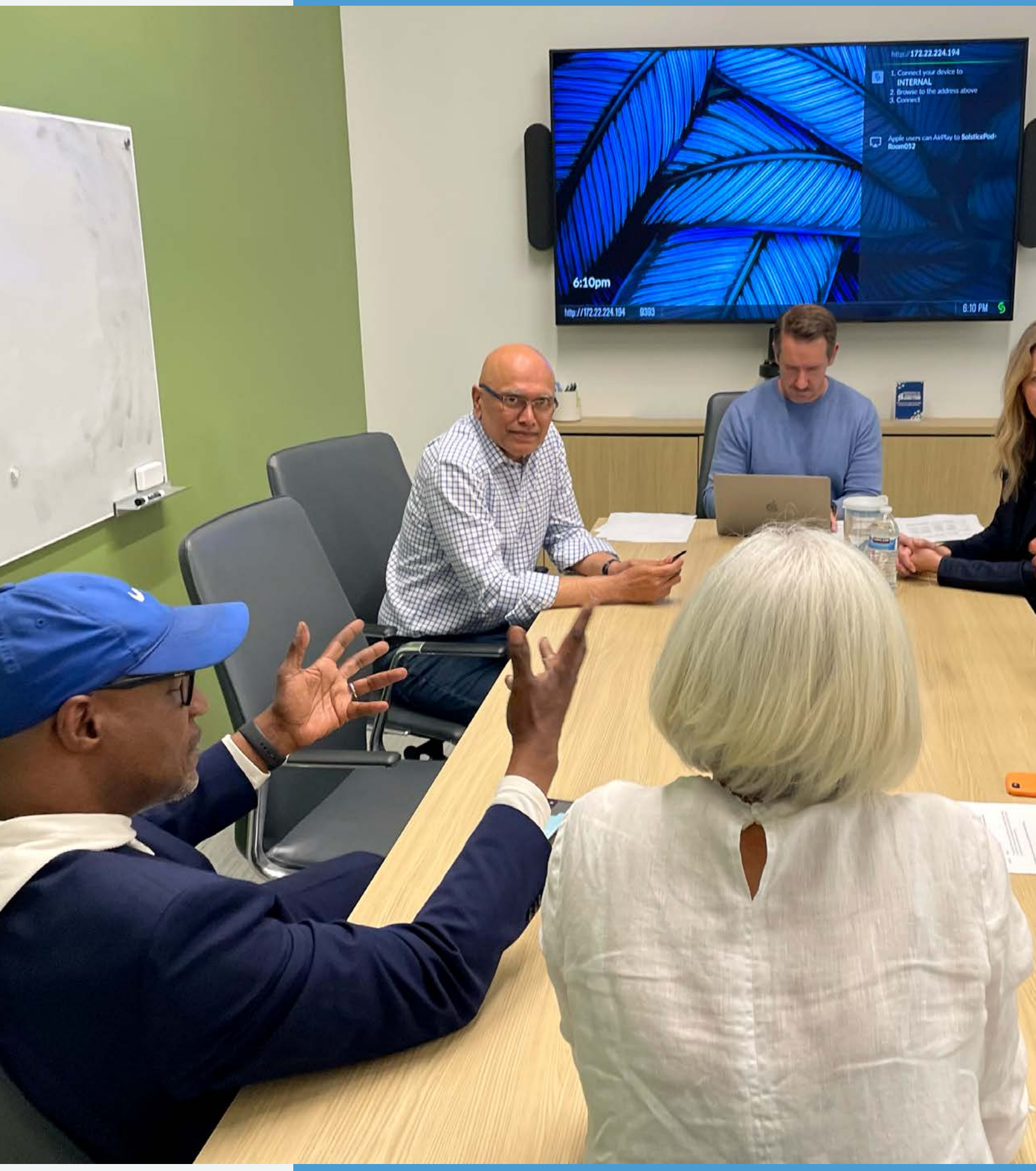
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3.
Innovation Gap Funding

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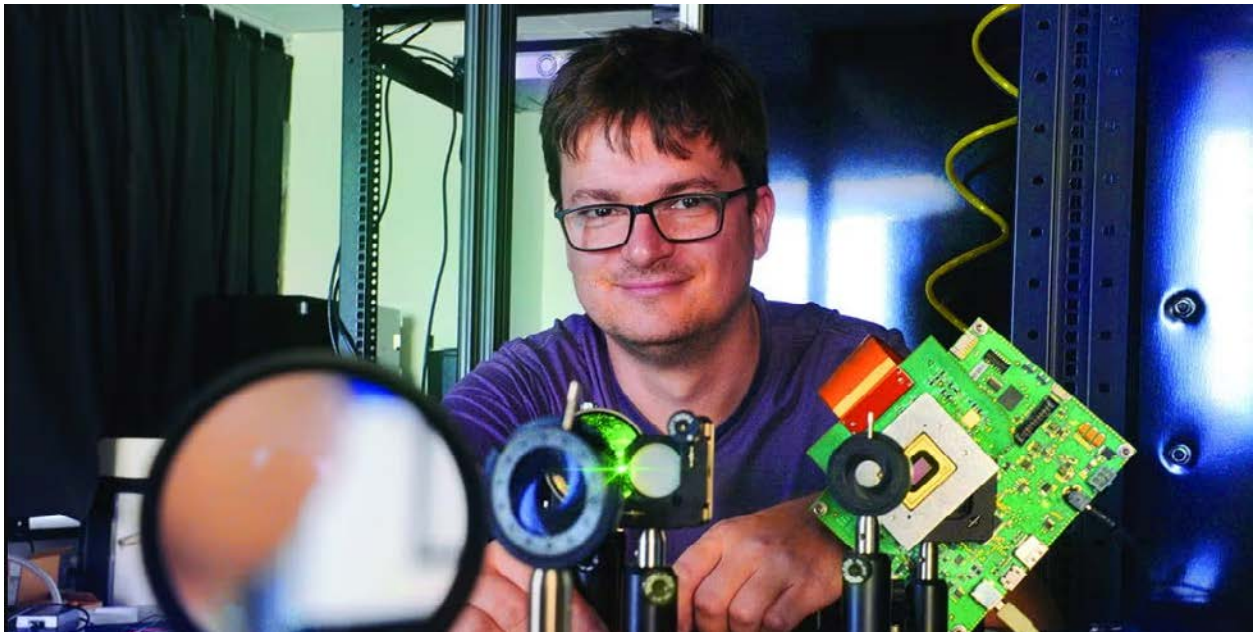
Innovation gap funding is critical to bridge the divide across academic research, valuable ideas and real-world application. These funds are essential for moving early-stage ideas, prototypes and research discoveries toward commercialization and impact. This support allows emerging entrepreneurs and founders to validate ideas and technologies, de-risk innovations, build prototypes or minimum viable products (MVPs), perform customer discovery and market research, recruit key talent, and position themselves for larger investments and revenue generation — key steps in reaching the marketplace or other broad-scale implementation.



