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Message from Desert Horse-Grant

Dear UCLA Health Community and Supporters,

From our first UCLA Health System Innovation Challenge to the launch of UCLA Biodesign, innovation at UCLA is thriving. The health system has contributed more than $1.1 million to incubate 37 projects across five verticals. As part of our strategy to provide you with the most current information about UCLA innovation, we offer newsletters; the UCLAhealth.org/innovation website, which includes an events section; and, now, our community is able to follow innovation updates on our social media channels. And in the coming days, we will begin releasing a new video, created by winning teams of inventors and innovators in our community, each week.

Our MD, MBA and engineering fellows who began in August as part of our new UCLA Biodesign program already are halfway through their fellowships! After months of clinical immersion and an intensive boot camp, teams have narrowed their novel inventions down to a final project. Their next steps will be to design and create prototypes of their projects. Stay tuned for the opportunity to hear their pitches in late spring. UCLA Biodesign also is a sponsor for the 8th Annual Medtech Partnering Conference, hosted by UCLA’s Technology Development Group (TDG). Please go to their website for more information and to learn how you can participate in the events.

Finally, the UCLA Innovation Fund has been a great entry point for UCLA entrepreneurs. TDG partners with the health system and schools on campus to host a biomedical competition each year. In this edition of our newsletter, we are pleased to announce both the 2018 and 2019 winners. Please take the time to read about two new companies launched by our own colleagues that have emerged out of the fund. We now have a success story in each of the two tracks (Medtech/Digital Health and Therapeutics). We hope you enjoy this update, and feel free to contact me at dhorsegrant@mednet.ucla.edu to submit a future newsletter story.

Thank you.

Desert Horse-Grant
Senior Director, UCLA Health Research and Innovation

Announcing the 2020 UCLA Innovation Fund - Call for Proposals

The UCLA Innovation Fund speeds technologies from idea to market, bridging the funding gap between academia and industry. Up to $200K is awarded per project to support commercialization activities that are not supported by basic research grants. Applications for the 2020 Innovation Fund competition are now open! For more information and to apply, please visit tdg.ucla.edu/ucla-innovation-fund.
Past Winners of UCLA Innovation Fund

The goal of the UCLA Innovation Fund is to move technologies from idea to the market more quickly, bridging the gap between academia and industry/investor interests. The UCLA Innovation Fund is a collaboration between the UCLA Technology Development Group (TDG), UCLA Health and the David Geffen School of Medicine at UCLA, the UCLA Henry Samueli School of Engineering and Applied Science and the UCLA College’s Divisions of Life Sciences and Physical Sciences. The 2018 Biomedical Competition, hosted by TDG, was held in March 2018 and was open to all UCLA faculty. Awards ranged from $50,000 to $200,000 (plus business development assistance) to support novel therapeutics, medical devices, diagnosis and digital health technologies.

Listed below are the 2019 UCLA Innovation Fund Winners:

Therapeutics Track

KHK Inhibitors for Targeted Cancer Therapy: Heather Christofk, PhD; Michael Jung, PhD
Small Molecule NPas2 Suppressors for Surgical Scar Prevention: Ichiro Nishimura, DDS, DMSc, DMD; Akishige Hokugo, DDS, PhD; Hiroko Okawa, DDS, PhD
Inhibitors of the N-terminal Domain of the Androgen Receptor: Matthew Rettig, MD; Robert Reiter, MD, MBA; Michael Jung, PhD; Elshan Ralalage, PhD
Development of Broad Spectrum Antiviral Medications to Treat Enteroviruses: Paul Krogstad, MD; Michael Jung, PhD
Synthetic Exosomes for CNS Delivery: Varghese John, PhD; Jesus Campagna, MS; Patricia Spilman, MS

MedTech Track

Dopamer: Bioactive dental filling with remineralization power: Alireza Moshaverinia, DDS, MS, PhD, FACP; Mahdi Hasani, PhD
Multi-component System for Manipulation of Bone and Soft Tissues: Nelson Soohoo, MD
A Wearable Platform Detecting Cortisol Levels for Stress Management: Sam Emaminejad, PhD
Point-of-care Detection Device for Cerebrospinal Fluid Leaks: Ashley Kita, MD; Maie St. John, MD, PhD; Daniel Kamei, PhD
Intraocular Robotic Interventional Surgical System for Cataract Removal: Jean-Pierre Hubschman, MD; Tsu-Chin Tsao, PhD; Jacob Rosen, PhD

Listed below are the 2018 UCLA Innovation Fund Winners:

