The University of Texas at Austin
Discovery to Impact

2025 ANNUAL REPORT

September 1, 2024 – August 31, 2025

2025

TABLE OF CONTENTS

DISCOVERY TO IMPACT® AT THE UNIVERSITY OF TEXAS AT AUSTIN BRINGS GROUNDBREAKING DISCOVERIES TO MARKET FOR THE BENEFIT OF SOCIETY.

The team serves as the bridge between campus innovators, industry, and the investment community — helping to cultivate ideas, uncover pathways to market, and foster commercial collaborations that transition academic research into products, services, and solutions that change the world.

James E. Davis

President of The University of Texas at Austin

A Message from the President of The University of Texas at Austin

For over a century, The University of Texas at Austin has built a research enterprise that delivers global results. Discovery to Impact serves as the key to accelerating UT's impact through research commercialization and supporting faculty innovation. Research breakthroughs discovered by UT faculty and innovators produce life-changing products and services that benefit people across Texas and around the world. From the forefront of AI and deep tech to reimagining material sciences and the future of health care, UT remains committed to investing in innovation, cultivating a culture of entrepreneurship, and recruiting world-class talent.

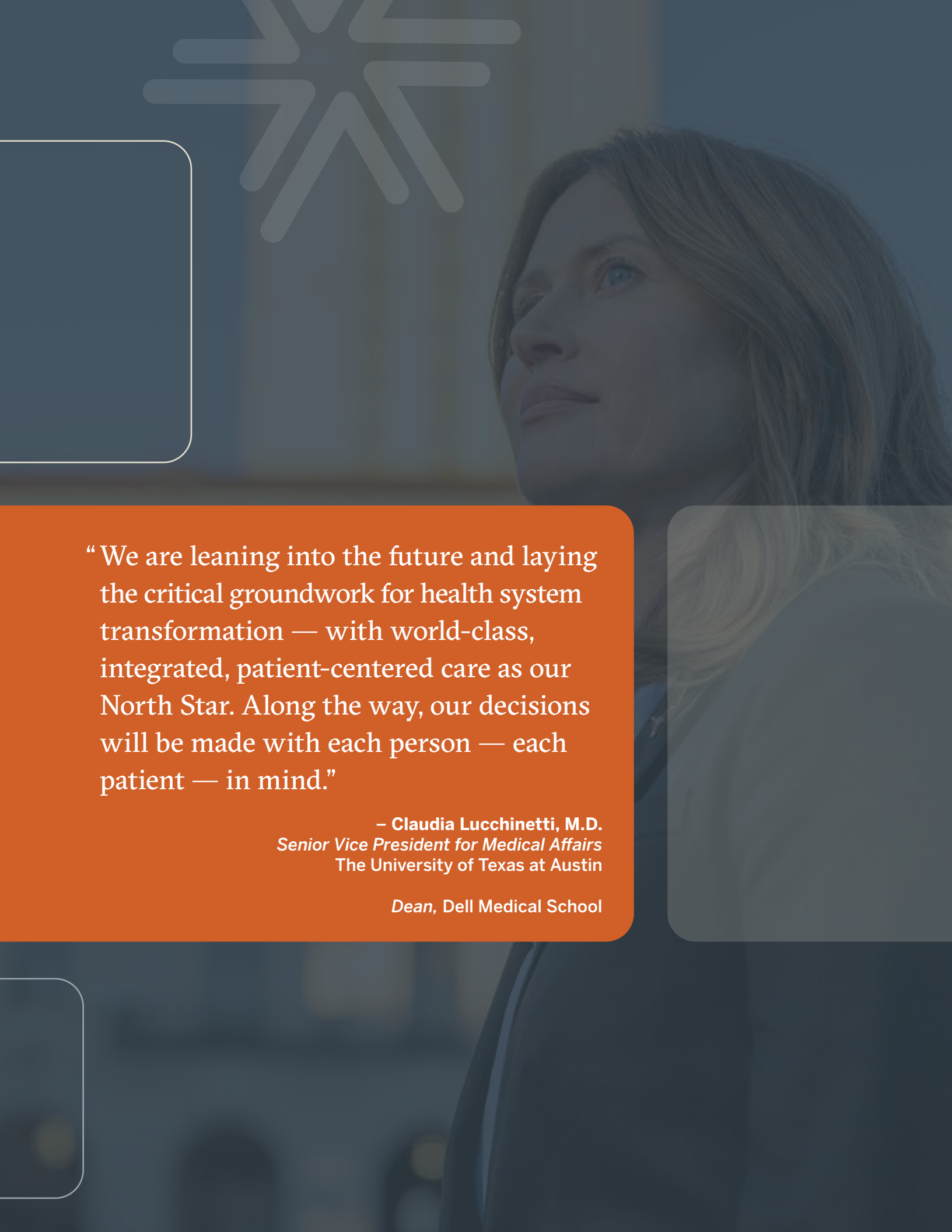
Mark Arnold

Associate Vice President, Discovery to Impact

Managing Director, Longhorn Ventures

A Message from the AVP of Discovery to Impact

Discovery to Impact is focused on translating innovative science and research coming out of our flagship University into real-world impact. This fiscal year, we have grown UT's invention disclosures, patents, technology licenses, and industry research agreements that result in millions of dollars in revenue that is reinvested back into UT's research enterprise to further innovation and venture creation. We have big ambitions to invest early and strategically in the most promising ideas and inventions, while scaling up the support, programs, and spaces that allow UT innovators and entrepreneurs to grow and thrive. While showcasing the depths of creativity and diversity of innovation across campus would take more than this report — we're pleased to highlight our work and share examples of the University's forward-looking initiatives and innovative companies. I hope you enjoy this inaugural report.



"We are leaning into the future and laying the critical groundwork for health system transformation — with world-class, integrated, patient-centered care as our North Star. Along the way, our decisions will be made with each person — each patient — in mind."

– Claudia Lucchinetti, M.D.
Senior Vice President for Medical Affairs
The University of Texas at Austin

Dean, Dell Medical School

UT'S FOCUS LOOKING FORWARD

Discovery to Impact plays a central role in advancing the University's innovation agenda, working alongside leaders, colleges, and units across campus. The team moves ground-breaking research discoveries from the University into the market, helping turn them into products and solutions with real-world impact.

Our focus is on bold, cross-disciplinary efforts to address urgent global problems by uniting UT's diverse academic strengths – from science and engineering to policy and patient care – to benefit society and the communities in which we live and work.

These are some examples of how UT is shaping what lies ahead.

BUILDING THE HOSPITAL OF THE FUTURE HERE IN AUSTIN

The University of Texas at Austin Medical Center aims to cement Austin as a premier destination for health care with a new, state-of-the-art UT hospital, a new world-renowned MD Anderson Cancer Center, and the academic and research expertise of UT Austin. This emerging academic medical center will revolutionize how people get and stay healthy, driven by innovations in technology, digital health, data science, artificial intelligence, robotics, materials science and more.

▶ Dell Medical School, the anchor of The University of Texas at Austin Medical Center, is defining the future of health.

SHAPING THE FUTURE OF COMPUTATION AND MACHINE INTELLIGENCE

▲ The Frontera (left) and Lonestar6 (right) supercomputers at the Texas Advanced Computing Center at The University of Texas at Austin.