Nicolas Pégard's lab helps neuroscientists tackle research challenges with custom-designed optical technology. He is co-founder of Carolina Instruments, a startup focused on developing eye-tracking technology to improve mental health treatment. The company received a KickStart Commercialization Grant Award in FY25. Photo courtesy of Donn Young.

IMPACT AT A GLANCE

NEARLY 2,000

STARTUPS AND TRANSLATIONAL PROJECTS FUNDED

UNC-based innovation gap funding has supported approximately 1,925 startups, translational research projects, and technologies developed by faculty, staff, students and alumni (cumulative).

100+

VENTURES AND INNOVATION PROJECTS FUNDED AND THRIVING IN FY25

Gap funding supports novel faculty and student projects ranging from therapeutics, diagnostics and devices to social projects serving the public good.

$117 MILLION

IN UNC-CHAPEL HILL INNOVATION GAP FUNDING SUPPORT

UNC-Chapel Hill programs have provided approximately $117 million in all-time innovation gap funding support, including more than $5 million in FY25.

285X MORE

TOTAL FUNDING RAISED BY UNC STARTUPS VS. UNC-CHAPEL HILL GAP FUNDING PROVIDED

Startups receiving innovation gap funding and/or in-kind program support from UNC-Chapel Hill have raised more than $33 billion in all-time funding — 285-fold more than the $117 million in UNC-Chapel Hill gap funding provided.

20X MORE

TOTAL FUNDING RAISED BY CAROLINA ANGEL NETWORK (CAN) STARTUPS VS. CAN INVESTMENTS RECEIVED

$628.7 million in total funding raised by Carolina Angel Network portfolio companies — 20-fold more than the $31.7 million invested by CAN members.

MEASURING THE IMPACT OF UNC INNOVATION GAP FUNDING

BUILDING ON CAROLINA RESEARCH FUNDING AND RESULTS

Innovation gap funding builds upon the significant return-on-investment universities deliver on the research funding they receive. Looking broadly at the economic impact of federal biomedical research funding, a United Medical Research (UMR) analysis found that in FY24 the National Institutes of Health (NIH) awarded $36.94 billion in extramural research funding, which directly and indirectly supported more than 400,000 jobs and produced nearly $95 billion in new economic activity nationwide. According to the study, every $1 dollar of federal research funding resulted in $2.56 of economic activity. Focusing specifically on the impact of UNC-Chapel Hill research, the Office of the Vice Chancellor for Research cited this 2024 study from United for Medical Research, noting that Carolina creates 6,000 jobs and $1.4 billion in economic impact from its $600 million NIH portfolio. The University's contributions are part of an overall $2.3 billion NIH investment in North Carolina that delivers some of the highest in-state economic returns in the nation. Those grants and contracts directly supported over 25,000 jobs and spurred $5.34 billion in economic activity in North Carolina in FY23.

THE ROLE OF INNOVATION GAP FUNDING

Beyond research funding, innovation gap funding provided by several UNC-Chapel Hill programs helps promising ideas and projects survive the "ditch of death," the widely cited funding gap between academic research and commercial readiness where promising university innovations often stall due to a lack of translational support. Traditional research grants don't fund product development, and investors typically wait until technologies are de-risked, leaving many ideas stranded without a path to market. Innovation gap funding at Carolina helps fill this void so that faculty, staff, students and alumni receive the early support they need to advance valuable technologies and ventures.

UNC-Chapel Hill developed the Innovate Carolina Data Intelligence Hub, a proprietary tool and national model for startups impact analysis and reporting, to assess the impact created by UNC-affiliated ventures. These include ventures that receive UNC-based impact funding and in-kind program support, many of which go on to raise additional capital. Several types of ventures receive funding and other forms of in-kind support:

- **Student- and Alumni-Founded Ventures.** Many ventures and entrepreneurial projects created by students and alumni receive funding support — often via student seed funds or pitch competitions. The nature of these ventures varies widely. Most often, these student- and alumni-founded ventures involve business-to-business and business-to-consumer companies or nonprofits that are not based on research and intellectual property.
- **Faculty- and Staff-Founded Ventures.** Faculty and staff also receive funding for ventures and projects with market potential via commercialization grants and awards. These ventures most often involve translational projects, research-driven innovations and/or intellectual property. Innovation gap funding provided by UNC-Chapel Hill programs to these ventures also makes a significant difference in the ability of these ventures to accelerate, develop, scale and attract additional capital.

OVERALL IMPACT OF INNOVATION GAP FUNDING ON UNC-BASED STARTUPS

- **1,925 startups, technologies and translational projects funded by UNC-based innovation gap funding.**
- **$117 million in gap funding provided by UNC-based innovation programs.**
- **$33 billion in total capital raised by 1,041 UNC startups receiving UNC-based gap funding and/or in-kind program support.**
- **285 times more in total funding raised compared to UNC gap funding provided.**

Combined, UNC-Chapel Hill programs have provided approximately $117 million in cumulative innovation gap funding to 1,925 UNC-affiliated startups, technologies and translational research projects that demonstrated market and human impact potential. Looking specifically at startups, 1,041 ventures have been supported by these funded efforts and/or other in-kind programs and services provided by the University. These startups have attracted at least $33 billion in total funding — approximately 285-fold more than the $117 million in innovation gap funding provided by UNC-affiliated programs.

