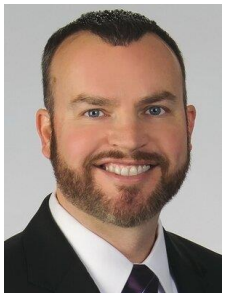
How Life Sciences And Education Industries Can Partner Up

By **Scott Marty, William Rhodes and Catherine Seibel** (July 19, 2023)



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The life sciences industry may face a significant shift in the coming years in how research is funded and conducted due to a coalescence of factors within the industry and the broader economy.

Upcoming patent expirations — sometimes referred to as the patent cliff — mean the loss of patent protection for many products. The resulting loss of revenue will put pressure on life sciences companies to identify new products and revenue sources. Estimates put the approaching pharmaceutical industry patent cliff at almost $200 billion in annual revenue at risk, as some of the largest brand name drugs lose market exclusivity.[1]

While big pharma as an industry has an estimated $1.5 trillion of cash on companies' balance sheets, the recent economic downturn may cause pharmaceutical businesses to curtail basic research, similar to what the industry experienced back in 2008.

The above factors have led some industry participants and analysts to predict that the time is approaching when big pharma will not be generating the same level of new research and technology as in the recent past. So where can the life sciences industry look to find new research and technology?

The answer may lie in a growing trend of partnerships with the education industry in the form of accelerators, incubator programs and sponsored research. This overlap with the education industry could be an important source of innovation for the life sciences industry.

Partnerships between life sciences companies and educational institutions are generating significant interest recently. They provide opportunities for universities and colleges to develop new assets and to deepen collaborations, which enhance graduate and undergraduate recruiting and career placements.

For life sciences companies, the partnerships help foster innovation, generate new research and technologies, and to develop new talent pipelines. These partnerships can provide a creative solution that strengthens both the life sciences industry and the education industry.

Partnerships between the life science industry and the education industry can take many forms and are not necessarily new, but recently the trend is the rise of incubator and accelerator programs, which are gaining traction. This trend is not limited to the U.S. In fact, it has been reported that India will have around 900 startup accelerator programs before the end of 2023.[2]

At their core, incubator and accelerator programs offer spaces and access to equipment, often at or associated with universities or colleges, where companies provide resources and structure for startup businesses to grow and to help advance early stage research.

These programs are often quite structured and can expand on the traditional joint venture format to provide a more holistic program, where small businesses often work in proximity to other entrepreneurial ventures.

A student or entrepreneur can join the program to gain access to a wide range of resources, such as access to investors, physical workspace, expertise, collaboration with other entrepreneurs, administrative assistance, workshops, seminars, business training and mentoring, and more.

These partnerships are symbiotic, and so it is unsurprising that more and more companies and educational institutions are partnering to form incubators and accelerators. Educational institutions often have both real property and intellectual property that is not yet commercialized and is potentially underutilized, and partnerships with companies can provide acceleration to commercialize and monetize those assets.

Many large research universities, particularly those in less densely populated areas, have a significant amount of excess real estate, and discussions about how best to deploy the real estate can identify opportunities for development.

If the goal is to increase unrelated business income, it could be beneficial to collaborate with a real estate developer for a mixed-use project. Or a project could be more directly related to the research-oriented mission, such as starting a research incubator or rapid acceleration of research already underway.

In terms of intellectual property, educational institutions generate an impressive amount of research. While some of the developed technologies may never result in an issued patent, many of them do.

Despite this volume, recent studies have shown that more than half of the technology that comes out of educational institutions is never commercialized.[3] A partnership with a life sciences company can provide the resources, funding and opportunities to make use of the best of these technologies, which otherwise may never be utilized.

Partnerships can provide unique opportunities for students to be involved in technology, innovation and building intellectual property. Higher education institutions are now shaping curriculums and building technology commercialization offices to encourage students to own intellectual property.

Incubators can be a space where students can find mentors, resources and other entrepreneurial students, and to build a more robust academic community. Simply put, students are given the opportunity to learn by doing.

Accelerators and incubators provide life science companies a more intimate view of nascent technologies, and they can then evaluate and encourage promising technologies to grow when they may otherwise be ignored or lost in the shuffle.

By providing the capital and resources to accelerate that research, life sciences companies can foster technology with the hope of significant returns down the line. Several life science companies in recent years have been able to spin off very successful new research into for-profit companies that have attracted successful rounds of venture capital funding and private equity funding.

It is important to remember that incubators and accelerators are a long-term game. There can be a long lead time between what a researcher may do today in a sponsored program and successful monetization of that research in the future.

As such, now is the time for companies and educational institutions to plant the seeds of partnership so that they can take root. By partnering, life sciences companies and education institutions that set the table now in a new era of robust collaboration and partnership will be in an enviable position to realize economic benefits of research in changing years to come.

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[1] https://www.biopharmadive.com/news/pharma-patent-cliff-biologic-drugs-humira-keytruda/642660/.

[2] https://www.primuspartners.in/docs/documents/Start-up%20Accelerators%20-%20Engines%20of%20Economic%20Growth.pdf.

[3] https://www.sciencedirect.com/science/article/pii/S0040162520310155.