Artificial intelligence (AI) and quantum computing are fundamentally changing our world, and UT Austin is at the helm with its Institute for Foundations of Machine Learning (IFML), Center for Generative AI, and Texas Quantum Institute (TQI). The IFML is focused on improving the accuracy and reliability of AI models crucial for developing more accurate AI systems. The IFML is creating one of the most powerful artificial intelligence hubs in the academic world to lead in research while offering world-class AI infrastructure to a wide range of partners. UT is also home to the Center for Generative AI for accelerating the process of scientific discovery and finding new solutions to major engineering challenges that would otherwise take years of experimental work. The center is powered by one of the largest supercomputers in academia, making it ideal for training AI models. Texas Quantum Institute is a newly launched interdisciplinary institute that unites more than 30 faculty and researchers across physics, electrical and computer engineering, chemistry, and materials science, with the mission to accelerate quantum science and engineering breakthroughs.

We connect businesses to University discoveries so they can enter the marketplace — and change the world

ADVANCING THE NEXT-GENERATION OF ROBOTS AND ROBOTICS LEADERS

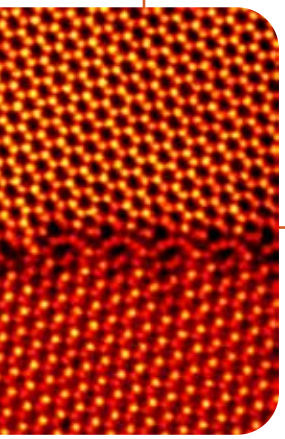
Texas Robotics Labs are advancing the next generation of robots that will influence how we use and interface with robots at work, at home, and in every facet of our daily lives. Texas Robotics is a collaborative program that unites robotics efforts across the University, pairing expertise in robotics, artificial intelligence, engineering, and computer science. Researchers at UT are developing robots to assist nurses in hospitals, replace humans in hazardous environments, provide physical therapy for patients recovering from strokes or injuries, provide logistics operations and supply chain management, and so much more.

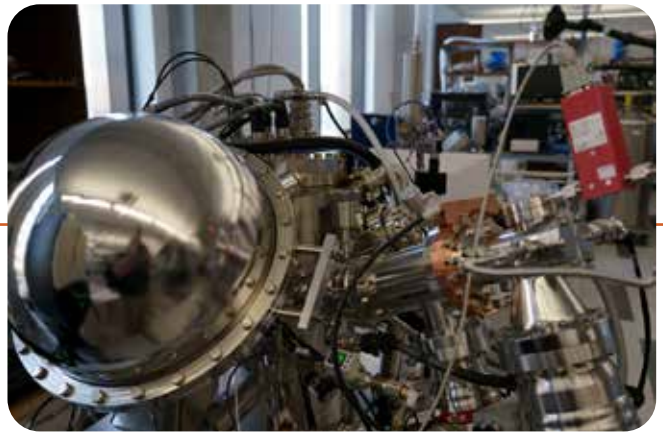
NEW APPROACHES TO ENERGY, SECURITY AND SUSTAINABILITY

UT's Energy Institute works to develop innovative, new approaches to solve the world's greatest energy and climate challenges through new research and cross-disciplinary educational programs across campus. The Energy Institute supports research, education and innovation across the entire spectrum of energy—how it's produced, moved and used—coordinating the world-class expertise of more than 450 energy scholars in colleges, schools, departments and research centers. It also provides credible research that informs policymakers and the public discourse on vital energy issues such as energy production, demand and use.

DESIGNING THE FUTURE OF MATERIALS FROM THE ATOM UP

UT's Texas Materials Institute (TMI) is at the forefront of cutting-edge materials science education and research with over 100 affiliated faculty members embedded within the Cockrell School of Engineering, College of Natural Sciences, Jackson School of Geosciences and the College of Pharmacy. TMI is focused on discovering and better utilizing materials in new and never-explored ways to support industry and improve products we rely on every day. As a foundational field of discovery, UT will continue to invest in materials science and its interdisciplinary research to reimage possibilities.





NEXUS FOR NEXT-GENERATION MICROELECTRONICS

Semiconductors are essential to the technologies we use every day, yet over 80% of these critical components are made overseas. To secure a sustainable supply of high-quality semiconductors, The University of Texas System and its institutions are spearheading a collaborative, statewide effort to make Texas the world's most powerful hub for semiconductor innovation and production.

At the heart of this effort is the UT-based Texas Institute for Electronics (TIE), a consortium of state and local government and pre-eminent defense electronics and semiconductor companies. TIE is leading the development of next-generation semiconductors using advanced 3D Heterogeneous Integration (3DHI) technology to build highly sophisticated computing designs and chips to reinforce the semiconductor supply chain in the U.S.

"TIE is tapping into the semiconductor talent available in the Cockrell School of Engineering, in Texas and nationally to build an outstanding team of semiconductor technologists and executives that can create this national center of excellence in 3DHI microsystems."

– S.V. Sreenivasan
TIE founder and Chief Technology Officer

UT professor of Mechanical Engineering

2025 BY THE NUMBERS

(Sept. 1, 2024 - Aug. 31, 2025)

AMONG U.S. PUBLIC UNIVERSITIES, **UT AUSTIN RANKS...**

#2 in Startup Creation*

#2 for Female Founders*

#8 Globally for Entrepreneurs Among Private and Public Universities*

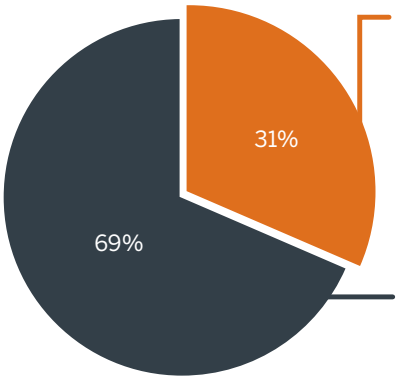
#16 for Invention Disclosures**

#22 for U.S. Patents Granted**

*Pitchbook 2025 university rankings based on the number of undergraduate alumni entrepreneurs who have raised venture capital in the last decade.

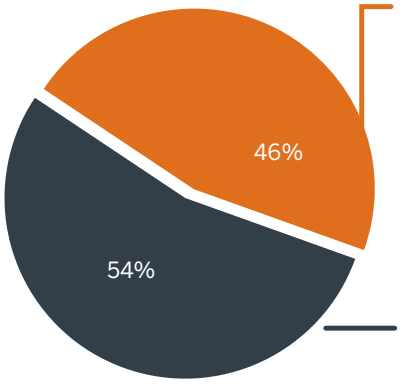
**Association of University Technology Managers (AUTM) 2024 membership survey.

