VANDERBILT UNIVERSITY
Technology Transfer

TECH CONNECT

Turning Ideas into Opportunities

Monthly news & updates

June 3, 2024

FY 2024 STATISTICS

YEAR TO DATE

Licenses* & Options

277

MTAs

898

Vanderbilt Innovation Catalyst Fund

Next Cycle Application Now Open!

Ignite your innovative potential through the Vanderbilt Innovation Catalyst Fund!

The Innovation Catalyst Fund provides translational research support for Vanderbilt innovations that

CDAs

45

Invention Disclosures

195

U.S. Patents Issued

62

**includes end-user software and materials licenses along with conventional technology licenses*

require proof of concept to attain commercial relevance, nascent projects that have strong innovation potential, and research projects with civic and social relevance.

The program is run by the Office of the Vice Provost for Research and Innovation in consultation with Division of Finance, VUMC Office of Research, and academic leadership in Vanderbilt schools and colleges, with management provided through the Center for Technology Transfer and Commercialization (CTTC).

All full-time faculty employed by either Vanderbilt University or VUMC are eligible to apply across all disciplines from Arts & Humanities, Engineering & Physical Sciences, Social Sciences, and Bioscience & Healthcare. Part-time faculty, students, or staff are not eligible.

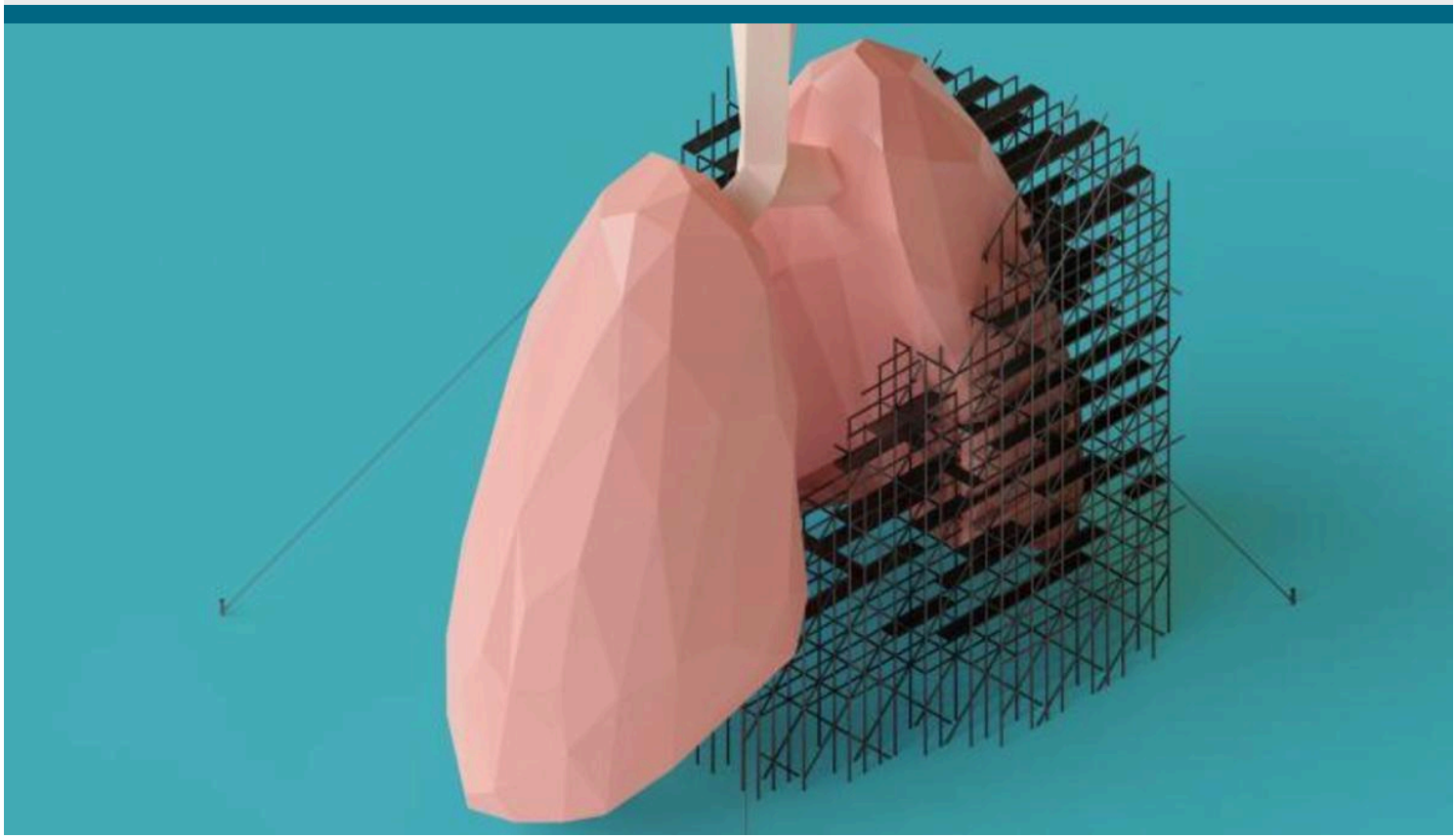
Key Features

Through this fund, Vanderbilt is supporting the advancement of basic research programs with commercial potential toward productization through support for a variety of translational and commercially-oriented development efforts. This program is intended to provide:

- Expert Evaluation – peer-reviewed assessment by a committee of Vanderbilt faculty
- Accelerated Decision-Making – prompt feedback and timely decision

- Focused Translational Research – commercial potential and social impact prioritized
- Tranche-Based Funding – project funds distributed based on milestone completion

Learn More



Xylyx Bio announces exclusive license agreement with Vanderbilt University for donor organ rehabilitation asset