Track 1: Therapeutics

Therapeutic Agents for Ectopic Calcification: Arjun Deb, MD; Michael Jung, PhD
Activation of Tau Regulator in Alzheimer's Disease: Daniel Geschwind, MD, PhD; Michael Jung, PhD
Antibody and Biologics Stabilization: Heather Maynard, PhD
let-7/LIN28 Regulators for Acute Myeloid Leukemia (AML): Martina Roos, PhD; John Chute, MD; William Lowry, PhD; Michael Jung, PhD
Novel Estrogen Receptor Ligand to Treat Multiple Sclerosis: Rhonda Voskuhl, MD; Michael Jung, PhD

Track 2: MedTech - Medical Devices, Diagnostics, Digital Health

Next Generation Optical Coherence Tomography (OCT): Chee Wei Wong, PhD; Kouroso Nouri-Mahdavi, MD
High-throughput Early Diagnosis and Monitoring of Antimicrobial Resistance: Aydogan Ozcan, PhD; Dino Di Carlo, PhD
Blood-based Biomarker to Diagnose Irritable Bowel Syndrome (IBS): Lin Chang, MD; Swapna Joshi, PhD
Acoustofluidic Platform to Diagnose Irritable Bowel Syndrome (IBS): Lin Chang, MD; Swapna Joshi, PhD
Novel Nanostructured Osteoconductive Periodontal Membrane: Paul Weiss, PhD; Alireza Moshaverinia, PhD
Companies Launched Out of UCLA Innovation Fund

Two new companies have emerged out of the UCLA Innovation Fund. Research supported by this TDG Initiative has resulted in the creation of Pelage Pharmaceuticals, founded by Heather Christofk, PhD, associated professor of biological chemistry; William Lowry, PhD, professor of molecular, cellular and developmental biology; and Michael Jung, PhD, Distinguished Professor of chemistry and biochemistry. The UCLA scientists discovered compounds that, in research in mice, enabled hair follicle stem cells to promote lactate production and, consequently, hair growth. Pelage will continue development of the new technology and work to develop new drugs that promote hair growth for people with baldness or alopecia, which is hair loss associated with factors including hormonal imbalance, stress, aging and chemotherapy treatment.

Another Innovation Fund-supported project to use artificial intelligence to interpret MRI scans in patients’ spines has led to creation of Theseus AI. Developed by a team of UCLA researchers, the software suite is intended to provide health care professionals with data that helps diagnose and treat back pain, and can help identify people who would be candidates for spine surgery. The research team includes Luke Macyszyn, MD, a neurosurgeon at the UCLA Spine Center, and Bilwaj Gaonkar, PhD, a postdoctoral researcher in bioengineering.
Regional Hub for Innovation

Federal Grant Creates Framework at UCLA Health for Medical Technology Development

The U.S. Department of Commerce’s Economic Development Administration awarded UCLA a grant to create a regional hub for the development of medical technology and digital health tools. Led by Desert Horse Grant and Jennifer McCaney, the launch of the UCLA Biodesign Hub for Medical Technology and Digital Health Innovation is an exciting new interdisciplinary effort to harness the clinical strengths of the UCLA Health system. The Regional Innovation Strategies i6 Challenge Award of $750,000 was matched by UCLA Health and the David Geffen School of Medicine at UCLA, to provide $1.5 million in total funding over three years. Leveraging the hotbed of activity in the tech center known as Silicon Beach—home to hundreds of startups in Southern California—the UCLA Biodesign Hub will collaborate with industry to fuel entrepreneurship and create new jobs and businesses in the life sciences field. Medtronic, Google, Samsung and others, including Los Angeles Mayor Eric Garcetti, are supporting the regional initiative, recognizing that the “tech” in medical technology requires support from many industry segments. The UCLA Biodesign Hub is launching a Faculty Innovators Program in 2020 to advance ideas from their concept to prototype stage and support the growing health technology ecosystem in Southern California.

UCLA Biodesign Faculty Innovators Application

UCLA Biodesign Faculty Innovators is a longitudinal program during the 2020–2021 academic year beginning last week in July 2020. A two-week intensive bootcamp followed by a monthly program led by executives from across the healthcare, medtech, and investor communities introduces participants to design thinking methodologies, product design and development, data utilization, manufacturing, regulatory strategy, intellectual property, healthcare economics, and more.

Apply Now

Nursing Innovation at UCLA Health

Nursing: New Knowledge, Innovations and Improvements Council

The New Knowledge, Innovations and Improvements (NKII) council at Ronald Reagan UCLA Medical Center, UCLA Medical Center, Santa Monica and Resnick Neuropsychiatric Hospital is one of four Magnet councils. The councils are responsible for empirical outcomes associated with their designated component of the Magnet Model, which was created to recognize healthcare organizations that provide nursing excellence, quality patient care and innovations in professional nursing practice. Through this council, our nurses are challenged to continuously seek and adopt evidence-based best practices to guide innovative patient care. This year, 22 new projects have been released. These projects include innovations in Patient Experience, Care Delivery and Efficiency, Training and Patient Safety.

