

2017 UNC-Chapel Hill

INNOVATION SHOWCASE

WEDNESDAY, APRIL 19 2017

THE WILLIAM AND IDA FRIDAY CENTER
FOR CONTINUING EDUCATION

INNOVATE
CAROLINA



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

AGENDA

5:30 PM

Welcome and Overview of Programs

6:00 PM

Innovation Presentations

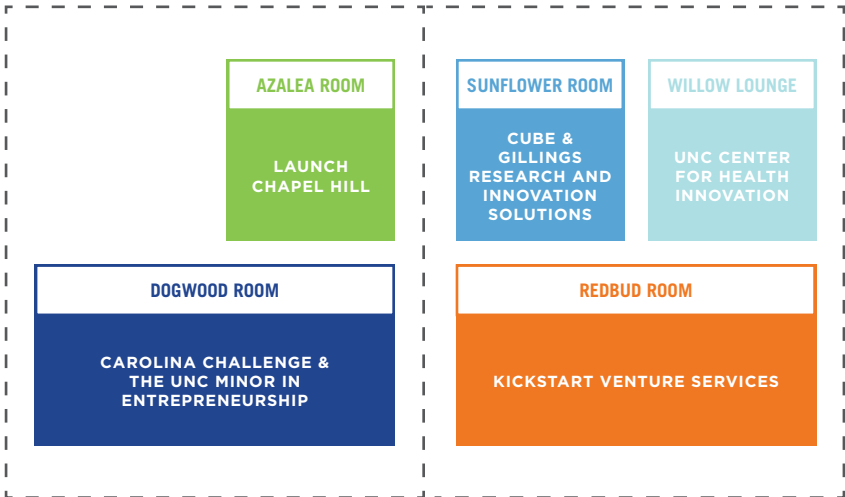
7:00 PM

Networking and Company Demo Fair

MAP

TECH & BUSINESS

SCIENTIFIC & SOCIAL



RECEPTION & COMPANY DEMOS

PRESENTING PROGRAMS

The Office of the Vice Chancellor for Innovation, Entrepreneurship and Economic Development works to create a supportive ecosystem for programs and individuals across the University to translate ideas into practical solutions. Together, the following programs support faculty, students, staff and alumni through every stage of venture development. For a full listing of UNC-Chapel Hill innovation and entrepreneurship programs, courses, clubs and activities visit innovate.unc.edu.

KickStart Venture Services provides support for faculty in commercializing biomedical technologies through startup generation. The KickStart Venture Services Commercialization Award Program provides up to \$50K in non-dilutive funding to UNC faculty-led startup companies. These companies are founded around UNC research-related intellectual property. The scope of these awards ranges from life science (e.g. therapeutics, diagnostics, medical devices or health IT) to technology (e.g. energy, material science, engineering or computer science).

Launch Chapel Hill is a unique collaborative investment by UNC-Chapel Hill, the Town of Chapel Hill, Orange County and a generous private donor. The mission is to develop the entrepreneurial ecosystem within Chapel Hill, Orange County and the region. Launch's 22-week program is designed to increase the growth potential of high-impact startup and early-stage ventures. The accelerator provides collaborative office space located in the heart of Chapel Hill's business district and access to startup expertise across multiple business functions.

Carolina Challenge is UNC's flagship business venture competition designed to promote entrepreneurship. Established in 2005, the Carolina Challenge gives students the chance to win seed funding for their early-stage idea. Approximately \$50K in total prize money is distributed among the most promising ventures each year in both profit and nonprofit/social tracks. A series of networking events, coaching sessions and practice workshops held throughout the academic year provide aspiring entrepreneurs with hands-on experience in communicating and accelerating their venture ideas.

The Minor in Entrepreneurship in the College of Arts and Sciences is for students from all backgrounds who are pursuing any major across campus. The Minor was founded on the understanding that there is a common process for the realization of new ventures, whether those ventures are startups, nonprofits, artistic endeavors or even growth within existing enterprises. The program consists of four classes and an internship. Successful entrepreneurs serve as professors, directors, advisors and guest speakers lending their real-world expertise.