INNOVATION GAP FUNDING BY CATEGORY

Innovate Carolina and several innovation-focused units and programs at UNC-Chapel Hill offer multiple modes of funding support. Each category of funding — and the individual funding programs within them — is designed to meet the level and type of support faculty and students need at various stages of their entrepreneurial journeys. The grant value ranges described within each category are approximate, as Carolina's approach to grant funding ensures flexibility to adapt to specific and emerging opportunities.

JUST-IN-TIME GRANTS

Up to Approximately $25,000 Per Grant

These small, rapid-deployment grants support immediate, time-sensitive needs that help researchers and student teams overcome short-term roadblocks and keep momentum in exploring nascent ideas.

1789 STUDENT VENTURE FUND

- **$174,834 in cumulative support: 163 awards to 137 student teams and startups ($44,500 to 37 in FY25).**
- **$2.02 million in total funding raised — nearly12 times more than funding received.**
- **67 active ventures earning $7.9 million in annual revenue and creating 5,676 jobs (FY25).**

The 1789 Student Venture Fund, managed by Innovate Carolina, provides early seed funding to help Carolina students advance their earliest-stage ventures. Jim Kitchen, Professor of the Practice in Entrepreneurship at Kenan-Flagler Business School, established the fund in 2020. Proceeds from Kitchen's undergraduate entrepreneurship course — in which students launch businesses and generate revenue — support the 1789 Student Venture Fund. Selected student startups use the funding to support prototyping, marketing, software, travel and other avenues that help them move their products and services forward.

Activity and Impact: In FY25, the fund provided $44,500 to 37 student ventures, contributing to the $174,834 in cumulative support for 137 Carolina student entrepreneurial teams and startups. Since the fund's inception, funded startups have raised more than $2 million in total funding — nearly 12 times more than the dollars they received from the 1789 Student Venture Fund. In FY25, 67 active ventures earned $7.9 million in annual revenue and created 5,676 jobs.

Examples of student ventures receiving funding in FY25 include:

- **SeCURE Technologies.** Designs medical devices that automate the extraocular muscle function test (eye movement tests), improving diagnostic efficiency.
- **WeyeZE.** A self-correcting glasses kit that allows people to get a personalized pair of corrective glasses within minutes.
- **Centible.** Promotes financial awareness in students by analyzing daily spending habits via an easy-to-use mobile app.
- **Yoomi Health.** A digital practice management solution for physical therapists to streamline operations, support rehab and boost reimbursement.

JOAN AND CHESTER LUBY PITCH COMPETITION

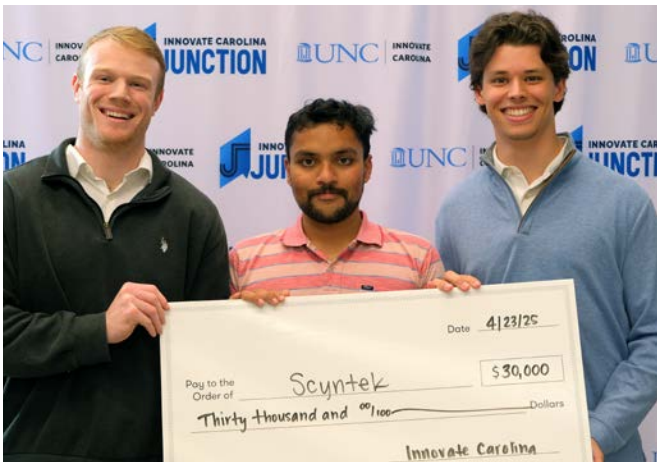
- **$187,000 in total funding provided to 16 student startup teams ($95,000 to five in FY25).**
- **$819,400 in total funding raised by Luby Pitch Competition student ventures (since 2024).**

Launched in 2024 and made possible by the Joan and Chester Luby Charitable Trust, the Joan and Chester Luby Pitch Competition provides significant funding to top student ventures at UNC-Chapel Hill. In July 2025, Chester Luby passed away. His generosity and support of student innovators at Carolina will always be remembered.

Activity and Impact: In its first two years, the competition provided a combined $187,000 in total funding to 16 student startup teams. In FY25, 18 teams applied and 10 finalists participated in the live pitch competition in April. Of the finalists, five teams received a total of $95,000 in grant awards:

- **Scyntek.** Developing a home-use device to detect deep vein thrombosis post-surgery, enabling early intervention and improving patient safety between hospital discharge and follow-up care.
- **STEM PLUG.** Makes STEM fun and accessible for youth by combining storytelling, robotics, and real-world learning to spark confidence and career interest.
- **Chapel Chill Tub Club.** A wellness venture that creates a modern social experience through cold plunges and saunas, promoting recovery, mindfulness and community resilience.
- **BuckIT.** A budgeting app tailored to college students, using AI to help them manage finances, track goals and make smarter daily spending choices.
- **Ember Learning.** An AI-powered classroom assistant that automates repetitive teaching tasks, helping educators save time, reduce burnout and focus on instruction.

Although the competition is only in its second year at Carolina, student teams are already gaining traction. Since FY24, winning ventures have raised $819,000 in total funding — more than four times more than funding received via the competition.



Co-founders of Scyntek (left to right): Josh Henderson, Vignesh Sriram, Bryce Menichella. This student-founded company, which is developing a noninvasive device for the early detection of deep vein thrombosis, placed first in the 2025 Joan and Chester Luby Pitch Competition.

GILLINGS SCHOOL PITCH COMPETITION

- **$16,350 in cumulative cash awards to nine student venture teams ($5,450 to three in FY25).**
- **$526,497 in total funding raised — 32 times more than awarded by the competition.**

The Gillings School Pitch Competition, launched in 2020 and overseen by the school's Innovation@Gillings team and entrepreneur-in-residence Donald Holzworth, gives entrepreneurial-minded students and recent alumni of the school opportunities to explore creative solutions to public health challenges. Students are paired with mentor coaches to help prepare pitches and shape ideas into practical and financially sustainable ventures. Based on post-competition survey responses, 100% of student participants reported learning something new to advance their venture ideas.

Activity and Impact: In its first three installments, the bi-annual competition provided $16,350 in cash awards to nine student venture teams, including $5,450 awarded to three teams in FY25:

- **Sensible.** A device that non-invasively screens for cervical cancer at a low cost.
- **Olea Health.** Expanding health care accessibility by providing AI-driven, SMS-based health education and preventive care solutions.
- **MedFam.** Provides discounted lodging rates to families in emergency medical situations through hospital and hotel partnerships. This team also received 1789 Student Venture Fund support.

