THE 2021 FOUNDATION FOR THE NATIONAL INSTITUTES OF HEALTH AWARDS CEREMONY

PRESENTING

LURIE PRIZE IN BIOMEDICAL SCIENCES
TRAILBLAZER PRIZE FOR CLINICIAN-SCIENTISTS
CHARLES A. SANDERS, M.D., PARTNERSHIP AWARD
The 2021 FNIH Awards Ceremony

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INTRODUCTION OF THE LURIE PRIZE IN BIOMEDICAL SCIENCES
Freda C. Lewis-Hall

SHORT FILM: 2021 LURIE PRIZE WINNER, XIAOWEI ZHUANG, PH.D.

INTERVIEW
Xiaowei Zhuang, Ph.D.
2021 LURIE PRIZE WINNER
Francis S. Collins, M.D., Ph.D.
DIRECTOR, NATIONAL INSTITUTES OF HEALTH

PRESENTATION OF THE 2021 LURIE PRIZE IN BIOMEDICAL SCIENCES
Ann Lurie
Xiaowei Zhuang

INTRODUCTION OF THE TRAILBLAZER PRIZE & PRIZE FINALISTS
Freda C. Lewis-Hall
Elaine K. Gallin, Ph.D.
John I. Gallin, M.D.

TRAILBLAZER PRIZE FINALISTS’ PRESENTATIONS

PRESENTATION OF THE 2021 TRAILBLAZER PRIZE
Elaine K. Gallin
John I. Gallin

INTRODUCTION OF THE PARTNERSHIP AWARD & Awardees
Freda C. Lewis–Hall
David Wholley
Steven M. Paul

PARTNERSHIP Awardees’ Remarks

CLOSING REMARKS
Freda C. Lewis–Hall
For nine years, the Lurie Prize in Biomedical Sciences has recognized the achievements of outstanding early-career scientists. First awarded in 2013 by the FNIH, the prize is bestowed by philanthropist Ann Lurie. The recipient is presented with an engraved medal and a $100,000 honorarium.

A jury of six eminent scientists selects the Lurie Prize winner. The panel is chaired by Solomon H. Snyder, M.D., Distinguished Professor of Neuroscience, Pharmacology and Psychiatry, the Solomon H. Snyder Department of Neuroscience at Johns Hopkins University School of Medicine. 

**JURY**

Solomon H. Snyder, M.D., CHAIR  
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Xiaowei Zhuang, Ph.D., has been awarded the 2021 Lurie Prize in Biomedical Sciences for pioneering the development of super-resolution microscopy and genome-scale imaging showing new spatial and functional organizations of molecules and cells. Dr. Zhuang’s innovative work with microscopy has enabled researchers to visualize with high resolution the positioning of and interactions between molecules in a cell, as well as the spatial organization of distinct types of cells in tissues. Her discoveries have made a significant impact all across the field of biology, with seminal applications to cell biology.

Visualizing the interior structures of cells has been a central goal of scientists since the late 16th century. How precisely these structures can be defined is limited by the physical properties of light itself, the so-called diffraction limit of light. Dr. Zhuang developed a super-resolution imaging method, Stochastic Optical Reconstruction Microscopy (STORM), which overcomes the diffraction limit and permits nanometer (one-billionth of a meter)-scale resolution. Using this method, Dr. Zhuang has identified never-before-seen structures in nerve cells in the brain.

I love using the visualization approach to make discoveries. It feels particularly rewarding to discover novel biological structures using the imaging methods that we developed.”

THE LURIE PRIZE IS AWARDED TO

Xiaowei Zhuang
Ph.D.

Howard Hughes Medical Institute Investigator;
Harvard University David B. Arnold, Jr. Professor of Science, Professor of Chemistry and Chemical Biology and Professor of Physics

LURIE PRIZE MENTORSHIP PROGRAM

The FNIH has partnered with the Global STEM Alliance of the New York Academy of Sciences to inspire the next generation to explore careers in STEM. Through the FNIH Lurie Prize Mentorship Program, middle and high school students from across the globe participate in an Expert Talk featuring a Lurie Prize winner. During a livestreamed event, students learn about the winner’s journey to become a biomedical researcher and can ask questions about careers in STEM. View the Expert Talks at fnih.org/LuriePrize.
AWARDS

THE TRAILBLAZER PRIZE FOR CLINICIAN-SCIENTISTS FINALISTS

Courtney DiNardo, M.D., MSCE
ASSOCIATE PROFESSOR, DEPARTMENT OF LEUKEMIA, DIVISION OF CANCER MEDICINE, THE UNIVERSITY OF TEXAS MD ANDERSON CANCER CENTER

Recognized for her innovative research into acute leukemia involving evaluation of novel small molecule and targeted therapeutics leading to three new FDA-approved acute myeloid leukemia (AML) therapies. Dr. DiNardo also founded the MDACC hereditary leukemia clinic for detection of inherited cancer predispositions.

Piro Lito, M.D., Ph.D.
ASSOCIATE MEMBER AND ATTENDING PHYSICIAN, MEMORIAL SLOAN KETTERING CANCER CENTER

Recognized for catalyzing breakthroughs in the understanding of oncprotein signaling and the development of novel therapeutic approaches for cancers driven by the mutant KRAS protein. Dr. Lito’s fundamental research directly translates to patients and he served as one of the principal investigators of the first-in-human clinical trial testing the effect of KRAS G12C inhibitors, work that helped establish the first FDA-approved KRAS-directed therapy for lung cancer patients.