CUBE is located in the Campus Y, UNC's Center for Social Justice and Social Innovation, and provides social entrepreneurs at Carolina with capacity building outside the classroom, elite coaching and mentoring from seasoned entrepreneurs, co-working space and seed funding for venture development. Every two years, CUBE welcomes competitors to the pan-university Social Innovation Challenge where UNC students, faculty and staff compete to receive a two-year residency.

Gillings School of Global Public Health Research and Innovation Solutions (RIS) promotes faculty and student research, innovation and entrepreneurship across the school by giving students the opportunity to work on real-world problems in which they can apply the approaches that they have learned in the classroom. Researchers conduct innovative research that changes public health practice, influence policy and improves the quality of people's lives. The Gillings School is committed to research, innovation, entrepreneurship and problem solving.

UNC Center for Health Innovation collaborates with outside organizations on innovations in health care including analytics, technology, payment models and patient care delivery. The Center for Health Innovation recently partner with AARP to launch a second Digital Health Sprint in the Triangle to develop a digital solution to the problem of medication adherence in patients age 50 and over. The Center provides funding, advice and support to UNC employees, faculty members and clinicians with innovative ideas or projects.

KICKSTART VENTURE SERVICES

REDBUD ROOM

Altis Biosystems has developed a patent-pending stem cell technology, recreating the human intestinal epithelium for compound screening and microbiome research. Their goal is to make drug discovery faster, cheaper and safer, and to reduce the need for animal testing.

Team: Nancy Allbritton, Michael Biron, Scott Bultman, Scott Magness, Christopher Sims and Yuli Wang

Capture Pharmaceuticals has developed a potent, orally active compound that binds and removes radionuclides and toxic metals, including gadolinium, from the system. This compound has multiple potential applications, including sequestration and removal of free gadolinium in patients treated with contrast agents. Preclinical animal studies demonstrate favorable stability, absorbance, tolerance and efficacy.

Team: Michael Jay, Russell Mumper, Alan Parr and Thomas Pitler

Clinical Sensors is developing a point-of-care test to identify sepsis rapidly after onset through nitric oxide measurement in blood. Sepsis is a life-threatening illness where early recognition and treatment are paramount for patient survival.

Team: Philippe Chemla, Mark Schoenfisch, Jon McDunn and Wesley Storm

Dualogics specializes in engineering bispecific antibody therapeutics and diagnostics using the proprietary OrthoMab platform. We are building a diverse and innovative bispecific antibody pipeline through internal R&D and strategic partnership.

Team: Ryan Hallett, Tim Jacobs and Dennis McNamara

continued >

Enzerna Biosciences is a RNA editing company focused on creating drug discovery platforms not possible via current DNA editing technologies. Enzerna is using its patented technology to create cell line and animal models of mitochondrial disease for toxicity testing and therapeutic applications.

Team: Spencer Gilbert, Joe Ruiz and Zefeng Wang

Mucommune was launched based on pioneering work in the Lai Lab at UNC on engineering carefully tuned antibodies that can immobilize pathogens in mucus. Mucommune is currently actively engaging in translational development of its technology to unmet medical needs in reproductive health and pulmonary infections.

Team: Sam Lai and Tom Moench

NeuroNano Pharma will develop optimized enzyme replacement therapy for treatment of lysosomal storage diseases. Current enzyme replacement therapies for these rare genetic disorders caused by lysosomal enzyme deficiencies do not cross the blood brain barrier. Brain-penetrant nanoscale polymeric micelles will deliver enzymes to lysosomes in the brain and peripheral tissues.

Team: Diane Ignar and Alexander Kabanov

Renovion is focused on developing its lead compound to improve outcomes for a population with no FDA approved therapies – lung transplant patients. Their compound has anti-inflammatory and anti-infective properties and with a cumulative of 15 years of therapy across a small group of patients.