Student teams thrive years after the competition. Five of 10 student teams that participated in the inaugural competition in 2020 are still active, and startups receiving Gillings School Pitch Competition support have raised $526,497 in cumulative funding — 32 times more than funding they received through the competition. LiRA (2022 second-place team) was acquired in 2025 for its technology that improves communication for voice-impaired patients.

CAROLINA PITCH FEST

- **$43,000 in funding awards to 37 student ventures ($25,000 to four in FY25).**
- **350 student venture teams engaged in business pitch competitions (since 2017).**
- **More than $810,000 in total funding raised by student ventures — 19 times more than the Carolina Pitch Fest funding provided.**

The Carolina Pitch Fest, launched and hosted by Kenan-Flagler Business School, is an entrepreneurial pitch competition that gives students with startup ideas the opportunity to pitch to a panel of judges. Formerly known as the Carolina Challenge and reimagined in its current form, this pitch competition is open to emerging entrepreneurs and those passionate about solving problems.

Activity and Impact: Since 2017, Carolina Pitch Fest has given more than 350 student venture teams the opportunity to pitch their ideas, while awarding over $43,000 to 37 winning teams.* These teams have raised $812,076 in total funding — 19 times more than the funding they received through Carolina Pitch Fest. In FY25, Carolina Pitch Fest awarded a total of $25,000 to four student venture teams:

- **DeAP Learning.** Learning platform with a built-in AI assistant that acts as a personal tutor for students and classroom assistant for teachers. This team participated in the Launch Chapel Hill summer accelerator for student ventures and received funding from Innovate Carolina's 1789 Student Venture Fund.



Student venture DeAP Learning notched a first-place finish and won a cash prize at the 2024 Carolina Pitch Fest hosted by Kenan-Flagler Business School. The team also participated Launch Chapel Hill's student summer accelerator in 2025. Photo courtesy of Kenan-Flagler Business School.

- **IRI-Sys.** Groundbreaking database that consolidates information on cosmetic ingredients, cross-referencing them with regulations from more than 70 countries. IRI-Sys won additional funding through the Luby Pitch Competition and 1789 Student Venture Fund.
- **WeyeZE.** A self-correcting eyeglasses kit that enables people to get a personalized pair of corrective glasses within minutes. WeyeZE also won funding through the Luby Pitch Competition and 1789 Student Venture Fund.
- **Centible.** Budgeting app built for college students, offering real-time insights into spending, categorized expenses and account balances. Centible also received an award from the 1789 Student Venture Fund.

* *Data is based on available records (2017-2025). Carolina Pitch Fest was launched by the Kenan-Flagler Business School in FY25 as a re-imagined edition of a previous competition (Carolina Challenge, launched in 2011 and held through 2020). Complete data records are not available prior to 2017.*

INSTITUTE FOR CONVERGENT SCIENCE DIRECTOR'S FUND

- **$142,000 awarded to four projects (since 2019).**
- **Case study: Equipment support for traumatic brain injury translational project at NC military base.**

The Institute for Convergent Science (ICS) Director's Fund helps faculty pursue entrepreneurial and translational excellence by removing financial or logistical barriers that could delay critical work. These grants provide rapid, flexible support for high-priority needs that fall outside standard funding channels.

Activity and Impact: Grants range from $10,000 to $30,000 per year. A notable example involved Jason Mihalik, PhD, Professor of Exercise and Sports Science and Director of the Matthew Gfeller Center. Mihalik's work on traumatic brain injuries required the installation of a medical-grade refrigerated centrifuge at Fort Bragg to collect samples from warfighters beginning special forces training. The $15,000 Director's Fund award ensured the equipment arrived onsite before a larger Department of Defense grant kicked in, allowing the project to stay on schedule and research outcomes to remain uncompromised.

CATALYST GRANTS

Up to Approximately $50,000 Per Grant

Catalyst grants help launch early-stage innovations by funding proof-of-concept work, minimal viable product (MVP) development and initial market validation. These grants serve as a critical first push that transforms promising ideas into investable opportunities.

TRANSLATING INNOVATIVE IDEAS FOR THE PUBLIC GOOD (TIIP) AWARDS

- **$328,000 for seven projects driving public benefit in North Carolina ($178,000 to four in FY25).**
- **Two of four projects from FY25 are pursuing commercialization and market research.**

The Translating Innovative Ideas for the Public Good (TIIP) Awards launched as a key initiative in 2023 by Innovate Carolina's Design and Innovation for the Public Good (DIPG) team. The TIIP Awards support innovative projects that embody UNC-Chapel Hill's mission to drive research, invention and innovation for public benefit in North Carolina. The awards provide up to $50,000 in funding support per project. They are designed to move faculty and staff ventures or projects with public good goals into commercialization pipelines by applying human-centered design in translational research — particularly to bridge academic ideas and community implementation.

Activity and Impact: During the first two years, the TIIP Awards provided $328,000 to seven projects, including $178,000 to four projects in FY25. Three of four projects awarded in FY25 are working on expanded human-centered design projects, with two of four following the path of commercialization and market research.

- **Community Co-Design for Street Medicine in Burke County.** Led by W. Oscar Fleming, DrPH of the Gillings School of Global Public Health, this initiative develops more effective street medicine practices for people experiencing homelessness in Burke County, NC. In partnership with Innovate Carolina's DIPG team and the Burke County Health Department, Fleming has engaged deeply with providers, public safety personnel, shelter staff, and unhoused individuals following Hurricane Helene in 2024 to assess medical gaps and needs. The team identified a critical need for

mobile, trauma-informed care that provides both physical and mental health services in private, respectful settings. The project addresses a specific gap in women's health care delivery — creating safe, closed-door spaces where women can access care for issues such as reproductive health and domestic violence.

