

# BIO-X

## Undergraduate Summer Research Program 2013



STANFORD  
BIO-X

Talks start at 12:00 noon (15 minute talks) Clark Center, Room S360

### Faculty Speakers:

#### June 26

**Josef Parvizi**, Studying the Localization of Functions in the Human Brain with Intracranial Electrodes

**Vinod Menon**, Development of Functional and Structural Brain Networks: Implications for Neurodevelopmental Disorders

**Lawrence Steinman**, When Bad is Good: Beneficial Amyloid to Protect the Brain

**Dean Felsher**, Modeling and Predicting Oncogene Addiction

#### July 3

**Mark Pegram**, Therapeutic Strategies Targeting ERBB2

**Firdaus Dhabhar**, A Hassle a Day May Keep the Doctor Away - Protective Versus Harmful Effects of Stress

**Renee Reijo Pera**, Reprogramming and Programming in Human Embryo Development

**Alexander Urban**, Genomic Basis of Mental Disorders

#### July 10

**Beth Pruitt**, Microsystems for Mechanobiology

**Kang Shen**, Using a Small Nervous System to Answer Big Questions

**Liqun Luo**, Of Mice and Flies: How Neural Circuits are Organized and Built

**Carla Shatz**, Restoring Plasticity to Old Brains

#### July 17

**Jason Dragoo**, The Clinical Use of Stem Cells in Orthopaedic Surgery

**Euan Ashley**, Big Data: Biological Networks, Human Genomes

**Howard Chang**, Genome Regulation by Long Noncoding RNAs

**Yoon-Jae Cho**, A Bedside to Bench to Bedside Approach to Childhood Brain Tumors

#### July 24

**Sean Mackey**, The Strain in Pain Lies Mainly in the Brain: Lessons Learned from Neuroimaging of Pain

**Nicholas Melosh**, Engineering Cell Access

**Yunzhi Yang**, Bio Inspired Approaches for Musculoskeletal Tissue Engineering

**Sarah Heilshorn**, Biomaterials to Improve Stem Cell Transplantation Therapies

#### July 31

**Elizabeth Sattely**, Antibiotic Biosynthesis in Plants: Implications for Plant and Human Health

**Nigam Shah**, Making Sense of Unstructured Data in Medicine

**David Stevenson**, Targeted Chemoprevention of Neonatal Jaundice

**Judith Frydman**, Molecular Origami: Protein Folding and Misfolding in Health and Disease

#### August 7

**Steven Boxer**, Not Your Grandmother's GFP

**Matthew Porteus**, Genome Editing using Engineered Nucleases

**Sheri Krams**, Visualizing the Functional Interactions Between NK Cells and Their Targets

**Robert Malenka**, Mechanisms and Functions of Synaptic Plasticity

#### August 14

**David Paik**, Imaging-Based Models of Cancer Treatments

**Susan Holmes**, Studying the Resilience of Bacterial Communities in the Human Microbiome

**Gary Steinberg**, Genetics and Pathogenesis of Moyamoya Disease

**Anthony Oro**, Hedgehog and the Race Against Tumor Evolution

#### August 21

**Andrew Fire**, The Difficulties of Genome Engineering and What We Can Learn from Them

**Ravindra Majeti**, Therapeutic Targeting of Human Acute Myeloid Leukemia Stem Cells

**James McClelland**, Understanding the Cognitive Consequences of Neurodegenerative Disease Through Simulated Damage to Artificial Neural Networks

**Joseph Wu**, iPSCs for Cardiovascular Diseases

#### August 28

**Alesha Castillo**, Mechanical Stimulation in Bone Adaptation and Healing

**Michael Snyder**, Getting Your Genome Sequenced: What Can You Learn?

**Irv Weissman**, Normal and Neoplastic Stem Cells

**Heng Zhao**, The Protective Effects of Ischemic Postconditioning Against Stroke

