2022 Leading Edge of Cancer Research Symposium

hosted by

MD Anderson Cancer Center

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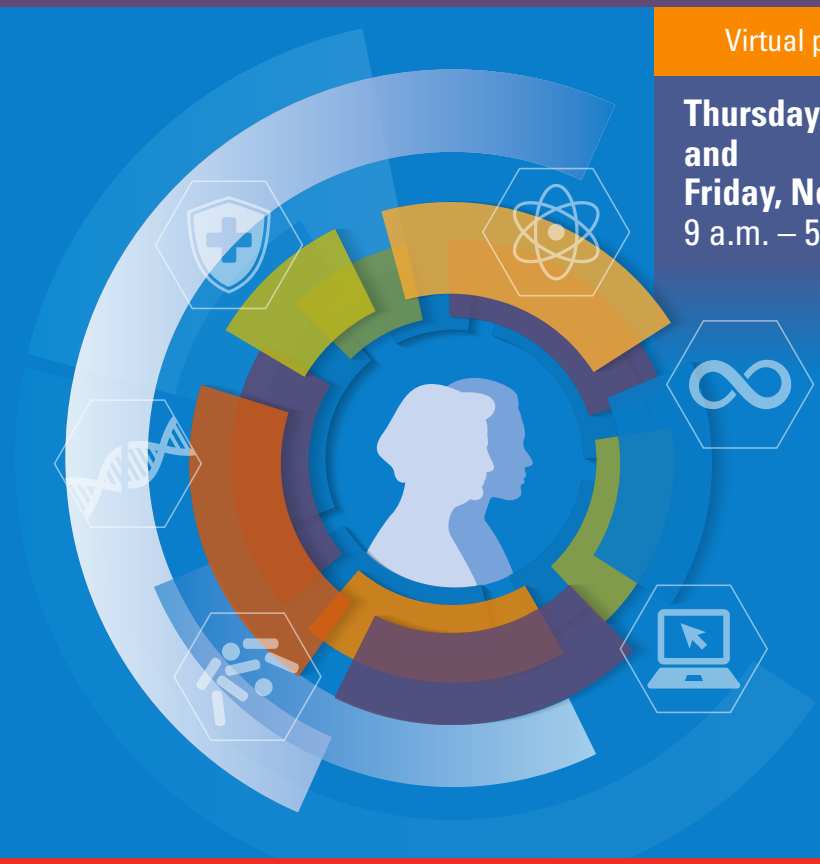

Virtual platform

Thursday, Nov. 17
and
Friday, Nov. 18
9 a.m. – 5 p.m.

THE UNIVERSITY OF TEXAS
MD Anderson Cancer Center
Making Cancer History®


The University of Texas
MD Anderson Cancer Center
R. Lee Clark Clinic

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Assistant Professor, Thoracic-
Head & Neck Medical Oncology

Nadim Ajami, Ph.D.
Committee Member
Executive Director, Scientific Research
Genomic Medicine

Caroline Chung, M.D.
Committee Member
VP, Chief Data Officer,
Data Impact & Governance

Sangeeta Goswami, M.D., Ph.D.
Committee Member
Assistant Professor, Genitourinary
Medical Oncology

Andrea Viale, M.D.
Committee Member
Assistant Professor, Genomic Medicine

Giulio Draetta, M.D., Ph.D.
Executive Sponsor
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Eva Kelly
Program Manager
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Goal

The purpose of the Leading Edge of Cancer Symposium is to discuss scientific ideas, share knowledge and seek opportunities for collaboration amongst the leading cancer researchers from across the globe.

This symposium will discuss emerging concepts across the breadth of cancer research including Clonal Expansion in Normal and Pathological Tissues: It's All a Matter of Fitness, Unleashing the Immune System to Develop Therapeutic Strategies, Integrated Immune-Microbiome Biomarker Discovery, Clinical Data Science, and Panel discussion–The Patient Is the Focus: Breakthroughs From Bench to Bedside, Clinical and Multiomics Integration and High Value Cancer Care.

Among our outstanding speakers at the symposium are 2022 Ernst W. Bertner Memorial Awardee, **Tyler Jacks, Ph.D.** (Massachusetts Institute of Technology and Break Through Cancer), 2022 Heath Memorial Awardee, **Alan Ashworth, Ph.D., F.R.S.** (University of California San Francisco) and 2022 Wilson S. Stone Memorial Awardee, **Simona Colla, Ph.D.** (MD Anderson Cancer Center)

The Symposium begins Thursday morning and will end Friday afternoon.

