



Stanford Bio-X Fellows Symposium

OCTOBER 18, 2022 - 10:00AM - CENTER AUDITORIUM & COURTYARD

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

Peyton Greenside

Morgridge Family SIGF Fellow and Stanford Bio-X Fellow, 2015-2018

currently Co-Founder and CSO of BigHat Biosciences

“Designing Therapeutic Antibodies with Synthetic Biology and Machine Learning”

Mentors: Anshul Kundaje (Genetics, Computer Science) and Thomas Quertermous (Cardiovascular Medicine)



PEYTON GREENSIDE

10:45AM

Patrick Ye

Bruce and Elizabeth Dunlevie Fellow and Stanford Bio-X Fellow, 2013-2016

currently Principal Scientist at BillionToOne

“Bio-X to BillionToOne: An Interdisciplinary Adventure”

Mentors: Kim Pauly (Radiology) and Stephen Baccus (Neurobiology)



PATRICK YE

11:15AM

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

11:45AM

Poster Session and Lunch

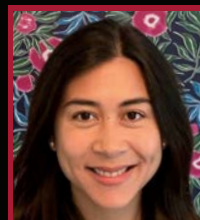
Brought to you by the Stanford Bio-X Team:



CARLA SHATZ



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GABRIELLA HERMAN



CICI HUBER



STANFORD
BIO-X

Introducing the 2022 Stanford Bio-X Fellows

PREKSHA BHAGCHANDANI

Morgridge Family SIGF Fellow, Stanford Bio-X SIGF, *Immunology*
Mentors: Seung Kim (Developmental Biology), Everett Meyer (Medicine - Blood & Marrow Transplantation and Pediatrics - Stem Cell Transplantation), Judith Shizuru (Medicine - Blood & Marrow Transplantation and Pediatrics - Stem Cell Transplantation), and Kyle Loh (Developmental Biology)

"Pseudoislet Manufacturing and Hematopoietic Stem Cell Transplant to Advance Islet Transplantation"

SA CAI

Stanford Bio-X Bowes Fellow, *Materials Science & Engineering*
Mentors: Stanley Qi (Bioengineering) and Guosong Hong (Materials Science & Engineering)

"Developing Genetic Photothermal Systems (GPS) for Non-Invasive, High Precision Cell Therapy"

XINYI CHEN

Bruce and Elizabeth Dunlevie Fellow, Stanford Bio-X SIGF, *Bioengineering*

Mentors: Stanley Qi (Bioengineering) and Wendy Fantl (Urology)

"Programmable Biomolecule Delivery through Cell-Cell Communication"

JACOB HORNE

Stanford Bio-X Bowes Fellow, *Chemical Engineering*

Mentors: Jian Qin (Chemical Engineering) and Daniel Jarosz (Chemical & Systems Biology and Developmental Biology)

"Unraveling the Molecular Drivers Behind LLPS and Coarsening of Biocondensates"

MINJI KANG

Rogers Family Interdisciplinary Graduate Fellow, Stanford Bio-X SIGF, *Computer Science*

Mentors: Aaron Newman (Biomedical Data Science), Michael Clarke (Medicine - Oncology), and Emma Lundberg (Bioengineering and Pathology)

"Decoding Single Cell Developmental States in Health and Disease"

ERICA LIU

Stanford Bio-X Bowes Fellow, *Chemistry*

Mentors: Bianxiao Cui (Chemistry) and Jun Ding (Neurosurgery and Neurology & Neurological Sciences)

"Optical Electrophysiology Using Electrochromic Materials"

ZHIRU LIU

Stanford Bio-X Bowes Fellow, *Applied Physics*

Mentors: Benjamin Good (Applied Physics) and Ami Bhatt (Medicine - Hematology and Genetics)

"High-Resolution Dynamics of Bacterial Recombination through Timescale Separation"

STEVEN MILLER

Stanford Bio-X Bowes Fellow, *Chemistry*

Mentors: Justin Du Bois (Chemistry), Merritt Maduke (Molecular & Cellular Physiology), Ron Dror (Computer Science) and John Huguenard (Neurology & Neurological Sciences)

"Design and Implementation of Small Molecule Tools to Study Chloride Channels and Epilepsy in the Central Nervous System"

AKSHATKUMAR NIGAM

Bruce and Elizabeth Dunlevie Fellow, Stanford Bio-X SIGF, *Computer Science*

Mentors: Michael Bassik (Genetics) and Anshul Kundaje (Genetics and Computer Science)

"Development of Deep-Learning Guided Mutational Scans to Allow Fast Mapping of Sequence to Function"