Xylyx Bio, a regenerative medicine company developing innovative solutions for tissue and organ repair, today announced entry into an exclusive license agreement with Vanderbilt University for the rights to a xenogeneic cross-circulation platform that restores damaged donor organs to transplant condition.

By repairing donor organs deemed unfit for transplant, the organ rehabilitation platform holds potential to significantly increase the number of organs available for transplant and ultimately eliminate transplant waitlist mortality.

"Our technology provides the systemic physiologic support and homeostatic regulation needed to rehabilitate and salvage donor organs that are not being utilized for transplant. Our team has demonstrated successful rehabilitation of donor lungs and livers, and we are thrilled to accelerate the path to patients," said Matthew Bacchetta, MD

Learn More

CTTC welcomes Stephen Miller to the team!

Stephen joined CTTC in May 2024 as the Executive Director of New Ventures and is responsible for leading the team in their efforts to advance entrepreneurship and new venture creation throughout Vanderbilt and the greater midsouth region.

Prior to joining CTTC, Stephen led the University of Colorado/Boulder's venture development team, where he helped manage a pipeline of over 130 high potential innovations through a 3-stage I-Corps® curriculum, corporate formation, launch, and venture funding. He also founded Destination Startup®, a collaboration of 15 research universities and national laboratories to showcase cutting edge innovations in the Rocky Mountain/Desert Southwest region; over $700M in venture, angel and grant funding raised through Q2 2024. Stephen received a B.A. in Economics from the University of Denver, and a Master's of Public Administration from the University of Colorado Denver.

Join us at the second annual Life Science Showcase on Thursday, July 18th.

This pivotal event aims to highlight Vanderbilt's pioneering research and development in combating infectious diseases, underscoring the urgent need for innovation in this field. By facilitating a collaborative platform, the Vanderbilt Life Science Showcase seeks to enhance Nashville's stature as a Life Sciences Hub, engaging key stakeholders from the life sciences industries, economic development organizations, and venture groups alongside Vanderbilt researchers.

