



2024 LUND SYMPOSIUM

On Human Origins and the Future of Humanity



PROF. DR. JACK W. SZOSTAK

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Investigator of the Howard Hughes Medical Institute

TALK TITLE: The Origin of Life: Not as Hard as it Looks?

Dr. Szostak is a University Professor and Professor of Chemistry at the University of Chicago, and an Investigator of the Howard Hughes Medical Institute. Prior to joining the University of Chicago in September 2022, Dr. Szostak was a Professor of Genetics at Harvard Medical School, a Professor of Chemistry and Chemical Biology at Harvard University, and the Alex Rich Distinguished Investigator in the Dept. of Molecular Biology and the Center for Computational and Integrative Biology at Massachusetts General Hospital. Dr. Szostak is a member of the National Academy of Sciences and the American Philosophical Society, and a Fellow of the Royal Society, the American Academy of Arts and Sciences, and the American Association for the Advancement of Science.

Dr. Szostak received his B.Sc. from McGill University in Montreal in 1972, and then conducted his graduate research under the supervision of Prof. Ray Wu at Cornell University, Ithaca, NY, obtaining his Ph.D. in 1977. Dr. Szostak then moved to the Sidney Farber Cancer Institute and Harvard Medical School in 1979, and then to Massachusetts General Hospital in 1984. During the 1980s he carried out research on the genetics and biochemistry of DNA recombination, which led to the double-strand-break repair model for meiotic recombination. At the same time Dr. Szostak made fundamental contributions to our understanding of telomere structure and function, and the role of telomere maintenance in preventing cellular senescence. For this work Dr. Szostak shared, with Drs. Elizabeth Blackburn and Carol Greider, the 2006 Albert Lasker Basic Medical Research Award and the 2009 Nobel Prize in Physiology or Medicine.

In the 1990s Dr. Szostak and his colleagues developed in vitro selection as a tool for the isolation of functional RNA, DNA and protein molecules from large pools of random sequences. His laboratory used in vitro selection and directed evolution to isolate and characterize numerous nucleic acid sequences with specific ligand binding and catalytic properties. For this work, Dr. Szostak was awarded, along with Dr. Gerald Joyce, the 1994 National Academy of Sciences Award in Molecular Biology and the 1997 Sigrist Prize from the University of Bern. In 2000, Dr. Szostak was awarded the Medal of the Genetics Society of America, and in 2008 Dr. Szostak received the H.P. Heineken Prize in Biophysics and Biochemistry.

From 2000 until the present Dr. Szostak's research interests have focused on the laboratory synthesis of self-replicating systems and the origin of life. For this work he received the Harold Urey Medal from the International Society for the Study of the Origin of Life in 2011, and the Wheland Medal from the University of Chicago in 2018.

CELEBRATING THE 50TH ANNIVERSARY
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