Designed to encourage creative, high-risk science and stimulate interdisciplinary research between the basic sciences and clinical medical investigation—these awards will ensure that Stanford School of Medicine faculty members continue to lead the world in biomedical innovation. The program provides grants of up to $200,000 to support groundbreaking projects. These unique awards support some of the most collaborative ideas aimed at accelerating fundamental discoveries that have the potential to impact human health.

The following eight proposals were selected from a highly competitive applicant pool from across all of Stanford Medicine.

1. **Changing the Gut Microbiome to Decrease Inflammation in Older Adults**
   - **Research by** Christopher Gardner, PhD • Justin Sonnenburg, PhD
   - **Goal** Decrease inflammation in adults via dietary changes that impact their gut microbiome.

2. **Connecting Gene Mutations with Disease Symptoms in Hypertrophic Cardiomyopathy**
   - **Research by** Daniel Bernstein, MD • Alexander Dunn, PhD • Beth Pruitt, MSC, PhD • James Spudich, PhD • Sean Wu, MD, PhD
   - **Goal** Develop new approaches to prevent and treat hypertrophic cardiomyopathy.

3. **Electronic Skin to Restore Sensation for Amputees**
   - **Research by** Zhenan Bao, PhD • Xiang Qian, MD, PhD
   - **Goal** Provide sensory feeling in prosthetic limbs to improve quality of life for amputees.

4. **Deep Learning to Individualize Palliative Cancer Treatment**
   - **Research by** Karl Bush, PhD • Daniel Chang, MD • Michael Gensheimer, MD • Daniel Rubin, MD
   - **Goal** Improve end-of-life care for metastatic cancer patients by developing a computer model that leverages information in electronic medical records.
EXPLOITING SUGARS TO ELUDE A RARE GENETIC DEFECT
RESEARCH BY VIVEK BHALLA, MD • SHARON PITTERI, PHD
GOAL Rescue a genetic defect that causes kidney failure by identifying and targeting molecular mechanisms of disease pathology.

RAPID TESTING FOR ANTIBIOTIC RESISTANCE
RESEARCH BY RON DAVIS, PHD • UTKAN DEMIRCI, PHD • LARS STEINMETZ, PHD
GOAL Develop a diagnostic to identify antibiotic-resistant bacterial infections in real time, guiding effective treatments and ultimately curbing the crisis of drug resistance.

TOXIN ACCUMULATION IN KIDNEY FAILURE
RESEARCH BY TING-TING HUANG, PHD • TIMOTHY MEYER, MD
GOAL Determine the identity and source of toxins that impair brain function in patients with kidney failure.

RESTORING SIGHT TO THE BLIND
RESEARCH BY E.J. CHICHILNISKY, PHD
GOAL Develop an advanced artificial retina to cure blindness caused by retinal degeneration.

“The impact of this award has been resounding. It has helped launch the career of a postdoc from my lab who has received a faculty position and several grants to continue work on this line of investigation. I consider this one of the transformational outcomes of this funding.”

-Monte Winslow, PhD
2015 Translational & Clinical Awardee

Further information on each project and the principle investigators is available upon request.

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