



Stanford Bio-X Fellows Symposium

SEPTEMBER 28, 2023 - 10:00AM - CLARK CENTER AUDITORIUM

10:00AM

Introduction by Carla Shatz

Sapp Family Provostial Professor, Professor of Biology and Neurobiology, and Catherine Holman Johnson Director of Stanford Bio-X



CARLA SHATZ

10:15AM

Mira Moufarrej

Stanford Bio-X Bowes Fellow, 2018-2021

currently Stanford Science Fellow and postdoctoral scholar with Kristy Red-Horse
“Improving Prenatal Care through RNA Liquid Biopsies”

Mentors: Stephen Quake (Bioengineering and Applied Physics) and David Stevenson (Pediatrics)



MIRA MOUFARREJ

10:45AM

Tim Schnabel

Stanford Bio-X Bowes Fellow, 2015-2018

currently Founder and CEO of Switch Bioworks

“From Bio-X Fellow to Startup Founder: How Switch Bioworks Aims to Change the World with Biotechnology and What I Learned Along the Way”

Mentors: Elizabeth Sattely (Chemical Engineering), Drew Endy (Bioengineering), Sharon Long (Biology), and KC Huang (Bioengineering)



TIM SCHNABEL

11:15AM

One-Minute Introductions and Talks by New Stanford Bio-X Fellows

11:45AM

Poster Session and Lunch

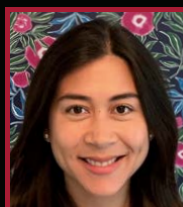
Brought to you by the Stanford Bio-X Team:



DR. CARLA SHATZ,
CATHERINE HOLMAN
JOHNSON DIRECTOR



DR. HEIDEH FATTAEY,
EXECUTIVE DIRECTOR OF
FINANCE, OPERATIONS,
AND PROGRAMS



GABRIELLA HERMAN,
EDUCATIONAL PROGRAM
ASSOCIATE DIRECTOR



CICI HUBER,
ASSOCIATE DIRECTOR
OF PROGRAMS



Introducing the 2023 Stanford Bio-X Fellows

CARLOS ALDRETE

Stanford Interdisciplinary Graduate Fellow (Anonymous Donor), Stanford Bio-X SIGF, *Chemical Engineering*
Mentors: Xiaojing Gao (Chemical Engineering) and Ngan Huang (Cardiothoracic Surgery)
“*Small-Molecule Control of Cytokine Activity Using Human Proteases*”

MEELAD AMOUZGAR

Felix and Heather Baker Interdisciplinary Graduate Fellow, Stanford Bio-X SIGF, *Immunology*
Mentors: Sean Bendall (Pathology), Robert Tibshirani (Biomedical Data Science, Statistics), Crystal Mackall (Pediatrics - Hematology/Oncology), Jan Skotheim (Biology), and Markus Covert (Bioengineering)
“*Integrating Experimental and Computational Methods to Understand the Link Between T cell Fate and Cell Cycle Progression*”

NAHAL BAGHERI

Stanford Bio-X Bowes Fellow, *Electrical Engineering*
Mentors: Steven Boxer (Chemistry), Possu Huang (Bioengineering), and Thomas Markland (Chemistry)
“*Electric Field Contribution to the Enzyme Activity of Trypsin*”

CRYSTAL CHEN

Stanford Bio-X Bowes Fellow, *Chemical Engineering*
Mentors: Stanley Qi (Bioengineering) and Katherine Ferrara (Radiology)
“*Autonomous Genetic Switches for mRNA Therapy and Autoimmune Disease*”

BENJAMIN DOUGHTY

William and Lynda Steere Fellow, Stanford Bio-X SIGF, *Genetics*
Mentors: William Greenleaf (Genetics), Jesse Engreitz (Genetics), and Polly Fordyce (Bioengineering, Genetics)
“*Deciphering the Mechanisms of Non-Coding Genetic Variation in Enhancers*”

MARK FLECK

Stanford Bio-X Bowes Fellow, *Chemistry*
Mentors: Fan Yang (Bioengineering, Orthopaedic Surgery), Michael Lim (Neurosurgery), Ovijit Chaudhuri (Mechanical Engineering), and Charles Chan (Surgery)
“*A 3D Viscoelastic Model for Investigating Glioblastoma-Tumor Associated Macrophage Crosstalk*”

KEXIN HUANG

Lubert Stryer Interdisciplinary Graduate Fellow, Stanford Bio-X SIGF, *Computer Science*
Mentors: Jure Leskovec (Computer Science), Anshul Kundaje (Genetics), and Jesse Engreitz (Genetics)
“*Scalable Generation of Disease-Critical Variant-to-Gene-to-Program Maps Using Graph Neural Networks*”

KARAN KATHURIA

Stanford Bio-X Bowes Fellow, *Immunology and Medicine*
Mentors: Mark Davis (Microbiology & Immunology), Prasanna Jagannathan (Medicine - Infectious Diseases, Microbiology & Immunology), and Sarah Heilshorn (Materials Science & Engineering)
“*Modeling Immune Responses to Malaria Infection and Vaccination in Human Spleen Organoids*”