- **Supporting Adolescents with Mental Health Concerns Through User-Centered Development of a Mindfulness-Based Parenting Resource.** Desiree Murray, PhD, a clinical psychologist and prevention scientist at the UNC Center for Health Promotion and Disease Prevention, is leading a project focused on supporting adolescents with mental health concerns through the user-centered development of a mindfulness-based parenting resource. This initiative seeks to equip parents with tools to better manage and support their children's mental well-being.
- **Building an Adaptive Mobile Intervention to Address High-Risk Alcohol Use.** Melissa Cox, PhD, from the Gillings School of Global Public Health is building an adaptive mobile intervention to address high-risk alcohol use. Cox, a behavioral scientist whose research focuses on the social ecology of youth and young adult alcohol misuse, is using her project to create a mobile technology approach that provides personalized interventions, aiming to reduce the incidence of alcohol-related harm through timely and targeted support.
- **Enhancing Juvenile Offender's Reintegration into Communities Through Prison-based Financial Interventions.** David Ansong, PhD, Associate Professor at the School of Social Work, leads a project dedicated to using prison-based financial interventions to help juvenile offenders better reintegrate into communities. This pilot study seeks to improve financial literacy and stability among young offenders, providing them with crucial skills to facilitate successful reintegration and reduce recidivism.

KICKSTART COMMERCIALIZATION GRANT AWARDS

- **$3.2 million provided to 76 startups ($236,000 to six in FY25).**
- **Nearly $1.4 billion in total funding raised — approximately 435 times more than the grant awards provided by KickStart.**
- **48 active companies earned $79.7 million in annual revenue and created 301 jobs in FY25.**

The KickStart Commercialization Grant Awards, managed by Innovate Carolina and launched in 2010, provide up to $50,000 in non-dilutive funding to help UNC-affiliated startups with active licenses de-risk University-owned intellectual property and move it closer to commercialization. Awarded twice annually, the grants support key technical or business milestones — such as prototype development, animal studies, or regulatory planning — to make technologies more attractive to investors or competitive for federal SBIR/STTR funding.

Activity and Impact: Since 2010, the grant awards have provided nearly $3.2 million to 76 startups (85 awards), which have raised almost $1.4 billion in total funding — approximately 433 times more than the grant awards provided by KickStart. During FY25, active companies earned $79.7 million in annual revenue and created 301 jobs. KickStart provided $236,000 in grant awards to six new ventures during FY25:

- **AmarnaBio.** Using computational algorithms, including AI/machine learning, to gain insights into genomic dark matter for biomedical applications and precision medicine.
- **Carolina Instruments.** Novel optical and physiological sensing devices that help neuroscience researchers and clinicians gain deeper insights into brain function and behavior.

- **Delgen Biosciences.** Polymer platform for next-generation drug delivery and precision medicine. Its initial product is an ophthalmic drug for age-related macular degeneration patients.
- **LevoSens.** Innovative biosensors for monitoring levodopa, the primary therapy in treating Parkinson's disease, enhancing control and restoring freedom in patients' daily lives.
- **Persistence Therapeutics.** Implantable, biocompatible sponges the size of a dime that mimic a synthetic lymph node and provide rapid, potent, and cost-efficient delivery of anti-cancer cells.
- **Tripill Biotechnology.** Developing targeted radionuclide therapeutic agents and cutting-edge linker technologies that have led to the identification of promising leads targeting diverse biomarkers in oncology. These advancements hold potential for improving cancer treatment.

INNOVATION PILOT AWARDS: UNC CENTER FOR HEALTH INNOVATION

- **Over $2.1 million provided to 45 teams for innovative pilots (cumulative).**
- **$12.3 million in total follow-on funding raised — a sixfold leverage over funding awarded.**

Established by UNC Health and the UNC School of Medicine, the UNC Center for Health Innovation initiates, evaluates and supports the adoption of disruptive, patient-centered innovations in the delivery and financing of health care. The Center provides rapid assessment, coordinated facilitation, program management, partnership development and funding for innovation.

Activity and Impact: Since 2013, the Center has awarded over $2.1 million to 45 teams to support innovative pilots aimed at disrupting the delivery and financing of health care, while improving health outcomes and lowering costs. Previous award winners leveraged pilot data and outcomes to obtain over $12.3 million of additional funding — a sixfold leverage over funding awarded — while generating over 30 publications.

In FY25, the Center awarded $185,000 to four projects:

- **Artificial Intelligence Enhanced Electrocardiography for Identifying and Addressing Premature Cardiac Aging.** PI: Faisal Syed BSc (Hons), MBChB (Division of Cardiology).
- **Cardiac Proteins Released into the Blood as Novel Biomarkers of NSTEMI in the Emergency Department.** PI: Ming Ding ScD, MBBS (Department of Emergency Medicine); Co-PIs: Jessica Zegre-Hemsey PhD, RN (School of Nursing), Michelle Meyer PhD (Department of Emergency Medicine).
- **Improving Hospitalization Experience for Patients with Parkinson's Disease at UNC Health.** PI: Nina Browner, MD (Department of Neurology).
- **Piloting the Use of Advanced AI for Physical Therapy Treatment.** PI: Rachelle Alpern MBA, MHA, UNC Advanced Care at Home; Co-PIs: Brian Trabulsi MPT, COMT, UNC Health Therapy Services; Dierdra Ricks, UNC Health Acute Care and Hospital Based Outpatient Services; Janet Prvu Bettger, ScD, MSc, FAHA, UNC Physical Medicine and Rehabilitation.

NC FASTTRACS AWARDS

- **$1.3 million supporting 30 translational projects (cumulative).**
- **Four startups launched (cumulative).**
- **FY25: six new patent applications, three I-Corps teams and one new startup launched.**

FastTraCS, launched in 2017 with support from the NC TraCS Institute, is UNC-Chapel Hill's MedTech incubator focused on accelerating health care innovation. The program specializes in medical device design and development, with strengths in women's health, interventional technologies, and translational AI. FastTraCS builds cross-disciplinary teams by pairing health care providers with its in-house engineering staff to invent, prototype, and commercialize new medical devices that improve patient care and reduce costs.

Activity and Impact: Since the program's beginning, it has provided $1.29 million in awards to support 30 translational projects. Startup companies receiving FastTraCS support have raised $503,695 in total capital. In FY25, alone, project teams supported by FastTraCS filed for six patents, participated in three I-Corps teams, and launched a new startup company named Poppi Biotherapies, which is developing a drug delivery film and device for pain management in women.