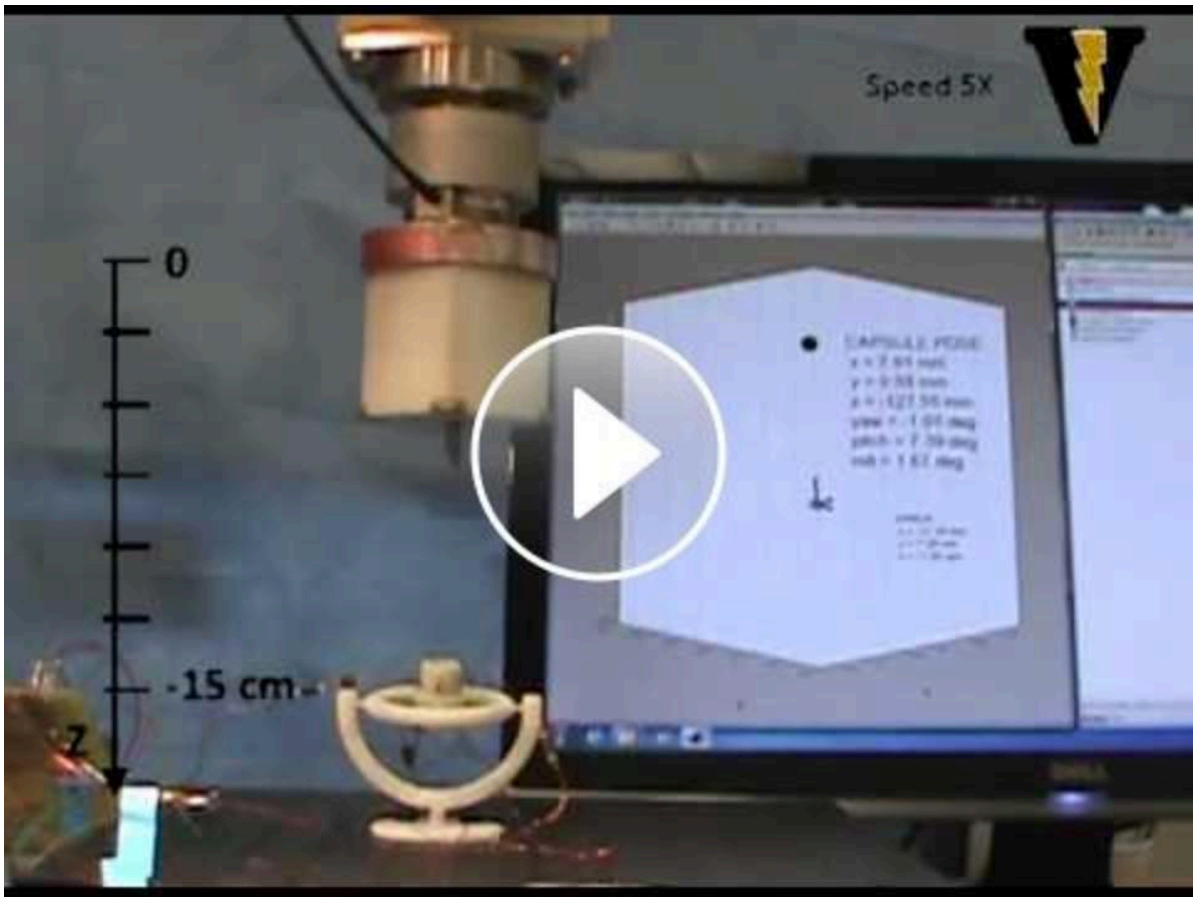
Learn More

Five Vanderbilt Technologies Earn Patent Protection in May

Patent #	TITLE
11,974,889	Variable Rigidity, Conformable Apparatus for Non-Invasively Affixing Surgical Fiducials and Surgical Tools to Patients
11,980,369	Transcatheter Device and Minimally Invasive Method for Constricting and Adjusting Blood Flow through a Blood Vessel
11,980,563	Wearable Assistance Devices and Methods of Operation
11,990,222	Patient Customized Electro-Neural Interface Models for Model-Based Cochlear Implant Programming and Applications of Same
11,992,520	Human Monoclonal Antibodies to Staphylococcal Aureus Isd Proteins and Uses Thereof

Technology Spotlight:

Real-time Detection of Position and Orientation of Wireless Endoscopy Capsule using Magnetic coupling



Vanderbilt researchers have developed a new system to detect the position, orientation, and pressure exerted on surrounding tissues of a wireless capsule endoscopy device. Magnetic coupling is one of the few physical phenomena capable of transmitting actuation forces across a physical barrier. Magnetic manipulation has the potential to make surgery less invasive, by allowing untethered miniature devices to enter the body through natural orifices or tiny

incisions, and then maneuver with minimal disruption to healthy tissue. In order to accomplish this goal, the pose (position and orientation) of the medical device must be available in real time. The method detailed here aims to accomplish this task.

Technology and IP Status:

Pending US Application: US20150342501 A1

Learn More

Monthly Interactions

Below is a sampling of the interactions that have taken place in our office and with our staff over the last month.

EXECUTED

- Executed an exclusive license with Mobius for the transit system optimization code and patent rights created by Abhishek Dubey and others in the Vanderbilt University Institute for Software Integrated Systems (VU-ISIS)
- Executed a CDA with a European venture builder around the technology for pharyngeal phenotyping with high-resolution manometry, created by Dave Kent from the Department of Otolaryngology and Daniel Fabbri from the Department of Biomedical Informatics
- Collaborated with industry, government, and university partners to submit multiple Transportation Network Growth Opportunity (TNGO) discovery proposals designed to spark new research and innovation in the mobility and automotive sector in Tennessee

