



Stanford

Spectrum Innovation Research Symposium



learn,
network,
brainstorm on
new research in
drug discovery,
medical devices,
diagnostics,
population health,
community engagement

Sponsored by
Spectrum | The Stanford Center for
Clinical & Translational Research & Education



About Spectrum Programs

Spectrum offers university-wide programs that provide promising scholars with financial support, training and mentoring to help them initiate research that accelerates the translation of medical discoveries into better health.

KL2 Mentored Career Development Program

Provides senior fellows and junior faculty in health-related professions with financial support and advanced training in clinical and translational research.

TL1 Predoctoral and Postdoctoral Research Training Program

Provides participants with partial tuition and stipend support for a year of full-time instruction in research methods.

All program participants receive dedicated research and academic mentorship, professional workshops, study design and analysis consultations, and targeted seminars.

(<http://spectrum.stanford.edu/accordions/kl2tl1-clinical-research-training-awards>)

Spectrum Pilot Grants

These grants of up to \$50,000 are awarded to investigators with bold ideas that address health-care problems through novel approaches and multidisciplinary teams. Proposals are due Sept. 30, 2014, in the following solution areas. (<http://stanford.io/UkuzS8>)

- Therapeutics (drug discovery and development)
- Medical technologies
- Predictives and diagnostics
- Population health sciences
- Community engagement

These programs are funded by a Clinical and Translational Science Award (CTSA) from the NIH's National Center for Advancing Translational Sciences (NCATS).

Spectrum Innovation Research Symposium

8:30-11:30am Friday, Sept. 26, 2014
Li Ka Shing Center, Berg Hall, LK250C

Learn, network, and brainstorm on new research in drug discovery, medical devices, diagnostics, population health, and community health

8:30a **continental breakfast**

9:00a **introduction**

Harry Greenberg, MD

Director of Spectrum, Senior Associate Dean for Research

9:10a **keynote**

The Impact of Chronic Disease on Bone Development: A Life Course Perspective

Mary Leonard, MD, MSCE

Professor of Pediatrics and of Medicine (Nephrology)

Co-leader, Spectrum Child Health

9:40a **program highlights**

Steven Goodman, MD, MHS, PhD

Leader, Spectrum Research Education and Training

Associate Dean of Clinical and Translational Research

Gordon Saul, MBA

Executive Director, Biodesign Program (medical technologies)

Kevin Grimes, MD

Co-director, SPARK Program (therapeutics)

Atul Butte, MD, PhD

Faculty Director, SPADA (predictives and diagnostics)

Lorene Nelson, PhD

Faculty Executive Director, Stanford Center for Population Health Sciences

Marilyn Winkleby, PhD, MPH

Faculty Director, Office of Community Health

10:10a **poster & networking session**

11:30a **program ends**

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2014 Spectrum Scholar Research

KL2 Scholars

Insulin resistance as the determinant of cardiovascular disease risk in individuals with normal glucose tolerance or impaired fasting glucose (1)

Danit Ariel, MD, endocrinology postdoctoral fellow

Mentor(s): Gerald Reaven, MD

A prospective repeat measurements study assessing pediatric fellow education in palliative care using high-fidelity simulation (6)

Katharine Brock, MD, hematology-oncology fellow

Mentor(s): Louis Halamek, MD; Harvey Cohen, MD; Barbara Sourkes, MD; and Julie Good, MD

Reducing child health disparities: Examination of parental English language proficiency as an effect modifier for access to early intervention and specialty care services among children with very low birth weight (15)

Monica Eneriz-Wiemer, MD, general pediatrics fellow

Mentor(s): Lee Sanders, MD; Jason Wang, MD; and Fernando Mendoza, MD

Poverty and child development: A study of the impact of the Earned Income Tax Credit (26)

Rita Hamad, MD, instructor, general medical disciplines

Mentor(s): Mark Cullen, MD, and David Rehkopf, ScD

Prospective study to characterize and treat immune-mediated indeterminate acute hepatitis and liver failure in pediatric patients (no poster)

Rebecca McKenzie, MD, pediatrics fellow

Mentor(s): Kari Nadeau, MD

Optimizing lung transplant benefit: Impact of the lung allocation score on post-transplant morbidity and healthcare resource utilization (32)

Joshua Mooney, MD, pulmonary and critical care medicine fellow

Mentor(s): Gundeep Dhillon, MD, MPH; Joe Levitt, MD, MS; and Mark Hlatky, MD

Do advance directives predict receipt of palliative care? (31)

Manali Patel, MD, instructor, oncology

Mentor(s): Steve Asch, MD; James Kahn, MD; Jay Bhattacharya, MD, PhD

Improvements in early mortality in acute myeloid leukemia patients undergoing induction chemotherapy: Implications for comparative effectiveness research (27)

