



UCLA TECHNOLOGY DEVELOPMENT GROUP

INNOVATION MAGAZINE

SUMMER
2023

VOLUME 11





UCLA TECHNOLOGY DEVELOPMENT GROUP

INNOVATION MAGAZINE

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A message from

AMIR NAIBERG

Dear Readers,

Welcome to the 11th Edition of the UCLA TDG Innovation Magazine.

We are proud to work with UCLA faculty and researchers, many of whom have attained great achievements this year. Congratulations to Elaine Hsiao and Lili Yang on being named BIOS Top Women in Academic Entrepreneurship. The Innovation Fund has awarded support to eighteen researchers with projects ranging from small molecules to injectable hydrogels. Recently, distinguished professor, Donald Kohn's work on ADA-SCID was featured on CNN.

In addition, the UC has provided \$1M in funding for climate-based research projects that were provided to five UCLA professors. And the UCLA Innovation Fellows program announced their 2023 cohorts with early-stage research that will continue to develop.

Startups based on UCLA technologies have reached milestones. CarbonBuilt's low Co2 concrete blocks are being produced and Equatic aims to remove Co2 from the atmosphere through a unique process using seawater. TORL Biotherapeutics revealed promising clinical data that targets ovarian and other cancers. ImmPACT Bio celebrated the opening of their GMP Facility in West Hills.

The year 2023 has seen the full return of our cornerstone events UCLA MedTech Partnering Conference and LABEST. Attendees, speakers, partners and sponsors joined us at the in-person for a day of learning and networking on campus. Both conferences were a big success.

Enjoy reading and have a good summer.

Sincerely,

Amir Naiberg

Associate Vice Chancellor, CEO & President
UCLA Technology Development Group

UCLA Life Sciences professors among BIOS Top Women in Academic Entrepreneurship

THIS YEAR, ALONGSIDE RECENT NOBEL LAUREATES, two UCLA Life Sciences professors, Elaine Hsiao and Lili Yang, were named on the [BIOS list of Top Women in Academic Entrepreneurship](#).

Here are excerpts from the 2023 [BIOS announcement](#):

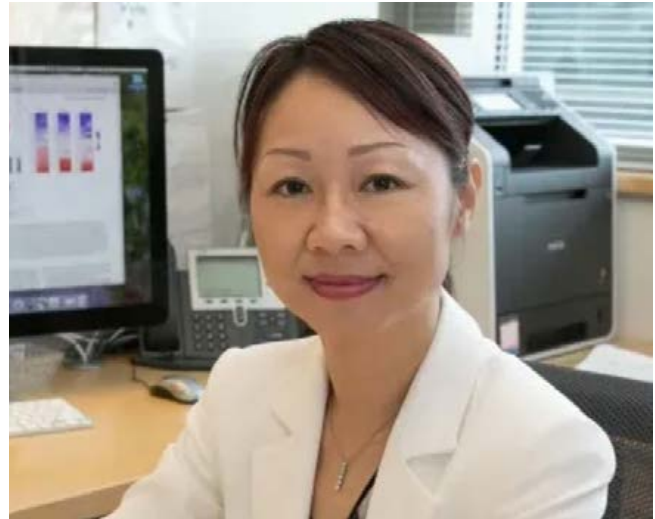


Professor Elaine Hsiao

ELAINE HSIAO

Elaine Hsiao is an Assistant Professor in the Department of Integrative Biology & Physiology at UCLA, where she studies the fundamental interactions between the microbiome, brain and behavior, and their applications to neurological disorders. Her work in this area, and on neuroimmune interactions in autism, has led to several honors, including the National Institutes of Health Director's Early Independence Award, distinction as Forbes' 30 Under 30 in Science and Healthcare, National Geographic's Emerging Explorer Award and fellowships from the National Institute of Mental Health and Autism Speaks. Inspired by this interplay between the microbiota and nervous system, the Hsiao laboratory is mining the human microbiota for microbial modulators of host neuroactive molecules, investigating the impact of microbiota-immune system interactions on neurodevelopment and examining the microbiome as an interface between gene-environment interactions in neurological diseases.

Hsiao holds 15 patents & has Co-Founded 4 companies: [Axial Therapeutics](#), [Bloom Science](#), Kanobo, & [Purpose Bio](#).



Professor Lili Yang

LILI YANG

Lili Yang is an Associate Professor of Microbiology, Immunology, and Molecular Genetics as well as a member of the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research (BSCR). Yang became widely recognized for her research of developing gene- and cell-based immunotherapies for cancer and HIV/AIDS, specifically through the use of viral vectors. Her laboratory at UCLA, the [Yang Engineering Immunity Lab](#), studies tumor immunology and cancer immunotherapy, with a special focus on stem cell-based and gene-engineered immunotherapy for cancer.

Yang currently holds 15 patents, is running 2 clinical trials, and has co-founded 2 biotech startups: [Appia Bio](#) & Immune Design (acquired by [Merck](#)).

BIOS is a journal of biology, established in 1930 by the Tribeta Biological Honor Society, to engage undergraduate scientists and give them a platform to share their biological findings with the scientific community.