Team: Dan Copeland and Carolyn Durham

LAUNCH CHAPEL HILL

AZALEA ROOM

Fanalytical helps collegiate athletic departments thrive by providing tools to boost fan engagement and encourage revenue growth. Fanalytical's primary solution will be a SaaS platform suite for data warehousing, predictive analytics and campaign management.

Team: Paul Krause, Kylee Wooten, Andy Kriegh and Elliot Krause

FeedStation is a turnkey software platform that helps midsize businesses sell their products on major online shopping platforms. FeedStation helps retailers integrate products and processes with online shopping channels such as Amazon, eBay, Jet.com and Walmart.

Team: Michael Linnane and Amy Linnane

Fixional makes it easier to read the best short fiction from around the world by bundling content from top authors and publications and curating with the help of machine learning.

Team: Pierce Gaynor

GymNOW sells single-use gym passes through a mobile application. Utilizing dynamic pricing, gyms set the time, quantity and price of passes available. GymNOW boosts memberships and revenue for partner gyms and health clubs while providing a commitment-free alternative to the conventional gym membership.

Team: Rob Gilliam, Lee Gilliam, Mark Moultrie, Tim Federoff, Thomas Sheldon and Andrew Carignan

continued >

Mechenai Data Bend disrupts the data solutions industry by providing a comprehensive platform to integrate data from many incompatible sources and puts that data to work. Mechenai was founded with the mission of developing disruptive technologies that change the landscape of industries.

Team: John Pandich and Chas Pass

Monikos uses mnemonics to create a fun, interactive and social educational app that can be used amongst friends and allows healthcare graduate students to efficiently learn about the most common drug facts.

Team: Riley Kim and Patrick Kurunwune

NanoVest is a global marketplace for all of the early-stage startup community that offers support from pitch to acquisition. NanoVest's goal is to foster the relationship between college entrepreneurs and college investors and encourage their mutual growth.

Team: Aditya Badve, Sifron Benjamin and James Shea

Sideline is fantasy sports betting - a free game that combines Vegas-style bets with the competitive, head-to-head nature of classic fantasy gaming.

Team: Tyler Eshraghi

So Good Pupasas is a social justice food truck working for the nonprofit Pupasas for Education to promote cultural appreciation and higher education through pupusas and scholarships.

Team: Cecilia Polanco, Raymundo Garcia, Steve Palacios, Jazlin Laboy and Aditi Adhikari

Seal the Seasons puts the farmers market in your freezer. By bringing produce from family farms to a frozen aisle near you, Seal the Seasons is changing the way consumers support local farmers.

Team: Patrick Mateer

CAROLINA CHALLENGE & THE UNC MINOR IN ENTREPRENEURSHIP

DOGWOOD ROOM

Parking Rebel is a platform for booking long term parking spots.

Team: William Lewis and Colin Bergey

In-Form Athletics is a college athletic recruiting software.

Team: Luke Lechner, Patrick Riess, Henry Campbell, Gray Dorsett, Jonathan Ng and Ashish Khanchandani

mAdapt is an app to help refugees get access to health services.

Team: Zainab Alidina, Hannah Rackers, Stephenie Metzen, Carline Pao and Rebecca Bartlett

Spread connects restaurants' surplus food to hungry, value-seeking customers.

Team: Andy Yang, Vamsi Yechoor, Austin Smith and Mahmoud Saad

Strip Straps is a removable ankle strap for flip flops.

Team: Fletcher Cox

TextIn Taking attendance made easy through SMS and analytics.

Team: Ronald Ding

continued >

Wake Up! Enjoy mornings waking up to curated music and routines.

Team: Mason Lantay, Visrut Sudakar and Avery Mavroudis

Tiba Health is a wearable and AI-driven solution that improves rehabilitation outcomes.

Team: Mihir Pershad, Cameron Valadez, Meghana Shamsunder, Tannya Cai and Dhruv Patel

BE cards is a mobile application that allows users to create and share more interactive business cards.