- Executed an exclusive license agreement with Xylyx Bio for a xenogeneic cross-circulation platform (see article above for more information)
- Executed a site license agreement with a medical school for the **STAT™ Training Site License, for implementation STAT (Screening Tool for Autism in Toddlers & Young Children)** developed by Wendy Stone and colleagues at **Peabody College**
- Executed CDA with local entrepreneurs to assess technology developed by Katherine Aboud from **Peabody College**
- Executed three non-exclusive licenses with a research tool company for technologies created by Craig Lindsley from the **Warren Center for Neuroscience Drug Discovery (WCNDD)**
- Executed a non-exclusive license with a research tool company for a technology created by Charles Manning from the **Department of Radiology**
- Executed a non-exclusive license with a research tool company for a technology created by Dave Weaver from the **Department of Pharmacology**

MARKETED

- Held a call with the President of TenU, the international collaboration for effective practices in research commercialization, to discuss their latest publication on software licensing
- Discussed the Vanderbilt Assessment of Leadership in Education (VAL-ED) Principal assessment tool with Vanderbilt's licensee, Resonant Education, and discussed plans for potential future expansion and development of the tool with Ellen Goldring and Jason Grissom of **Peabody College**
- Discussed licensing of patent and software rights with Jeff Dendy of the **Division of Cardiovascular Medicine** for the software and algorithms he has created for automating measurements in cardiac MRI
- Under the **Office of Research and Innovation**, Vanderbilt University sponsored the **Intelligent Transportation Society (ITS) of Tennessee's 2024 Annual Meeting**, which brought together leading experts from

academia, industry, and government to discuss the challenges and opportunities facing the transportation sector

- Held a meeting with a large pharmaceutical company to discuss their interest in novel small molecules targeting the 5HT-2b receptor to treat scleroderma, developed by Dave Merryman and colleagues from the **Department of Biomedical Engineering** and Craig Lindsley and colleagues from the **Department of Pharmacology** and the **WCNDD**
- Met with a large orthopaedic medical device company to discuss their interest in a novel knee implant developed by J. Ryan Martin from the **Department of Orthopaedic Surgery**
- Met with eCential Robotics, a surgical robotics company that is moving their North American HQ to Nashville
- Met with a large medical supply company to explore a potential collaboration around a wound healing technology developed by Wesley Thayer in the **Department of Plastic Surgery** and Leon Bellan in the **Department of Mechanical Engineering**
- Met with Dr. Micheal Golinko regarding the commercialization of the standardized photo app software developed by Micheal Golinko from the **Department of Plastic Surgery** and VUMC Health IT colleagues
- Met with a venture accelerator to discuss commercialization of technologies developed by Piran Kidambi in the **Department of Chemical and Biomolecular Engineering**
- Held introductory discussions with a PI from **VU-ISIS** regarding the formation of a NEWCO based on Generative AI technology under development
- Met with Lisa Lancaster from the **Department of Medicine** and Kyle Ulses to initiate licensing discussion for the AutoO2 technology via startup Respiro
- Met with Aditya Nanda, researcher in the **Department of Biomedical Engineering** to discuss a suite of software applications and its commercialization via a startup Karabella Ventures
- Met with Minnow Ventures and attended reception sponsored by Project Healthcare

- Met with Deerfield Discovery and Development liaison to discuss project sourcing strategies for Ancora Innovation
- Developed Investment Team pitch presentation for technology from Larry Marnett from the **Department of Biochemistry** and Trevor Penning from UPenn
- Met with Industry Engagement and **WCNDD** scientists to discuss project concept ideas for submission to industry calls for proposals
- Promoted New Ventures projects with Nashville Angel Investors
- Met with Greentown Labs to discuss potential Vanderbilt collaborations
- Discussed a license and future clinical trials for the **Drug Repurposing program (ADDRI)** with a pharmaceutical company
- Discussed with a health-tech startup a license to technology developed by Ed Chekmenev formerly from the **Department of Radiology**
- Held call with a pharmaceutical company licensee interested in continuing sponsored research at **the WCNDD**
- Executed multiple licenses to a biotech company developing the therapeutic antibodies for the treatment of food allergies developed by Scott Smith from the **Department of Pathology, Microbiology and Immunology**
- Held meeting with a biotech company interested in licensing anti-viral therapeutic antibodies developed by James Crowe from the **Vanderbilt Vaccine Center**
- Held diligence call with a pharmaceutical company interested in the acute kidney injury biotherapeutic developed by Lauren Woodard of the **Division of Nephrology and Hypertension**
- Held call with a vaccine company interested in the genome editing technology developed by Matthew Wilson of the **Division of Nephrology and Hypertension**
- Held license and sponsored research negotiations with a biopharmaceutical company interested in the therapeutic compounds to treat neurodegenerative disease developed by Craig Lindsley and **the WCNDD**