[Original article by UCLA College of Life Sciences](#)

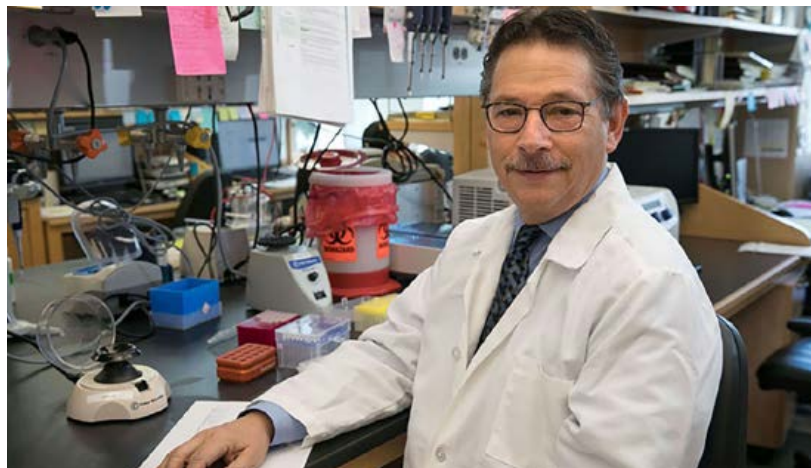
[See all the BIOS Top Women in Academic Entrepreneurship](#)

Photos: HeroMade

National news outlet tells the story of a young girl with ADA-SCID

CNN RECENTLY PUBLISHED a detailed article on the journey of a young girl who suffers from ‘bubble boy disease’. After decades of research, a treatment has been developed by UCLA’s Dr. Donald Kohn, a distinguished professor of microbiology, immunology and molecular genetics. The ‘bubble boy disease’ is scientifically known as ADA-SCID – a rare and severe immunodeficiency disease that a very small population of children are born with each year.

Read the CNN article [here](#).



Dr. Donald Kohn

Photo: Courtesy Reed Hutchinson

SAVE THE DATE

12TH ANNUAL **UCLA MedTECH**
PARTNERING CONFERENCE

INDUSTRY INVESTORS INVENTORS

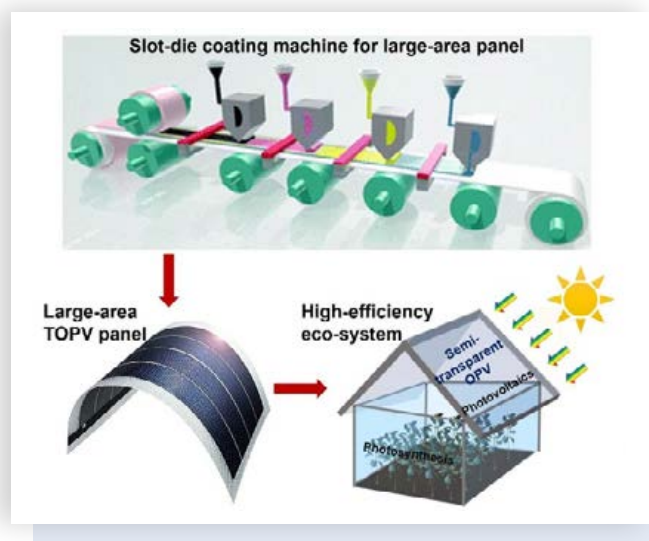
TUESDAY, MARCH 12, 2024

UCLA  TECHNOLOGY DEVELOPMENT GROUP

UCLA provides innovation awards to climate-based research

IN EARLY MARCH, the University of California announced \$15M in climate-focused innovation awards where \$1M would be allocated to each of the 10 UC campuses in addition to other UC departments. [Read more here.](#)

At UCLA, four research projects have received part of these funds: building a full-scale agricultural greenhouse with a roof containing semitransparent photovoltaics, optimizing the production of materials that facilitate rapid charging of EV batteries, designing and building a wastewater treatment system that produces net negative greenhouse gas emissions, and optimizing the performance of supercool paints.



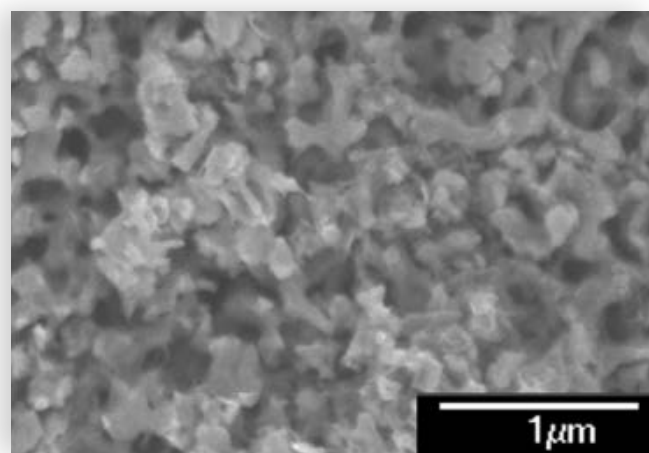
1. Photovoltaics/Photosynthesis Integration for High-Efficiency Eco-System Producing Energy and Food

Prof. Yang Yang

Technology: Semitransparent organic photovoltaics installed on agricultural greenhouse roofs, particularly in remote areas.

Problem that the technology addresses: Providing grid connections to greenhouses, especially in remote regions, increases costs.

The technology has been demonstrated at lab scale. With the project funding, the team plans to fabricate a full-scale prototype, study the performance of the system, and optimize the design.



Scanning electron microscopy image of templated nanoporous LVPF.