Ronald Reagan Patient Experience: Wii-hab in CTICU

Nurses on the Cardiothoracic Intensive Care Unit at Ronald Reagan UCLA Medical Center wanted to help patients become more active and to help make...
hospital stays more engaging. Erica Djen, RN, and Jorie Pope, RN, took an innovative approach and incorporated Wii Fit into patient care and rehab. This new innovation has led to adoption of Wii Fit by PT/OT house-wide, and patients can now play games and interact with their families in a new way. Staff also has noted a decrease in patients’ sense of loneliness and depression.

Santa Monica Patient Safety: AvaSure TeleSitter
Nurses noticed that the fall rate at UCLA Medical Center, Santa Monica exceeded the national benchmark in FY18. To decrease the fall rate, an algorithm was created to identify patients at risk of falling. When AvaSure Telesitter units were employed for these patients, the rate of falls with injury decreased by 25% in FY19. The implementation of remote monitoring also has resulted in significant cost savings for the organization.

Resnick Patient Experience: Engaging Patients in Therapeutic Groups through Improv
Nurses on 4West at UCLA Resnick Neuropsychiatric Hospital wanted to increase patient satisfaction with nurse-led therapeutic groups and make it easier to facilitate therapeutic groups for patients with ADHD. Maria Dalesandro, BSN, RN, and Leilanie Ayala, MSN, RN, PMHCNS-BC, PMHNP-BC, decided to use improv with therapeutic groups. This new innovation increased patient engagement and satisfaction with the groups by 34.4%, and patients were able to express their emotions without the fear of shame or doubt. There also was a decrease in nurse anxiety related to running these groups.

More Innovation News at UCLA Health
- 3D virtual reality models help yield better surgical outcomes
- Brain implant restores visual perception to the blind
- AI helps radiologists in detecting prostate cancer
- Deep learning device identifies cancer cells in blood in milliseconds

Promoting Campus Groups
Get to Know the CTSI Grants Submission Unit
CTSI’s Grants Submission Unit (GSU) offers grant application support for UCLA-affiliated staff. Assistance spans the entire lifecycle of a grant, from prospecting to refining a final submission, and is available to both early stage investigators and veteran researchers. Tools and services provided by GSU may include:

- Hands-on project management of the entire grant development process
- Creating detailed checklists and timelines for required components
- Meeting and/or subaward site coordination
- Document collection, editing, and review
- Narrative review and editing for consistency, clarity, and responsiveness to FOA guidelines
- Customizing resources and boilerplate text (e.g., letters of support, biosketches, resources and facilities)
- Guidance on protection of human subjects and clinical trials

Click here or contact gsu@mednet.ucla.edu to learn more about GSU’s services and how we can support your grant application efforts.

Call for Startups: Venture Accelerator at UCLA Anderson
The Anderson Venture Accelerator is looking for early stage startup companies to apply to the upcoming winter cohort. It is a six-month program, with workshops, mentors and additional resources to accelerate early stage startups to the next level of their business. The program includes free consulting and advice on various topics, including go-to-market strategy, how to fundraise, customer acquisition, product development and more. Accelerator startups receive customized and actionable programming catered to your vertical and stage, peer support and mentorship, as well as unlimited access to a 10,000-square-foot, state-of-the-art coworking space on campus.

More information
AI in Medicine Seminar

Computational Medicine is hosting a quarterly AI in Medicine seminar to highlight a collaborative project that uses Artificial Intelligence methods to analyze UCLA Health Patient Data. The seminar series is a collaboration between Computational Medicine, UCLA Value-Based Care Research Consortium (VBCRC), UCLA Biodesign, and the Faculty Practice Group. This will be an opportunity to develop new collaborations and ideas for future partnerships among clinicians and researchers.

Previous Events


The Society of Physician Engineers held a panel to hear from health care entrepreneurs who have managed to successfully navigate through the challenging health care startup landscape and have stories to share about their experiences. Speakers included Dr. Yaniv Bar-Cohen, Desert Horse-Grant, Dr. Dan Levi, Jennifer McCaney and Jay Goss. This event was sponsored by the UCLA Biodesign Program, Sirius Healthcare and CTIP.

Keep up to date:

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https://biodesign.ucla.edu
http://twitter.com/innovateshealth
http://instagram.com/innovateshealth