KCA 2023 Novel Technologies in Childhood Cancer

Invited Speakers Biography

Professor Leonard Sender is an AYA (Adolescents and Young Adults) clinician at Children's Hospital of Orange County (CHOC) and University of Irvine California. Prof Sender is regarded as one of the leading advocacy pioneers of the AYA oncology movement. Prof Sender developed the joint AYA Cancer Program at CHOC Children's and UC Irvine Health and is currently the chairman of the United States' largest AYA patient advocacy group: Stupid Cancer (www.stupidcancer.org).

Assistant Professor Efrat Shema is a Laboratory Head for Cancer Epigenetics, Department of Biological Regulation. Her research is focused on understanding human genome regulation by development and application of novel single-molecule-based technologies to visualize the epigenome. She received her BSc degree from the Hebrew University of Jerusalem and her PhD from the Weizmann Institute. In 2017, after postdoctoral training at Massachusetts General Hospital and the Broad Institute of MIT and Harvard, she returned to the Weizmann Institute, where she is now an Assistant Professor in the Department of Biological Regulation.

Joseph Kreitz works in the Feng Zhang laboratory (where CRISPR was discovered) at the Broad Institute of MIT and Harvard in Cambridge, Massachusetts, USA. His work focuses on a new class of targeted protein delivery tools called contractile injection systems (CISs), which he first published earlier this year in *Nature*. This work received broad media coverage including *Nature*, *Science*, *Scientific American*, *GEN*, *Stat News*, and others.

Professor John Silke is a Laboratory Head for Infection, Inflammation and Immunity Theme at Walter and Eliza Hall Institute of Medical Research (WEHI). His lab investigates proteins that can regulate both inflammation and cell death. His lab is revealing how these proteins contribute to inflammatory diseases including: psoriasis, rheumatoid arthritis, Crohn's disease, as well as cancer. His goal is to translate discoveries into new treatments for these scourges.

Professor Susan Branford is the Head of the Leukaemia Unit in the Department of Genetics and Molecular Pathology at SA Pathology and a Section Leader at the Centre for Cancer Biology, University of South Australia. She is a major contributor to international collaborative initiatives that established guidelines and recommendations for producing reliable molecular data for patients with chronic myeloid leukaemia. Her research is focused on understanding the factors that predict for response to tyrosine kinase inhibitor therapy and the mechanisms of drug resistance. Dr Branford has received a number of international prizes for her research, including the 2021 International Chronic Myeloid Leukaemia Foundation Rowley Prize for significant contribution to the understanding of the biology of chronic myeloid leukaemia.

Dr Arutha Kulasinghe is a Peter Doherty NHMRC Research Fellow and leads the 'Clinical-oMx Lab' at the University of Queensland. Dr Kulasinghe has pioneered spatial transcriptomics using digital spatial profiling approaches in the Asia-Pacific region, contributing to world-first studies for lung cancer, head and neck cancer, and COVID-19. His research aims to understand the underlying pathobiology by using an integrative multi-omics approach.

Associate Professor Fatemeh Vafaee is the Deputy Director of UNSW Data Science Hub since 2021 and an A/Prof in Computational Biomedicine and Bioinformatics at the School of BABS. A/Prof Vafaee has launched and leads the AI-enhanced Biomedicine Laboratory at UNSW, collaboratively working on deploying advanced AI techniques to address various pressing biomedical problems.

Associate Professor Antoine de Weck joined Children's Cancer Institute in January 2022 to establish and lead the Computational Drug Discovery Biology Group. Antoine's work at the Institute focuses on identifying new therapeutic vulnerabilities in childhood cancers and identifying new or existing compounds capable of targeting those vulnerabilities.

Professor Dayong Jin is a Clarivate Highly Cited Researcher, one of the world's top 0.1% influential researchers across multiple fields. He has spent the past decade driving the transformation of photonics and materials into analytical, diagnostic, and imaging devices for disease detection, including cancer. These devices use photonics technologies to analyse saliva, urine, or blood to identify early signs of disease and toxins.

Dr Claire Sun is an early career researcher and an emerging research leader in computational biology in cancer research. Dr Sun is the current recipient of a Victorian Cancer Agency Early- Career Fellowship. Since 2018, she has served as the lead bioinformatician in the Next-Generation Precision Medicine Program at the Hudson Institute of Medical Research. CI Sun has a keen interest in developing and applying state-of-the-art computational approaches to identify new therapeutic targets and biomarkers for low-survival paediatric cancers. She is mentored by AI Prof Ron Firestein, the co-lead for the Victorian Paediatric Cancer Consortium (VPCC) and deputy director of the Hudson Institute. CI Sun has a strong publication record, with 17 peer-reviewed research papers, with 7 as first author including in *Cancer Cell* (2023), *Molecular Cell* (2021)*, and Nucleic Acids Research* (2018). Her publications have garnered over 500 citations, highlighting the impact of her research in the scientific community.