2. Enabling Electric Vehicle Adoption Through Fast-Charging Batteries

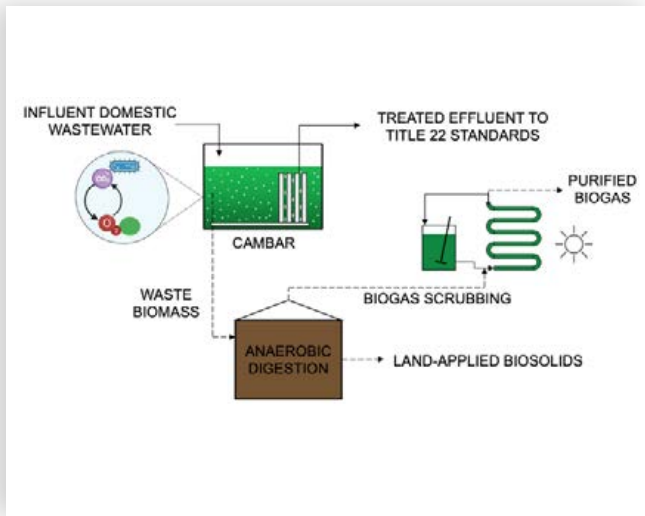
Profs. Sarah Tolbert and Bruce Dunn

Technology: Nanoporous lithium vanadium fluorophosphate (LVPF) is made from low-cost elements and shows exceptionally fast battery-charging capabilities when used in electrodes.

Problem to be addressed: Researchers' current method of producing LVPF cannot be scaled to large-batch size because of the type of polymer template used.

During the project, the team plans to develop the polymer technology needed for large-batch scale-up and optimize the technology's performance.

UCLA provides innovation awards to climate-based research continued



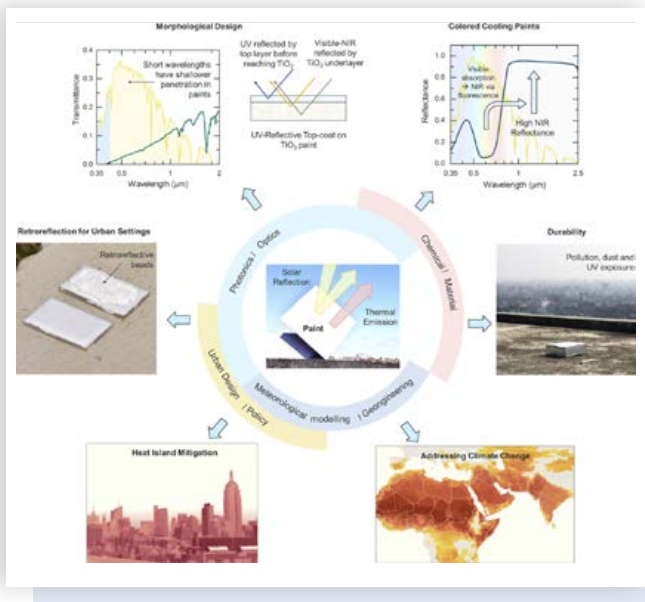
3. Carbon-Negative, Energy-Positive Water Recycling via a Combined Aerobic Membrane Bacterial-Algal Reactor

Prof. Eric Hoek

Technology: Combine bacteria and microalgae into a single wastewater treatment reactor to recover potable water, valuable nutrients as fertilizers, and pipeline-ready biogas. Because of the carbon fixation by microalgae, the system is capable of producing net negative greenhouse gas emissions.

Problem that the technology addresses: Conventional biological wastewater treatment requires substantial energy inputs for aeration and emits CO₂.

During the project, the team will design the system, build a prototype, optimize operating conditions, and field test.



4. Durable Supercool Radiative Cooling Paints for Climate Resilience to Extreme Heat

Prof. Aaswath Raman

Prof. Raman has developed UV-reflective paints that have been shown to reflect > 99% of the sun's energy; 10°F cooler than conventional, best-in-class "cool" white paints available on the market.

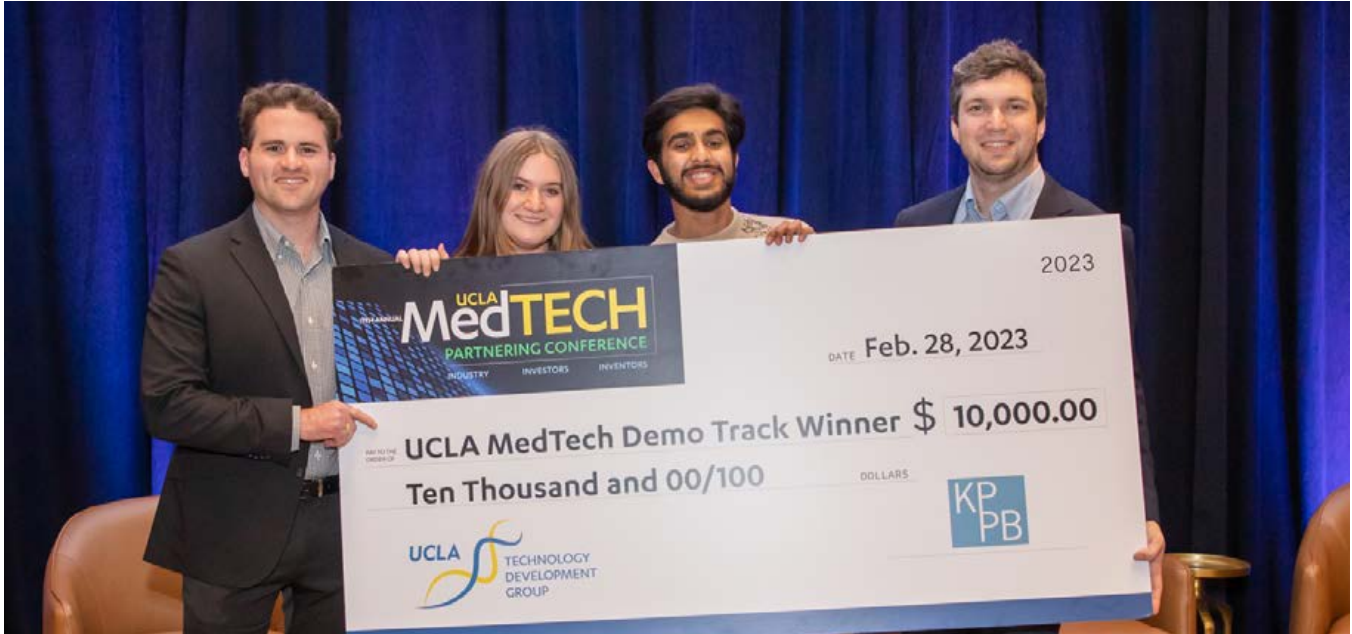
Problem to be addressed: Commercialization challenge has been proving durability and performance in the field.