Mary-Beth Percival, MD, hematology fellow

Mentor(s): Bruno Medeiros, MD

Evaluation of a novel thermosensitive delivery platform to administer topical therapeutics (16)

Sidhartha Sinha, MD, instructor, gastroenterology-hepatology

Mentor(s): Aida Habtezion, MD; Ray Kim, MD; and Paul Yock, MD

The role of GLP-1 in mediating glucose reductions after bariatric surgery (9)

Colleen Craig, MD, endocrinology fellow

Mentor(s): Tracey McLaughlin, MD

TL1 Scholars

Tolerability and physiologic effects of oral probiotics *Lactobacillus reuteri* DSM 17938 and *Bifidobacterium logum* and *infantis* in Bangladeshi infants (33)

Yana Emmy Hoy-Schulz, PhD, infectious diseases postdoctoral scholar
Mentor(s): Stephen Luby, MD, and Julie Parsonnet, MD

Identification of autologous and allogeneic CD4+ and CD8+ T cell responses to neoepitopes in Acute Myeloid Leukemia (AML) (10)

Rupa Narayan, MD, hematology fellow
Mentor(s): Bruno Medeiros, MD, and Ronald Levy, MD

Cleft Palate Repair: An Evaluation on Length of Stay, Complications, & Costs by Hospital Type (35)

Christine Nguyen, Medical Student
Mentor(s): Catherine Curtin, MD, and Jay Bhattacharya, MD, PhD

Predictive modeling of infectious diseases in Bangladesh (no poster)

John Openshaw, MD, infectious diseases fellow
Mentor(s): Stephen Luby, MD

Phase 1 study of MPDL3280A (PD-L1 inhibitor) + GDC-0973 (MEK inhibitor) in KRAS-mutated non-small cell lung-cancer & BRAF or RAS mutated solid tumors (28)

Suki Padda, MD, Instructor, Oncology
Mentor(s): Heather Wakelee, MD

Subclinical Injury in pediatric renal transplant patients: ACE2 and Ang-(1-7) as novel biomarkers (17)

Andrew South, MD, pediatric nephrology fellow
Mentor(s): Paul Grimm, MD, and Alan Pao, MD

2014 Spectrum Pilot Grant Research

Medical Technologies (Biodesign)

Smartphone-based ophthalmic imaging system for remote triage (3)

Robert Chang, MD; David Myung, MD, PhD resident, Byers Eye Institute at Stanford; Mark Blumenkranz, MD, professor and chairman, ophthalmology

An in-situ, non-invasive method to monitor oxidative stress and gastrointestinal cancer progression (25)

George Fisher, MD, PhD; Victor Miller, mechanical engineering PhD candidate; Mitchell Spearrin, mechanical engineering PhD candidate; Christopher Strand, mechanical engineering PhD candidate; Amato Giaccia, PhD, professor of radiation oncology; Ron Hanson, PhD, professor of mechanical engineering

An ex-vivo gross study of radio-frequency-based denervation of pulmonary artery tissue: A translational study with implications in therapy device development for pulmonary hypertension (11)

Swami Gnanashanmugam, MS, MD, cardiovascular medicine postdoctoral fellow; Jeffrey Feinstein, MD, PhD, associate professor of pediatrics and cardiology

An intracranial access device for minimally invasive evacuation of recurrent subdural hematoma (18)

Stanley Hoang, MD, neurosurgery resident; Maziyar Kalani, MD, neurosurgery resident; Gordon Li, MD, assistant professor of neurosurgery

Real-time visualization of beam position and dosimetry of radiation therapy (29)

Dominik Naczynski, PhD, radiation physics postdoctoral fellow; Cesare Jenkins, mechanical engineering MS candidate; Lei Xing, PhD, professor of radiation physics

A cost-effective solution for management of perioperative normothermia (20)

Peter Santa Maria, MD, instructor of otolaryngology, head and neck surgery; John Brock-Utne, clinical professor emeritus of anesthesia; Brian Kannard, Stanford MBA student; Abhinav Ramani, ex-Global Biodesign fellow

Therapeutics (SPARK)

Pan-genotypic small molecule inhibitors of influenza A virus (4)

Jeffrey Glenn, MD, PhD, associate professor of medicine and microbiology and immunology; Rachel Hagey, PhD candidate in microbiology and immunology; Rhiju Das, PhD, assistant professor of biochemistry

Repurposing a biologic therapy for treatment of neuromyelitis optica (no poster)

Alexandra Goodyear, MD, clinical assistant professor of neurology and neurological sciences and Robert Axtell, Stanford research associate

