





2024 LUND SYMPOSIUM

On Human Origins and the Future of Humanity



PROFESSOR EMMANUELLE CHARPENTIER

TALK TITLE: CRISPR-Cas: the power of microbiology for a transformative genomic engineering technology

Emmanuelle Charpentier studied biochemistry, microbiology and genetics at the University Pierre and Marie Curie (now Sorbonne University), Paris, France and obtained her Ph.D. in microbiology for her research performed at the Pasteur Institute, Paris, France. She then continued her work in the United States, at The Rockefeller University, New York University Medical Center (now NYC Langone Health) and the Skirball Institute of Biomolecular Medicine (all in New York, NY) and at St. Jude Children's Research Hospital (in Memphis, TN). Emmanuelle returned to Europe to establish her own research group as Assistant and Associate Professor at the Max F. Perutz Laboratories (now Max Perutz Labs) at the University of Vienna in Austria where she obtained her habilitation in the field of microbiology. She was then appointed Associate Professor at The Laboratory for Molecular Infection Medicine Sweden (MIMS, part of Nordic European Molecular Biology Laboratory (EMBL) Partnership for Molecular Medicine) at Umeå University in Sweden, where she habilitated in the field of Medical Microbiology and was active as a Visiting Professor until 2017. Between 2013 and 2015, Emmanuelle was Head of the Department of Regulation in Infection Biology at the Helmholtz Centre for Infection Research, Braunschweig, and Professor at the Medical School of Hannover in Germany. In 2013, she was awarded an Alexander von Humboldt Professorship, which she held in 2014 and 2015. In 2015, Emmanuelle was appointed Scientific Member of the Max Planck Society. From 2015 to 2018, she was Scientific Director and Head of the Department of Regulation in Infection Biology at the Max Planck Institute for Infection Biology in Berlin, Germany. Since 2016, Emmanuelle has been an Honorary Professor at Humboldt University in Berlin. Since 2018, she has been Scientific and Managing Director of the Max Planck Unit for the Science of Pathogens in Berlin, an independent institute she founded together with the Max Planck Society. Emmanuelle has laid the foundation for the development of a highly versatile and specific genome editing technology - CRISPR-Cas9 that is revolutionizing life sciences, biotechnology and medicine. For her groundbreaking discovery and innovative research, she has received numerous prestigious international awards and honors, including the Nobel Prize in Chemistry in 2020, and is an elected member of national and international scientific academies. She is co-founder of CRISPR Therapeutics and ERS Genomics with Rodger Novak and Shaun Foy.

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