The project funding will be used to conduct experiments to identify techniques to increase durability of paints, conduct long-duration testing, develop scale-up production methods, and perform field testing to assess the human-level cooling benefits.

MEDTECH

PARTNERING CONFERENCE

2023 Wrap Up



MEDTECH DEMO TRACK WINNERS; Two Feminora team members flanked by L: David Riccardo, UCLA TDG and R: Isaac Fine, KPPB

“AI IS A TOOL LIKE ANY OTHER TOOL – it can be used well or it can be used poorly. It is up to us humans to figure out how to use it well” – these words were part of my opening remarks at the 11th annual UCLA MedTech Partnering Conference. As part of our commitment to explore new industry trends, identify tools and technologies that will help us better perform our jobs and improve patients’ lives, we hosted two panels dedicated to exploring the impacts of AI on MedTech:

AI Imaging Playbook – an exploration of what works and what doesn’t when adding AI to imaging technologies and techniques, as well as opportunities for them in the marketplace.

Realities of the Metaverse: Implications for the healthcare industry – another opportunity to explore what is working and what is not when we add the latest technologies to patient experiences, including AR, VR, AI and new sensors. One important insight from the panelists - humans are not “out,” but their knowledge and skills are still needed and these tools will also create new roles for people.

MEDTECH PANELS Top: AI Imaging Playbook and Bottom: Realities of the Metaverse



MEDTECH

PARTNERING CONFERENCE

2023 Wrap Up Continued

HIGHLIGHTING INNOVATION FROM AROUND THE ECOSYSTEM



DEMO TRACK JUDGES Ryan Witt, Tech Coast Angels, Isaac Fine, KPPB and Thea Pham, OVC Partners

This event is also intended to help showcase the work of all of our partner institutions and organizations from around the Southern California region, demonstrating the great strength we have in technologies, entrepreneurship and support for innovation. In parallel with the main stage presentations, we hosted the Demo Track, which included 10 presenting companies/projects, representing 8 partners from around the region, who were competing for a \$10,000 prize for the best demonstration. The competition was fierce, the room was packed, and the judges had a difficult time choosing! In the end, Feminora won the prize for their innovative new design for a gynecological speculum redesigned from the ground up to improve patient experience and physician ease of use.

HIGHLIGHTING UCLA INNOVATION



FIRESIDE CHAT L to R: Richard Kaner, UCLA, Amir Naiberg, UCLA TDG and Abbas Ardehali, UCLA

It was also delightful to hear two of our world renown inventors discuss with UCLA TDG's CEO & President, Amir Naiberg how their innovations traveled from the lab to the marketplace, working with TDG and commercialization partners. Partners who had licensed both innovations received FDA approval in the past year for taking products based on these innovations to market. Dr. Abbas Ardehali invented a new dual lumen cannula for use in ECMO which was commercialized by partner Spectrum Medical. Dr. Richard Kaner invented a surface coating that prevents biofilm formation to improve the safety of medical devices, with partner SILQ Technologies receiving FDA approval for use in a urological catheter, the first of many applications.

This event was also held as part of the 3rd Annual #LAMedTechWeek – a collaboration between BioscienceLA, MedTech Innovator, UCLA and a whole host of other ecosystem partners highlighting the fantastic innovation occurring around the greater LA area.

We're starting planning for next year's UCLA MedTech Partnering conference, save the date March 12, 2024. We will be partnering again to bring you the fourth annual LA MedTech Week, starting March 11, 2024! If you are interested in partnering, sponsoring or participating, please contact dina.lozofsky@tdg.ucla.edu.

All Photos: HeroMade

UCLA INNOVATION FELLOWS 2023 COHORT



SEVEN FACULTY WERE SELECTED to participate in UCLA's Faculty Innovation Fellows fourth cohort, a program designed to support and amplify faculty entrepreneurship at UCLA.

eyeHERFI

eyeHERFI produces retinal screening images to prevent diabetic retinopathy and provide early warnings for heart attack, stroke, Alzheimer's, and Parkinson's.

[Akanksha Prasad](#) – Fellow, Ophthalmology

Storyfairy

Storyfairy is an interactive storytelling app for parents and children, employs state-of-the-art AI models to generate diverse stories in text and images.

[Xiang 'Anthony' Chen](#) – Assistant Professor, Department of Electrical & Computer Engineering

[Chunxu Yang](#) – Master student, Department of Electrical & Computer Engineering

Nlighten

Nlighten is a comprehensive ML-assisted tool that enables state-of-the-art calculations and optimization for user-defined multi-dimensional parameter space.

[Sergio Carbajo](#) – Assistant Professor, Electrical & Computer Engineering

[Randy Lemons](#) – Ph.D. student

[Jack Hirschman](#) – Ph.D. student

Quantitative Lung Fibrosis Score

Build a QLF score for patients with chronic lung disease that provides better information for clinical trials and clinical care. The system and algorithm used is patented.

