Health Technology Commercialization at the University of Illinois
EnterpriseWorks Chicago is a technology startup incubator at the University of Illinois at Chicago (UIC) that provides entrepreneurial support, resources, and programming to the Chicagoland community. Located in the Illinois Medical District, the nation’s largest urban medical district, EnterpriseWorks Chicago has created a robust entrepreneurial community to nurture commercialization and accelerate the growth and evolution of new ventures—specifically health technologies—originating from University research.

EnterpriseWorks Chicago provides the infrastructure around which entrepreneurial communities thrive and generates a strong pipeline of talent critical to the success of technology-based ventures. Connections to peer, industry, investment, and community networks allow entrepreneurs to gain valuable feedback and provide access to much-needed capital.

HEALTH, TECHNOLOGY, INNOVATION (HTI)

The flagship initiative of EnterpriseWorks Chicago is Health, Technology, Innovation (HTI), an office and laboratory space that brings scientists, clinicians, engineers, and industry experts together for an interdisciplinary approach to drug, diagnostic, device, and information technology development.

HTI provides the infrastructure to support technology development outside of academic labs and provides access to professional services to assist in commercialization planning and venture formation. HTI serves University faculty, staff, and students; Chicago area research institutions; and the broader entrepreneurial community as a nexus of biotechnology commercialization.

POC ACCELERATOR

The Proof-of-Concept (POC) Accelerator provides student consultants with hands-on experience examining the commercial pathways of novel
technologies. EnterpriseWorks Chicago collaborated with the Office of Technology Management and IllinoisVENTURES to sponsor this accelerator program, which launched in Spring 2014.

Under the direction of experienced entrepreneurs, nearly 50 UIC students have participated in the POC Accelerator and gained real-world skills and knowledge on how to transform research and technology into practical applications. From developing an enhanced method for improving cloud elasticity and efficiency, to a new method to screen for colon cancer, graduate students have learned how to examine innovative technologies with a commercialization lens and see first-hand how an emerging technology is brought to market. Student participants hail from a variety of disciplines at UIC, including business, chemistry, kinesiology, mechanical engineering, and physics.

ENTREPRENEURS-IN-RESIDENCE

Entrepreneurs-in-Residence (EIRs) are experienced entrepreneurs who provide a range of consulting services through the POC Accelerator. EIRs oversee consulting teams comprised of graduate students and post-doctoral candidates that are charged with analyzing the commercialization potential of new technologies. EIRs help assess the market potential and commercial viability of applied research and technology projects at UIC, mentor and guide graduate students and postdoctoral researchers through the early-stage commercial assessment process, and help the University produce viable technology startups.

“Working with EnterpriseWorks Chicago and the POC Accelerator is such a unique experience because of the wide variety of fascinating technologies and markets we evaluate, as well as the opportunity to work with talented faculty and students,” says EIR Dana Deardorff. “Currently, there is a gap between translating academic research into real products and services, but the POC Accelerator and funding can start to bridge that gap and kickstart the formation of viable new ventures.”

SUCCESS STORY: CAPIO BIOSCIENCES

Dr. Seungpyo Hong developed the UiChip™, a new medical device that detects circulating tumor cells (CTCs). CTCs are cells that escape from solid tumors and travel through the blood to other parts of the body and can be responsible for the metastasis, or the spreading of cancer cells.

Metastasis that is induced by CTCs is one of the major reasons that cancer is fatal. Through his research in materials science, biology, and nanotechnology, Dr. Hong and his team designed the UiChip™ and founded a company—Capio Biosciences—to bring this new technology into hospitals and clinics.

Hong credits the University of Illinois’ innovation pipeline with providing necessary guidance and support in moving his technology out of the laboratory, enabling him to form a startup company.

“EnterpriseWorks Chicago provided a student consulting team via the POC Accelerator and assisted with our SBIR/STTR application,” says Hong. “All of these support services are part of an initiative that coordinates activities for UIC faculty and students who are interested in licensing a product, starting a venture, or funding a startup.”
The Capio Biosciences team recently launched a clinical pilot study through the University of Illinois Cancer Center to test the efficacy of the UiChip™. The study is in its early stages, but the results are promising. The ability to detect spontaneous CTCs will provide physicians a way to detect the spread of cancer to other areas of the body at an earlier stage. It also will provide a powerful tool for cancer prognosis, diagnosis of minimal residual disease, assessment of tumor sensitivity to anticancer drugs, and ultimately, a more personalized anti-cancer therapy for the patient.

SUCCESS STORY: NETENERGY

University of Illinois startup company NETenergy has developed a novel thermal energy storage technology that uses patented phase change materials to store energy during off-peak times for use during peak times, in turn creating a smarter and more energy efficient grid.

Founded by Said Al-Hallaj, a renewable energy expert and a Visiting Research Professor of Chemical Engineering at UIC, NETenergy is using next generation material science and adaptive control systems to optimize thermal energy storage (TES) systems for smart grid applications.

NETenergy was the first tenant in the Health, Technology, Innovation (HTI) facility. After a successful launch, the company graduated from EnterpriseWorks Chicago and is now located in the Chicago Innovation Exchange.

“The Office of Technology Management and EnterpriseWorks Chicago facilitated intellectual property licensing in a smooth and professional way and provided essential support in establishing and incubating NETenergy,” says Al-Hallaj. “The staff from these campus units was sincerely interested in helping our team build a strong foundation.”

CONCLUSION

EnterpriseWorks Chicago promotes a vibrant entrepreneurial ecosystem that leverages university assets and connects innovation, infrastructure, networks, talent, and capital within and beyond the university. Through programs such as the POC Accelerator and Entrepreneurs-in-Residence, the University of Illinois is connecting student, faculty, and other technology entrepreneurs throughout the Chicagoland community with the essential resources and support required to launch viable technology startups.