

Senator Laughlin and members of the Senate Majority Policy Committee. It is an honor to be sitting on this panel to discuss the importance of education and training within life sciences.

Thomas Jefferson University, Jefferson Health and Jefferson Health Plans include over 42,000 employees dedicated to educating tomorrow's professionals through transdisciplinary and experiential learning; discovering new treatments and therapies that will define the future of clinical care; and providing nationally ranked, high-quality healthcare coverage to members throughout Pennsylvania and New Jersey. As the region's second-largest employer and largest network of safety net hospitals, Jefferson has dedicated itself to providing care and related services to the commonwealth for two centuries. Jefferson's total economic impact is close to \$10B in PA alone.

More than five years ago, executive leadership at Thomas Jefferson University had a vision to develop a business unit with the sole purpose of offering real hands-on bioprocess training opportunities to both students and professionals within the life science sector. With tremendous support by the President of the University and the University Board, along with several industry partnerships the Jefferson Institute for Bioprocessing or JIB, was launched.

In July of 2019 a state-of-the-art facility was completed in a leased building within the Springhouse Innovation Park, a new 133-acre campus located in Montgomery County. Jefferson was one of the first tenants of this 14 building life science campus, formerly owned by chemical manufacturer Rohm and Hass. Today the campus is nearly at capacity with Merck entering as one of the latest and largest tenants. The 25K square foot JIB facility is a one-of-a-kind, fully flexible, simulated GMP facility capable of producing the most advanced lifesaving and life improving therapies available. The space is not only used for training the future of biomanufacturing professionals but also to help advance technologies supporting the industry and to further develop therapeutics to one day reach the clinic. With a recent \$2M RACP award, which we are extremely grateful for, JIB is evolving to offer even more innovative training and contract service capabilities.

To date JIB has conducted over 8000 training days, defined as one person trained for one day. We did this across several modalities and dozens of employers, some of which are the largest companies in the commonwealth. JIB has created and delivered 100 distinct courses to industry; tailored to meet the learning objectives of the sponsor company. With a flexible model, focused on upskilling and practical learning, JIB has become a partner to many tackling the need for a highly skilled workforce in a growing Lifescience industry.

Academically, the University has created multiple Master's programs, a PhD program, concentrations at the undergraduate level and a certificate, all of which are offered at JIB to specifically address the growing need for a skilled and trained workforce within the biomanufacturing industry.

To support these programs, the JIB staff works strategically with several local high schools as well as other area Universities and Community Colleges to provide outreach, establish pathways to train at the JIB facility, career counseling and facility tours. The University has also acted proactively to create partnerships at the local, state and international levels to increase the opportunity for collaboration in both research and scholarship.

The University has also obtained several grants focusing on workforce development and advanced training through the National Science Foundation and NIIMBL, with the latest award intended to support early-stage career exploration for underserved communities.

As advocates for scientific research, education, and training within life sciences, we believe that investing in the training of future scientists and healthcare professionals is essential for the advancement of the sector and the well-being of our communities.

Lifesciences is at the forefront of addressing some of the most pressing challenges facing humanity, from combating infectious diseases to developing new treatments for cancer. However, the success relies heavily on the availability of a highly skilled and knowledgeable workforce. A challenge faced by many companies within the commonwealth and beyond.

State-funded training programs play a crucial role in nurturing the next generation of scientists, healthcare professionals, and biotechnology experts. By providing support for undergraduate and graduate education, postdoctoral training, and professional development opportunities, states can ensure that individuals have access to the resources and mentorship they need to pursue careers in the life sciences. This, in turn, helps to cultivate a diverse and talented workforce capable of driving innovation, conducting groundbreaking research, and improving healthcare outcomes for all.

Investing in training initiatives in the life sciences can also yield significant economic benefits for the state. Biotechnology and pharmaceutical companies are major contributors to economic growth, job creation, and innovation, with the potential to attract investment, stimulate local economies, and generate tax revenue. By investing in the education and training of individuals with expertise in the life sciences, states can position themselves as attractive destinations for biotech investment, fostering the growth of the industry and creating high-quality employment. At JIB our trainings not only provide essential skills required to perform complex bioprocessing roles but allow employers to offer learning opportunities to their employees and an additional vehicle to further their careers.

State funding for training in the life sciences can also help address persistent disparities in access to education and career opportunities. Historically marginalized communities, including women, minorities, and individuals from low-income backgrounds, are underrepresented in STEM fields. By providing financial support, mentorship, and outreach programs targeted at these populations, states can promote diversity, equity, and inclusion in the life sciences workforce, ensuring that all individuals can contribute their talents and perspectives to scientific discovery and innovation.

A recent example of state funded support within the sector is the BioHub Maryland initiative and its global partnership with NIBRT, the National Institute of Bioprocessing Research and Training out of Dublin, Ireland. BioHub in collaboration with Hood College plans to offer biomanufacturing training to Veterans and members of disadvantaged communities. This partnership is made possible through \$5M in state and federal funding and is heavily supported by AstraZeneca one of Maryland's most significant contributors to the state's economy and growth of life sciences.

An example of funding support for training right here in Philadelphia is the Keystone LifeSci Collaborative, a forum for industry executives from across southeastern Pennsylvania to collectively address challenges within the region. The collaborative is being supported by \$3.4 million in funding from the American Rescue Plan Act and is part of a larger \$22.8 million grant Philadelphia Works received under the Good Jobs Challenge to spur job growth in sectors including health care and life sciences, energy, and infrastructure. The goal for the overall grant is to create 3,000 family-sustaining jobs in southeastern Pennsylvania, many of which will require specialized training.

We need more support; we can't do it alone. The need for training in the life sciences is paramount and we need to work together. By investing in education, training, and professional development programs, the commonwealth can foster the development of a skilled and diverse workforce capable of addressing the complex challenges of today. So, I urge you to continue to prioritize this critical issue and allocate the necessary resources to support training initiatives in the life sciences. JIB is here to help any way we can.

Thank you.

Aldo Romano  
Chief Business Officer  
Thomas Jefferson University  
Jefferson Institute for Bioprocessing (JIB)

C 717-317-7996  
[aldo.romano@jefferson.edu](mailto:aldo.romano@jefferson.edu)  
<https://www.jeffersonbioprocessing.com/>