9 a.m.

Symposium Opening and Welcome

Giulio Draetta, M.D., Ph.D.
MD Anderson

9:05 a.m.

KEYNOTE ADDRESS: ERNST W. BERTNER MEMORIAL AWARD LECTURE AND PRESENTATION

Tyler Jacks, Ph.D.
Massachusetts Institute of Technology and Break Through Cancer
Molecular Dissection of Tumor Evolution

10:05 a.m.

SESSION I: CLONAL EXPANSION IN NORMAL AND PATHOLOGICAL TISSUES: IT'S ALL A MATTER OF FITNESS

Chair: Andrea Viale, M.D., MD Anderson

Phil Jones, Ph.D., F.R.C.P.
Wellcome Sanger Institute and University of Cambridge
Pro- and Anti- Oncogenic Mutants in Aging Normal Epithelia

Laura Wood, M.D., Ph.D.
Johns Hopkins University School of Medicine
3D Genomic Analysis of Human Pancreatic Intraepithelial Neoplasia

Hao Zhu, M.D.
UT Southwestern Medical Center
Clone Wars: Evolution of Adaptation and Malignancy in the Liver

Katherine King, M.D., Ph.D.
Baylor College of Medicine
CH: Mutation-Specific Adaptation to Environmental Change

Noon

FLASH Talk Presentations

Chair: Caroline Chung, M.D., MD Anderson

Abdelrahman Yousef, M.D.
Gastrointestinal Medical Oncology, MD Anderson
A Prospective Randomized Crossover Trial of Systemic Chemotherapy in Patients with Low-Grade Mucinous Appendiceal Adenocarcinoma.

Irene Ganan-Gomez, Ph.D.
Leukemia, MD Anderson
Immune microenvironment dysfunctions enable malignification at the onset of myelodysplastic syndromes

Luigi Perelli, M.D., Ph.D.
Genitourinary Medical Oncology, MD Anderson
Convergent evolutionary trajectories uncover metastatic drivers in renal cancer

Celia Sze Ling Mak, Ph.D.
Genitourinary Medical Oncology, MD Anderson
Targeting histone lysine demethylase KDM4A in Aggressive Variant Prostate Cancer

Stephanie Schmidt, Ph.D.
Genomic Medicine, MD Anderson
Shared Nearest Neighbors Approach and Interactive Browser for Network Analysis of a Comprehensive Non–Small-Cell Lung Cancer Data Set

12:30 p.m.

Break

1:15 p.m.

KEYNOTE ADDRESS: HEATH MEMORIAL AWARD LECTURE AND PRESENTATION

Alan Ashworth, Ph.D., F.R.S
University of California San Francisco
Synthetic Lethal Therapies for Cancer

2:15 p.m.

SESSION II: UNLEASHING THE IMMUNE SYSTEM TO DEVELOP THERAPEUTIC STRATEGIES

Chair: Sangeeta Goswami M.D., Ph.D., MD Anderson

Pavan Bachireddy, M.D.
MD Anderson
Molecular Evolution of Anti-Leukemic Immunity

Saar Gill, M.D., Ph.D.
University of Pennsylvania
Chimeric Antigen Receptor Macrophages for Solid Tumors

Yvonne Chen, Ph.D.
University of California, Los Angeles
Engineering Next-Generation CAR-T Cells for Cancer Therapy

Betty Kim M.D., Ph.D.
MD Anderson
Targeting Phagocytosis for Cancer Immunotherapy

4:30 p.m.

Closing remarks

Tina Cascone, M.D., Ph.D.
MD Anderson

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9 a.m.

Symposium Opening and Welcome

Giulio Draetta, M.D., Ph.D.
MD Anderson

9:10 a.m.

Opening Remarks

Tina Cascone, M.D., Ph.D.
MD Anderson

9:20 a.m.

KEYNOTE ADDRESS: WILSON S. STONE MEMORIAL AWARD LECTURE AND PRESENTATION

Simona Colla, Ph.D.
MD Anderson
The Biological Landscape of Myelodysplastic Syndromes: From Clonal Hematopoiesis to Disease Progression

10:20 a.m.