[Grace Hyun Kim](#) – Professor-in-Residence, Radiological Sciences

[Jonathan Goldin](#) – Co-inventor, Department of Radiological Science

[Matthew S. Brown](#) – Co-inventor, Department of Radiological Science

[Pang Yu Teng](#) – Computer engineer, Department of Radiological Science

Rarity

Rarity is a Ultra-Rare disease ADA SCID business model that focuses on the commercialization plan for the high-profile gene therapy “cure” of Don Kohn’s for severe-combined immunodeficiency (SCID) or “baby in a bubble” syndrome.

[Paul Ayoub](#) – graduate in lab of Donald Kohn

Donald Kohn – Distinguished Professor MIMG, MD in Pediatrics Hematology Oncology

Roger Hollis – Project Scientist VIII

Paul Ayoub – PhD Student in Molecular and Medical Pharmacology

Ferrobotix

Ferrobotic technology achieves decentralized & personalized diagnostic test using a portable, tablet-sized platform capable of conducting complex testing and comprehensive metabolic panels on small blood samples.

[Sam Emaminejad](#) – Associate Professor in Electrical and Computer Engineering

Xuanbing Cheng – Researcher, Ph.D Candidate

Wenzhuo Yu – Researcher, Ph.D Candidate

Jiarui Cui – Project Engineer, Master’s Student

Ben Yang – Project Engineer, Undergraduate Student

Satellite-based information on water use

A software that analyses data to provide information on crop water consumption and advice on irrigation.

[Mekonnen Gebremichael](#) – Professor, Step I

ABOUT:

The Faculty Innovation Fellows program is a collaboration between [Startup UCLA](#), [UCLA Technology Development Group](#), and the [Office of the Vice Chancellor of Research and Creative Activities](#). Through Startup UCLA, Fellows collaborate with program leaders, venture consultants, and colleagues across the university to hone and advance their ideas.

The mission of Startup UCLA is to promote the development of the entrepreneurial mindset on campus, to connect participants with the entrepreneurship community, to provide learning opportunities that include an inquiry-based and experiential approach to developing ideas, and to advocate for the entrepreneurial community at UCLA, partnering with students, faculty, staff, and alumni to achieve that end.

Innovation Fellow Leads



Akanksha Prasad
eyeHERFI



Xiang 'Anthony' Chen
Storyfairy



Sergio Carbajo
Nlighten



Grace Hyun Kim
Quantitative Lung
Fibrosis Score



Paul Ayoub
Rarity



Sam Emaminejad
Ferrobotix



Mekonnen Gebremichael
Satellite-based
information on water use

UCLA Institute of Carbon Management makes great strides in 2023



Gaurav N. Sant

TWO COMPANIES, CARBONBUILT AND EQUATIC, were founded around technologies from the UCLA Samueli School of Engineering's [Institute of Carbon Management](#) led by director Gaurav N. Sant, the Pritzker Professor of Sustainability and an entrepreneur. Both companies have made significant advancements over the past year — with CarbonBuilt announcing the production of concrete blocks using an XPRIZE-winning technology to permanently seal CO₂ in the concrete, and Equatic having launched two testing facilities, one in the Port of Los Angeles and the other in Singapore, which utilize the UCLA-developed SeaChange technology to capture and store CO₂ from the atmosphere in the sea.



Ultra-low carbon concrete block

CARBONBUILT

CarbonBuilt recently announced that partner company Blair Block has begun the production of concrete blocks that reduces the use of carbon by 70–100 percent. The idea is to use low-carbon materials that react with CO₂ in a process that strengthens the block and makes use of biomass that would otherwise produce carbon emissions. Creating a concrete block that is just as strong as what's currently available in the market through a process that is more efficient will help reduce negative climate effects that have challenged the construction industry.



An illustration of Equatic's next project: a larger, pre-commercial carbon direct removal and hydrogen generation plant. EQUATIC

EQUATIC

Equatic's carbon removal technology uses a unique process to remove CO₂ from the ocean and atmosphere, and store it in the form of solid calcium and magnesium-based materials natural to the sea. The steps include electrolysis, direct air capture and neutralization. In addition, this method produces green hydrogen gas as a co-product that can be used to power the process or sold as low-carbon fuel source. Seawater naturally captures CO₂, transports, and stores the greenhouse gas. Equatic scales up the ocean's natural cycle with the goal of reducing the amount of CO₂ in the atmosphere that studies show is one of the main sources of climate change.

Both disruptive technologies originated from UCLA's Institute for Carbon Management and continue to make significant contributions to reducing carbon in today's world.

All Photos: HeroMade

Promising data from TORL Biotherapeutics



TORL BIOTHERAPEUTICS is a cancer biopharma company that began in the UCLA laboratory of Dr. Dennis Slamon at UCLA David Geffen School of Medicine and formed where they recently announced its public launch and the closing of a \$158 million Series B financing. Their lead therapy, claudin 6 (CLDN6) targeted antibody drug conjugate (ADC), was developed by Dr. Slamon, UCLA Director of Clinical/Translational Research at UCLA Jonsson

Comprehensive Cancer Center. The initial clinical data was recently released.

"We are excited to provide the first clinical data with TORL-1-23, a novel claudin 6 targeted ADC" stated Dave Licata, CEO and Co-Founder of TORL Bio. "We are very encouraged by the current TORL-1-23 efficacy and safety data indicating that this drug could represent a new potential treatment for patients with ovarian and other CLDN6+ cancers" said Dennis Slamon, MD, PhD, and Co-Founder of TORL Bio.

The data was first announced at UCLA's Los Angeles Bioscience Ecosystem Summit (LABEST2023) and then revealed via poster presentation at the American Society of Clinical Oncology (ASCO).

