating rare and fragile cell populations, from human and mouse, and experience with hematopoietic progenitors and stem cells led to being recruited to Baylor College of Medicine to support an active stem and cancer cell research community. He continues to support the BCM community and provide services and consultations. Joel, with hep of others, found FlowTex user group in 2007 bringing it to a popular annual cytometry conference. Finally, He continues to bring cutting edge technologies to the communities including but not limited to High Parameter Flow Cytometry, Mass Cytometry, Mass Imaging Cytometry, and Imaging Cytometry.

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Sarah Schneider, *Preparing the Perfect Sample & Examining immune checkpoint inhibitor mediated colitis with spectral flow cytometry.*

Sarah Schneider is a third year PhD candidate at the University of Texas MD Anderson Cancer Center UTHealth Houston Graduate School of Biomedical Sciences, where she studies the immune mechanisms of immune checkpoint inhibitor-mediated colitis in the lab of Dr. Stephanie S. Watowich. Sarah earned her B.A. in Biochemistry & Molecular Biology from Clark University in Worcester, MA. She then worked as a research assistant at the Texas Heart Institute prior to joining MD Anderson's Advanced Cytometry & Sorting Facility in 2015, where she specialized in high dimensional cytometry data analysis. Sarah is currently a Vice President of FlowTex and has served on the executive board since 2017.

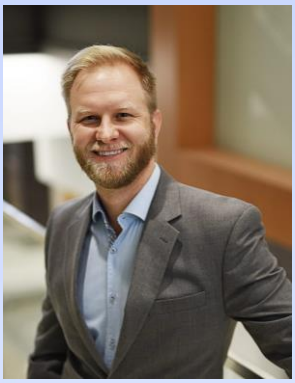
Bill Telford, PhD, *Deep UV lasers for flow cytometry: How low can we go?*

Bill Telford received his Ph.D. in microbiology from Michigan State University in 1994, where his laboratory developed some of the earliest techniques for flow cytometric detection of apoptosis. He received his postdoctoral training in immunology at The University of Michigan Medical School, was appointed assistant scientist at the Hospital for Special Surgery in New York City from 1997 to 1999. Dr. Telford became a Staff Scientist at the National Cancer Institute, National Institutes of Health in 1999, and is currently a Senior Associate Scientist and director of the flow cytometry core laboratory in the NCI Laboratory of Pathology. Dr. Telford's main research interests include advanced instrument and assay design and development aimed at solving unusual problems in flow cytometry and cell biology.

Leroy Versteeg, MS *Preparing the Perfect Sample*

Leroy Versteeg works as a research associate in the Texas Children's Hospital Center for Vaccine Development. As part of the pre-clinical team, Leroy develops and executes different immune-assays to evaluate immune responses elicited by candidate vaccines for various neglected tropical diseases, such as Ascariasis, Trichuriasis, and hookworm disease. More recently, Leroy has focused on the identification and evaluation of new vaccine targets against *Trypanosoma cruzi*, the causative agent of Chagas disease.

Leroy obtained his BSc at Wageningen University in the Netherlands, and an MS in Biology Health & Disease at the same university.



Daniel Vocelle, PhD, *Label-free cell sorting of distinct microbial populations based on autofluorescent and morphological phenotypes derived from imaging flow cytometry.*

Dr. Daniel Vocelle is an Assistant Professor in the Department of Pharmacology and Toxicology at Michigan State University. He also holds the position of Assistant Director for the Michigan State University Flow Cytometry Core Facility, where he supports more than 350 active users, over 140 federally funded research projects, and 12 advanced analytical and sorting instruments. Dr. Vocelle is a seasoned Biomolecular Engineer with a dual Ph.D. in Chemical Engineering and Quantitative Biology, and over a decade of multidisciplinary research experience in a range of areas, including Immunology, Genetic Engineering, Exosomes/Nanoparticles, and Single-Cell Genomics. Drawing on these skills and experience, he is an expert in workflow development, assay optimization, and innovating non-traditional flow cytometry applications. In 2024 he was named an Emerging Leader by the International Society for Advancement of Cytometry (ISAC).

Stephanie Watowcih, PhD, *Examining immune checkpoint inhibitor mediated colitis with spectral flow cytometry.*

Dr. Stephanie S. Watowich is Professor and Deputy Chair in the Department of Immunology at MD Anderson Cancer Center, where she holds the Vivian L. Smith Distinguished Chair in Immunology. Her research interests center on understanding mechanisms that regulate innate immune cell generation and function in cancer and inflammation, with the goal of using this knowledge to advance new cancer immunotherapies. Dr. Watowich obtained her B.A. in Biology from Carleton College in Northfield, Minnesota. She started her career in cancer research at the University of Chicago, where she worked with Dr. Geoff Greene. She progressed to PhD studies at Northwestern University with Dr. Richard I. Morimoto, where her research on heat shock gene transcriptional regulation provided foundation for the unfolded protein response. Dr. Watowich performed postdoctoral research at the Whitehead Institute of Biomedical Research with Dr. Harvey F. Lodish (1990-1995). Her work on the erythropoietin receptor provided a paradigm for cytokine receptor activation mechanisms via receptor oligomerization. At MD Anderson, Dr. Watowich's laboratory revealed molecular mechanisms of innate immune development and understanding of STAT3 function in hematopoiesis. Her group has recently advanced a novel dendritic cell (DC)-based immunotherapy and pioneered the development of mouse models to investigate immune-related adverse events (irAEs) to cancer immunotherapy. Dr. Watowich is co-PI of the MD Anderson CPRIT Research Training Award and the NIH R25 UPWARDS training program, and co-director of the MD Anderson CATALYST summer research training program. She is a member of the NIH CMIB study section and has participated regularly on cancer immunology study sections and fellowship panels. Dr. Watowich has received numerous honors and awards including The William Randolph Hearst Foundation Faculty Achievement Award in Education, MD Anderson (2009), induction into the UT Kenneth I. Shine Academy of Health Science Education (2010), the John P. McGovern Outstanding Teacher Award (2010), and the President's Recognition of Faculty Excellence for Education and Mentorship Advancement (2022). In 2023, she was recognized by her alma mater with the Carleton College Alumni Distinguished Service Award.

Publications:https://www.ncbi.nlm.nih.gov/sites/myncbi/stephanie.watowich.1/bibliography/41138711/public/?sort=date&direction=descending