THIS YEAR'S **SHARE OF GROWTH**



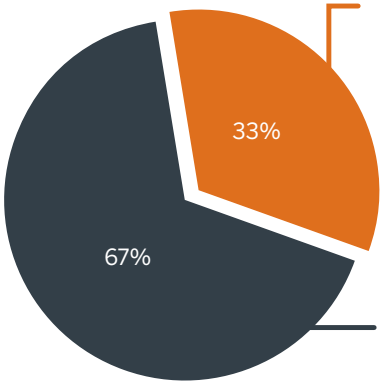
300
Invention Disclosures Received in 2025

654 received in 2022-2024



112
License Agreements Signed in 2025

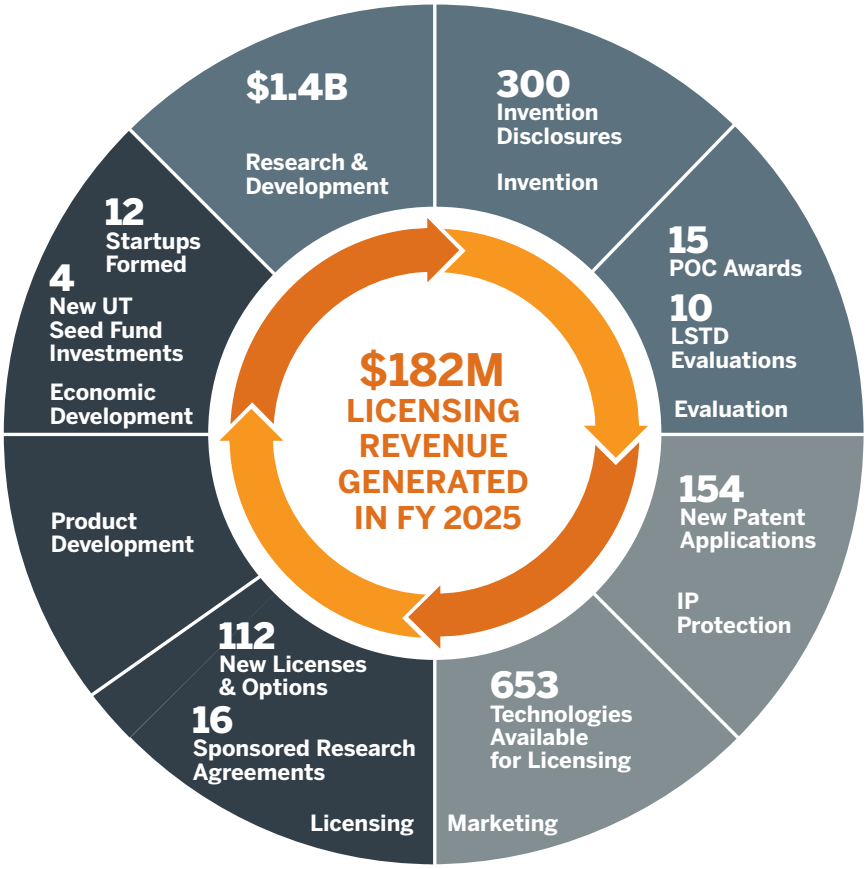
244 signed in 2022-2024



12
Startups Formed in 2025

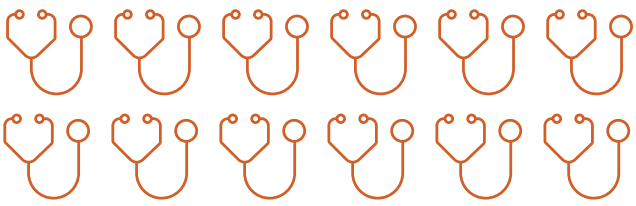
36 formed in 2022-2024

2025 COMMERCIALIZATION SCORECARD



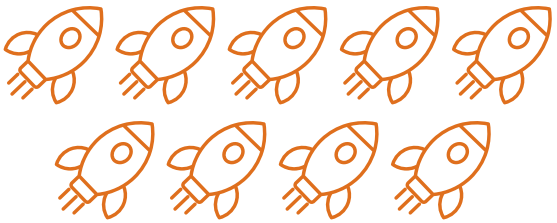
EXPEDITING THE LAUNCH OF UT AUSTIN **INNOVATIONS INTO STARTUPS**

LIFE SCIENCE TECH DEVELOPMENT



12 Emerging life science, biotech, medical device, diagnostic startups

UT SEED FUND



9 Total startups funded from the $10M UT Seed Fund to date

STRENGTHENING TEAM LEADERSHIP

▲ Andrew Maas joined the University in January to lead its research commercialization and innovation initiatives.

In January 2025, UT recruited Andrew Maas as the new assistant vice president for technology transfer of Discovery to Impact to lead the University's research commercialization and innovation initiatives, including overseeing the protection and commercialization of UT's intellectual property. Reporting to Mark Arnold, associate vice president of Discovery to Impact and managing director of Longhorn Ventures, Maas ensures that the University's innovations transition effectively from academic research to market applications that benefit society. Maas joined UT from Louisiana State University, where he most recently served as associate vice president for research, overseeing the office of Innovation and Ecosystem Development. He recently served as board chair for the Association of University Technology Managers, and he lectures all over the world about intellectual property valuation, economic impact, technology licensing, and technology commercialization.

PROTOTYPING OF AI TOOLS TO STREAMLINE TECH TRANSFER PROCESSES

Discovery to Impact is using AI to automate time-consuming tasks such as patent searches, market analysis, and prototype development. These tools can analyze vast amounts of data, identify emerging trends, and generate insights that help researchers align their inventions with market needs. By streamlining these important activities, generative AI accelerates the technology transfer process, allowing UT to bring innovations to market more efficiently.

OPENING OF INNOVATION TOWER

As part of its mission, Discovery to Impact offers innovation spaces on and off campus including the newly opened Innovation Tower. Through curated events, strategic programming, and a vibrant innovation community, the Innovation Tower positions UT Austin and its partners at the forefront of global problem-solving and venture creation. Innovation Tower is a premier space with 26,000 square feet for campus researchers and entrepreneurs to meet, collaborate, and bring transformative ideas to market. Anchored in Austin's Innovation District at 1300 Red River St., and just a few blocks from the UT campus, the building serves as a central hub for a wide range of sectors, including artificial intelligence, advanced manufacturing, semiconductors, robotics, climate and energy technologies, life sciences, and health care.

▲ Innovation Tower, 16th Floor: Collaboration space, offices, event center, conference room.

OPENING OF UT INNOVATION LABS

This year, Discovery to Impact opened UT Innovation Labs, a brand-new, state-of-the-art 10,000-square-foot wet lab for groundbreaking advancements in health care and life sciences. Located in north Austin, UT Innovation Labs provides innovators with direct access to UT Austin's world-class Research Core Facilities, Texas Advanced Computing Center (TACC), and renowned faculty expertise. Companies that join Innovation Labs receive access to Discovery to Impact's resources for entrepreneurs including business development support, technical expertise, mentorship, and educational programming. UT Innovation Labs is an integral part of a thriving startup ecosystem where UT and non-UT entrepreneurs can connect with investors and industry partners, collaborate with like-minded ventures, and immerse themselves in Austin's vibrant life sciences community.

▲ Discovery to Impact's new UT Innovation Labs is a state-of-the-art wet lab facility located in north Austin.

SOUTHEAST VENTURE SHOWCASE

▲ UT Austin had the highest number of startups chosen to present at the Southeast Venture Showcase 2025, where they showcased their innovations for investors.

The Southeast Venture Showcase is a transformational event that empowers research universities and federal laboratories across the Southeast to showcase their most promising technology ventures for the nation's venture community. This exclusive showcase is where investors and early-stage technology ventures come together to accelerate the productization of cutting-edge research outcomes that drive real-world impact and create stakeholder value. This year, UT achieved the highest number of startups chosen to present through an exceptionally competitive selection process. From sustainability solutions to medical advancements and robotics, UT innovators outshined and gained exposure for their entrepreneurial ventures to accelerate the commercialization of cutting-edge research.

