Lawrence J. Ellison Institute for Transformative Medicine Welcomes New USC affiliate members

Ten transdisciplinary trailblazers join as founding institute members

Contact: Gary Polakovic (213-740-9226) or polakovi@usc.edu.

The Lawrence J. Ellison Institute for Transformative Medicine of USC (Ellison Institute) is proud to announce the launch of their Institute Members Program.

Drawing on the breadth and depth of USC’s community, the initial group of 10 Institute Members has worked extensively with Ellison Institute’s core faculty across a wide range of disciplines.

The new members are biophysicists, chemists, engineers, computer scientists, health economists, pathologists and physician-scientists who share founding Director and CEO Dr. David Agus’s bold vision for transforming cancer research and unbridled passion for championing patient-centered healthcare.

“The Founding Institute Members join me and my team during an exciting time. We are planning the move to our permanent home, growing our faculty and administrative leadership teams, and forging new collaborations. By working together, we will change the way we treat and prevent cancer,” Agus said.

The Founding Ellison Institute Members are (in alphabetical order):

Andrea M. Armani, PhD – chemical engineer, inaugural Ray Irani Chair and professor of chemical engineering and materials science. Professor Armani is developing advanced biomaterials and integrated optical devices for portability in disease diagnostics including early cancer detection.

Stacey D. Finley, PhD – chemical engineer, Gordon S. Marshall Early Career Chair and assistant professor of biomedical engineering. Professor Finley directs the Computational Systems Biology Lab and is developing novel mathematical models of biological processes to study angiogenesis, cell metabolism, immunotherapy and tumor progression.

Scott E. Fraser, PhD – biophysicist, Elizabeth Garrett Chair in Convergent Bioscience and provost professor. Professor Fraser leads the USC Translational Imaging Center and is developing innovative imaging technologies for biological structure and function, in particular 3D/4D
imaging of patient-derived cancer cells. Professor Fraser and colleagues are also widely known for their development of lightsheet and MRI microscopy.

**Dana P. Goldman**, PhD – health economist, Leonard D. Schaeffer Chair and Distinguished Professor of Public Policy, Pharmacy, and Economics at USC, where he directs one of the nation’s premier health policy centers. He is a member of the National Academy of Medicine. He chairs a policy advisory board for the Fred Hutchinson Cancer Institute and is a former advisor to the Congressional Budget Office. His research is featured in the New York Times, Wall Street Journal, Washington Post and other leading journals.

**Carl F. Kesselman**, PhD – computer scientist, electrical engineer and dean’s professor of industrial and systems engineering. Widely considered as a founding father of grid computing, professor Kesselman leads the Informatics Research Division within USC Information Sciences Institute. Its focus is on advancing medical informatics to transform the processes, practices and delivery of healthcare worldwide. Professor Kesselman is helping to develop a powerful, cloud-based, national NIH data commons platform.

**Heinz-Josef Lenz**, MD – physician-scientist, professor of medicine and preventive medicine and associate director for clinical research at USC Norris Comprehensive Cancer Center. An active oncology researcher, Dr. Lenz’s priorities include regulation of gene expression in drug resistance, methods of early cancer detection and patients at high-risk of developing colorectal cancer. His professional memberships are numerous, including American Association for Cancer Research, American Gastroenterology Association and National Society of Genetic Counselors.

**Charles E. McKenna**, PhD – chemist and professor of chemistry, pharmacology and pharmaceutical sciences. Professor McKenna leads the USC Center for Drug Discovery, a medicinal chemistry group that is pioneering research in key areas, including the design of nucleotide prodrugs for viral infections and advancing our understanding of DNA repair mechanisms and their potential for cancer therapeutics.

**Paul K. Newton**, PhD – mathematician, physicist and professor of aerospace and mechanical engineering. Professor Newton lab’s computational oncology program focuses on advancing: dynamical systems of cancer progression and metastasis; information theory and predictability of different cancer types; evolutionary game theory models of tumor growth; and the development of statistical forecasting for cancer progression.

**Michael F. Press**, MD, PhD – pathologist, physician-scientist and Harold E. Lee Chair in Breast Cancer Research. Professor Press leads the USC Breast Cancer Analysis Lab, co-directs the Women’s Cancers Program, and champions personalized medicine for breast cancer patients. Professor Press’s lab aims to discover molecular biomarkers that can predict response to targeted therapies, determine resistance to therapies to match patients to the right drugs.

**Fei Sha**, PhD – computer scientist and professor of computing and biological sciences. Professor Sha leads the USC Machine Learning Center and applies the latest machine learning, deep learning and AI (artificial intelligence) technologies to medical science, in particular, to tissue pathology and different types of cancer.

The Ellison Institute Members fulfill three major roles:

First, to lead change in biomedical and clinical research by collaborating with the Ellison Institute on high-impact, multidisciplinary, team-oriented science with the greatest promise for transforming human health.
Second, to advance the mission of the Ellison Institute by helping to engage additional world-renowned researchers, innovators and technologists in the Ellison Institute’s strategic research directions.

Third, to provide counsel about strategic research programs and help advance science through high-impact collaborations, including academic-industry partnerships.

“The Ellison Institute offers extraordinary opportunities to collaborate and reimagine research and clinical care for patients in the modern era of molecular-driven medicine. I am thrilled to formally add these long-time collaborators with the launch of the Institute Members Program and I look forward to furthering our efforts with them and others as the Institute continues to grow,” said professor Jerry S.H. Lee, the Institute’s chief science and innovation officer.

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About the Lawrence J. Ellison Institute for Transformative Medicine of USC

The Lawrence J. Ellison Institute for Transformative Medicine was founded in 2016 to leverage technology, spark innovation and drive interdisciplinary research to reimagine and redefine cancer treatment, enhance health, and transform lives. Under the leadership of Dr. David B. Agus, the Ellison Institute realizes this vision by breaking down traditional barriers in academic research and medicine to produce a meaningful impact on patient health outcomes. The Ellison Institute brings together the world’s brightest minds in pushing the boundaries of translational research and medicine.

**Photo caption:** Ellison Institute’s new 80,000-square-feet, state-of-the-art building at the nexus of West L.A.’s Silicon Beach and life sciences community, opening summer 2019.

**Photo credit:** Courtesy of the Luzzatto Co.