

The header features the text 'The Pulse' in a large, green, sans-serif font, flanked by green ECG-style line graphics on a dark blue background.

— THE PULSE —



JUNE 2024

Message from our CEO & President

Megan Shaw

Dear Friends and Fellow Pittsburgh Life Sciences Enthusiasts—

Hello from the **BIO conference** in San Diego. Thank you for diving into the first edition of *The Pulse*, our regular update on the work of the Pittsburgh Life Sciences Alliance (PLSA) and the companies and people driving the region to become a global leader in human health innovation. As the organization grows and evolves, so will *The Pulse*, and your feedback is welcome.

We started this work by listening to the companies and innovators driving growth and job creation in the region. We heard directly from over 100 people who told us they wanted PLSA to focus on three key areas: (1) convening and connecting players in the ecosystem, (2) leading with a strategic vision and narrative, and (3) raising the profile of the ecosystem with key regional, state, and national stakeholders.

Based on what we heard during this listening tour, we rolled up our sleeves and got to work.

Out Of The Gate

In April, we officially launched PLSA [via this open letter from the Board](#), reiterating the founding organizations' unwavering commitment to the current and future vibrancy of the region. These organizations – The University of Pittsburgh, Carnegie Mellon University, Richard King Mellon Foundation, Henry L. Hillman Foundation, UPMC, and Highmark Health – provided invaluable strategic insight and material support in igniting this effort.

Industry Voice

A priority of PLSA is to make sure we are informed by the voice of the industry. To that end, I've been spending time in the field, touring facilities, meeting directly with large and small companies, and

listening hard to understand their opportunities and pain points.



Thanks for the tour, Biohaven!

The newly established **Industry Advisory Council** will play a crucial role in aligning PLSA's work to the real needs of employers and innovators. The group's first convening brought together many people who had never met and provided insight into which state policy proposals could be most impactful for the life sciences.

We heard loud and clear from employers that part of our growth path must include attracting, training, and retaining world-class talent. That is why, back in February, we partnered with the Pittsburgh Technology Council to support displaced workers from LivaNova through an event with 25 participating employers. As the LivaNova layoffs are ongoing through 2024, we continue seeking creative ways to assist these displaced workers. Seeing these talented people end up at other regional employers has been particularly rewarding.

Community Partners

We are fortunate to have established champions for economic development in the region. **Community Partners** like the **Allegheny Conference**, **InnovatePGH**, **Innovation Works**, **Life Sciences PA**, **LifeX**, and the **Pittsburgh Technology Council** have provided a warm welcome and sage insight. Our ability to lean into a unified regional strategy will be critical to our collective success.

Policy and Advocacy

With the launch of our website, we also released *[Bridge to the Future: Southwest Pennsylvania's Transformative Opportunity to Lead the Next Generation of Life Sciences Innovation](#)*. This white paper provides a primer on the unparalleled regional assets and a series of recommendations to accelerate sector growth.

In meetings with over a dozen policymakers and leaders in Harrisburg and across the region, two things have become incredibly clear. First, more elected officials need to understand the depth of economic activity, employment, and discovery happening here. Second, champions in the statehouse, Governor's administration, and Congress are receptive to the steps required to truly emerge as a global leader.



The Pittsburgh contingent at LSPA's Life Sciences Advocacy Day in Harrisburg.

Looking Forward

We engaged TEconomy Partners to conduct a top to bottom review of Pittsburgh's differentiated strengths and what is needed to translate those strengths into a world-leading life sciences cluster. PLSA's Strategic Advisory Committee for this effort includes leadership from industry, higher education, healthcare, and economic development. This work will be foundational in guiding PLSA's strategic plan for the next several years. Stay tuned for more – we're eager to share the results with you.

I am more optimistic than ever that our region can produce life sciences innovations that improve opportunity *locally* and change lives *globally*, for generations to come. But winning for the region will require strategy, collaboration, and grit. We can't wait.

Megan Shaw, President & CEO
Pittsburgh Life Sciences Alliance

Recent Wins

After impressive \$150M raise, Abridge doubles down on Pittsburgh roots

The Lawrenceville-based health tech company is using the funding to drive momentum in healthcare technology and expand its team.

Krystal Biotech moves to next step in clinical trial

The phase 1 clinical trial of Krystal Biotech Inc.'s potential inhaled treatment for solid tumors of the lung has seen its first patient dosage.