LIFE SCIENCES TECH DEVELOPMENT SHOWCASE

Discovery to Impact hosted the Life Sciences Tech Showcase in March 2025, featuring 24 of UT's most transformative researchers and startups commercializing breakthrough discoveries in life sciences – including computational sciences, generative therapeutics, health care, and medtech devices. The event included an interactive pitch round followed by an exhibit where attendees from industry and the investment community had the chance to meet with entrepreneurs to learn more about their impactful products and technologies.

▲ Reseachers and startup founders pitched their ideas, then participated in one-on-one small group discussions in the exhibit area at Innovation Tower.

SHOWCASING 53 NEW U.S. PATENTS

PATENT 12,076,328
Pharmaceutical compositions of niclosamide

Ashlee Brunaugh, Matthew Herpin, Miguel Jara Gonzalez, Hyo-Jong Seo, Hugh Smyth, Zachary Warnken, Robert Williams; *College of Pharmacy*

PATENT 12,077,520
Compounds for the selective solid–liquid extraction and liquid–liquid extraction of lithium chloride

Qing He, Sung Kuk Kim, Jonathan Sessler; *College of Natural Sciences, Chemistry*

PATENT 12,077,563
Prefusion-stabilized HMPV F proteins

Ching-Lin Hsieh, Jason McLellan, Scott Rush, Nianshuang Wang; *College of Natural Sciences*

PATENT 12,079,557
Nanofabrication and design techniques for 3D ICS and configurable ASICS

Paras Ajay, Jaydeep Kulkarni, Mark McDermott, Aseem Sayal, S.V. Sreenivasan; *Cockrell School of Engineering*

PATENT 12,087,566
Collection probe and methods for the use thereof

Livia Eberlin, Nitesh Katta, John Lin, Thomas Milner, John Rector, Aydin Zahedivash, Jialing Zhang; *Cockrell School of Engineering, College of Natural Sciences*

PATENT 12,094,775
Nanoscale-aligned three-dimensional stacked integrated circuit

Ovadia Abed, Paras Ajay, Jaydeep Kulkarni, Mark McDermott, Aseem Sayal, Shrawan Singhal, S.V. Sreenivasan; *Cockrell School of Engineering*

PATENT 12,120,740
Network routing system, method, and computer program product

Vidur Bhargava, Jubin Jose, Sriram Vishwanath; *Cockrell School of Engineering*

PATENT 12,122,874
Catalysts for ring opening polymerization

Robert Ferrier, Jr., Jennifer Imbrogno, Nathaniel Lynd; *Cockrell School of Engineering, Jackson School of Geosciences*

PATENT 12,126,467
Low resolution OFDM receivers via deep learning

Jeffrey Andrews, Eren Balevi; *Cockrell School of Engineering*

PATENT 12,129,836
Geothermal well designs and control thereof for extraction of subsurface geothermal power

Pradeepkumar Ashok, Dongmei Chen, Eric van Oort; *Cockrell School of Engineering*

PATENT 12,133,714
Line excitation array detection microscopy

Adela Ben-Yakar, Tianqi (Fred) Li, Christopher Martin, Peisen Zhao; *Cockrell School of Engineering*

PATENT 12,144,828
Human kynureninase enzymes and uses thereof

John Blazeck, George Georgiou, Christos Karamitros, Everett Stone; *Cockrell School of Engineering, College of Natural Sciences*

PATENT 12,151,062
Compositions and devices to administer pharmaceutical compositions nasally

Yang Lu, Hugh Smyth, Zachary Warnken, Robert Williams; *College of Pharmacy*

PATENT 12,163,168
Engineered primate cystine/cysteine degrading enzymes for therapeutic uses

Christos Karamitros, Wei-Cheng Lu, Everett Stone; *Cockrell School of Engineering, College of Natural Sciences*

PATENT 12,168,244
Nanoscale thin film deposition systems

David Choi, Lawrence Dunn, Parth Pandya, Shrawan Singhal, S.V. Sreenivasan; *Cockrell School of Engineering*

PATENT 12,173,087
Melanocortin 1 receptor ligands and methods of use

Natalie Barkey, Robert Gillies, Victor Hruby, David Morse, Christian Preihs, Jonathan Sessler, Kevin Sill, Narges Tafreshi, Josef Vagner; *College of Natural Sciences*

PATENT 12,178,868
Immunogenic compositions and uses thereof

Maria Croyle, Stephen Schafer; *College of Pharmacy*

PATENT 12,196,760
Molecular neighborhood detection by oligonucleotides

Eric Anslyn, Sanchita Bhadra, Alexander Boulgakov, Andrew Ellington, Brendan Floyd, Jon Laurent, Edward Marcotte, Raghav Shroff, Jagannath Swaminathan, Erhu Xiong; *College of Natural Sciences*

KEY

COMPUTER SCIENCE LIFE SCIENCE PHYSICAL SCIENCE

PATENT 12,203,107 ●
Non-LTR-retroelement reverse transcriptase and uses thereof

Alan Lambowitz, Alfred Lentzsch, Georg Mohr, Seung Park, Jennifer Stamos; *College of Natural Sciences*

PATENT 12,213,482 ●
Fungicide enhancers effective for treating plants infected with fungal pathogens

Gregory Clark, Simon Hiebert, Stanley Roux; *College of Natural Sciences*

PATENT 12,213,810 ●
Systems and methods for automated coronary plaque characterization and risk assessment using intravascular optical coherence tomography

Vikram Baruah, Marc Feldman, Taylor Hoyt, Austin McElroy, Thomas Milner, Aydin Zahedivash; *Cockrell School of Engineering*

PATENT 12,226,404 ●
Enhanced delivery of immunosuppressive drug compositions for pulmonary delivery

Keith Johnston, Jason McConville, Jay Peters, True Rogers, Prapasri Sinswat, Robert Talbert, Alan Watts, Robert Williams; *Cockrell School of Engineering, College of Pharmacy*

PATENT 12,239,296 ●
Devices, systems and methods for cleaning of elongated instrument surface

Christopher Idelson, Christopher Rylander, John Uecker; *Biomedical Engineering, Cockrell School of Engineering, Dell Medical School*

PATENT 12,246,057 ●
Transmembrane stem cell factor (TM-SCF) lipid nanocarriers and methods of use thereof

Aaron Baker, Eri Takematsu; *Cockrell School of Engineering*

PATENT 12,255,264 ●
Enhanced room temperature mid-IR LEDs with integrated semiconductor 'metals'

Seth Bank, Andrew Briggs, Leland Nordin, Daniel Wasserman; *Cockrell School of Engineering*

PATENT 12,263,243 ●
Templated open flocs of anisotropic particles for enhanced pulmonary delivery

Joshua Engstrom, Keith Johnston, Jasmine Tam (Rowe), Alan Watts, Robert Williams; *Cockrell School of Engineering*

PATENT 12,274,414 ●
Methods, systems and controllers for facilitating cleaning of an imaging element of an imaging device

Farshid Alambeigi, Alexander Cohen, Christopher Idelson, Christopher Rylander; *Cockrell School of Engineering*

PATENT 12,280,088 ●
Dry powder formulation of Caveolin-1 peptides and methods of use thereof

Dale Christensen, John Koleng, Sawittree Sahakijpijarn, Alan Watts, Robert Williams, Yajie Zhang; *College of Pharmacy, Dell Medical School*