FLASH Talk Presentations

Chair: Nadim Ajami, Ph.D., MD Anderson

Vera Adema Llobet, Ph.D.
Leukemia, MD Anderson
Targeting the EIF2AK1 Signaling Pathway Rescues Red Blood Cell Production in SF3B1 Mutant Myelodysplastic Syndromes With Ringed Sideroblasts

Natthakan Thongon, Ph.D.
Leukemia, MD Anderson
Targeting DNA2 Overcomes Metabolic Reprogramming in Multiple Myeloma

David Yongwoo Seo, M.D.
Surgical Oncology, MD Anderson
VirMAP for Cancer: Characterization of the Intratumoral Virome in Virally-Associated Cancers and a Resource for Investigators

Yifan Zhou, Ph.D.
Immunology, MD Anderson
Intestinal toxicity to CTLA-4 blockade driven by IL-6 and myeloid infiltration

Teng Zhou, Ph.D.
Thoracic-Head & Neck Medical Oncology, MD Anderson
Efficacy and immune modulation of KRAS G12C inhibitor sotorasib in murine KRAS G12C mutant non-small cell lung cancers with major co-occurring genomic alterations

10:55 a.m.

SESSION III: IMMUNE-MICROBIOME BIOMARKER DISCOVERY

Chair: Nadim Ajami, Ph.D., MD Anderson

Yardena Samuels, Ph.D.
Weizmann Institute of Science
Deciphering the Highly Complex Cancer Immunopeptidome

Abigail Overacre, Ph.D.
University of Pittsburgh
Microbiota-Specific Immune Responses in Cancer

Florencia McAllister, M.D.
MD Anderson
Microbial Matters in Pancreatic Cancer

Stephen Shiao, M.D., Ph.D.
Cedars-Sinai Medical Center
Microbiome Regulation of Anti-Tumor Immunity Elicited by Radiation and Immunotherapy

12:50 p.m.

Break

1:40 p.m.

SESSION IV: CLINICAL DATA SCIENCE

Chair: Caroline Chung, M.D.

Hugo Aerts, Ph.D.
Harvard-Mass General Brigham
Artificial Intelligence for Medical Imaging

Yinyin Yuan, Ph.D.
MD Anderson
Co-evolving AI and Pathology

Heiko Enderling, Ph.D.
H. Lee Moffitt Cancer Center & Research Institute
Predicting Patient-Specific Radiation Response to Personalize Dose and Dose Fractionation

Regina Barzilay, Ph.D.
Massachusetts Institute of Technology
Rethinking Cancer Risk Prediction

3:35 p.m.

Break

3:40 p.m.

Panel Discussion: The Patient Is the Focus: Breakthroughs From Bench to Bedside, Clinical and Multiomics Integration and High Value Cancer Care

Chair: Tina Cascone, M.D., Ph.D.

Bissan Al-Lazikani, Ph.D.
MD Anderson

Andrea Ferris, M.B.A.
LUNGevity Foundation

Patrick Forde, M.B.B.Ch.
John Hopkins Medicine

Tim Heffernan, Ph.D.
MD Anderson

Harpeet Singh, M.D.
FDA

4:30 p.m.

Flash Talk Award Presentation

Tina Cascone, M.D., Ph.D.
MD Anderson

4:35 p.m.

Closing Remarks

Giulio Draetta, M.D., Ph.D.
MD Anderson

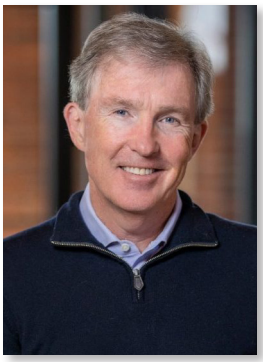
AWARDS AND BIOGRAPHIES

The Ernst W. Bertner Memorial Award

The Ernst W. Bertner Memorial Award is conferred annually on a physician or scientist who has made distinguished contributions to cancer research. It is the oldest award conferred by The University of Texas MD Anderson Cancer Center and is presented at the Annual Symposium on Cancer Research.

Established in 1950, the award honors the late Ernst William Bertner, M.D., who was the first acting director of MD Anderson and first president of the Texas Medical Center. The award is made possible by a gift from the former Bertner Foundation, now the Ernst W. Bertner Endowment at St. Luke's Episcopal Hospital. It is sustained by MD Anderson.

