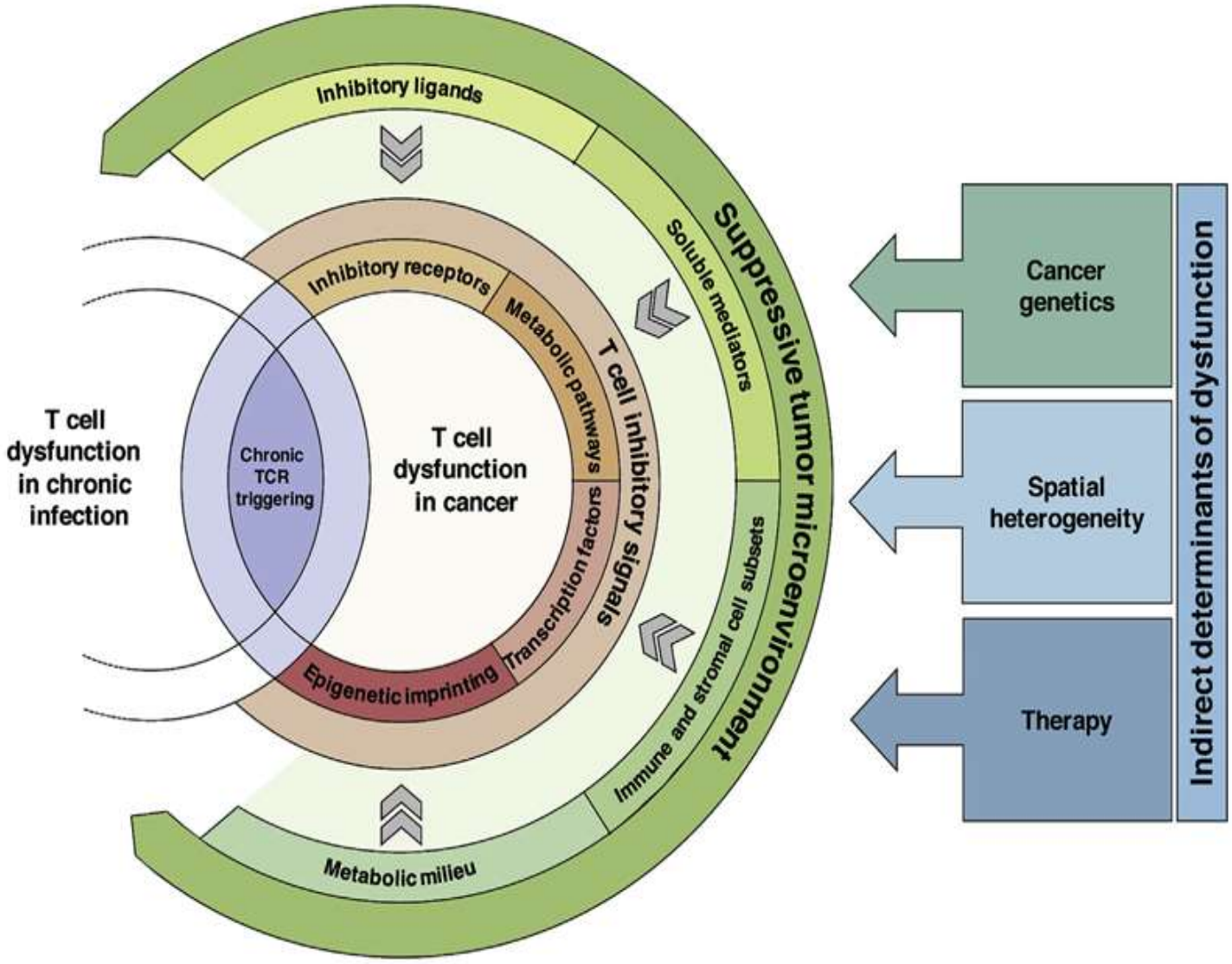
11th Annual Cancer Biology Research Retreat



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WELCOME

Welcome to the Eleventh Annual Cancer Biology Research Retreat at the University of Maryland. This is an opportunity for graduate students, postdoctoral and clinical research fellows and faculty involved in cancer research to interact and share research ideas and techniques in an informal and relaxed environment. The Organizing Committee would like especially to thank the Retreat Sponsors for their financial support, the Alumni participating in the Career Panel, predoctoral student Hadley Bryan for her expertise and guidance with the Gather.town platform, and the keynote speaker, Dr. E. John Wherry, for participation in today's Research Retreat.