PATENT 12,280,089 ●
Dry powder formulation of caveolin-1 peptides and methods of use thereof

Dale Christensen, John Koleng, Sawittree Sahakijpijarn, Sreerama Shetty, Alan Watts, Robert Williams, Yajie Zhang; *College of Pharmacy, Dell Medical School*

PATENT 12,280,869 ●
Vertical take off and landing aircraft

Fabrizio Bisetti, Christopher Cameron, Mehmet Erengil, Jayant Sirohi; *Cockrell School of Engineering*

PATENT 12,286,719 ●
Electrodepostion of metals from liquid media

Sheila Gerardo, Wen Song, Thomas Underwood; *Cockrell School of Engineering*

PATENT 12,290,675 ●
Method and apparatus for assisting a heart

Marc Feldman, Clay Heighten, John Porterfield; *Cockrell School of Engineering*

PATENT 12,297,464 ●
Modified plants containing combination of apyrase genes and method for making modified plants with combination of apyrase genes

Gregory Clark, Stanley Roux; *College of Natural Sciences*

PATENT 12,297,736 ●
Systems and methods for controlling a drilling path based on drift estimates

Todd Benson, Sashmit Bhaduri, Teddy Chen; *Cockrell School of Engineering*

U.S. PATENTS (CONTINUED)

PATENT 12,304,930
Prefusion-stabilized HMPV F proteins

Ching-Lin Hsieh, Jason McLellan, Scott Rush, Nianshuang Wang ; *College of Natural Sciences*

PATENT 12,306,204
Apparatus and methods for cleaning and/or exchanging medical devices

Livia Eberlin, Noah Giese, Nitesh Katta, Jeffrey Kuhn, John Lin, Thomas Milner, James Suliburk, Jialing Zhang; *Cockrell School of Engineering, College of Natural Sciences*

PATENT 12,308,275
Heterogeneous integration of components onto compact devices using moire based metrology and vacuum based pick-and-place

Ovadia Abed, Paras Ajay, Michael Cullinan, Lawrence Dunn, Vipul Goyal, Mark McDermott, Aseem Sayal, Shrawan Singhal, S.V. Sreenivasan; *Cockrell School of Engineering*

PATENT 12,309,819
Methods and apparatuses for relaying data in wireless networks

Vidur Bhargava, Jubin Jose, Sriram Vishwanath; *Cockrell School of Engineering, Electrical and Computer Engineering*

PATENT 12,312,628
Metabolic control over organometallic catalysts using electroactive bacteria

Chris Dundas, Gang Fan, Austin Graham, Benjamin Keitz, Nathaniel Lynd; *Cockrell School of Engineering*

PATENT 12,314,684
Generation of certified random numbers using an untrusted quantum computer

Scott Aaronson; *College of Natural Sciences*

PATENT 12,319,369
Tank seal inspection

Robert Anderson, Connor Crawford, Mitchell Pryor, Andrew Zelenak; *Cockrell School of Engineering*

PATENT 12,322,831
Electrolyte membrane for an alkali metal battery

Yong Che, John Goodenough, Yutao Li, Henghui Xu; *Cockrell School of Engineering*

PATENT 12,325,691
Compounds and methods for treating cancer neurological disorders, ethanol withdrawal, anxiety, depression, and neuropathic pain

Stephen Martin, Jonathan Pierce-Shimomura, James Sahn, Luisa Scott *College of Natural Sciences*

PATENT 12,329,744
Methods of preparing extrudates

Siyuan Huang, Abbe Miller, Robert Williams, Feng Zhang; *College of Pharmacy*

PATENT 12,332,707
Hilite: hierarchical and lightweight imitation learning for power management of embedded socs

Ali Akoglu, Samet Egemen Arda, Daniel Bliss, Chaitali Chakrabarti, Ahmet Goksoy, Anish Krishnakumar, Nirmal Kumbhare, Joshua Mack, Sumit Mandal, Radu Marculescu, Umit Ogras, Anderson Sartor; *Cockrell School of Engineering*

PATENT 12,335,035
Autoencoder-based error correction coding for low-resolution communication

Jeffrey Andrews, Eren Balevi; *Cockrell School of Engineering*

PATENT 12,338,382
Surfactants having non-conventional hydrophobes

Aaron Boorem, John Boorem, Kurt Cheshire, Pinaki Ghosh, Kishore Mohanty, Krishna Panthi, Peter Radford, Himanshu Sharma, Kevin Sikkema, Upali Weerasooriya; *Cockrell School of Engineering*

PATENT 12,344,879
Transgenic bacteria with expanded amino acid usage and nucleic acid molecules for use in the same

Andrew Ellington, Ross Thyer; *College of Natural Sciences*

PATENT 12,364,640
Upper body human to machine interface

Rohit Varghese, William Wu; *Cockrell School of Engineering*

PATENT 12,379,381
Single molecule peptide sequencing

Eric Anslyn, Andrew Ellington, Edward Marcotte, Jagannath Swaminathan; *College of Natural Sciences*

PATENT 12,385,382
Optimal probabilistic steering control of directional drilling systems

Dongmei Chen, Robert Darbe, Nazli Demirer, Alexander Keller; *Cockrell School of Engineering*

PATENT 12,390,387
Upper-body robotic exoskeleton

Ashish Deshpande, Bongsu Kim; *Cockrell School of Engineering*

PATENT 12,392,773
Devices, systems, and methods for analyte sensing with optothermally generated bubbles in biphasic liquid samples

Youngsun Kim, Yuebing Zheng; *Cockrell School of Engineering*

"UT's Discovery to Impact is committed to moving groundbreaking discoveries into the market to have lasting impact on the world."

– Mark Arnold
Associate Vice President, Discovery to Impact
and Managing Director, Longhorn Ventures
University of Texas at Austin

HONORING NEW UT AUSTIN STARTUP LICENSEES

CANVAS PHARMACEUTICALS

ZAMANEH MIKHAK AND BOB CLIFFORD

Developing inhaled therapies (dry-powder formulations) for complex pulmonary diseases including lung transplant patients.

GENERATION FOOD RURAL PARTNERS

FRANK CLEMONS

Investing in the commercialization of food, protein, and agriculture technologies through a venture-building impact fund managed by Big Idea Ventures, a global leader in early-stage investments in alternative protein and food tech.

IMAGINE DEVICES, INC.

IMAN SALAFIAN AND ALAN GROVES

Next-generation neonatal medical device integrating feeding, vital sign monitoring, gas venting, and respiratory support in a single feeding catheter.

LLANO TREASURES, LLC

NICHOLE RYLANDER AND CHRIS RYLANDER

Developing a novel design for a device that controls the temperature of bottled drinks, specifically baby bottles.

MATERIALS NOVA, LLC

EMMA FAN

Pioneering innovative materials solutions to improve water treatment and advance biomedical diagnostics.

KEY

FOUNDER(S)

ADVANCED MATERIALS

EMERGING TECH

ENERGY SOLUTIONS

HEALTH & LIFE SCIENCES

MOON TOWER LABORATORIES LLC

BEN UMLAUF

Implementing studies around the effective manufacture and storage of specific bacteria for applications in cancer treatment.

NASCENT MATERIALS, INC.

CHAITANYA SHARMA

Reinventing how the core of every battery is made with next-generation cathode chemistries.

