Innovation incubators are crucial for life sciences startups

By Aaron Vigil-Martinez

Innovation ecosystems are complex and multidimensional. They take time, intentionality, effort, and a commitment to build. So why bother, and why have they become a favored path to securing a prosperous economic future?

The yields are boundless, transformational, and can change the fate and trajectory of a people. They require buy-in, support, and investment at all levels, but more importantly they need unwavering champions at the highest levels with a commitment to help them thrive and, at times, survive. The complexity of these innovation ecosystems increases, especially when they support complex industry sectors like life sciences, whose subsectors span not only across pharmaceuticals, medical devices and equipment, research testing, and medical labs, but also include agriculture, industrial biosciences, bioscience-related logistics and distribution and even extend into other adjacent and complex industries like health care.

Life sciences incubators are crucial to supporting early-stage startups in this space because they provide specialized facilities, equipment, know-how, and support services that are costly even for mature businesses. Life sciences incubators like The Indiana Center for Biomedical Innovation, or ICBI, fill critical gaps in the Indiana ecosystem by providing a comprehensive platform—one that supplies much needed and affordable laboratory facilities with access to shared equipment, clinical resources, and expertise coupled with startup acceleration services and entrepreneurial business support to create new startup companies, drive innovation, and foster talent in the economy of today and the future.

The ICBI has a unique advantage in that it sits at the intersection of cutting-edge research coming out of the country's largest medical school and access to clinicians and patients from the state's largest health care system, IU Health. The ICBI serves as an extension of IU School of Medicine's entrepreneurship and commercialization efforts by serving and supporting the translation of research into commercial opportunities. The ICBI also serves as an extension of IU Health by supporting health care innovation at-large and by serving entrepreneurial-minded physicians, nurses, technicians, and health care staff. The ICBI exemplifies "bench-to-bedside" innovation precisely because it is set up to support research derived from the university setting, translating that research into a therapy, device, or solution that can then be clinically tested and ultimately deployed directly to patients.

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The ICBI embodies IU's 2030 bold and ambitious strategic plan of supporting transformational research and creativity while providing service to our state and beyond. The ICBI is much more than an incubator—it is an economic driver—and while the ICBI has a relatively small footprint, it has had tremendous impact. ICBI member companies alone raised $49 million in funding and created 60 jobs between 2021 and 2022. It contributes to and supports the state's life sciences ecosystem, which according to the 2022 TEConomy Partners Report, "Essential: The impact of healthcare and life sciences sector in Indiana," has a $150 billion annual economic impact and accounts for about 14.5% of the state's GDP.

Indiana's life sciences sector grew 9.5% from 2015 to 2020 and continues to grow. This growth is further fueled by the innovative research taking place, especially leading up to and in the wake of COVID-19. Resources like the ICBI's are crucial in supporting this renaissance and resurgence of life sciences research, innovation, and growth.

As the great biographer Walter Isaacson recently wrote in the 'The Code Breaker':

"The invention of CRISPR and the plague of COVID will hasten our transition to the third great revolution of modern times.

The first half of the twentieth century, beginning with Albert Einstein's 1905 papers on relativity and quantum theory, featured a revolution driven by physics. In the five decades following his miracle year, his theories led to the atom bombs and nuclear power, transistors and spaceships, lasers, and radar.

The second half of the twentieth century was an information technology era, based on the idea that information could be encoded by binary digits—known as bits—and all logical processes could be performed by circuits with on-off switches. In the 1950s, this led to the development of the microchip, the computer, and the internet. When these three innovations were combined, the digital revolution was born.

Now we have entered a third and even more momentous era, a life sciences revolution. Children who study digital coding will be joined by those who study genetic code."

In order to participate and compete in this third great revolution before us, it is essential that we collectively and collaboratively support the innovation ecosystems and the crucial elements that comprise them.

The ICBI embraces the opportunities and challenges alongside the companies, researchers, and founders it supports with its facilities, services, and network. Their work and discoveries are generating tomorrow's life-saving drugs, therapies, medical devices, and health care innovations. Our partners are improving health outcomes by understanding diseases and finding cures for the conditions that plague humanity.•

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