Read the full press release [here](#).

SAVE THE DATE



LA
BIOSCIENCE
ECOSYSTEM
SUMMIT
TWENTY24™

UCLA

THURSDAY
MAY 23, 2024
UCLA MEYER AND RENEE LUSKIN CONFERENCE CENTER



UCLA TDG Team at LABEST 2023

LABEST IS THE PREMIER BIOSCIENCE CONFERENCE IN THE LOS ANGELES REGION, launched in 2018 by UCLA TDG was hosted at the UCLA Meyer and Renee Luskin Conference Center on May 24th and 25th 2023. with attendance by key stakeholders in the Los Angeles area, including: UCLA, Caltech, Cedars-Sinai, City of Hope, The Lundquist Institute and USC. The event's mission is to promote Los Angeles as a center of excellence for biotech innovation and to foster partnerships between academic institutions, life science incubators, the investment community and the biopharma industry. Leading bioscience translational research programs, faculty entrepreneurs and start-ups are showcased where Los Angeles institutions have expertise, pioneering multi-disciplinary research

and significant resource commitments directed towards developing novel therapies.

LABEST 2023 was sold-out and achieved a record 1,200 registrations with >200 partnering meetings. New programs launched included the UCLA TDG Learning Lounge, LA Bio-manufacturing Showcase hosted by California Institute of Regenerative Medicine (CIRM) and the NIIMBL Consortium, Non-Dilutive Funding Seminar featuring several NIH agencies and organized by BioscienceLA, and the Startup Ecosystem Showcase organized by The Lundquist Institute, LARTA and Abbott Construction. Our UCLA CNSI colleagues graciously organized several facility tours with UN WIPO, NIH, CIRM and biopharma.

LABEST 2023 RECAP

Continued



LABEST 2023 Attendees enjoying the reception

LABEST 2023 PROGRAM HIGHLIGHTS INCLUDE:

- UCLA Health Homeless Healthcare Collaborative Mobile Clinic on display outside of the Luskin Center
- “Challenges & Solutions to Enable Sustained Patient Access to Transformative Therapies” panel organized by the California Institute for Regenerative Medicine (CIRM) in collaboration with Dr. Don Kohn, Distinguished Professor, MIMG; Pediatrics
- Keynote Address by Dr. Albert Bourla, Pfizer Chairman and Chief Executive Officer
- Keynote Address by United Nations World Intellectual Property Organization (WIPO) Director General Daren Tang
- Fireside Chat on the importance of I&E in the University of California system featuring Chancellor Block and UC Regent Chair Richard Leib and UC Regent Lark Park
- Johnese Spisso, President of UCLA Health, CEO of UCLA Hospital System and Associate Vice Chancellor of UCLA Health Sciences hosted the LA Hospital Leaders Innovating for Future Success panel for the 3rd consecutive year
- Arie Beldegrun MD, Roy and Carol Doumani Chair in Urologic Oncology, UCLA moderated the Meet the Leaders in the Business of Life Sciences panel for the fifth time
- Venture Capital panel moderated by Josh Green, Silicon Valley Advisor, Consultant and Lecturer at UCLA Law School
- Six Unified Research Theme Interactive Showcases: Cancer, Neuroscience, Cardiovascular, Regenerative Medicine, Immunology & Metabolism



Hospital CEO panel



Meet the Leaders panel

PLEASE SAVE THE DATE

and mark your calendars for LABEST 2024 at the UCLA Meyer and Renee Luskin Conference Center on May 23rd, 2024!

All Photos: HeroMade

ImmPACT Bio announces opening of California-based GMP facility



ImmPACT Bio Team

IMPACT BIO USA, INC., a clinical-stage company developing transformative logic-gate-based chimeric antigen receptor (CAR) T-cell therapies for treating cancer and autoimmune diseases, today announced the opening of the Company's 21,500 square foot Good Manufacturing Practices (GMP) facility in Los Angeles, California. The integrated, state-of-the-art development and manufacturing facility will support clinical production of the Company's lead candidate IMPT-314, a potential first-in-class CD19/CD20 bispecific CAR-T therapy for B-cell mediated malignancies and autoimmune diseases. IMPT-314 was based on research and work conducted by Yvonne Chen, Ph.D., associate professor, and Sarah Larson, M.D., principal investigator, both of University of California, Los Angeles (UCLA). Drs. Chen and Larson initiated an ongoing investigator Phase 1 study at UCLA in patients with relapsed or refractory non-Hodgkin lymphoma. ImmPACT Bio licensed the logic-gate-based CAR T-cell platforms from UCLA Technology Development Group.

"We are pleased to celebrate the grand opening of ImmPACT Bio's first U.S.-based GMP manufacturing facility, an instrumental milestone marking the clinical readiness of our lead program IMPT-314. The West Hills facility in Los Angeles will support our clinical manufacturing capacity, advance our clinical studies, and help position us for success when we approach commercial launch," said Sumant Ramachandra, M.D., Ph.D., president and chief executive officer of ImmPACT Bio. "Importantly, it will help ImmPACT Bio deliver a differentiated CAR T therapy that offers the potential for unmatched safety and durability based on initial UCLA-led Phase 1 data. We look forward to dosing the first patient with IMPT-314 in our Phase 1/2 trial in aggressive B-cell malignancies in the second quarter of this year."