OMNI CARBON TECHNOLOGY CORPORATION

RYOSUKE OKUNO

Converting waste into clean fuels without harmful emissions.

PARTICLES OF COLOR LLC

JESSICA CIARLA

Creating plant-derived, sustainable sequins and textiles to revolutionize the fashion industry.

RUMEDICAL NOVA, LLC

EMMA FAN

Reimagining the future of cancer diagnostics with portable chips for early disease detection.

SUPRA ELEMENTAL RECOVERY, INC.

JORDAN SESSLER AND KATIE DURHAM

Enabling high-efficiency absorption of targeted metals from brine solutions.

TUBE TECH MEDICAL, LLC

DAN STROMBERG

Designing and commercializing medical devices for vascular, endovascular or minimally-invasive procedures.

VERSA MATERIALS TECHNOLOGY, INC.

CARSON RAST

Producing domestically-manufactured cathode materials for next-generation batteries, aiming to reduce dependency on foreign supply chains.

HONORING NEW LICENSEES

BASECAMP RESEARCH LTD.

Using AI and massive biological datasets to discover novel proteins and accelerate biodiscovery for synthetic biology applications.

BLUE ORIGIN ENTERPRISES LP

Designing and launching reusable rockets and spacecraft to enable cost-effective access to space and support long-term human presence beyond Earth.

GIGAGEN, INC.

Developing novel antibody therapeutics using cutting-edge antibody engineering and manufacturing platforms.

NATURA RESOURCES, LLC

Developing next-generation clean nuclear energy technologies, including molten salt reactors, with roots in oil & gas.

QUANTINUUM LLC

Building full-stack quantum computing systems (hardware + software) and offering quantum computing services for materials discovery, cybersecurity and next-gen AI.

KEY

- ADVANCED MATERIALS
- EMERGING TECH
- ENERGY SOLUTIONS
- HEALTH & LIFE SCIENCES

MEET OUR TEAM

Discovery to Impact helps connect the right people to the right resources so that bold ideas can transform into products and services that change lives. Our team includes industry experts, analysts, intellectual property and licensing specialists, business development professionals, and more to help University innovators at every step of the journey to market success.

HIGHLIGHTING UT SEED FUND INVESTMENTS

Discovery to Impact oversees the UT Seed Fund, a specialized multimillion-dollar venture fund that invests exclusively in early-stage startups built on UT Austin intellectual property. Its primary objective is to address the funding gap between initial launch and venture capital investment for the most promising new companies spinning out of UT's research enterprise. Launched in 2022, the UT Seed Fund investment portfolio is composed of a mix of groundbreaking University-based discoveries in physical sciences, life sciences, and computer sciences. During the 2024-2025 and beginning of 2025-2026 academic years, the UT Seed Fund expanded its portfolio with investments in Angara Bio, Locus Lock, TAU Systems and Nascent Materials.

▶ ClearCam was one of the earliest recipients of investment from the UT Seed Fund.

ANGARA BIO

▲ Ken Hsu, founder of Angara Bio.

Angara Bio is an early-stage therapeutics company translating research from The University of Texas at Austin into new medicines. Founded by Professor Ken Hsu, College of Natural Sciences, and collaborators, Angara is building a discovery platform centered on RNA-protein biology to address diseases with significant unmet need. The company combines academic innovation with biotech industry experience to advance drug discovery through defined research and development milestones. In 2025, the UT Seed Fund participated in Angara's pre-seed financing, supporting progress in core science, platform development/validation, and team growth. Angara collaborates with UT researchers and scientific advisors and is expanding its network of partners to accelerate program advancement. Angara Bio's mission is to translate cutting-edge science into transformative therapies for patients.

LOCUS LOCK

▲ Hailey Nichols, founder of Locus Lock.

locuslock.com

Locus Lock represents the first UT Seed Fund investment in computer science, with its software-defined Global Navigation Satellite System (GNSS) technology that is designed to provide secure and precise location data for the vehicle, defense, aerospace and high-tech industries. Locus Lock CEO Hailey Nichols, who earned an M.S. in aerospace engineering from UT, is commercializing the software-defined GNSS receiver, which was developed at UT's Radionavigation Lab under the direction of Todd Humphreys, a professor in the Department of Aerospace Engineering and Engineering Mechanics. Their patented GNSS technology offers a low-cost, high-performance navigation solution, with possibilities across multiple industries where precise signaling in challenging environments is key. The investment will help Locus Lock scale up and meet the growing demand for cost-effective, precise and reliable navigation solutions.

HIGHLIGHTING UT SEED FUND INVESTMENTS

▲ Björn Manuel Hegelich, founder of Tau Systems.

tausystems.com

TAU SYSTEMS

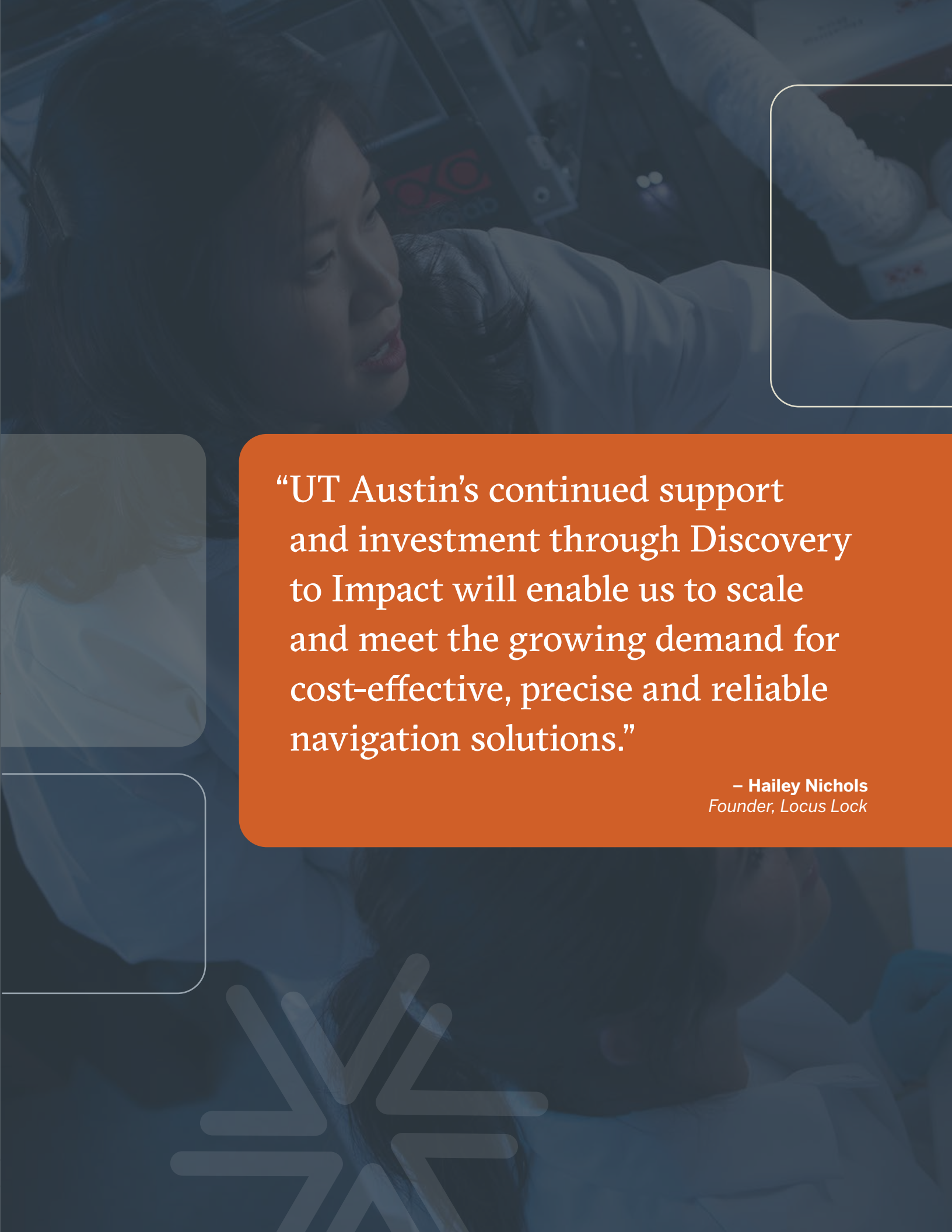
TAU Systems is a company focused on commercializing the world's first compact laser-driven particle accelerator to expedite breakthroughs in environmental solutions, manufacturing, and health care. Founded by UT physics professor Björn Manuel Hegelich, TAU Systems will use the UT Seed Fund investment toward developing TAU Labs, an R&D center and radiation testing facility in Carlsbad, California, providing industrial users with access to cutting-edge particle and imaging systems. Laser-driven particle accelerators are incredibly powerful tools that speed charged particles, such as electrons or protons, to very high energies often close to the speed of light — allowing scientists to study the ultra-small universe of subatomic particles and their interactions with targets or each other. Before TAU Systems' development, science and industry had few opportunities to get "beamtime" with particle accelerators for research due to their scarcity and large size. By compacting the high-power laser-driven accelerators into one room, TAU Systems is making the technology more cost-efficient and accessible to researchers and industry.

