

2022 Arthur P. Arnold Distinguished Lecture

Barbara Stranger

Northwestern University Feinberg School of Medicine

Barbara Stranger, PhD, is an Associate Professor in the Center for Genetic Medicine and the Department of Pharmacology at Northwestern University Feinberg School of Medicine, and is an expert in the genetics and genomics of sex differences in human complex traits and disease. She received her educational training at the University of Chicago, University of Montana, and the Max Planck Institute for Chemical Ecology. She completed post-doctoral training at the University of Barcelona and the Wellcome Trust Sanger Institute. She has held faculty positions at Harvard Medical School, Brigham and Women's Hospital, and University of Chicago.

Dr. Stranger has a longstanding interest in understanding how human genetic variation contributes to variation in human traits and disease risk, often through the process of regulating which genes are active or inactive in human cells or tissues. She and her research team develop effective analytic pipelines for large-scale analysis of genetics, genomics, and clinical data. Using the tools of statistical genetics, they perform integrative data analysis to uncover the biology underlying complex traits. Dr. Stranger has made many of the seminal discoveries of how human genetic variation impacts gene expression, including the demonstration of how these relationships vary with context (e.g., cell-type, sex, age, response to stimulus) and can impact disease risk. Dr. Stranger's research considers the role of sex as a biological variable, a historically understudied and priority area in biomedical research.

Dr. Stranger's expertise in characterizing the impact of sex on human traits and its interaction with genetic variation has led to numerous national and international speaking engagements, as well as appointments on strategy panels and advisory boards for a variety of organizations, including the National Academies of Science and the National Institutes of Health. She also serves as the Chair of the Sex Analysis Working Group of the NIH-funded Genotype-Tissue Expression Consortium, and co-Chairs the Sex-specific Cross Disorder working group of the Psychiatric Genomics Consortium.