

The UM BioPark is a beacon for early-stage technology ventures

The research park's perfectly matched location and array of startup-supporting resources makes it an invaluable pillar for a growing number of life science startups — and the entire Maryland ecosystem.



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ALLAN DOCTOR, MD (PICTURED LEFT) IS THE COFOUNDER AND CHIEF SCIENTIFIC OFFICER OF BIOTECH FIRM KALOCYTE. WHEN HE WAS RECRUITED TO JOIN THE UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE (UMSOM), THE COMPANY CHOSE TO MOVE TO BALTIMORE AS A BIOPARK AFFILIATE. TODAY, KALOCYTE AND ITS EMPLOYEES, LIKE SCIENTIST ANKITA JOSHI (PICTURED RIGHT), ARE THRIVING IN A RESEARCH ENVIRONMENT THAT ALLOWS FOR CLOSE COLLABORATION WITH UMSOM. (COURTESY UM BIOPARK)



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Startups require immense support to thrive.

That's one reason why Globin Solutions, a pre-clinical stage company that's developing protein therapeutics for carbon monoxide poisoning and artificial blood, relocated in the fall of 2022 from the University of Pittsburgh to the [University of Maryland \(UM\) BioPark](#). The UM BioPark's prime location on the University of Maryland, Baltimore (UMB) campus makes it an ideal connection center for entrepreneurs, companies and academic researchers. Its wealth of lab space, access to a leading health science institution and proximity to key players in the life science industry — such as the US Food and Drug

Administration and National Institutes of Health — help biotech companies develop their products and form critical relationships.

Globin Solutions had already raised \$5.5 million in Series A funding before relocating to the BioPark, but the opportunity to be in the heart of Maryland’s robust biomed ecosystem was too enticing for president and CEO Jason Rose, MD, MBA, to turn down.

“What I really liked was the integrated ecosystem with a major academic medical center,” Rose said, “and how you could have a startup company right beside the academic campus to allow for maximal partnering, integration and utilization of UMB’s resources.”

Connecting startups with the University of Maryland, Baltimore

The BioPark boasts several dozen life science companies, ranging from early-stage ventures to mature companies to leading global firms.



JASON ROSE, MD, MBA, SEES THE BIOPARK AS AN INTEGRAL PART OF THE UNIVERSITY OF MARYLAND, BALTIMORE’S ENTREPRENEURIAL ENVIRONMENT. (COURTESY UM BIOPARK)

Many of the startups and early-stage companies are drawn to the BioPark for its high-quality lab space and the University’s specialized facilities and equipment. For life science companies, access to these resources helps accelerate research and development, which is crucial for efficient commercialization in an industry known for notoriously long lead times.

In addition to leading Globin Solutions, Dr. Rose wears many hats for the University of Maryland School of Medicine (UMSOM), serving as director of faculty entrepreneurship, associate professor of medicine and the associate dean of innovation and physician science development.

Since joining the university, he has helped implement policy changes that increase UMSOM's focus on innovation programs and entrepreneurship as part of its faculty evaluation. Dr. Rose is also working to create more robust relationships between industry partners – including UM BioPark tenants – and the university's researchers. These relationships can often be critical in recruiting new faculty members that are eager to pursue entrepreneurial projects in addition to teaching and developing innovative technologies for the university.

“To move technologies to market where they are able to actually help patients, you really need commercialization partners. This requires collaboration between industry, startups, and academia,” Rose said. “You need a robust enough system in place that can attract renowned investigators, who may have complex relationships with industry or their own startups, balanced with the appropriate amount of oversight.”

Access to targeted startup technology grants

For the young companies that become BioPark tenants, the research park offers something equally as important as a location on UMB's campus and state-of-the-art lab equipment:

Access to early-stage funding programs without the strings typically attached to venture capital.

This is especially tempting for startups, as making products economically viable for later investors is a significant hurdle that they must overcome. The disconnect between founders pushing to get their products to patients and investors seeking financial gain can make fundraising extremely difficult.

Locating in the BioPark qualifies these early-stage ventures for a slew of funding programs designed to maximize their cash flow while products are still in development.

“A great advantage of Maryland and the UM BioPark is the amount of targeted early-stage technology development available to entrepreneurs,” Rose said. “It's pretty unique that

there are programs within the state where you can apply for seed level of non-dilutive funding to advance a technology commercialization program.”

For instance, UMB recently [received a \\$4 million NIH REACH grant](#) to establish the University of Maryland Life Science Discovery (UM-BILD) accelerator, which is partially housed in the BioPark.

UM-BILD is focused on developing potential scientific breakthroughs into medical products while simultaneously training the biomedical workforce in the region. Prior cohorts of the NIH REACH program have helped establish 49 startups and led to the development of 15 commercial technologies, according to the NIH.

