

The Twenty-First Irving L. Swartz Lectureship in Structural and Chemical Biology

December 9, 2021

Karolin Luger, PhD

Jennie Smoly Caruthers Endowed Chair of Biochemistry,
Professor, Department of Chemistry and Biochemistry,
University of Colorado Boulder
Investigator, Howard Hughes Medical Institute

“Some Assembly Required: of Histone Chaperones, Chromatin Remodelers, and Nucleosome Assembly Factors”

Thursday, December 9, 2021
1:00PM

Virtual Lecture

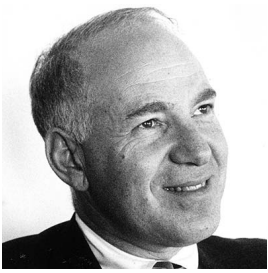
<https://mssm.zoom.us/j/84310213033>



Karolin Luger, PhD

Dr. Luger is the Jennie Smoly Caruthers Endowed Chair of Biochemistry, Professor of Department of Chemistry and Biochemistry in the University of Colorado Boulder, and an Investigator of the Howard Hughes Medical Institute. She is a biochemist and structural biologist recognized for her work on chromatin structure and function. She was a key player in efforts to elucidate the three-dimensional structure of the nucleosome, the basic repeating unit in chromatin. Her lab's current work focuses on how nucleosomes are recognized, assembled, and remodeled, and how nucleosome dynamics affect gene expression. The group also studies the structure and function of histone-based chromatin in non-eukaryotic organism, to gain insight into the evolutionary origin of the nucleosome.

Dr. Luger was born in Austria and graduated with a degree in Biochemistry from the University of Innsbruck, Austria. She obtained her Ph.D. in protein engineering and biophysics at the Biocenter in Basel, then moved to a postdoc at the ETH Zürich in 1990. She started her independent career at Colorado State University in Fort Collins in 1999, where she continued her work on nucleosome and chromatin structure. In 2015, she moved to the University of Colorado at Boulder. She is a fellow of the Biophysical Society, a member of the National Academy of Science; the American Academy of Arts and Science; and EMBO.



Irving L. Schwartz, MD
(1918-2011)

Dr. Schwartz was the first Dean of the Mount Sinai Graduate School of Biological Sciences from 1965 to 1980 when he became Dean Emeritus. He was also the founding chairman of the Department of Physiology and Biophysics (currently the Department of Pharmacological Sciences) and the Lamport Distinguished Professor until his retirement in 1989. Under Dr. Schwartz's early leadership, Mount Sinai grew as a center of excellence in translational research. He believed in the "vital interdisciplinary interactions among clinicians, basic scientists, medical students, and graduate students within one institution." Dr. Schwartz's interests in biomedical research and education were far reaching, addressing fundamental problems of body fluid regulation, secretory phenomena and neurophysiology. His work, originally in whole animal and organ physiology, evolved over the years to the cellular level, and ultimately to the molecular level. He had a major interest in the function of neurohypophyseal and other peptides.

His studies on peptides ranged from bedside observations, to biochemical mechanisms of action, to the definition of three-dimensional structure of such molecules in solution as well as in the crystalline state. The work of his group on the molecular conformation of hormones in solution pioneered structure-function analysis based on the tertiary structure of molecules.

In Honor of
IRVING L. SCHWARTZ
Scientist, scholar, teacher, physician

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|------|---|------|--|------|---|
| 1993 | Albert J. Hudspeth, MD, PhD University of Texas-Southwestern Medical Center | 2009 | Michael G. Rosenfeld, MD University of California, San Diego Howard Hughes Medical Institute | 2016 | Jennifer Doudna, PhD University of California, Berkeley Howard Hughes Medical Institute <i>Nobel Prize in Chemistry (2020)</i> |
| 1995 | Charles F. Stevens, MD, PhD The Salk Institute | 2010 | Klaus Schulten, PhD University of Illinois Urbana-Champaign | 2017 | Stephen W. Fesik, PhD Vanderbilt University School of Medicine |
| 1998 | Wayne L. Hubbell, MD, PhD University of California at Los Angeles | 2011 | Kevan Shokat, PhD University of California, San Francisco Howard Hughes Medical Institute | 2018 | Thomas R. Cech, PhD University of Colorado Howard Hughes Medical Institute <i>Nobel Prize in Chemistry (1989)</i> |
| 2000 | Richard N. Bergman, PhD University of Southern California | 2012 | Tony Hunter, PhD The Salk Institute for Biological Studies | 2019 | David Baker, PhD University of Washington Howard Hughes Medical Institute |
| 2005 | Stephen C. Harrison, PhD Harvard Medical School | 2013 | David E. Shaw, PhD D. E. Shaw Research Columbia University | 2020 | Joan A. Steitz, PhD Yale University School of Medicine Howard Hughes Medical Institute |
| 2006 | Roger D. Kornberg, PhD Stanford University <i>Nobel Prize in Chemistry (2006)</i> | 2014 | Joachim Frank, PhD Columbia University Howard Hughes Medical Institute <i>Nobel Prize in Chemistry (2017)</i> | | |
| 2007 | Kurt Wüthrich, PhD The ETH Zurich The Scripps Research Institute <i>Nobel Prize in Chemistry (2002)</i> | 2015 | Wayne A. Hendrickson, PhD Columbia University | | |
| 2008 | Stuart L. Schreiber, PhD Harvard University The Broad Institute of Harvard & MIT Howard Hughes Medical Institute | | | | |