Enjoy the day,
Michele Vitolo, Ph.D.

Cancer Biology Research Retreat Organizing Committee

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BioPark

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PROGRAM

Morning Poster Sessions, Gather.town

9:00am -9:45am	Postdoctoral poster session 1, Poster room 2, posters 19-24
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10:30am – 11:15am	Predoctoral poster session 2, Poster room 1, posters 9-15
11:15am -12:00pm	Postdoctoral poster session 2, Poster room 2, posters 16-18, 25-27

Lunch Break

12:00pm -12:45pm	Break for lunch

Afternoon Seminars, Zoom

12:45pm -1:00pm	**Dr. Kevin Cullen**, Director of the University of Maryland Marlene and Stewart Greenebaum Comprehensive Cancer Center
1:00pm – 2:00pm	"**Mechanisms and role of T cell exhaustion in disease"** Keynote Speaker: **Dr. E. John Wherry**, Chair, Department of Systems Pharmacology and Translational Therapeutics Richard and Barbara Schiffrin President's Distinguished Professor, Director, Institute for Immunology, University of Pennsylvania
2:00pm – 2:15pm	Zoom Breakout room with Dr. Wherry
2:15pm - 3:00pm	**"Building Resilience for Your Future Using Life Design"** Jennifer Aumiller, MEd, Director of Predoctoral & Postdoctoral Career Development
3:00pm-3:30pm	**Scientist-Survivor Program** Dr. Laundette Jones, Assistant Professor, Epidemiology & Public Health

Alumni Career Panel, Zoom

3:30pm – 4:30pm UMGCCC/GPILS Alumni Career Panel

Robert Bruno, Ph.D., Associate Professor, Director, Molecular Diagnostics Graduate Certificate Program, School of Medical Diagnostic & Translational Sciences, Old Dominion University

Benjamin Emanuel, Ph.D., Associate Director, Epidemiology, AstraZeneca

Edward H. Cho, Ph.D., Co-Founder/CSO, Spin Bio**,** Chief of Staff R&D, Detect

Keynote Speaker

Dr. E. John Wherry

Chair, Department of Systems Pharmacology and Translational Therapeutics
Richard and Barbara Schiffrin President's Distinguished Professor
Director, Institute for Immunology
University of Pennsylvania

Dr. Wherry received his B.S. from Pennsylvania State University in 1993 and his Ph.D. in Immunology from Thomas Jefferson University in 2000 under the mentorship of Laurence C. Eisenlohr. After completing his postdoctoral fellowship with Dr. Rafi Ahmed at Emory University, he joined The Wistar Institute as an Assistant Professor where he remained until 2010. He then joined the Department of Microbiology at the University of Pennsylvania's Perelman School of Medicine. He served as the Chair of the Immunology Graduate Group (IGG) from 2011-2013 and remains on the IGG Executive Committee. In 2012, he was appointed as Director of the Institute for Immunology (IFI).

Dr. Wherry was named the inaugural Richard and Barbara Schiffrin President's Distinguished Professor in 2017. A year later, he was appointed as chair of the Systems Pharmacology and Translational Therapeutics Department. Dr. Wherry is the recipient of multiple awards, honors and grants. A few of which include being selected as one of "America's Young Innovators – 37 under 36" by the *Smithsonian* magazine and receiving the Sharp Award via the Stand Up To Cancer campaign. Additionally, he has co-authors over 230 manuscripts in high impact journals such as *Science*, *Nature* and *Nature Immunology*.

A major goal of Dr. Wherry's laboratory is to understand the fundamental biology of T cell exhaustion during chronic infections and cancer. His work has defined the nature of T cell exhaustion including altered function, limited responses to antigen restimulation, high co-expression of inhibitory receptors such as PD-1, and a characteristically distinct transcriptional program. His work has defined the importance of limited protective capacity of these cells during infection and cancer and uncovered the pathways involved in re-invigorating these cells by checkpoint blockade.

