



19th Annual “Advances in Inflammation Research” Symposium October 13, 2022 Providence, RI

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Featured Speakers:

Timothy Billiar, MD

George Vance Foster Professor
Chair, Department of Surgery
UPMC Presbyterian Hospital
Pittsburgh, PA

Kornelia Polyak, MD, PhD

Professor of Medicine
Harvard Medical School
Dana-Farber Cancer Institute
Boston, MA

George Auditorium

- 1:00-1:05 Welcome and Introductions - J. Albina**
- 1:05-2:00 Junior Investigator Presentations + Q&A**
 - Cynthia Xu, MD PGY3
 - Cassandra Parker, MD PGY4
 - Elizabeth Tindal, MD PGY4
- 2:00-2:15 Refreshment Break**
- 2:15-3:00 Kornelia Polyak, MD, PhD**
Immune Escape in Breast Cancer
- 3:00-3:45 Timothy Billiar, MD**
**Multi-platform Multiomics Applied to Human Injury: A
Look Inside the Black Box**
- 4:00-5:00 Poster Session - APC 4 Foyer**

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Rhode Island Hospital/Brown University



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Alpert Medical School
Department of Surgery

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Speaker Biographies

Timothy Billiar, MD

Dr. Billiar’s laboratory is involved in several research projects including: Nitric oxide and hepatic function in sepsis and trauma; Post-traumatic sepsis: regulation of LPS binding protein; Training in trauma and sepsis research; and Molecular biology of hemorrhagic shock. Dr. Billiar has a long-standing interest in the mechanisms involved in organ injury and immune dysfunction in acute inflammatory states such as shock, trauma, and sepsis. His laboratory has made seminal observations in the study of nitric oxide in several disease conditions. Most recently, his laboratory has focused on immune dysfunction and the use of multi-omic strategies to study the human injury response.

Kornelia Polyak, MD, PhD

Dr. Polyak’s laboratory is dedicated to the molecular analysis of human breast cancer with the goal improving the clinical management of breast cancer patients. Her lab has devoted much effort to develop new ways to study tumors as a whole and to apply interdisciplinary approaches. Using these methods, Dr. Polyak’s lab has been at the forefront of studies analyzing purified cell populations from normal and neoplastic human breast tissue at genomic scale and in situ at single cell level and to apply mathematical and ecological models for the better understanding of breast tumor evolution. She has also been successful with the clinical translation of her findings including the testing of efficacy of JAK2 and BET bromodomain inhibitors for the treatment of triple-negative breast cancer in clinical trials.

Cassandra Parker, MD

Dr. Parker received her medical degree from Boston University School of Medicine in 2017. She recently completed her second year of research in Dr. Wafik El-Deiry’s lab supported by Brown University and a Versaci Research Scholarship. Dr. Parker’s research examined the impact of dual therapy with ONC201, a novel small molecule imipridone discovered by Dr. El-Deiry’s lab, and TRAIL agonists in gastric adenocarcinoma. Her research project aimed to establish a novel therapy strategy that is both more effective and better tolerated than currently available chemotherapy regimens used in advanced gastric cancer utilizing. Dr. Parker plans to pursue a fellowship in surgical oncology.

Elizabeth Tindal, MD

Dr. Tindal received her medical and master’s degree in public health from Drexel University in 2017 and is currently a general surgery resident in her fourth clinical year. She completed two years of research in Dr. Alfred Ayala’s lab supported by the Trauma and Inflammation Research Training Grant. Her research utilized murine models of trauma and sepsis to further elucidate the impact that the expression of Programmed Cell Death Receptor 1 (PD-1) and its ligand (PD-L1) have on sepsis-related morbidity and mortality. She explored PD-L1 expression on vascular endothelial cells and neutrophils as well as PD-1 expression on macrophages using Cre-Lox constructs to create specialized selective knockout lineages. Dr. Tindal plans to pursue a fellowship in minimally invasive surgery.

Cynthia Xu, MD

Dr. Xu received her medical degree from the University of Maryland in 2019. She is currently a General Surgery resident in her second year of research under Dr. Frank Sellke’s mentorship on the Trauma and Inflammation Research Training Grant. One of her areas of research focuses on the use of human bone mesenchymal stem cell-derived extracellular vesicles (HBMSC-EV) in ischemic cardiovascular disease. She is exploring the both the therapeutic effects of the HBMSC-EV as well as optimizing the mode of delivery. Dr. Xu plans on pursuing a career in vascular or cardiothoracic surgery.