Team: Chris Reede and Ricardo Garcia

SmartCan is a Fitbit for your trashcan.

Team: Carson Zone, Andrew Freeman, Ben Fingers, Alton Peques and Alex Haber

University Connect Innovative representation for emerging artists.

Team: Collin Dworsky, Cohen Dworsky and Carson Southard

New Galaxy Records is education for the future.

Team: Ethan Baechtold, Quincy Godwin, Steini Davidsson and Alessandro Uribe-Rheinbolt

Rate Your Dorms is a platform that enables students to write and read reviews of campus dorms.

Team: Jasper Brindis, Andrew McKinnon and Phillippa Owens

Salud Ahora is a mass texting service to encourage preventive healthcare.

Team: Graham Treasure, Clayton Swords and Jonathan Alvarez

VINCI is an app/website that uses GPS to streamline fraternity/sorority events.

Team: Cory Flannery, Avery Mavroudis, Michael Miller, Michael Sawh and Nicholas Mills

VINCI Fitness is an online personal training website/social media platform for students.

Team: Jared Noble, Trent Myers, Yujian Tang and Cory Flannery

Ask Why bridges modern politics' empathy gap through tech and digital media.

Team: Joe Nail, Caroline Kennedy and Peter Andringa

TerraOak Inc. is a cleaner way of burning biomass by introducing proprietary technology in the combustion chamber.

Team: Godwin Attigah and Maxwell Chinnah

Watdo finding an interesting event to attend at any time.

Team: Isha Sharma, Jay Randolph, Mason Farmer and Damian Walker

Feelin DNA is bridging the gap between STEM topics and the visually impaired community through 3D models designed to fit their needs.

Team: Elliot Krause, Emma Astrike-Davis, Amaya Martinez, Joanna Cao and Rachael Hamm

Carolina Conscious brands 100% commercially compostable bioplastic cups with messaging that encourages students to get involved in the conversation about sexual assault on campus.

Team: Mary Scott Lowrey, Deanna McCormac and Alex Requarth

Funeral-Solutions is an online pre-need, peri-need, and post-need funeral concierge service that is in the startup phase with a proof-of-concept website.

Team: Alex Requarth

LaundrFi is a small portable moisture detector device that is placed in dryers and connected to an app on the user's smartphone.

Team: Ellie Dannenberg, Hanna Hepburn, Allen Cater and Nicolas Schwarz

MedServe pairs recent college graduates with primary care physicians in rural primary care clinics for two years of service. MedServe is training an army of advocates for health equity in every zip code and sees a future where every medical student starts their medical education understanding the full potential of great community-based primary care.

Team: Patrick O'Shea and Anne Steptoe

STEPS Too many boys of color are being pushed out of school and into the criminal justice system. STEPS trains students for success in the classroom and in life. Designed to disrupt the school-to-prison pipeline by reducing participants' risk of school dropout and delinquency, the program includes student groups, parent trainings and home visits.

Team: Letanya Love and Kim Newsmen

Healthy Girls Save the World is a nonprofit dedicated to promoting healthy minds, bodies and relationships for middle school girls in North Carolina. The venture inspires girls to be joyful, healthy and confident using a fun, experience-based curriculum.

Team: Camille McGirt

Global Music Outreach is a collaborative music program at Good Hope School and Orphanage in Arusha, Tanzania. Grounded by Herbie Hancock's quotation that "music happens to be an art form that transcends language," the program promotes cross-cultural understanding and supports student education in Tanzania.

Team: Laura Limarzi and Ava Peters

we are (working to extend anti-racist education) equips students, parents and educators with the knowledge and skills necessary to understand the complexity of racism. Using a combination of week-long summer

campus for students, professional development for teachers and workshops for parents, we provides a three-pronged approach to address racial inequities in schools.

Team: Ronda Taylor Bullock

Build the Hill is empowering financially under-served individuals in their business endeavors through advisory services and zero-interest micro-loans. This student-led organization strives to grow local businesses in Chapel Hill by giving them the resources, guidance and capital they need.