A second major focus of his lab is to use knowledge of fundamental immune biology, including of exhausted T cells, but also follicular helper T cells and B cells, to perform high dimensional immune profiling in human disease. By applying these approaches to immune oncology, his lab was the first to identify exhausted T cells as the major responding cell type in human cancer patients receiving PD-1 blockade treatment. His goal is to use such approaches to define the baseline and disease associated features of overall immune health and use the information to interrogate individual responses to therapeutic interventions.

Overall, his laboratory uses many high dimensional immune profiling approaches, genomics including RNA-seq, scRNA-seq, ATA-seq, scATAC-seq, other epigenetic profiling approaches, high dimensional imaging (CODEX) and rests on a strong foundation of computational biology and informatics.

Alumni Career Panel

Robert Bruno, Ph.D.

Associate Professor, Director, Molecular Diagnostics Graduate Certificate Program, School of Medical Diagnostic & Translational Sciences, Old Dominion University

Robert Bruno earned a Ph.D. in Molecular Medicine from the University of Maryland Baltimore in 2009 for his work on a novel prostate cancer therapeutic (galeterone). He then completed a post-doctoral fellowship at the National Cancer Institute in the Mammary Stem Cell Section of the Basic Research Laboratory at the Center for Cancer Research. In 2013, he joined Old Dominion University as an Assistant Professor in the School of Medical Diagnostic & Translational Sciences within the College of Health Sciences. He is currently an Associate Professor and graduate program director and his current work applies biomedical engineering principles including 3D bioprinting and tissue decellularization to study mechanisms of cellular fate determination in development, cancer, and neurodegeneration.

Benjamin Emanuel, Ph.D.

Associate Director, Epidemiology, AstraZeneca

Dr. Benjamin Emmanuel completed his Master of Public Health (MPH) in Epidemiology and Biostatistics at The George Washington University, then received his Ph.D. in Epidemiology at the University of Maryland Baltimore (UMB). After his MPH, he spent 3 years as a Cancer Research Training Award Fellow at the Division of Cancer Epidemiology and Genetics at the National Cancer Institute (NCI). He was also the NCI study manager for a Burkitt lymphoma case-control study in East Africa. During his Ph.D. under the mentorship of Dr. Shyam Kottilil, he served as an epidemiologist within the Division of Clinical Care and Research at the Institute of Human Virology and was a Meyerhoff Graduate Fellow. Dr. Benjamin Emmanuel is currently an Associate Director, Epidemiology, at AstraZeneca in Gaithersburg, MD. He has authored/co-authored more than 30 papers in peer-reviewed journals for observational studies and clinical trials in the field of infectious disease, oncology, and respiratory disease.

Edward H. Cho, Ph.D.

Co-Founder/CSO, Spin Bio
Chief of Staff R&D, Detect

Dr. Edward Cho is the Co-Founder and Chief Scientific Officer of the life sciences startup, Spin Bio, which develops a personalized medicine platform that enables multi-omic interrogation of single cells to improve the resolution of biology. Ed also serves as the Chief of Staff, R&D at Detect, a developer of at-home diagnostic assays providing users sample-to-answer in <60 minutes in the comfort of their own home.

Ed earned his B.A. in Public Health and M.S. in Biotechnology from Johns Hopkins University and his Ph.D. in Molecular Medicine from the University of Maryland, Baltimore. Ed was a member of the first incoming class of the Graduate Program in Life Sciences (GPILS) at UMB. His dissertation work was performed in the lab of Dr. Stuart Martin where he investigated the role of post-translational modification in regulating microtubule nucleation in breast cancer metastasis. He did his postdoctoral fellowship at The Scripps Research Institute developing circulating tumor cell companion diagnostics to track treatment efficacy. After his postdoc, Ed worked for and helped co-found several life sciences startups.

Ed currently lives in San Diego, CA where he is actively involved in the life sciences startup/entrepreneur community and consults for biotech/pharma companies. He enjoys volunteering as a Board Member of the K-12 STEM education non-profit Science Delivered. When he has time, he enjoys taking advantage of the San Diego sun and beaches by playing softball and spikeball.