Pittsburgh-area life sciences accelerator gets \$10M grant

The grant from an anonymous donor will create an evergreen fund to help life sciences companies grow at their earliest stages.

Move over Google: Bakery Square is becoming a place for AI companies

The Pittsburgh AI scene is booming in Bakery Square, and the collaboration of AI with life sciences discovery and healthcare delivery is just beginning.

Pittsburgh's office market showing signs of spring

The first quarter 2024 Colliers report shows that the region's office market continues to be influenced by growth in the technology, AI, and robotics sectors.

Startup Spotlight

LyGenesis

- Allogenic cell therapy company
- Headquartered in Pittsburgh, PA
- Founded in 2018



LyGenesis is the epitome of a company leveraging Pittsburgh's unique strengths to develop novel health innovations. Bringing together a multifaceted team of founders – University of Pittsburgh Pathology Professor and Director of the Cancer Stem Cell Center at the McGowan Institute Dr. Eric Lagasse, transplant surgeon Dr. Paulo Fontes, former director of the Liver Transplant Center at UPMC, and life sciences entrepreneur Dr. Michael Hufford – the company is a spinoff from the University of Pittsburgh's McGowan Institute for Regenerative Medicine.

Based on Dr. Lagasse's discoveries, LyGenesis is a clinical-stage allogeneic cell therapy company that uses lymph nodes as *in vivo* bioreactors to regenerate functioning organs within the patient's own body. In a medical first, LyGenesis recently **dosed their first patient** in a clinical trial using their own lymph nodes as living bioreactors to regenerate an ectopic organ. If the study is successful and FDA approval is obtained, this novel allogenic cell therapy could enable one donated liver to treat many dozens of end-stage liver disease patients, which could help tilt the long-standing organ supply-demand imbalance in favor of patients.

A venture-backed biotech company that has raised just under \$40M to date, LyGenesis is presently conducting an open-label, dose-escalation **Phase 2a clinical trial** (NCT04496479) of 12 patients with end-stage liver disease.

Taking place at a fascinating intersection of cell therapies, regenerative medicine, and transplantation, Dr. Lagasse's discovery has the potential to be a platform for multiple cell therapies, with important applications for end-stage renal disease, diabetes, and even aging.

Innovation Today



This Bag of Cells Could Grow New Livers Inside of People

Pittsburgh-based LyGenesis is pushing boundaries with an incredible, potentially life-saving approach to treating liver disease. [Read more](#) about efforts to grow a new, miniature liver inside of a human being.

Tell Us What You Think



Which proposed policy change from our white paper would be most impactful?

Offering Small Business Innovation Research Matching Funds

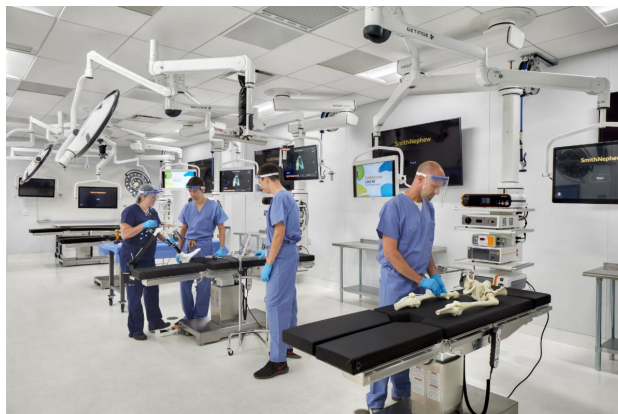
Expanding R+D Credit

Expanding University Commercialization Funds

Employer Spotlight

Smith+Nephew

- Global medtech company
- 175+ employees in the Pittsburgh office
- Founded in 1856



Smith+Nephew is a global medical technology company that exists to restore people's bodies through their global franchises of Orthopedics, Advanced Wound Management, and Sports Medicine & ENT.

Smith+Nephew's presence in Pittsburgh started via the acquisition of Blue Belt Technologies in 2016. The company was attracted to the Carnegie Mellon-spawned start-up for its unique hand-held robotics technology associated with orthopedic surgery applications. Now, Smith+Nephew has over 175 employees at the Strip District facility, which is also the company's global R&D center for developing surgical robotic products, including hardware and software.