Team: Ali Alford

MedUCate is a video game that teaches young people how to be healthy. By educating kids about their personal health, MedUCate believes young people can lead healthier lives. In a pilot phase now, this venture builds on the serious games movement and draws from UNC's strengths in computer science and social enterprise.

Team: Elliot Krause

The Looma Project is a B2B platform for curating and deploying product story content. The venture drives revenue for merchants and vendors by more effectively communicating stories in retail environments. Recent digital storytelling case studies suggest a 20+% increase in sales from video-enabled stories, proving that consumers want to know the who and the how behind products.

Team: Cole Johnson

Helping Hand Project aims to improve the quality of life of children and families afflicted with limb disabilities. We do this through the design of custom prosthetics and the development of a community to support those with limb loss. We are a nonprofit organization based out of Chapel Hill.

Team: Elliot Krause, Shelby Anderson, Dhruv Shankar and Jeff Powell

My Health Ed is a new nonprofit organization that focuses on improving health education for youth through the use of technology. Its signature app, Real Talk, is a phone-based application for middle school students in rural North Carolina and Texas that provides sex education through daily storytelling.

Team: Elizabeth Chen and Cristina Leos

ChitoSan is developing a water treatment technology involving the novel use of ChitoSan, a naturally-derived biodegradable polysaccharide. When used as an optimized pre-treatment solution, ChitoSan removes 99.9% of water borne pathogens while remaining affordable, environmentally-friendly and widely-accessible. ChitoSan plans to implement easy-to-use kits for individual households in both developing countries and in mixed and commercial markets in developed countries.

Team: Lydia Abebe

Carpe Lotion is the world's first antiperspirant lotion. Carpe uses a waterproof formula that has antimicrobial agents and moisturizes skin while also inhibiting sweat from forming and lasts for hours after the first application. The formula includes dermatologist-recommended ingredients to dry the skin and penetrate sweat glands.

Team: David Spratte and Kasper Kubica

FreshSpire is a mobile app that connects consumers and grocers by alerting nearby shoppers of time-sensitive deals on produce. FreshSpire reduces food waste, food insecurity, and the amount of food deposited in landfills.

Team: Gabrielle Beaudry, Hannah Sloan, Shraddha Rathod, Jennifer Wu and Mona Amin

Osmotic Ballasts provides a simple chemical means to enhance the performance of membrane-based energy processes. In proof-of-concept tests, the osmotic ballast more than doubled the faradaic energy efficiency of a battery system based on

saltwater by controlling the unwanted movement of water in the system.

Team: Ryan Kingsbury and Orlando Coronell

Made With Love Bakery empowers homeless individuals with love, training and support to overcome poverty. As a nonprofit, faith-based, transitional employment program, Made with Love seeks to care for the physical, emotional and spiritual needs of its employees with support and development in all areas.

Team: Ellen Snow

Sonder Market is a student-run food venture that brings local, sustainable and affordable food to UNC's campus. Operating from a cart located outside of the Campus Y, Sonder Market is stationed at the heart of campus to serve students, faculty and staff. Partnerships with local farms and agriculture groups enable students to purchase high-quality produce below grocery store prices.

Team: Joe Sullivan, Elinor Solnick, Roan Urquhart and Delaney O'Connell

The Meantime Coffee Co. is UNC Chapel Hill's only student-run, nonprofit coffee shop. With each cup of coffee, The Meantime also supports the professional development of students and a flourishing entrepreneurial landscape at UNC.

Team: Scott Diekema

Musical Empowerment provides free, one-on-one music lessons to nurture meaningful relationships between collegiate mentors and children in under-served communities that build a foundation of confidence, creativity and self-discipline to create successful individuals. Musical Empowerment recruits college student volunteers with music backgrounds to teach lessons to children in need for a variety of instruments.