The bronze medallion for the award symbolizes the twin goals of cancer research: prevention and cure. The hands of Hygeia emerge from a star to hold a bowl from which the serpent, ancient symbol of medical wisdom, is fed. The goddess Hygeia, daughter of Aesculapius, Greco-Roman god of medicine, represents hygiene and prevention of disease. The star denotes both the State of Texas and the Texan for whom the award is named.



Tyler Jacks, Ph.D.

Tyler Jacks, Ph.D., is the founding director of the Koch Institute for Integrative Cancer Research, the David H. Koch Professor of Biology, and head of the Lustgarten Pancreatic Cancer Research Laboratory all at MIT. He is also the president of Break Through Cancer, a foundation committed to supporting multidisciplinary, multi-institutional research teams to find new solutions to the most intractable challenges in cancer.

Jacks pioneered gene targeting technology in mice to study cancer-associated genes and to construct mouse models of many human cancer types. These models led to insights in tumor development and new strategies for detection and treatment.

Jacks is the recipient of the AACR Outstanding Achievement Award, the Amgen Award from the American Society of Biochemistry and Molecular Biology and the Paul Marks Prize for Cancer Research. He also served as chair of the National Cancer Advisory Board for the National Cancer Institute during the Obama Administration and was president of the American Association for Cancer Research.

Jacks is an elected member of the National Academy of Sciences, the National Academy of Medicine, the American Academy of Arts and Sciences, and the inaugural class of Fellows of the AACR Academy. In 2015, Jacks received the Killian Award, the highest honor the MIT faculty can bestow its members. In 2016, Jacks co-chaired the Blue-Ribbon Panel for then Vice President Joe Biden's Cancer Moonshot Initiative. Jacks is a member of the Board of Directors of Amgen and Thermo Fisher Scientific.

The Heath Memorial Award

The Heath Memorial Award honors those who have made outstanding contributions to cancer patient care through the clinical application of basic cancer knowledge. The award is conferred annually by The University of Texas MD Anderson Cancer Center at the Annual Symposium on Cancer Research.

The late William W. Heath, a former chairman of The University of Texas System Board of Regents and past American ambassador to Sweden, and his wife, Mavis, established the award in 1965 in memory of Mr. Heath's brothers Guy H. and Dan C. The name of a third brother, Gilford G., was added after his death three years later.

The medallion for the Guy H., Dan C., and Gilford G. Heath Memorial Award symbolizes the care and protection of the cancer patient through the services of the physician, supported by research. Two central figures on the face of the medallion represent the physician tending his patient. Below the figures is the tree of life. To the left above them is the alpha superimposed on the omega, representing the continuing role of the physician in the care of his patients from birth to death. To the right of the figures is the retort, indicating the prominent part played by research in the physician's role as healer. All the figures and symbols emerge from the artist's interpretation of the sun, which represents life itself.

The Heath Memorial Award

Alan Ashworth, Ph.D., F.R.S.

Alan Ashworth is president of the Helen Diller Family Comprehensive Cancer Center at University of California, San Francisco and senior vice president for clinical services, CSF Health. Ashworth was a key member of the team that discovered the BRCA2 gene in 1995, which is linked to an increased risk of breast, ovarian and other cancers. In 2005, his lab identified a way to exploit genetic weaknesses using synthetic lethality in cancer cells with mutated BRCA1 or 2 genes, leading to a new approach to cancer treatment, PARP inhibition. Four different PARP inhibitors have now been approved by the US Food and Drug Administration for the treatment of ovarian, breast, pancreatic and prostate cancer based on his work. This work was named by Nature in the top 20 discoveries in cancer in the 21st century. He continues to develop new treatments for cancer using genetic principles.

He has received a number of awards and prizes, many of which recognize the innovative and translational nature of his work as well as its clinical impact. He is an elected member of the European Molecular Biology Organization (EMBO) and a fellow of the Academy of Medical Sciences, the American Association of Arts and Sciences, the American Association of Cancer Research and the Royal Society (equivalent to membership of the National Academy of Sciences). Prizes include the European Society of Medical Oncology (ESMO) Lifetime Achievement Award, the David T. Workman Memorial Award of the Samuel Waxman Cancer Research Foundation, the Meyenburg Foundation's Cancer Research Award, the Genetics Society Medal, the inaugural winner of the Basser Global Prize and the Susan G. Komen Brinker Award.

The Wilson S. Stone Memorial Award

The Wilson S. Stone Memorial Award was created in 1971 to recognize young researchers who have made outstanding contributions to biomedical sciences in the United States. The award honors the late Wilson S. Stone, Ph.D., a brilliant researcher and educator who helped develop the sciences within The University of Texas System.