CLINICAL AND TRANSLATIONAL SCIENCE (CTS) PILOT GRANTS

- **$18.4 million in pilot grants awarded to 940 translational science teams ($450,000 to nine in FY25).**
- **Two of nine awarded FY25 projects submitted for subsequent grants.**

The NC TraCS CTS Pilot Award Program supports investigation focused on understanding the scientific and operational principles underlying each step of the translational process, enabling advances that can apply to any disease or research area. The program is designed to explore innovative new leads, stimulate involvement from investigators in other disciplines, and provide initial support to establish proof of concept for promising clinical and translational science projects. For each annual CTS pilot grant cycle, NC TraCS awards up to eight grants of $25,000 to $50,000 direct costs.

Activity and Impact: NC TraCS has awarded 940 teams nearly $18.4 million in total CTS pilot grant support.* In FY25, NC TraCS awarded $450,000 to nine projects focused on a range of translational science topics. Some involved improving biospecimen collection pipelines, using ultrasound to assess muscle function in older adults and developing digital health tools for pediatric mental health crises. Other projects explored wearable technology for physical and mental health monitoring, novel models for testing inhaled therapies for respiratory diseases, gene expression analysis related to antiplatelet drug exposure, using AI to predict drug effects on cancer tumors and advancing science to inform future treatments for borderline personality disorder. Of the nine FY25 projects awarded, two have already submitted for subsequent grants.

* *CTS Pilot Program funds include matched dollars.*

GROWTH GRANTS

Up to Approximately $150,000 Per Grant

Growth grants provide mid-stage support to accelerate technical development, pilot programs and early commercial milestones. They provide support for de-risking and developing technologies, research, or ideas to levels where they become viable for technology transfer, licensing, or startup formation and growth.

INSTITUTE FOR CONVERGENT SCIENCE (ICS) AGILE GRANTS

- **$2.5 million in cumulative support providedto 16 translational project teams. ($435,000 to two in FY25).**
- **Three major pre-commercial milestones completed by project teams.**
- **Two of three completed AGILE projects on track for commercialization by end of 2025.**

Offered by Innovate Carolina's Institute for Convergent Science (ICS), Advance Great Inventions or Leave Early (AGILE) Grants provide internal funding — $100,000 (Phase 1) and $150,000 (Phase 2) — for faculty-led, pre-commercial research with strong commercial or societal potential. Structured around milestone-based funding, the grants prepare teams to launch startups, secure IP, license technologies, or drive societal impact. Projects, often led by postdocs, also receive ICS lab space, mentoring from ICS Faculty Fellows, project management, and market guidance. ICS and Innovate Carolina further connect teams with investors, industry partners and resources to accelerate translation and commercialization.

Activity and Impact: In FY25, ICS granted $435,000 to two translational research projects, contributing to nearly $2.6 million in cumulative support for 16 teams. AGILE teams have completed major pre-commercial milestones: two NSF I-Corps teams and one NIH Entrepreneurship Bootcamp. One team launched the startup Sorbenta, which has already raised $349,000 in funding. ICS has an initial 67% commercialization conversion rate with two of three completed projects on track for market launch by the end of 2025. Examples ICS AGILE projects include:



Dr. Jeffrey Stringer at the School of Medicine received AGILE grant funding from the Institute for Convergent Science to help develop a portable, low-cost, AI-enabled ultrasound system. The device is designed to reduce the need for trained medical staff, while improving maternal health in rural and under-resourced areas. Photo courtesy of Alyssa LaFaro, UNC Research.

- **AI-Guided Ultrasound for High-Risk Pregnancy.** This AGILE Grant–funded project tackles maternal health risks in rural and underserved areas lacking specialist care. Led by Dr. Jeffrey Stringer (Medicine), the team is creating a low-cost ultrasound system paired with AI, enabling non-specialist providers to perform diagnostic scans with a simple "blind sweep." The AI achieves clinician-level accuracy, giving women in communities like Bertie County, NC, earlier diagnoses and informed decisions — potentially saving lives through timely detection and treatment.
- **Brain Organoid Sensor "Hot Pocket."** This AGILE project addresses a major neuroscience challenge: recording high-quality signals from 3D brain organoids, miniature brain-like models grown from human cells. Standard 2D sensors barely contact these spheres, losing valuable data. Led by Jason Stein, PhD (Medicine) and Wubin Bai, PhD (Applied Physical Sciences), the team created a 3D "hot pocket" sensor array that envelops organoids for multidirectional recording. With AGILE Grant support, milestones are met, commercialization is near, and the innovation could transform neurodiagnostics and brain research.
- **Artificial Kidney (GENESIS).** The GENESIS project — Graphene Oxide Membranes for Portable Kidney Dialysis — is an effort to revolutionize kidney care with a low-cost, portable device. Led by Theo Dingemans, PhD (Applied Physical Sciences), Dr. Prabir Roy-Chaudhury (Medicine), and Orlando Coronell, PhD (Public Health), the team is creating ultra-thin polymer–graphene oxide membranes that filter toxins like urea while retaining vital proteins. Their goal is a backpack-sized dialysis device powered by blood pressure, reducing clinic visits and expanding access for 850 million people with kidney disease.
- **Blood Vessel-on-a-Chip (BVOC).** This team is developing a patient-specific diagnostic platform to detect kidney diseases in patients before they reach advanced or irreversible stages. Led by William Polacheck, PhD (Biomedical Engineering) and Dr. Prabir Roy-Chaudhury (Medicine), the team is engineering miniature blood vessels from patient-derived cells to model vascular conditions associated with dialysis. These organoid-based vessels mimic real human vasculature, enabling earlier and more precise disease detection. If successful, this platform could radically

improve preventative care for dialysis patients by identifying high-risk conditions long before symptoms appear.

- **PFAS Mitigation.** ICS partnered with the North Carolina Collaboratory to fund the PFAS Mitigation project, led by Frank Leibfarth, PhD (Chemistry) and Orlando Coronell, PhD (Public Health). The team developed an innovative ionic fluorogel resin that selectively captures and removes PFAS contaminants from water, offering solutions for both municipal systems and household filters. Their startup, Sorbenta, holds exclusive rights to commercialize the technology. With a recent Collaboratory investment, the NC Pure initiative is scaling testing of the sorbent resin as part of the statewide PFAS Testing Network, advancing efforts to make North Carolina's drinking water safer.