NASCENT MATERIALS

Nascent Materials is using UT-patented technology from the Cockrell School of Engineering and College of Natural Sciences to commercialize a new way to process materials needed in next-generation batteries that are safer and more resilient. Traditional production methods for lithium batteries come with major challenges, including limited domestic raw material supply from manufacturers, flammability risks, and energy-intensive synthesis processes. Nascent's breakthrough improves the critical cathode materials needed in lithium-based batteries, while also leveraging the UT technology to explore additional pathways in development of next-generation cathode chemistries. The result is safer cathode chemistries with superior material quality and process control that result in lower production costs and emissions. With the UT Seed Fund investment, Nascent Materials will scale up its cost-efficient and sustainable domestic manufacturing technologies, reducing dependence on imported materials and strengthening the U.S. critical materials supply chain.

▲ Chaitanya Sharma, founder of Nascent Materials.

nascentmaterials.com



"UT Austin's continued support and investment through Discovery to Impact will enable us to scale and meet the growing demand for cost-effective, precise and reliable navigation solutions."

– Hailey Nichols
Founder, Locus Lock

ENTREPRENEURS TO WATCH

CHARLEY TAYLOR
DIGITAL TWINS FOR HEALTHCARE

Dr. Charley Taylor's journey into revolutionizing cardiovascular care began with a bold idea: could the human heart be simulated with such accuracy that doctors could diagnose life-threatening conditions without surgery? This vision became reality through HeartFlow, the company he co-founded to bring AI-powered, noninvasive diagnostics to the forefront of cardiology. Drawing from his early NSF-funded research in computational modeling, Taylor helped pioneer the creation of "digital twins," highly detailed, personalized 3D simulations of a patient's heart modeled from CT scans. These models allow doctors to visualize blood flow, assess blockages, and even test treatments virtually before applying them in real life. The HeartFlow technology is FDA-approved and has helped over 500,000 patients. *(source:* **heartflow.com***)*

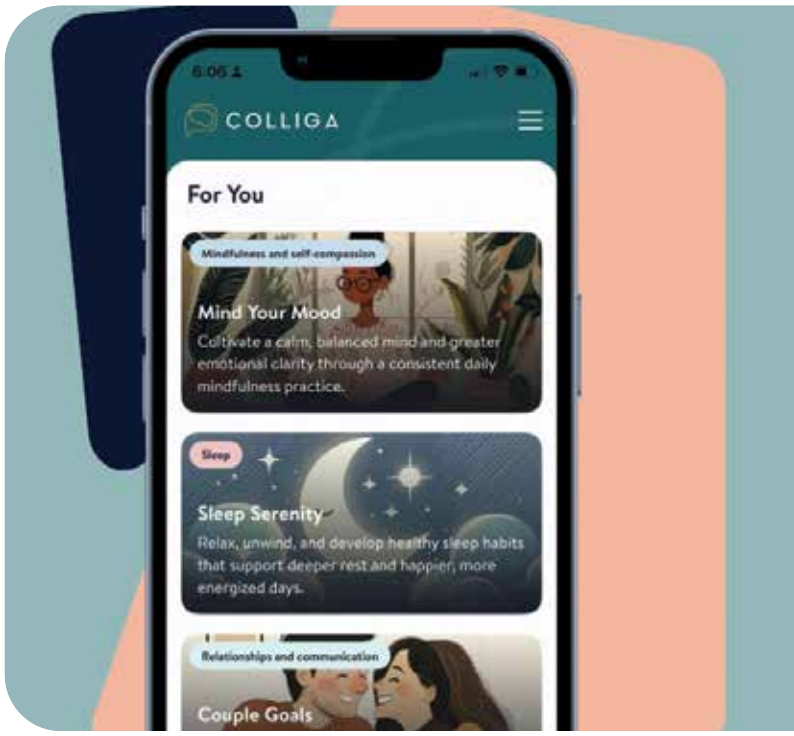
At The University of Texas at Austin, Dr. Taylor is bringing his vision full circle. As founding director of UT's Center for Computational Medicine, he's applying the power of AI and advanced simulation to broader areas of health care. His work is not just about technology, but about transforming health care delivery, empowering clinicians with better tools, and positioning Austin as a global hub for digital health innovation.

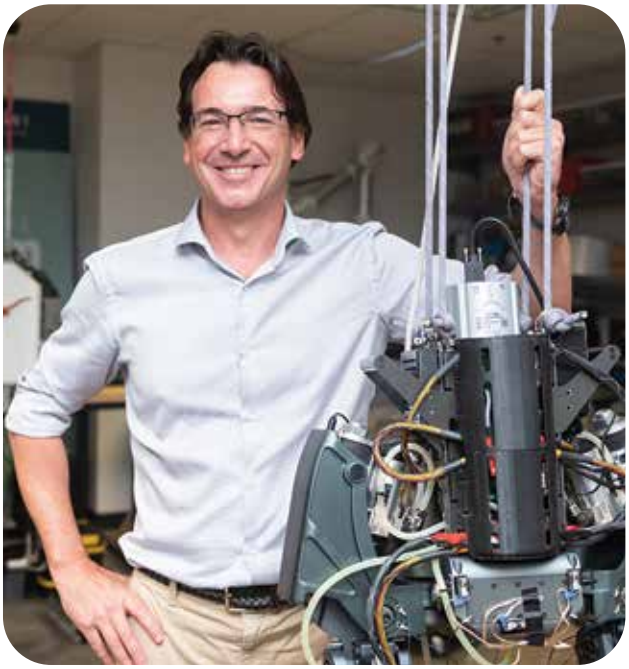
HeartFlow uses AI-powered, non-invasive diagnostics to assist doctors in the visualization of blood flow and test treatments virutally.