Developing small molecule inhibitors of a novel mTOR target for treatment of tuberous sclerosis complex (24)

Tobias Meyer, PhD, professor of Chemical and Systems Biology

Repurposing approved drugs against dengue virus (34)

Vijay Pande, PhD, professor of chemistry; Karla Kirkegaard, PhD, professor of microbiology and immunology; Shirit Einav, MD, assistant professor of medicine and of microbiology and immunology

Repurposed drug to treat Alzheimer's disease via a novel pathway (12)

Mehrdad Shamloo, PhD, associate professor (research) of neurosurgery

Predictives and Diagnostics (SPADA)

Development of non-invasive, laser-based breath-ammonia sensor for urea-cycle-defect diagnosis and monitoring (19)

Gregory Enns, MD, director of the Biochemical Genetics Program and associate professor of pediatrics; Victor Miller, mechanical engineering PhD candidate; Mitchell Spearrin, mechanical engineering PhD candidate; Christopher Strand, mechanical engineering PhD candidate; Ron Hanson, PhD, professor of mechanical engineering

Assessment and prediction of age-related macular degeneration progression through quantitative imaging biomarkers (30)

Daniel Rubin, MD, assistant professor of radiology and of biomedical informatics; Luis de Sisternes Garcia, PhD in radiology; and Ted Leng, MD, assistant professor of ophthalmology at the Byers Eye Institute

The diagnosis and characterization of major depressive disorder by applying machine learning methods to human neuroimaging data (23)

Matthew Sacchet, graduate student in neurosciences; Gautam Prasad, PhD, psychology visiting scholar; Ian Gotlib, PhD, professor and chair of psychology

First in-human clinical trial of manganese-enhanced MRI (MeMRI) to assess peri-infarct injury (8)

Phillip Yang, MD, associate professor of cardiovascular medicine; Rajesh Dash, MD, PhD, assistant professor of cardiovascular medicine; Dwight Nishimura, PhD, professor of electrical engineering

Population Health Sciences

Land use change, social networks and cross-species disease transmission in western Uganda (5)

Laura Bloomfield, graduate student in the Emmett Interdisciplinary Program in Environment and Resources

A comprehensive decision analysis framework supporting international chronic hepatitis-B control policy (38)

Mehlika Toy, PhD, Asian Liver Center postdoctoral scholar; Samuel So, MD, professor of surgery

Social and environmental determinants of DNA methylation: A population-based study (21)

David Rehkopf, ScD, MPH, assistant professor of medicine

Online cognitive-behavioral therapy for mild-to-moderate anxiety and depression in adolescents and young adults with chronic illness (22)

Christy Sandborg, MD, professor of pediatrics

Health coaching in a population management program to reduce stroke and vascular risk (13)

Waimei Tai, MD, clinical assistant professor of neurology and neurological sciences. From the Clinical Excellence Research Center: Lucy Kalanithi, MD, postdoctoral scholar; Jared Conley, graduate student; Arnie Milstein, MD, professor of medicine and center director

Community Engagement

Fighting food insecurity and hunger in East Palo Alto: Evaluation and dissemination of a collaborative public-private partnership model (14)

Lisa Chamberlain, MD, MPH, assistant professor of pediatrics; Janine Bruce, DrPH, MPH, pediatric advocacy program director, partnering with Ravenswood City School District and YMCA of Silicon Valley

HealthyU and environmental conservation: A shared journey (7)

Eunice Rodriguez, PhD, associate professor of pediatrics; Rodolfo Dirzo, PhD, professor of biology and director of the Center for Latin American Studies, partnering with Jasper Ridge Biological Preserve and Hoover Community School in Redwood City

Incorporating historical and intergenerational trauma to prevent diabetes in urban American Indians (2)

Randall Stafford, MD PhD, professor of medicine; Lisa Goldman Rosas, PhD, instructor of medicine, partnering with Indian Health Center of Santa Clara Valley

2014 Spectrum-Funded Fellowships

Biodesign innovation program (37)

Michael Feldstein, MD, cardiovascular fellow, and Elisabeth Wynne, MD, cardiovascular medicine fellow
Mentor(s): Paul Yock, MD

Clinical Excellence Research Center (CERC) program (36)

Jeff Jopling, MD, and Sierra Matula, MD, internal medicine fellows
Mentor(s): Arnold Milstein, MD and Terry Platchek, MD

Meta-Research Innovation Center at Stanford (METRICS) (no poster)

Patrick Sullivan, medical student, MedScholar Masters student in epidemiology and clinical research
Mentor(s): Nishita Kothary, MD

Masters of Medicine project (no poster)

Kara Brower, PhD candidate, bioengineering; Darwin Yi, PhD candidate; biomedical informatics

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