- Held license with a pharmaceutical company interested in the therapeutic compounds to treat neurodegenerative disease developed by Craig Lindsley and **the WCNDD**
- Held a diligence call with a pharmaceutical company interested in the antibiotic compounds developed by Brian Bachmann from the **Department of Chemistry**

ATTENDED

- Attended the “Transit Conversation” with Nashville Mayor Freddie O’Connell discussing his plans to improve mobility and transit funding through the “Choose How You Move” program
- Attended the **Tennessee Valley Corridor (TVC) 2024 Summit** hosted on campus. The annual national summit promotes initiatives to advance the TVC’s mission and leadership, and encourages on-going collaborations in national security, energy, environment, science, space, transportation, education, and workforce development
- Attended an Innovation Hub Summit in Chapel Hill, NC aimed at exploring ways to develop innovation intersections that allow for stronger engagement regionally with industry partners
- Attended the **Warren Center of Neuroscience Drug Discovery** open house
- Attended the **Vanderbilt Center for Stem Cell Biology (VCSCB) 2024** symposium
- Attended the **Vanderbilt-Ingram Cancer Center (VICC) 25th Annual Scientific Retreat**
- Attended the **Vanderbilt Diabetes Day 2024**
- Attended annual **Vanderbilt Ingram Cancer Center** Scientific Retreat
- Attended Rivervest Ventures visit to campus
- Attended LaunchTN's Summer Open House
- Attended 3rd Thursday Happy Hour at the Nashville Entrepreneur Center

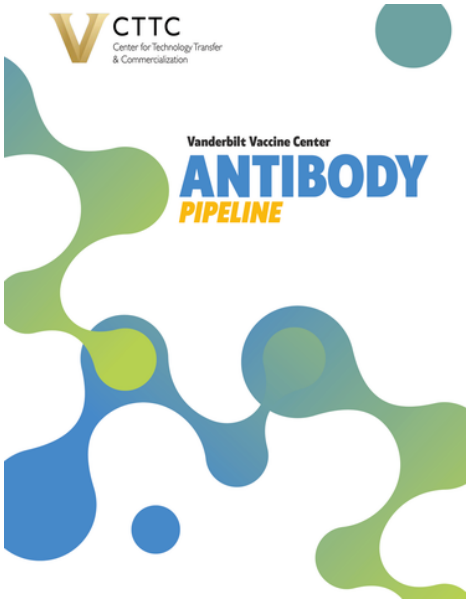
- Attended InFlight Showcase at the Nashville Entrepreneur Center
- Attended Vanderbilt University's Spring Staff Assembly

PARTICIPATED

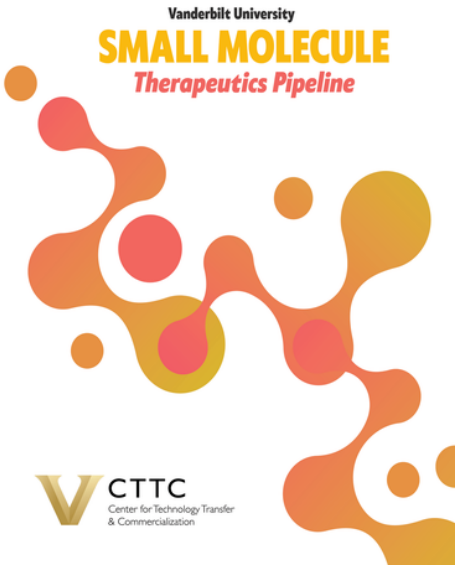
- Hosted a global automotive company on campus for a multi-day workshop to explore opportunities in the mobility and transportation space
- Participated in an NSF-sponsored Roundtable on Intellectual Property and Licensing in Partnerships to help find common ground on IP terms related to NSF-funded projects with industry and academia
- Presented student award at the VU School of Engineering Dean's Award Ceremony
- Participated SOM: Basic Sciences in Pilot Ignition Fund application review
- Held Q1/2 Ancora Innovation Joint Steering Committee Meeting
- Volunteered as Staff Marshalls for Vanderbilt University Commencement
- Participated in Mid-South REACH Internal Advisory Committee Orientation
- Hosted Mid-South REACH: RTI International Onsite Visit
- Hosted Entrepreneur In Residence Monthly Meeting

View past issues of Tech Connect here!

Technology Pipelines



View our updated [Vanderbilt Vaccine Center Antibody Pipeline.]



View our updated [Small Molecule Therapeutics & Companion Diagnostics Pipeline.]

View our updated [Medical Device Pipeline.]

View All Vanderbilt Technology Pipelines

www.vanderbilt.edu/cttc

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