Ian A. Myles, M.D.
CHIEF, EPITHELIAL THERAPEUTICS UNIT, LABORATORY OF CLINICAL IMMUNOLOGY AND MICROBIOLOGY, DIVISION OF INTRAMURAL RESEARCH, NATIONAL INSTITUTE OF ALLERGY AND INFECTION DISEASES (NIAID) AT NIH

Recognized for his exploration of the skin condition atopic dermatitis, allergy and microbial dysbiosis—an imbalance of the body’s microbial communities that cause inflammation—leading to the development of the first-in-human trial of topical microbiome transplantation using Roseomonas mucosa in treating atopic dermatitis.
JANSSEN RESEARCH & DEVELOPMENT LLC

Janssen Research & Development, LLC, has been an exemplary partner and leader across many FNIH projects and programs, including ACTIV; several Accelerating Medicines Partnerships®, the Biomarkers Consortium; the Partnership for Accelerating Cancer Therapies (PACT); and the Alzheimer’s Disease Neuroimaging Initiative (ADNI). Janssen members in their scientific leadership role have consistently promoted a highly collegial, collaborative approach to problem-solving with an emphasis on teamwork and transparent communication that enables open precompetitive science.

CO-CHAIRS OF THE ACCELERATING COVID-19 THERAPEUTIC INTERVENTIONS AND VACCINES (ACTIV) WORKING GROUPS

In support of finding therapeutics and vaccines to combat COVID-19, the Working Group Co-Chairs spent countless hours collaborating with the FNIH and NIH to design strategies for their areas and execute them with unprecedented speed. They participated in hundreds of meetings, reporting regularly to the ACTIV Leadership Team, and devoted valuable time and effort to identify opportunities for and help resolve challenges to the partnership. They have been invaluable to the ability of ACTIV to navigate the ever-changing scientific and political landscape during this all-encompassing global pandemic.

AWARDS

THE CHARLES A. SANDERS, M.D., PARTNERSHIP AWARD RECIPIENTS

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ACTIV THERAPEUTICS CLINICAL WORKING GROUP

Kathrin Jansen, Ph.D.
SENIOR VICE PRESIDENT AND HEAD OF VACCINE RESEARCH AND DEVELOPMENT, PFIZER

Michael Kurilla, M.D., Ph.D.
DIRECTOR, DIVISION OF CLINICAL INNOVATION, NATIONAL CENTER FOR ADVANCING TRANSLATIONAL SCIENCES (NCATS), NIH

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Douglas Lowy, M.D.
PRINCIPAL DEPUTY DIRECTOR, NATIONAL CANCER INSTITUTE (NCI), NIH
Francis S. Collins, M.D., Ph.D.

Francis S. Collins, M.D., Ph.D. was appointed the 16th Director of the National Institutes of Health (NIH) by President Barack Obama and confirmed by the Senate. He was sworn in on August 17, 2009. In 2017, President Donald Trump asked Dr. Collins to continue to serve as the NIH Director. President Joe Biden did the same in 2021. Dr. Collins is the only Presidentially appointed NIH Director to serve more than one administration. In this role, Dr. Collins oversees the work of the largest supporter of biomedical research in the world, spanning the spectrum from basic to clinical research.

Dr. Collins is a physician–geneticist noted for his landmark discoveries of disease genes and his leadership of the international Human Genome Project, which culminated in April 2003 with the completion of a finished sequence of the human DNA instruction book. He served as director of the National Human Genome Research Institute at NIH from 1993-2008.

Dr. Collins is an elected member of both the National Academy of Medicine and the National Academy of Sciences, was awarded the Presidential Medal of Freedom in November 2007, and received the National Medal of Science in 2009. In 2020, he was elected as a Foreign Member of the Royal Society (UK) and was also named the 50th winner of the Templeton Prize, which celebrates scientific and spiritual curiosity.

Freda C. Lewis-Hall, M.D., DFAPA

A pioneer in medicine and leadership, Freda Lewis-Hall, M.D., DFAPA, MFPM has been on the frontlines of healthcare for more than 40 years as a clinician, researcher, and leader in the biopharmaceuticals and life sciences industries. A passionate advocate for health equity and improved outcomes for all patients, she was a regular guest providing practical, easy to understand health advice and consumer health information on national programs such as “Dr. Phil,” and “The Doctors,” for nearly a decade, and is a regular speaker at consumer and health care conferences.

Dr. Lewis-Hall is widely regarded for expanding outreach to patients, reshaping the focus on patient engagement and inclusion, improving health information and education, and amplifying the voice of the patient within company culture and decision-making. She served in various leadership roles at a number of pharmaceutical companies, most recently as Chief Medical Officer and Executive Vice President, and later Chief Patient Officer, at Pfizer.

Appointed by the Obama Administration in 2010, she recently completed a decade of service on the Board of Governors for the Patient-Centered Outcomes Research Institute (PCORI). Dr. Lewis-Hall currently serves on boards focusing on advancing health outcomes: 1Life Healthcare, Inc., Exact Sciences Corporation, Pyxis Oncology, SpringWorks Therapeutics, Davos Alzheimer’s Collaborative, the Foundation for the National Institutes of Health, the Milken Institute’s FasterCures Center, and the Prostate Cancer Foundation.
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