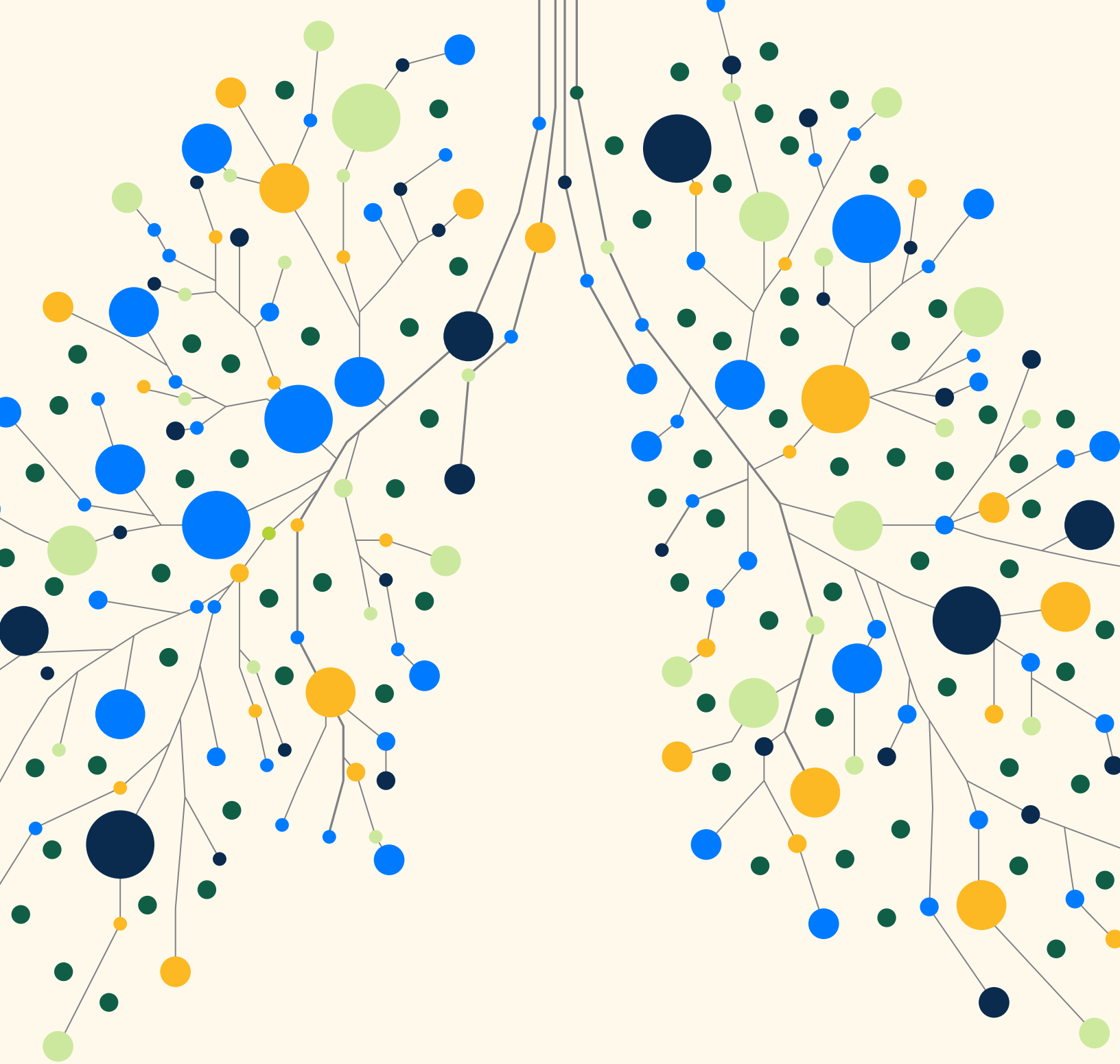


When Technology Fails, Innovation Must Prevail

MAKANI SCIENCE

ULP UNIVERSITY LAB PARTNERS

We place immense trust in the technology of a modern hospital. The array of monitors at a patient's bedside creates an impression of comprehensive, vigilant oversight where every vital sign is tracked with precision. But for what's arguably the most critical sign of all–respiration–that technology doesn't always deliver.

Despite all the innovation, **respiratory rate remains the most unreliable vital sign**. When this measurement is unreliable, the consequences can be devastating, a reality one innovator would confront in the most personal way imaginable.