RENNIE KENDRICK

Tusher Family Stanford Interdisciplinary Graduate Fellow, Stanford Bio-X SIGF, *Neurosciences*
Mentors: Scott Owen (Neurosurgery), Scott Linderman (Statistics), and Laura Prolo (Neurosurgery)
“*Elucidating Cellular and Molecular Mechanisms of OCD in the Human Brain*”

DANIELLE KLINGER

Stanford Interdisciplinary Graduate Fellow (Anonymous Donor), Stanford Bio-X SIGF, *Bioengineering*
Mentors: Kristy Red-Horse (Biology), Mark Skylar-Scott (Bioengineering), Casey Gifford (Pediatrics - Cardiology), and Marlene Rabinovitch (Pediatrics - Cardiology)
“*Engineering Organoid Models of Early Cardiac Developmental Stages*”

DANIEL LIU

Seth A. Ritch Graduate Fellow, Stanford Bio-X SIGF, *Stem Cell Biology & Regenerative Medicine and Medicine*
Mentors: Irving Weissman (Pathology, Developmental Biology) and Laura Prolo (Neurosurgery)
“*Characterization of the Glial Progenitor Cell in Human Health and Disease*”

PRADNYA NARKHEDE

Mona M. Burgess Fellow, Stanford Bio-X SIGF, *Chemistry*
Mentors: Or Gozani (Biology) and James Chen (Chemical & Systems Biology, Developmental Biology, Chemistry)
“*Cracking the eEF1A Code: Unraveling the Differential Roles and Disease Relevance of eEF1A Lysine Methylation States in Regulating Proteome-Wide Translation Dynamics*”

BABATUNDE OGUNLADE

Stanford Bio-X Bowes Fellow, *Materials Science & Engineering*
Mentors: Jennifer Dionne (Materials Science & Engineering) and Amanda Kirane (Surgery - General Surgery)
“*Spatially Profiling the Melanoma Tumor Microenvironment Using Metasurface-Enhanced Raman Spectroscopy and Machine Learning*”

JENNIFER PARKER

Stanford Bio-X Bowes Fellow, *Stem Cell Biology & Regenerative Medicine*
Mentors: Michael Longaker (Surgery) and Eric Appel (Materials Science & Engineering)
“*Targeting Engrailed-1 Positive Fibroblasts and Mechanotransduction Signaling in Foreign Body Response*”

DIVYA RAJASEKHARAN

Stanford Bio-X Bowes Fellow, *Mechanical Engineering*
Mentors: Leanne Williams (Psychiatry & Behavioral Sciences), Ellen Kuhl (Mechanical Engineering), and Laura Hack (Psychiatry & Behavioral Sciences)
“*An Integrated Continuum Finite Element & Network Neuroscience Method for Understanding Mechanisms of Transcranial Magnetic Stimulation*”

JULIA SCHAEPE

Colella Family Fellow, Stanford Bio-X SIGF, *Bioengineering*
Mentors: William Greenleaf (Genetics) and Lacramioara Bintu (Bioengineering)
“*Dissecting Dynamics of Gene Activation by Human Transcription Factors with Single Molecule Footprinting*”

JUN HO SONG

Stanford Bio-X Bowes Fellow, *Biology*
Mentors: Liqun Luo (Biology) and Scott Linderman (Statistics)
“*Deconstructing the Serotonin System: Projectomes, Transcriptomes, and Animal Behavior*”

MICHELLE TAI

Stanford Interdisciplinary Graduate Fellow (Anonymous Donor), Stanford Bio-X SIGF, *Bioengineering*
Mentors: Fan Yang (Bioengineering, Orthopaedic Surgery), Christina Curtis (Medicine - Oncology, Genetics, Biomedical Data Science), and Joy Wu (Medicine - Endocrinology)
“*Engineering a 3D Model for Mimicking Breast Cancer Metastasis at the Bone Tissue Interface*”

ABBY THURM

Stanford Bio-X Bowes Fellow, *Biophysics and Medicine*
Mentors: Lacramioara Bintu (Bioengineering), Daniel Herschlag (Biochemistry), and William Greenleaf (Genetics)
“*High-Throughput Measurements of RNA-Mediated Regulation of Gene Expression*”

AUSTIN WANG

Stanford Bio-X Bowes Fellow, *Computer Science*
Mentors: Anshul Kundaje (Genetics) and Kristy Red-Horse (Biology)
“*Characterizing the Species-Specific Genetic Basis of Cardiac Development with Deep Learning Models of Regulatory Function*”

THEO YANG

Lavidge and McKinley Interdisciplinary Fellow, Stanford Bio-X SIGF, *Chemical Engineering*
Mentors: Daniel Jarosz (Chemical & Systems Biology, Developmental Biology) and Jian Qin (Chemical Engineering)
“*Dissecting the Molecular Grammar of Prion Material States*”