ADELA TIMMONS
SCIENCE-BASED MENTAL HEALTH APPS

Adela Timmons, Ph.D. leads the Technological Interventions for Ecological Systems (TIES) Lab at The University of Texas at Austin, where her interdisciplinary team blends clinical psychology, data science, and engineering. At UT Austin, she not only conducts pioneering research but also teaches and mentors students. Through both her academic lab and her startup, Colliga, she is building a new generation of mental health tools designed with equity, accessibility, and community collaboration at their core.

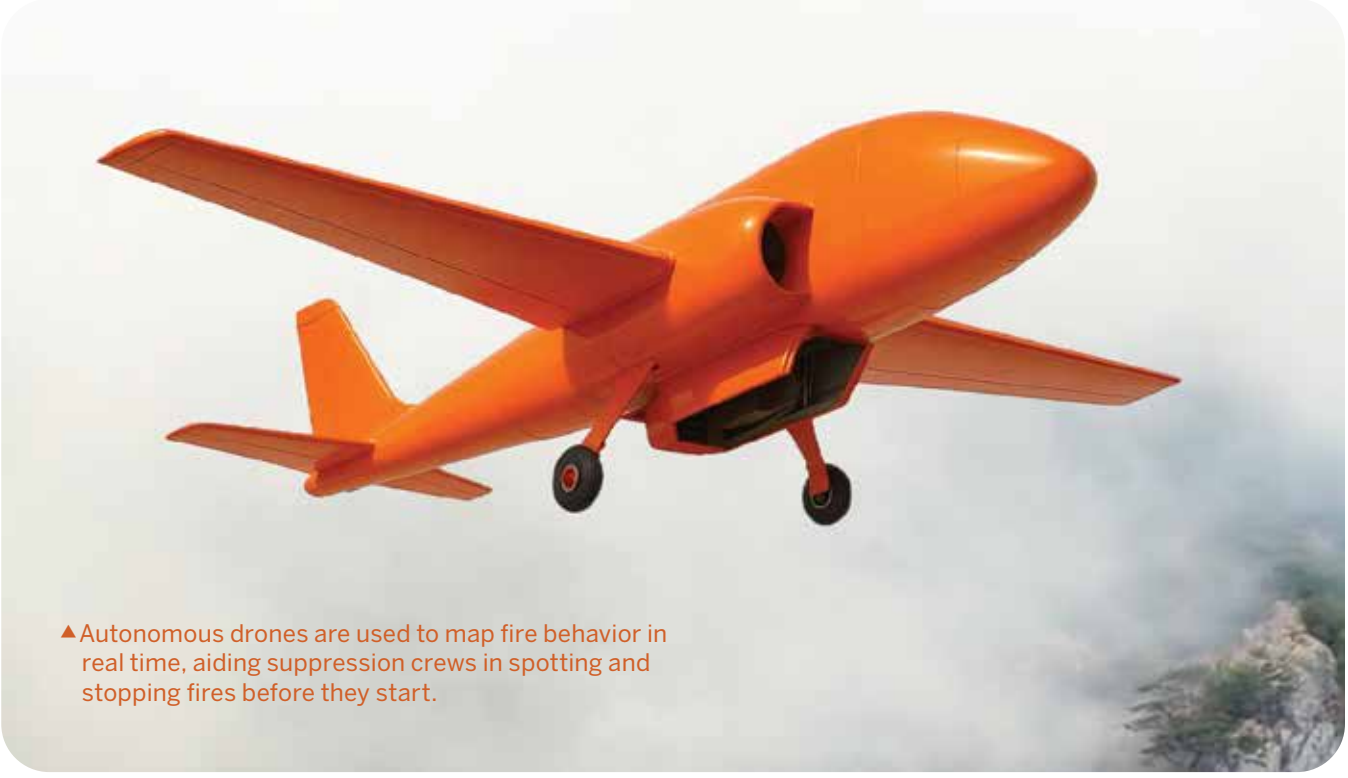
Her work was sparked by a deep interest in understanding how childhood trauma and adversity become biologically embedded and influence emotional regulation within close relationships. As she explored the real-time dynamics of human connection, particularly how people co-regulate their emotions, she saw an opportunity to harness technology to better observe, analyze, and intervene in these patterns as they naturally unfold. Her passion for both mental health and innovation led her to develop cutting-edge tools using AI, wearables, and smartphones to passively monitor psychological states and deliver just-in-time mental health support to children, couples, and families.





LUIS SENTIS
INTELLIGENT DRONE FLEETS

Wildfires are one of the fastest growing natural disaster costs in the United States. During the past decade, wildfires have caused more than $70 billion-$100 billion in total economic cost in the U.S. alone. Luis Santis, Ph.D., a professor of aerospace engineering at UT Austin, is a leading expert in human-centered robotics and control systems. He was a co-founder of Apptronik, the Austin-based human robotics company, and now serves as the CEO and co-founder of AIVE — an integrated wildfire intelligence and rapid-response platform that uses autonomous drones, distributed sensor networks, and computer vision to detect ignition events early, map fire behavior in real time, and guide suppression crews with precise, continuously updated situational awareness. The company is currently competing in the XPRIZE Wildfire Challenge.



▲ Autonomous drones are used to map fire behavior in real time, aiding suppression crews in spotting and stopping fires before they start.

JESSICA CIARLA
SUSTAINABLE FASHION SEQUINS

Each year, the fashion industry uses 342 million barrels of petroleum to produce plastic-based fibers such as polyester, nylon and acrylic—including conventional sequins and synthetic textiles made of petroleum-based plastic. After learning how harmful sequins are to the environment, UT associate professor Jessica Ciarla, Ph.D., assembled a team of researchers to create a more sustainable solution for the fashion industry. Ciarla discovered a breakthrough using agricultural waste and natural pigments to create sustainable sequins in custom colors, shapes, and sizes. Discovery to Impact helped her patent the technology used to create the materials, and then Ciarla spun out a company called Particles of Colors. Several of her sequined looks have been featured in fashion magazines, an art exhibit, and in a documentary. Her lab is continuing to innovate to develop non-toxic, biomaterial textiles and looking to partner with international designers to create more sustainable fashion.

HOW TO CONNECT WITH DISCOVERY TO IMPACT RESOURCES

Connecting the right people to the right resources so bold ideas can transform into products and services that change lives.

For ways to collaborate with UT's venture and research enterprise:

Mark Arnold
Associate Vice President, Discovery to Impact
Managing Director, Longhorn Ventures
Mark.Arnold@austin.utexas.edu

To learn more about commercializing UT discoveries, inventions, and technologies:

Andrew Maas
Assistant Vice President for Technology Transfer
Andrew.M@austin.utexas.edu

Find out how we can help you at discoverytoimpact.utexas.edu

Explore our portfolio of technologies at utotc.technologypublisher.com

Discovery to Impact® at The University of Texas at Austin invites innovators and partners to transform bold research into world-changing innovations. By working with us, startups, companies, and investors can help launch breakthrough technologies that redefine industries and improve lives.

Discovery to Impact®
The University of Texas at Austin
110 Inner Campus Drive | Austin, TX 78712-3400