The award is presented at the Annual Symposium on Cancer Research sponsored by The University of Texas MD Anderson Cancer Center.

The Wilson S. Stone Memorial Award

Simona Colla, Ph.D.

Simona Colla, Ph.D., is an associate professor in Leukemia at The University of Texas MD Anderson Cancer Center. Her laboratory works on understanding the mechanisms underpinning the pathogenesis and progression of multiple myeloma (MM) and myelodysplastic syndromes. Before coming to MD Anderson 12 years ago, she was a research fellow at the University of Parma in Parma, Italy and at Dana Farber Cancer Institute. Her studies have been published in Cancer Cell, Nature Communications and Nature Medicine. She is the recipient of MD Anderson's President's Recognition of Research Excellence Award in 2021 and 2020, the Leukemia and Lymphoma Society's Scholar and Development Award 2018-2019 and the Potu N. Rao Award for Excellence in Basic Science. She is also the recipient of two SPORE awards.

Phil Jones, Ph.D., F.R.C.P.

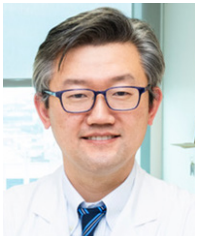
Phil Jones, Ph.D., F.R.C.P., is clinician scientist who researches how somatic mutations linked to cancer alter the behaviour of normal stem cells in normal skin and oesophagus in the earliest stages of cancer development. He is professor of Cancer Development at the University of Cambridge UK, a senior group leader at the Wellcome Sanger Institute UK and a fellow of the UK Academy of Medical Sciences. His work encompasses mapping mutant clones in human tissues and modelling the effects of mutations in advanced cell cultures and mice. Integrating experiments with computational modelling has revealed that both normal and mutant cell dynamics follows simple rules. His goal is to use molecular and cellular assays to uncover the basis of mutant cell fitness, development of interventions to deplete oncogenic mutant clones from normal tissues and reduce cancer risk. Jones' clinical practice is in skin cancer.

Katherine Y. King, M.D., Ph.D.

Katherine Y. King, M.D., Ph.D., is an associate professor of Pediatric Infectious Diseases at Baylor College of Medicine, where she is part of the faculty for the Stem Cells and Regenerative Medicine Center and serves as a co-director of the BCM Medical Scientist Training Program and associate vice chair for Research for the Department of Pediatrics. A board-certified pediatrician within the Infectious Disease Division, King's research focuses on the molecular mechanisms by which inflammation affects blood and immune cell production and clonal competition by hematopoietic stem cells in the bone marrow. King has been the recipient of the NHLBI R35 Emerging Investigator Award and the Presidential Early Career Award for Scientists and Engineers (PECASE). In 2006, she cofounded Doctors for Change, a health care advocacy non-profit in Houston.

Laura D. Wood, M.D., Ph.D.

Laura D. Wood, M.D., Ph.D., is an associate professor and director of Gastrointestinal and Liver Pathology at the Johns Hopkins University School of Medicine. Wood leads a translational research laboratory focused on molecular characterization of pancreatic neoplasms. Her laboratory leverages next generation sequencing to characterize genetic heterogeneity and clonal evolution in precancerous pancreatic lesions. In addition, her group employs three-dimensional organoid culture models to interrogate the molecular drivers of pancreatic cancer invasion, and they are developing tools to transform human pancreatic pathology from two to three dimensions.

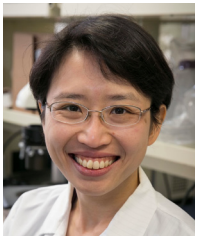


Hao Zhu, M.D.

Hao Zhu, M.D., received his bachelor's degree in biology from Duke University, and earned his M.D. at Harvard Medical School and Massachusetts Institute of Technology. He received training in internal medicine at the University of California, San Francisco, and in medical oncology at the Dana-Farber Cancer Institute. In 2012, he joined the faculty of UT Southwestern and the Children's Medical Center Research Institute (CRI) at UT Southwestern. He is also an attending physician in the Multidisciplinary Liver Cancer Clinic at Parkland Memorial Hospital. The Zhu Laboratory is interested in understanding the relationship between tissue injury, regeneration, and cancer.

Pavan Bachireddy, M.D.