There’s no shortage of similar programs that are easily accessible. [TEDCO](#) offers myriad funding opportunities for early-stage technology and life science companies; the [University System of Maryland \(USM\) Momentum Fund](#) invests in technology ventures affiliated with USM institutions; and if a company licenses UMB technology, they are eligible for an array of funding initiatives that range from R&D grants to equity investment. That’s why the BioPark connects its tenants with startup-supporting organizations across Maryland immediately upon locating in the research park.

“We’re all focused on trying to grow this wonderful place called Maryland,” said BioPark Executive Director Jane Shaab. “The only way to do that in today’s world is to cooperate, be open to new relationships, be open to new introductions, bring new people into your world all the time, and make that circle bigger. That cooperation and collaboration makes the world we live in more fun and interesting.”

A collaborative working environment adjacent to federal players

The BioPark’s close proximity to prominent federal players can pay huge dividends for these early-stage companies as well.

Take for example KaloCyte, a preclinical stage company developing an artificial red blood cell substitute called ErythoMer, which captures and releases oxygen just like a normal red blood cell.

CEO Elaine Haynes decided to [move the company from St. Louis to Baltimore](#) as a BioPark affiliate in 2019 when Allan Doctor, the cofounder and chief scientific officer, was recruited to lead the UMSOM's new Center for Blood Oxygen Transport & Hemostasis. Moving would allow the company to continue closely collaborating with academic research partners while placing them close to key federal partners and funders – KaloCyte is backed by \$17 million in federal funding – both critical pieces for advancing.

“The proximity to federal agencies and UMSOM has been dramatic in terms of [increasing] efficiency,” said Allan Doctor, MD, the biotech firm's cofounder and chief scientific officer. “It has improved both the production and the evaluation of the product.”

Dr. Doctor's standing as a UMSOM faculty member also provides opportunities for KaloCyte to collaborate with UMB on federally funded research grants. Grants like a \$46 million research project, funded by the Defense Advanced Research Projects Agency, to develop and test a whole blood product that is storable at room temperature.

In addition to the university's value, the BioPark also nestles KaloCyte amongst dozens of other life science companies.

“The advantage is being in a collective and also having the infrastructure supported by and maintained by the university,” Dr. Doctor said. “And there's also the benefit of being in a peer community. There's collective purchasing, space discounts, access to intellectual property and business expertise and there's support with personnel and recruiting. There's an affinity to helping each other.”

The BioPark aims to nurture the relationships between its tenants to foster this collaborative working environment.

KaloCyte President and CEO Elaine Haynes recently started attending a CEO forum co-hosted by the BioPark. This gives leaders of Baltimore-based life science companies a space to share updates about their companies, collaborate, and discuss the state of the life sciences industry.

“I can’t imagine not being in this environment and ecosystem with the support that we get,” Haynes said. “It’s been really good camaraderie and networking just expanding our expertise and making connections.”

Since relocating to Baltimore, KaloCyte has raised nearly \$5 million in investment funding and expanded their team from three to 10 employees. They have also completed their pre-IND meeting with the FDA, and are now collecting IND-enabling data and preparing to submit an IND application.

Supporting Baltimore’s continued growth in life sciences

Executive director Shaab said the ideal scenario for companies born out of the university is that they’ll remain in Maryland – and ideally the BioPark – to create jobs for local residents and provide a boost to the state’s economy.

“If you’re going to put the partnership, investment, time, friendship and relationship building into nurturing these companies, you don’t want those companies to pick up and go,” Shaab said. “We want them stay here and grow, giving jobs to our cousins, our children, people that live here in Baltimore and those that live in Maryland.”

That’s why the research park is in the midst of a massive construction project that will extend its already expansive wet lab facilities.



4MLK, SET TO OPEN IN FALL 2024, WILL GREATLY EXPAND THE BIOPARK'S COMMERCIAL WET LAB FACILITIES. ONE ENTIRE FLOOR WILL HOUSE CONNECT LABS BALTIMORE, A FLEXIBLE, SCALE-IN-PLACE LAB AND INNOVATION INFRASTRUCTURE FOR EMERGING AND GROWTH COMPANIES. (COURTESY UM BIOPARK)

The BioPark is adding a 252,000 square foot building known as 4MLK to help fill the need for wet lab space in Baltimore. The eight-story building — which is set to open in fall 2024 — is predominantly comprised of new labs and offices, to accommodate 50 to 100 new companies. A programmed civic engagement space will help the BioPark continue to facilitate the networking, relationship building, and connections that are strengthening Baltimore's life science community.

“We really want to be the centerpiece for civic life and life sciences here in the city,” Shaab said, “and hopefully the region.”

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