ANUSRI PAMPARI

Stanford Interdisciplinary Graduate Fellow (Anonymous Donor), Stanford Bio-X SIGF, *Computer Science*

Mentors: Anshul Kundaje (Genetics and Computer Science) and Maya M. Kasowski (Medicine and Pathology)

"Base-Resolution Deep Learning Models of Bulk and Single Cell Multi-Omic Data to Decipher the Regulatory Basis of Thyroid Cancer"

KALANI RATNASIRI

City Hill Foundation Stanford Interdisciplinary Graduate Fellow, Stanford Bio-X SIGF, *Immunology*

Mentors: Catherine Blish (Medicine - Infectious Diseases) and Purvesh Khatri (Medicine and Biomedical Data Science)

"Elucidating Conserved and Targetable Severity-Associated Monocyte Responses in Acute RNA Viral Disease"

FREDRIK SAMDAL SOLBERG

Pierce Family Goldman Sachs Fellow, Stanford Bio-X SIGF, *Mechanical Engineering*

Mentors: Mark Skylar-Scott (Bioengineering), Allison Okamura (Mechanical Engineering), and Michael Ma (Cardiothoracic Surgery)

"In Situ In Vivo 3D Bioprinting"

JIAWEI SUN

Rosenberg Ach Family Fellow, Stanford Bio-X SIGF, *Bioengineering*

Mentors: Kerwyn Huang (Bioengineering and Microbiology & Immunology), Denise Monack (Microbiology & Immunology), and Naima Sharaf (Biology)

"Exploiting the Physical Properties of the Bacterial Cell Envelope to Combat Antibiotic Resistance"

RAELINE VALBUENA

Stanford Bio-X Bowes Fellow, *Genetics*

Mentors: Michael Bassik (Genetics), Lacramioara Bintu (Bioengineering), and Polly Fordyce (Bioengineering and Genetics)

"Integrative Approaches for Deciphering the Functional Roles of Intrinsic Disorder"

CASSANDRA VILICANA

Stanford Bio-X Bowes Fellow, *Bioengineering*

Mentors: Fan Yang (Orthopaedic Surgery and Bioengineering), Stuart Goodman (Orthopaedic Surgery), and Charles Kwok Fai Chan (Surgery - Plastic & Reconstructive Surgery)

"Tissue Extracellular Matrix-Derived Microribbon Scaffolds to Enhance Bone Regeneration Through Immunomodulation"

JAVIER WEDDINGTON

Stanford Bio-X Bowes Fellow, *Neurosciences*

Mentors: Stephen Baccus (Neurobiology) and Nick Haber (Education and Computer Science)

"Rapid Perceptual Learning in Rewarded Tasks - The Efficient Learning Hypothesis"

ERIC WU

Stanford Interdisciplinary Graduate Fellow (Anonymous Donor), Stanford Bio-X SIGF, *Electrical Engineering*

Mentors: James Zou (Biomedical Data Science) and Daniel Ho (Law and Political Science)

"How Should We Evaluate and Regulate Medical AI Algorithms?"

TING-HSUAN (TIMOTHY) WU

Stanford Interdisciplinary Graduate Fellow (Anonymous Donor), Stanford Bio-X SIGF, *Biochemistry and Medicine*

Mentors: Mark Krasnow (Biochemistry), Peter S. Kim (Biochemistry), and Catherine Blish (Medicine - Infectious Diseases)

"Dissecting Human Respiratory Disease Initiation and Therapeutic Efficacy at Single Cell Resolution"

YAN WU

Stanford Bio-X Bowes Fellow, *Bioengineering*

Mentors: Michael Lin (Neurobiology and Bioengineering), Nathanael Gray (Chemical & Systems Biology), and Michelle Monje (Neurology & Neurological Sciences)

"Non-Invasive Bioluminescent Imaging for in vivo Visualization of the Efficacy of Kinase-Targeting Drugs"

JONATHAN YANG

Stanford Interdisciplinary Graduate Fellow (Anonymous Donor), Stanford Bio-X SIGF, *Chemistry*

Mentors: Carolyn Bertozzi (Chemistry) and Alice Ting (Genetics and Biology)

"The Selective Degradation of Essential Proteins on Cancer Cells: Adding New Orders of Selectivity to Chemotherapy"

MAXIM ZASLAVSKY

Stanford Bio-X Bowes Fellow, *Computer Science*

Mentors: Anshul Kundaje (Genetics and Computer Science), Scott Boyd (Pathology), Robert Tibshirani (Biomedical Data Science and Statistics), and Benjamin Pinsky (Pathology and Medicine - Infectious Diseases)

"Universal Disease Diagnostics with Immune Repertoire Sequencing and Machine Learning"