Pavan Bachireddy, M.D., joined MD Anderson in 2001 as an assistant professor in Hematopoietic Biology & Malignancy as well as Lymphoma & Myeloma, where his group uses unbiased discovery tools to decode co-evolving leukemic-immune interactions that shape patient outcomes, particularly in allogeneic stem cell transplant. In addition, he serves as the scientific director of the ECLIPSE platform, dedicated to identifying novel, anti-leukemic antigen-receptor pairs. He is an ASCI Young Physician-Scientist, a CPRIT Scholar in Cancer Research, and an Amy Strelzer Manasevits Scholar.



Yvonne Chen, Ph.D.

Yvonne Chen, Ph.D., is an associate professor of Microbiology, Immunology, and Molecular Genetics at University of California-Los Angeles, where she is also the co-director of the Tumor Immunology program in the Jonsson Comprehensive Cancer Center. In addition, she serves as a member researcher of the Parker Institute for Cancer Immunotherapy. She runs the Chen Laboratory, which applies biomolecular engineering techniques to the development of novel mammalian-cell systems for clinical use, and led the first investigator-sponsored clinical trial on CAR-T cell therapy at University of California, Los Angeles. The Chen Lab's work has been recognized by the NIH Director's Early Independence Award, the NSF CAREER Award, the Mark Foundation Emerging Leader Award, and the Cancer Research Institute Lloyd J. Old STAR Award, among others. Prior to joining UCLA in 2013, Chen was a Junior Fellow in the Harvard Society of Fellows.

Saar Gill, Ph.D.

Saar Gill, Ph.D., obtained his medical degree and Ph.D. in immunology from the University of Melbourne, and trained in hematology at St Vincent's Hospital, the Royal Melbourne Hospital and the Peter MacCallum Cancer Centre. In 2008, he moved to the United States, first to pursue a post-doctoral fellowship in cellular therapy at Stanford University, and then in 2011 to the University of Pennsylvania where he is now an associate professor of medicine. Gill's clinical practice is in leukemia and bone marrow transplantation. He has led clinical trials of chimeric antigen receptor CAR-T cells for chronic and acute leukemias. Gill's research laboratory focuses on the interface between adoptive cellular therapy and genetic engineering.

Betty Kim, M.D., Ph.D.

Betty Kim, M.D., Ph.D., is an associate professor in Neurosurgery at MD Anderson. Clinically as a neurosurgeon, Kim specializes in brain tumors, and her lab is interested in understanding the molecular cross-talk that occurs between tumor and stromal cells within the tumor immune-microenvironment, while also developing multiple patented therapeutic strategies to inhibit tumorigenesis. Her current research primarily focuses on finding new ways to promote immune recognition of glioma cells to boost the efficacies of cancer immunotherapies. Her work is supported by the NIH and the Department of Defense and has been published in the New England Journal of Medicine, Nature, Nature Nanotechnology, Nature Biomedical Engineering, Nature Reviews Immunology and Nature Reviews Drug Discovery.

Florencia McAllister, M.D.

Florencia McAllister, M.D., is a physician-scientist with basic science training in host defense and tumor immunology. McAllister came to MD Anderson in 2014, and since then has established a translational research program focused on further understanding the fundamental microenvironmental mechanisms that influence pancreatic tumor initiation and progression with the ultimate goal of discovering novel immunopreventive and immunotherapeutic approaches for this disease. She participated in key discoveries on T cell immunobiology, including unraveling the epithelial IL-17 signaling pathway, the characterization of IL-17-secreting immune cells in the initiation and progression of premalignant pancreatic and colorectal lesions and the key role of inflammation and bacteria induced T cells responses in the initiation and promotion of pancreatic and colon cancer. Recently, she published in Cell a study that implicates the gut-tumor microbial axis in modulating the tumor microenvironment, using the powerful approach of human-into-mice fecal microbial transplantation (FMT). She has also developed a clinical platform, including a gastrointestinal cancer microbiome repository and pancreatic cancer high risk cohort.

Abigail Overacre, Ph.D.