TECHNOLOGY DEVELOPMENT GRANTS

- **Nearly $1.3 million in total support for 26 Carolina-born technologies ($204,000 to two in FY25).**
- **Bolstering the research product pipeline — 42 UNC research-based products on market since 2006.**
- **High-impact projects: oncology drug targets, gene therapies and lung cancer treatments.**

Innovate Carolina's Office of Technology Commercialization (OTC) provides Technology Development Grants to advance the development of unlicensed University technologies to commercially relevant endpoints. Successful projects result in technologies that are prepared for commercial engagement and, preferably, licensing. These grants support many commercialization activities, including proof-of-concept and/or prototype development, technology validation, improving intellectual property related to a technology, or making improvements suggested by potential licensees.

Activity and Impact: Technology Development Grants support a growing pipeline of University technologies and the aim of moving them closer to the commercial market. As of FY25, 42 products based on UNC-Chapel Hill research have moved to the market since 2006 — averaging approximately two new Carolina research-affiliated products launched each year over the past two decades. In FY25, OTC provided $204,000 in grants to two project teams, contributing to the $1,268,926 in cumulative support for 26 Carolina-born technologies. Funded projects have advanced technologies with substantial industry interest and human impact potential. Examples include:

- **Oncology drug targets.** Developing an assay for drug screening and development of an oncology target, which attracted a commercial partnership and led to approximately $2 million in in-kind services. (Dr. William Kim, MD, Medicine/Oncology).
- **Gene editing and therapy applications.** Development of engineered Adeno-Associated Virus (AAV) inverted terminal repeats (ITRs) to enhance AAV production and therapeutic efficiency. ITs of AAV play a role in the virus' ability to replicate and effectively transfer therapeutic genes in gene therapy applications. These advancements hold promise for enhancing AAV production and gene editing for gene therapy applications. (Matthew Hirsh, PhD, Medicine/Gene Therapy Center)
- **Squamous cell lung cancer therapies.** A grant-enabled partnership with OpenBench to conduct virtual screens for small molecules that bind NSD3, in an effort to develop therapeutics to treat squamous cell lung cancer (Lindsey James, PhD, Pharmacy).

GILLINGS INNOVATION LABS AWARDS

- **Nearly $8 million invested in 44 projects ($595,000 to six in FY25).**
- **$332 million follow-on research funding — a 42-fold leverage over funding provided.**
- **Three startup companies launched, raising nearly $570,000 in total funding.**

Gillings Innovation Labs (GILs) at the Gillings School of Global Public Health accelerate the translation of public health discoveries into practice. They do this by supporting interdisciplinary teams, training future public health leaders, and fostering connections between academic researchers, communities, governments, and organizations.

Activity and Impact: GILs are made possible by the foundational 2007 Gillings Gift, which has invested nearly $8 million in 44 projects and led to $332 million in follow-on research funding — a 42-fold leverage over funding provided — and over 500 scholarly publications. Awarded on a two-year cycle, the most recent GILs were announced in FY24* and provided $595,000 in funding to six Gillings School faculty to pursue research using generative AI that focuses on solving real-world problems such as:

- Cervical cancer prevention.
- Scaling shared decision-making counseling for HIV prevention.
- Advancing brain disorder research.
- Mobile health and behavioral weight control interventions.
- Efficient air quality forecasts for vulnerable communities.
- Improving primary care via reinforcement learning and collective expert feedback.

Since their inception, GILs have resulted in three spinout companies: WaterSHED (water filters and sanitation; company exit); Aquagenx (easy-to-use water quality tests); Biodeptronix (measuring air toxicity for in-vitro testing). Startups receiving Gillings Labs grants have raised $568,668 in total funding.

* *Gillings Innovation Labs are awarded on a two-year cycle. In FY24, six two-years awards were funded, with projects starting in FY24, active in FY25, and concluding in FY26*



A 2025 graduate of UNC-Chapel Hill, Sasha Surkin founded the company WeyeZE (pronounced "wise") while she was an undergraduate student. WeyeZE received funding multiple innovation funding programs at the University, including the 1789 Student Venture Fund, Luby Pitch Competition, and Carolina Pitch Fest. Her startup is developing a personalized corrective-lens eyeglasses kit to improve access to quality vision care.

SCALING GRANTS

Approximately $150,000+ Per Grant

Scaling grants fuel the transition from prototype or early-stage technology to market-ready product by supporting accelerated translation, advanced product development, manufacturing and go-to-market execution. These larger investments are critical for helping translational projects complete commercial milestones and startups scale.

ESHELMAN INNOVATION

- **Approximately $35 million in support to 191 projects and companies ($2.1 million to six in FY25)**
- **$251 million in total follow-on funding, generating a 1:7 return ratio on Dr. Fred Eshelman's donation.**
- **2025 Autoimmune Summit convening leading researchers, clinician and industry partners.**
- **Startup Goldie Health launched, raising $1.85 million in additional capital (FY25).**

Eshelman Innovation advances the future of health care through two key capabilities: the Therapeutics Accelerator and the Venture Studio.

The Eshelman Innovation Therapeutics Accelerator identifies, funds, and develops promising drug discovery projects to address unmet needs in oncology, neuroscience, and infectious disease. The accelerator de-risks early-stage therapeutics by providing end-to-end translational support — from initial project consultation and study design to proof-of-concept validation. It aligns scientific strategy with industry needs, facilitates stakeholder engagement and connects innovators to a robust network of industry advisors. The program emphasizes transforming academic discoveries into investment-ready assets, bridging the gap between lab-based science and real-world medical impact.

The Eshelman Innovation Venture Studio conceives, builds and launches digital health startups that tackle major public health challenges like opioid use disorder and food insecurity. As a public-private partnership, the studio leverages Carolina research, talent and statewide networks to turn bold ideas into scalable companies. A cornerstone of this effort is Kairos, an AI-powered venture studio, which accelerates startup creation by combining generative AI tools with student and faculty expertise. This AI-enabled, student-powered model reduces startup costs and timelines.