Sylvain Roy, chief technology officer of ImmPACT Bio added, "The integrated and streamlined design of the West Hills facility offers efficient and flexible end-to-end manufacturing capabilities. By fostering cross-collaboration, the all-encom-



Left to Right. **Dave Whelan** (Bioscience LA CEO), **Sean Regan** (Field Representative, Office of Congressman Brad Sherman), **Jack Trent Dorfman** (Field Representative, Office of Assemblymember Jesse Gabriel), **Leila Lee** (Director, Economic Policy, Office of Los Angeles Mayor Karen Bass), **Madeline Khoury**, Office of State Senator Henry Stern, **Sumant Ramachandra**, President / CEO, ImmPACT Bio, **Cristina Puig Saus**, Assistant Professor of Medicine at UCLA, **Mark A. Wisniewski**, Senior Director, Biopharmaceuticals, UCLA Technology Development Group

passing layout that includes research, development, quality labs plus manufacturing in one facility aims to help break barriers between teams and facilitate the rapid transfer of knowledge. We want to thank everyone at ImmPACT Bio and our partners for their support in bringing us one step closer to our goal of delivering potentially transformative therapies to patients with cancer and autoimmune diseases.”

The 21,500 square foot West Hills facility is a state-of-the-art, multi-use, single location facility integrating GMP manufacturing, quality control (QC) labs, process and analytical development labs, research labs, and office space. The GMP manufacturing space includes a 4,800 square foot clean room separated into two manufacturing suites, a 5,700 square foot QC lab, and a 3,000 square foot space for future cleanroom expansion. The Company’s two manufacturing suites are dedicated to autologous cell therapy drug manufacturing, using the most stringent aseptic processing controls and advanced manufacturing technologies.

ImmPACT Bio’s GMP manufacturing facility will initially focus on clinical manufacturing of IMPT-314, a bispecific autologous CAR T-cell therapy targeting prevalent B-cell antigens CD19 and CD20. ImmPACT Bio will evaluate IMPT-314 in a Phase 1/2 clinical trial for aggressive B-cell lymphoma, including diffuse large B-cell lymphoma. Dosing of the first

patient is expected in Q2 2023 with initial Phase 1 safety and efficacy data expected in the second half of 2023. The open Investigational New Drug Application for IMPT-341 was based on research and work by Drs. Chen and Larson.

About ImmPACT Bio

ImmPACT Bio USA, Inc., is a clinical-stage company dedicated to the discovery of transformative chimeric antigen receptor (CAR) T-cell therapies for patients in need of safer and more efficacious treatment options. The Company’s logic-gate-based CAR T-cell platforms, licensed from University of California, Los Angeles (UCLA) Technology Development Group, address key biological challenges in treating cancer. ImmPACT Bio’s technologies are specifically designed to prevent antigen escape, and overcome the immunosuppressive tumor microenvironment. The Company’s technology is based on the work of pioneering scientists Yvonne Chen, Ph.D., and Antoni Ribas, M.D., Ph.D., both from UCLA. In addition, another logic-gate-based CAR T-cell technology is based on the work of Gideon Gross, Ph.D., from the MIGAL-Galilee Research Institute, to address the prevention of ‘on-target, off-tumor’ toxicities. For more information, visit www.immpact-bio.com.

STARBURST WRAP UP



Care in Space at California Science Center

SCALE IS AN AEROSPACE ACCELERATOR that is a collaboration between UCLA TDG and Starburst for pre-seed and seed stage companies. The 13-week program that serves as a platform for entrepreneurs to launch and scale their businesses. The program is composed of lectures, workshops, pitch practice sessions, networking opportunities, and special events culminating with a Demo Day.

SCALE was designed to inspire a generation of students, entrepreneurs, and investors to pursue the development and advancement of novel technologies with aerospace applications, here in Southern California. Since its inception, the program has graduated close to 40 phenomenal companies and helped facilitate pilot opportunities, partnerships, and non-dilutive and/or venture funding.

A few standout alumni from the program thus far have been Axion Ray, Exosonic, Metaspectral, and Rogue Space Systems.

[Axion Ray](#) (Cohort 1) has developed an AI platform that automates engineering and quality analytics for manufacturing teams. The intelligence derived from their platform detects issues early before they cause a threat. Earlier this year, the

company closed a \$7.5M seed round and has grown to a team of almost 20 employees.

[Exosonic](#) (Cohort 1) led by UCLA alumni Norris Tie, is re-imagining the future of supersonic aviation. The company has developed a supersonic UAV and the world's first low boom supersonic aircraft. They recently won a \$1.25M AFRL SBIR direct to phase II with total funding amounting to around \$4.2M.

[Metaspectral](#) (Cohort 1) has created an AI platform that detects imperceptible defects in real-time using hyperspectral imaging. Their solution makes it simple to deploy deep-learning models on hyperspectral and multispectral data and gain actionable insights. In 2022, the company raised \$4.7M in seed funding to scale their team and support further development of their Fusion platform.

[Rogue Space Systems](#) (Cohort 2) designs satellite vehicles and subsystems to provide on-orbit services. Their space robots support satellite operators, manufacturers, and insurers. Last year, Rogue won an unprecedented 13 SpaceWERX STTRs, 11 of which were funded and valued at about \$2.75M total.

STARBURST WRAP UP

Continued



Mentors, alums, and investors came together in support of the graduating Cohort 3 founders.



SCALE founders gather at Cross Campus El Segundo for Demo Day and an end of year celebration.



SCALE's first Care in Space accelerator graduating at Demo Day.