Team: Lindsay Player and Marissa Cranford

Carolina Optimizing the Management of Patients Presenting to the Emergency Department with Atrial Fibrillation:

A New Treatment Paradigm. This project aims to reduce unnecessary hospitalization by implementing and evaluating a new protocol-based care pathway for AF patients who present at the ED, directing those without complications to an AF Transitions Clinic staffed by clinical pharmacists and overseen by Cardiology and Electrophysiology.

Team: Anil Gehi and Kevin Biese

Adaptation of the PPD ACT App to Dramatically Enhance Clinical Management of PPD

The team will build upon the success of the recently launched PPD ACT iPhone app, which aims to help researchers understand why some women suffer from PPD and others do not – critical knowledge to help researchers find more effective treatments. The team will conduct pilot testing of the app in women with PPD at UNC, and data collected and displayed via the app will be used in the evaluation and delivery of personalized treatment for these patients.

Team: Samantha Meltzer-Brody and Patrick Sullivan

Objective Assessment of Workload Performance for Clinical Tasks

This project will create an infrastructure to objectively assess workload and performance for providers performing routine clinical tasks that require human-computer interactions. Providers are required to continually interact with multiple computer screens. The need for providers to interact with computers also raises serious challenges that can hinder quality care. Our practical efforts in this area are focused on usability evaluations of EMRs.

Team: Lukasz Mazur, Prithima Mosaly, Bhashamjit Chera and Lawrence Marks

Development of Augmented Reality Applications to Improve Safety and Efficiency in the Operating Room

Leveraging the rapidly-developing technology known as augmented reality, this team will develop an augmented reality system for use in both open and endoscopic surgery. This augmented reality environment for the operating room would allow for localization of a patient's specific pathology and normal anatomic landmarks.

Team: PI Austin Rose, Henry Fuchs and Jan-Michael Frahm

Procedure Scheduling Prediction Model, Integration, and Web Application

This team will develop and implement Fast Healthcare Interoperability Resource (FHIR) services at UNC to power a model that predicts the likelihood a patient will attend an appointment and a companion app that uses that model to optimize how patients are scheduled for gastrointestinal procedures. The app will combine patient-reported and clinical data to optimize how patients are scheduled and prepared for these procedures.

Team: PI Spencer Dorn and Larry Klein

Galileo, an eponym for both an innovative information system and an emerging venture, recently secured a top spot at the 2016 Digital Health Sprint hosted by UNC Healthcare's Center for Innovation. Galileo is a platform-agnostic and standards-based data aggregation system, which can be integrated seamlessly with core platforms and applications already in-use by healthcare organizations at a low cost and with minimal disruption.

Team: Javed Mostafa, Brian Moynihan, Phil Sloan and Michelle Johnson

My Healthy Heart is the third place winner of the recent UNC Digital Innovation Sprint. Their solution bridges the gap between patients at risk for hospital readmission with Congestive Heart Failure (CHF) and the healthcare ecosystem that supports them. The venture uses a combination of high-tech with high touch to progress the patient toward self-care over a 30-day period. Care concepts included goal setting, gratitude journeying, data tracking/analysis, resourcing and reporting. This novel approach, using tailored support and technology, provides a system with multiple opportunities to reinforce hospital discharge teaching allowing the patient to become the CEO of their care.

Team: Karen Metzguer and Susan Helms

Asthma One is a holistic mobile app for asthma patients that will: 1.) Educate - Provide evidence-based education about asthma and asthma medication management. Educate on how to use their inhalers. Provide information based on their current environment and how this affects their personal needs. 2.) Engage - Provide positive feedback when patients adhere to their medication. Provide financial incentives to patients by giving them cash for improving/maintaining positive numbers on medical adherence. Healthcare providers have the option to direct patient progress directly. 3.) Empower - Giving real time and instant feedback to patients about their asthma status. Integrating asthma patient caregivers. Option to integrate with other technologies.

Team: Ahmad Hamad, Dob Njinimbam, Seyram Fudzie and Alexander Brown