Abigail Overacre, Ph.D., is an assistant professor of Immunology at the University of Pittsburgh and a member of the Tumor Microenvironment Center at the University of Pittsburgh MC Hillman Cancer Center. Her research is focused on interactions between the microbiota and immune system during cancer progression and immunotherapy. She has a broad background in cancer immunology, with specific expertise in immunoregulation in the tumor microenvironment and microbiota-specific immune responses during cancer progression. Her work focused on regulatory T cell stability in the tumor microenvironment, where she identified Neuropilin-1 as a critical mediator of T_{reg} stability in the tumor microenvironment. She further identified T_{reg} stability as a hurdle to effective anti-tumor immunity, and that T_{reg} instability was required for immunotherapy response. These studies resulted in a first author publication in Cell, multiple middle-author papers in Nature and Nature Immunology, as well as clinical trials targeting Nrp1 that are currently underway.

Yardena Samuels, Ph.D.

Yardena Samuels, Ph.D., is a cancer geneticist at the Weizmann Institute of Science and director of the EKARD Institute for Cancer Diagnosis Research, the Weizmann-Brazil Tumor Bank of the Moross Integrated Cancer Center, and the incumbent of the Knell Family Professorial Chair. Samuels is the recipient of the Pezoller Foundation - EACR Cancer Researcher Award, the Youdim Family Prize for Excellence in Cancer Research, The Michael Bruno Memorial Award and is an elected member of European Molecular Biology Organization. Samuels' lab seeks to identify and characterize gene mutations that play a role in the progression of cutaneous melanoma and to delineate protein target combinations to achieve lasting disease control. Her lab identified novel melanoma drivers, revealed novel oncogenic pathways, and derived the first melanoma whole-exome repertoires.

Stephen Shiao, M.D., Ph.D.

Stephen Shiao M.D., Ph.D., is an associate professor and director of Basic Science Research in the Radiation Oncology at Cedars-Sinai Medical Center and the co-leader of the Experimental Therapeutics Program at the Cedars-Sinai Cancer Center. The Shiao Lab has a long-standing interest in understanding how the innate immune system regulates the response to cytotoxic cancer therapy. Using multiplex flow cytometry, immunohistochemistry and next-generation sequencing techniques, the Shiao Lab explores the changes in the microbiota and tumor immune landscape following cytotoxic treatments in preclinical murine models and early-phase clinical trials in breast cancer with the goal of developing microbiome and immune-based therapeutic interventions to improve the efficacy of current cancer treatment paradigms.

Hugo Aerts, Ph.D.

Hugo Aerts, Ph.D., is director of the Artificial Intelligence in Medicine (AIM) Program at Harvard-Mass General Brigham. AIM's mission is to accelerate the application of AI algorithms in medical sciences and clinical practice. This academic program centralizes AI expertise stimulating cross-pollination among clinical and technical expertise areas, and provides a common platform to address a wide range of clinical challenges. Aerts is a leader in medical AI and principle investigator on major NIH-supported efforts, including the Quantitative Imaging Network (U01) and Informatics Technology for Cancer Research (U24) initiatives of the NCI. In 2020, he was awarded a prestigious ERC Consolidator grant of the Horizon program from the European Union. His research has resulted in numerous peer-reviewed publications in top-tier journals. In 2022, he was awarded by Web of Science, as he was among the top 1% highest cited scientists worldwide. Aerts is an associate professor at Harvard University and a professor at Maastricht University.

Regina Barzilay, Ph.D.

Regina Barzilay, Ph.D., is a School of Engineering Distinguished Professor for AI and Health in Electrical Engineering and Computer Science and a member of the Computer Science and Artificial Intelligence Laboratory at the Massachusetts Institute of Technology. She is an AI faculty lead for Jameel Clinic, an MIT center for Machine Learning in Health. Her research interests are in applications of deep learning to chemistry and oncology. She is a recipient of various awards, including the NSF Career Award, the MIT Technology Review TR-35 Award, Microsoft Faculty Fellowship and several Best Paper Awards at NAACL and ACL. She's also received a MacArthur fellowship, an ACL fellowship and an AAAI fellowship, and was awarded the AAAI Squirrel AI Award for Artificial Intelligence for the Benefit of Humanity, the AACC Wallace H. Coulter Lectureship Award, and the UNESCO/ Netexplo Award. In 2022, she was elected to the American Academy of Arts and Sciences.

Heiko Enderling, Ph.D.

Heiko Enderling, Ph.D., is associate member and director for Education and Outreach in Integrated Mathematical Oncology at Moffitt Cancer Center, with courtesy appointments in the Radiation Oncology and Genitourinary Oncology.
He currently serves as president of the Society for Mathematical Biology. Enderling came to Moffitt in 2013. Since 2013, he directs a research group with focus on quantitative personalized oncology and develops calibrated and validated mathematical model driven by clinical data to aid patient-specific treatment decisions, with major focus on radiation therapy and mathematical biomarkers for treatment personalization. Enderling has published over 100 peer-reviewed articles, and his laboratory is funded by multiple NCI and several foundation funding awards.