Care in Space Challenge winners on stage



Dinner with members of the Starburst team and Cohort 5 founders



Endeavour Space Shuttle

Photos: Starburst

STAFF ANNOUNCEMENTS



Dan-Oscar Antson, PhD
Business Development
Officer - Life Sciences Team



Shushanik Basmajyan
Contracts Manager



Elina Kreditor JD, MD
Associate Director of Industry
Research & Material Transfer



Natasha Radovsky
Senior Director
of Contracts

UCLA TDG would also like to welcome

Andrew Dang, New Ventures Operations & Data Manager and
Mimi Ojukwu, LLB, Industry Sponsored Research and Material Transfer Officer

UCLA TDG HUB FOR ENTREPRENEURSHIP — A CALL FOR RESOURCES

Do you serve as a resource for entrepreneurs at UCLA or within the greater LA Ecosystem?
If so, send us your information so we can linkout to your organization via the UCLA TDG HUB.

Email or contact us at marketing@tdg.ucla.edu



ANNOUNCING THE INNOVATION FUND 2022 COHORT



Robert Chin



**Robert
Damoiseaux**



David Elasoff



Nalo Hamilton



Airi Harui



Jason Hinman



Varghese John



Mike Jung



Aaron Lisberg



**Diana
Marquez-Garban**



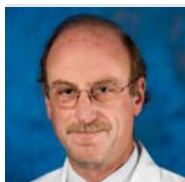
Neda Moatamed



**Milica
Momcilovic**



Richard Pietras



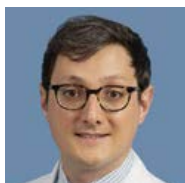
Michael Roth



Ricky Savjani



**David
Shackelford**



William Zeiger

18 UCLA Researchers awarded

The 2022 Innovation Fund cohort includes 18 researchers from UCLA. The fund supports early stage research in order to reach its next milestone. The research subject and teams are listed below. Congratulations!

Nalo Hamilton, associate professor of nursing
Michael Jung, distinguished professor of chemistry
David Elashoff, professor of biostatistics and computational medicine
Dr. Richard Pietras, professor of medicine
Dr. Diana Marquez-Garban, assistant professor of medicine
Dr. Neda Moatamed, professor of medicine
Novel IGF1R/IR Inhibitors in the Prevention of Triple-Negative Breast Cancer Progression

Dr. Jason Hinman, associate professor of neurology
Jennifer An, NSIDP graduate student
Varghese John, professor of neurology and the principal investigator at the Drug Discovery Lab
Dr. William Zeiger, assistant professor of neurology
Robert Damoiseaux, professor of molecular and medical pharmacology
Small Molecule Therapeutics for Epigenetic Regeneration of Axons

Dr. Michael D. Roth, professor of pulmonary and critical care medicine
Airi Harui, associate project scientist
An Injectable Hydrogel Delivery Platform for Cancer Immunotherapy

Dr. Ricky Savjani, resident in radiation oncology
Dr. Robert Chin, associate professor of radiation oncology
Novel Device for Targeted Irradiation of Bladder Cancer

David Shackelford, associate professor of pulmonary and critical care medicine
Michael Jung, distinguished professor of chemistry
Dr. Aaron Lisberg, assistant professor of medicine
Dr. Milica Momcilovic, assistant professor of pulmonary and critical care medicine
Targeting Mitochondrial Liabilities in Therapy-Resistant Lung Cancer

Aioi partners with UCLA Innovation Fund



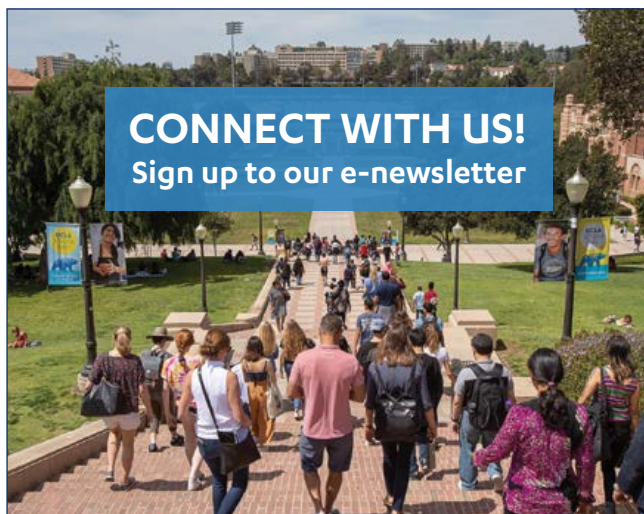
THE UCLA INNOVATION FUND, in partnership with Aioi Nissay Dowo, is excited to present the 2023 Cleantech for Mobility Pitch Day. We have received applications from faculty and PIs with innovations in the transportation ecosystem. Pitch Day is scheduled for 06 December 2023 and additional information will be posted at the [event page](#). The application period has closed, but we invite you to

watch for updates regarding the pitch day event and upcoming events to showcase your innovations!

The Innovation Fund will be looking for more opportunities to collaborate with more partners to provide opportunities across the campus in more disciplines and technologies. Please reach out to inquire about partnership opportunities.

About Aioi:

Aioi Nissay Dowo is a subsidiary MS&AD, the 8th largest P&C insurance company in the world. A strategic pillar for the company is to create shared value through digital transformation, or CSV x DX. Aioi believes that promoting advancements that reduce carbon emissions and industrial waste will create a better society. Aioi has sponsored and collaborated on research with several universities globally in areas such as AI, drone delivery, disaster prevention, and next-gen insurance products.”



UCLA Technology Development Group E Newsletter provides updates on the latest research, funding, breakthroughs, entrepreneurs, start up companies and events.



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UCLA NEW VENTURES: Championing the UCLA Entrepreneurial Ecosystem

Established in 2012, UCLA New Ventures leverages its broad network of funding sources, service providers, and experts to support UCLA faculty, graduate students, and post-docs with startup creation, funding, and success.



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