Activity and Impact: Together, the Therapeutics Accelerator and Venture Studio programs have provided $35 million from the Eshelman gift to support 191 projects and companies,* driving innovation with both scientific rigor and entrepreneurial agility. Eshelman Innovation funds have generated $251 million in total follow-on funding, creating a 1:7 return ratio on Dr. Fred Eshelman's donation. During FY25, Eshelman Innovation provided nearly $2.1 million to support six translational projects and companies.

- **Autoimmune Summit.** As part of its therapeutics curation strategy, Eshelman Innovation hosted the Autoimmune Summit in 2025 to catalyze the development of next-generation therapies for complex autoimmune diseases. Featuring moving patient testimony and expert panels on AI, drug development, and translational strategy, the summit convened researchers, clinicians, funders, and industry partners to explore how new technologies and scientific insights can accelerate innovation for conditions like lupus, rheumatoid arthritis, and multiple sclerosis, which affect over 15 million Americans.
- **Goldie Health.** A significant FY25 milestone is the traction of Eshelman Venture Studio portfolio company Goldie Health, an overdose detection and case-management tool for response teams. The venture had a banner year, moving from concept to launched startup. Goldie hired a CEO and CTO, implemented eight customers in two states and raised over $1.85 million in additional capital.

* *Total projects include those that received funding from multiple sources and distributed by Eshelman Innovation. Some projects received Eshelman gift dollars (approximately $35 million distributed), while other projects received funding from separate state and foundation grant dollars distributed by Eshelman Innovation.*

CTS INNOVATION-TO-IMPACT (I2I) AWARDS

- **$1 million in total support for two translational science teams (since 2023).**
- **Two research publications submitted in FY25.**

Launched in 2023, the CTS Innovation to Impact (i2i) Awards, funded by the NIH through UNC-Chapel Hill's CTSA and administered by NC TraCS, support translational science research that addresses scientific and operational roadblocks in the translational science pipeline. These awards fund research teams that enhance the efficiency and effectiveness of translational research, integrate clinical and translational science and address pressing challenges with strong potential for rapid application. Teams develop innovative methods or approaches that enhance the translational research process while addressing specific diseases or conditions.

Activity and Impact: During FY25, two project teams received $500,000 to support translational science research, contributing to the $1,000,000 in total support received by teams since 2023. During FY25, the teams also submitted two research publications.

CAROLINA INVESTOR PROGRAMS

Funding from external investors, such as angel and venture capital (VC) investors, supports team expansion, market entry and revenue growth. University gap funding helps de-risk ventures so they can attract angel and VC interest.

CAROLINA ANGEL NETWORK

- **233 members invested $31.7 million in 37 portfolio companies since 2017 (cumulative).**
- **Seven exits by CAN portfolio companies (cumulative).**
- **$10.4 million in capital returned to CAN investors (cumulative).**
- **Nearly $629 million in total funding raised by CAN portfolio companies — 20 times more than CAN investments received (cumulative).**

The Carolina Angel Network (CAN) connects accredited investors with promising startups founded by UNC-Chapel Hill alumni, faculty and students. CAN is a nonprofit entity affiliated with UNC-Chapel Hill via Innovate Carolina. Focused on seed and Series A funding, CAN enables members to invest on a deal-by-deal basis without management or carry fees. Each year, the network curates several new investments and follow-on opportunities.

While the majority of member investors are based North Carolina, one of the angel network's strengths is its expanding national reach with 30% of CAN members residing outside North Carolina. During FY25, CAN expanded nationally via a city tour (New York City, Atlanta, San Francisco, Philadelphia and Washington, DC) featuring CAN-hosted events that convened new members and CAN portfolio companies.

Activity and Impact: In FY25, members invested nearly $2.4 million in two new CAN companies. New company investments included Synaptrix (non-opioid acute pain treatment medical device) and PinPrint (microneedle patch technology for painless drug delivery). In these investments, CAN co-invested alongside institutional investors from coast to coast, including local investment firms like Rex Health Ventures and other strategic partners.

Since CAN's launch in 2017, 233 individual members invested nearly $31.7 million in the angel network's 37 portfolio companies.* In total, CAN's portfolio features seven company exits, including an FY25 exit by Carpe, a startup co-founded by Carolina and Duke alumni that specializes in antiperspirant and sweat-absorbing solutions offered in stores nationwide. In sum, CAN investments have resulted in $10.4 million in capital returns to members, including over $9.6 million in combined capital returned over the past three fiscal years. CAN portfolio companies continue to attract additional investments, raising $628.7 million in total funding — 20 times more than CAN investments received.** Through their investments, member investors also support economic impact. In FY25, the 37 CAN portfolio companies created 1,015 jobs and earned $117.9 million in annual revenue.

CAN also launched several new investment initiatives. One was Tar Heel Madness, a new seed pitch competition during the NCAA basketball tournament that spotlights early-stage UNC-affiliated startups that haven't previously received a CAN investment. Winning startup Virnika earned access to CAN's due diligence and investment process, plus legal service credits. CAN also piloted a new philanthropic funding model to support portfolio company Couplet Care, using a donor-advised fund structure in partnership with Inspire Access. The CAN Venture Fellows Program also gives students experience with hands-on investment work, contributing to due diligence, company research, and startup screening.

** New company investments, does not include follow-on investments.*

*** May include funding raised before CAN investment.*

KENAN-FLAGLER PRIVATE EQUITY FUND

- **$10 million in fund investments (cumulative).**
- **9 portfolio companies, with 47 active firms and 39 exits (cumulative).**
- **$16.3 billion in total funding raised by portfolio companies (cumulative).**

Launched in 2007, the Kenan-Flagler Private Equity Fund has more than $10 million in committed capital under management and was the first student-run fund associated with a top-tier global business school that seeks to provide real returns to its limited partners. The management team is comprised of MBA and undergraduate students at the Kenan-Flagler Business School. Working for the private equity fund, students receive course credit while learning to manage all aspects of the investment cycle, including presenting decisions to the faculty/advisory committees and the board of directors. In addition to providing an experiential educational opportunity for students, the fund supports startups and small businesses as they develop, grow, or pivot toward new market geographies and strategies for greater financial returns. The fund has invested in at least 69 portfolio companies, including 47 firms that remain active. During FY25, those firms generated $2.9 billion in annual revenue and were responsible for 16,737 jobs.