Yinyin Yuan, Ph.D.

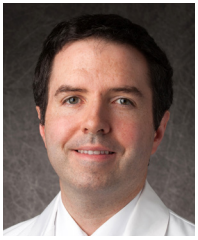
Yinyin Yuan, Ph.D., is a professor of Translational Molecular Pathology at MD Anderson Cancer Center. She brings over a decade of experience in machine learning and digital pathology to cancer research to develop innovative clinical tests and cancer therapies. Prior to coming to MD Anderson she led the Computational Pathology and Integrative Genomics team in the Centre for Evolution and Cancer and the Division of Molecular Pathology at the Institute for Cancer Research, London. There, her team focused on building the interface between artificial intelligence, cancer biology, and clinical science, to decipher and target cancer evolution and immune escape.

Bissan Al-Lazikani, Ph.D.

Bissan Al-Lazikani, Ph.D., is a data scientist and drug discoverer with experience in academia and industry. She is professor, Genomic Medicine; director of Discovery Data Science and founding faculty of the Institute for Data Science in Oncology at MD Anderson. Prior to this, she was head of Data Science at the Institute of Cancer Research, London. She co-led the creation of the groundbreaking ChEMBL database. Then, she led the creation of the world's largest public drug discovery knowledgebase, canSAR, integrating vast multidisciplinary data, and leading suite of AI-driven drug discovery analysis algorithms. She applies these to discovery novel drugs and optimize therapy for adult and pediatric cancers.

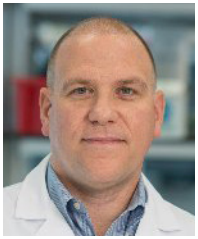
Andrea Ferris, M.B.A.

Andrea Ferris, M.B.A., is president and CEO of LUNGevity Foundation. She became involved with lung cancer advocacy following her mother's death from the disease in 2008. Determined to drive more money into lung cancer research, Andrea left the successful software company that she helped launch, to found Protect Your Lungs, an organization focused 100% on funding early detection research. In 2010, Andrea merged Protect Your Lungs with LUNGevity, a Chicago based organization, to form the nation's leading lung cancer focused non-profit. LUNGevity funds translational research into both early detection and more effective treatments of lung cancer as well as a highly coveted Career Development Awards program.



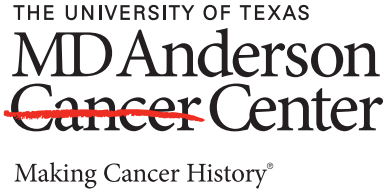
Patrick Forde, M.B.B.Ch.

Patrick Forde, M.B.B.Ch., is a medical oncologist who treats patients with lung cancer and other thoracic cancers. He completed training in internal medicine and oncology in Ireland prior to undertaking a further fellowship at Johns Hopkins University. He is currently associate professor of Oncology, associate member of the Bloomberg~Kimmel Institute for Cancer Immunotherapy, and director of clinical research for lung cancer, mesothelioma, and other thoracic cancers at Johns Hopkins. His research examines the role of immunotherapy for early-stage lung cancer and he is principal investigator for the thoracic oncology biospecimen repository. He also leads an international phase 3 registrational trial investigating neoadjuvant chemo-immunotherapy for resectable lung cancer and is co-principal investigator for a phase 3 trial of first-line chemo-immunotherapy for mesothelioma, the DREAM3R study.



Tim Heffernan, Ph.D.

Tim Heffernan, Ph.D., is vice president and head of Oncology Research in Therapeutics Discovery at MD Anderson. Heffernan leads both the TRACTION and ORBIT Moon Shot® platforms. In these roles, he manages the development of an advanced drug discovery and development portfolio coordinating research on programs from target identification through clinical development. During his time at MD Anderson, Heffernan has advanced 10 internal or partnered therapeutics into clinical trials. His expertise lies in basic and translational cancer research, cancer genomics and targeted oncology therapeutics. Prior to joining MD Anderson, he served as senior vice president at C4 Therapeutics Inc., overseeing drug discovery and translational biology efforts to advance a portfolio of internal and partnered programs.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