The Pittsburgh team leads work on the CORI Surgical System, which provides image-free smart mapping to build 3D models of the joint in surgery, real-time planning for personalized surgery, handheld precision milling, and intra-operative gap balancing. Smith+Nephew also partners with local startups on R&D projects, UPMC on R&D and surgeon education, and local universities for technology development.

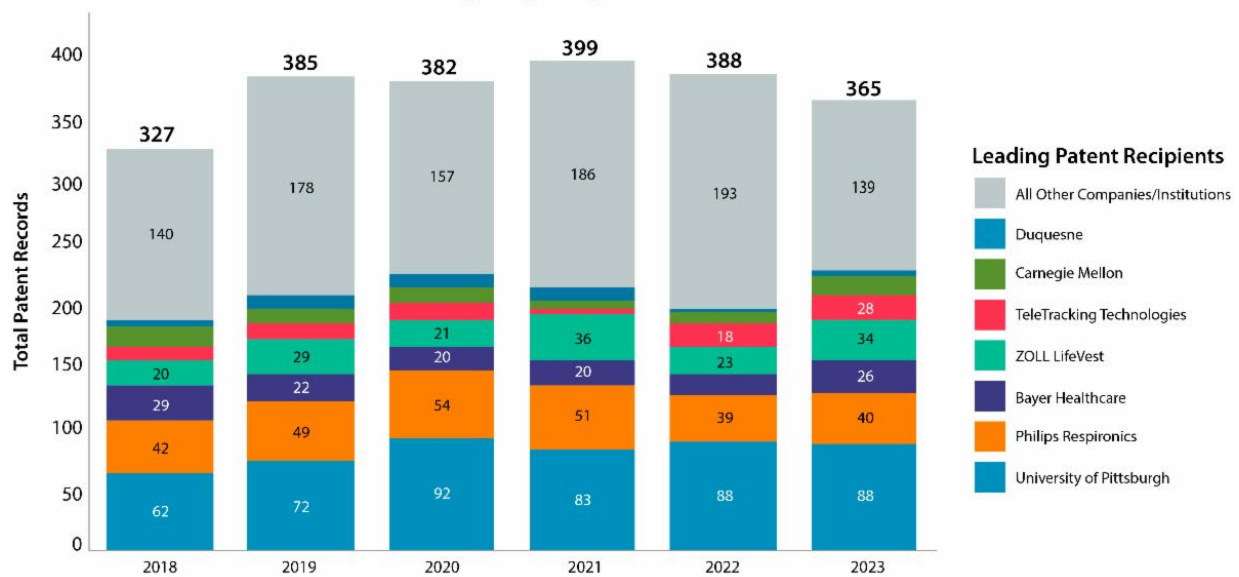
Building on the Pittsburgh region's strength in AI, Smith+Nephew recently released RI.KNEE Robotics 2.0 at the American Academy of Orthopedic Surgeons meeting, the largest orthopedic meeting in the United States. This software provides personalized knee planning software powered by AI.

Smith & Nephew is currently expanding its software engineering team as well as hiring for other positions. There are a variety of engineering, testing, and marketing roles in the [Pittsburgh office](#).

Did You Know?

The greater Pittsburgh region is granted nearly **400 life sciences patents** annually, with corporate recipients **Phillips Respironics, Bayer Healthcare, and ZOLL LifeVest** leading the way.

Life Sciences Patents Granted in Pittsburgh Region by Year



Source: TEconomy analysis of Derwent Innovation USPTO Data

Life Sciences Real Estate

Earlier this year, a non-profit foundation, [The University Financing Foundation \(TUFF\)](#), in collaboration with Carnegie Mellon University, acquired Hot Metal Labs. The 81,000-square-foot wet lab facility is located in the Pittsburgh Technology Center at 700 Technology Drive.

Hot Metal Labs has approximately 25,000 square feet of wet lab space available for lease and occupancy this fall, with the remaining portions of the building becoming available over the next three to five years. Should you have any questions about the current and future wet lab availability at Hot Metal Labs, please contact Dominick Constanza at Collaborative Real Estate at dconstanza@collabre.co.



Thank You To Our Founders



The best way to stay up to date with news and updates from PLSA, as well as the organizations in our ecosystem, is by following us on LinkedIn. Don't miss out!



We are always looking for your input! If you have suggestions for newsletter content or spotlights, please contact kate@atozcommunications.com.

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