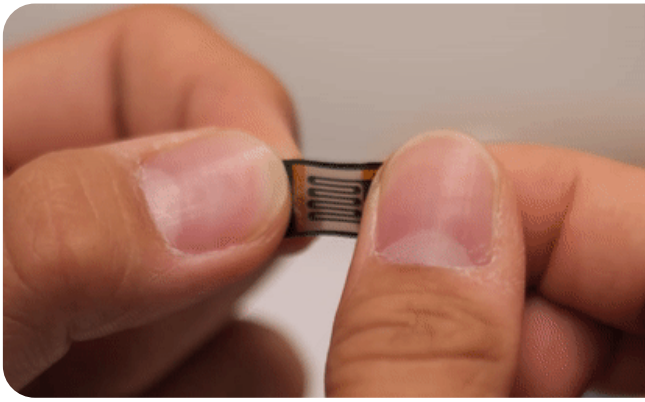
When Dr. Michelle Khine's son was born with a collapsed lung, he was held in the NICU, attached to wires and monitors, unable to be close to his mother. She was left wondering, with all of these monitors in place, how had the technology failed to detect a collapsed lung?

For the University of California, Irvine (UCI) biomedical professor, this wasn't just distressing–it was a call to action.

Dr. Khine knew she could build a better respiratory monitor, one that wasn't bound by wires but prioritized accurate and immediate respiratory readings. From this deeply personal and urgent need, **Makani Science** was born. Dr. Khine and her co-founder, former UCI doctoral student Dr. Michael Chu, created their startup with a singular mission: to engineer a revolutionary, small wearable device that vigilantly monitors breathing and catches what current systems overlook.

Dr. Michael Chu

Dr. Michelle Khine



The Makani Respiratory Monitoring System will make critical respiratory information potentially more accessible in more settings.

The sensor is gentle enough to be used on newborns but robust enough for adults to wear day-to-day. Where traditional monitoring equipment can be cumbersome, this new form of respiratory monitoring doesn't detract from daily living.

While the size of the device introduces many advantages in the wearable healthtech space, what sets Makani apart is the data collected. Unlike wired systems that restrict movement or certain wireless devices susceptible to motion artifacts, Makani Science's sensor is engineered to maintain data integrity during ambulation. This capability supports uninterrupted respiratory monitoring in a variety of settings, from assessing physiological responses during military training to remote patient monitoring for asthma or COPD.

Accurate

Convenient

Applicable for Different Uses

A significant aspect of Dr. Khine and Dr. Chu's innovation is the sensor's capacity to collect highly accurate and detailed respiratory data. This accuracy provides a critical speed advantage over currently available technologies. As CEO Dr. Greg Buchert stated, "We saw in our own clinical trials that we did for the FDA, that our device detects changes in breathing between 5 to 12 seconds faster than what's considered a gold standard." Beyond just speed, the sensor captures the complete respiratory pattern waveform, not just the respiratory rate in a given moment, providing significantly richer clinical information.

And that information opens the doors for further innovation in healthcare. For instance, the rapid detection capabilities and detailed waveform analysis enable earlier identification of adverse respiratory events or deterioration. This provides clinicians with crucial lead time for intervention, particularly in acute care settings, like operating rooms or intensive care units.

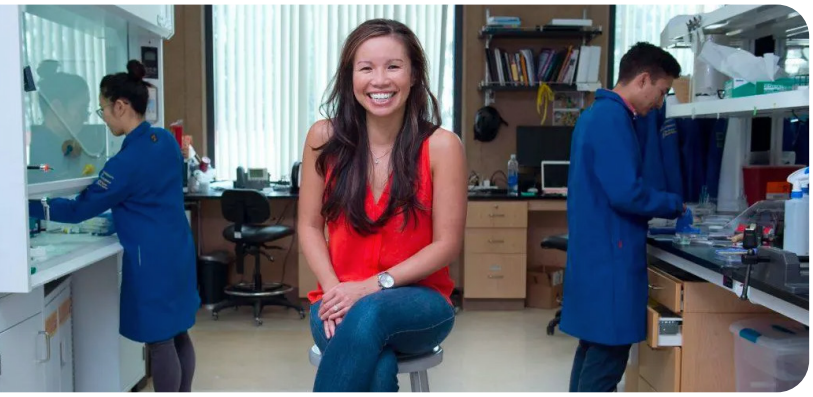
> **"It's not just the fact that a premature baby stops breathing periodically, but it's that the frequency and the duration of those episodes are associated with developmental delays later on in life. We have the opportunity to change the lives of so many kids with our NICU monitor."**
>
> Greg Buchert, MD, CEO of Makani Science

The data collected means improved patient care across use cases. But the device allows for improved quality of life—no more machines and wires. Instead, instant and continuous data collection is stored in the cloud, all from a small wearable device that's as simple as wearing a watch.

BEYOND THE LAB: A COMMUNITY OF INNOVATION AND SUPPORT

Having the tools needed to conduct trials and test components is an essential part of the startup life cycle. However, what's perhaps even more important than the physical lab space is the offerings of the community.

University Lab Partners has cultivated a rich ecosystem that counters the isolation often faced by early-stage companies. Rather than the "garage inventors" working in isolation, ULP is rooted in a collaborative community.



> **"We've actually been very successful with leveraging information shared by other startup founders, including information regarding our applications to the NIH and interpreting some of the [feedback] that came back from the FDA."**
>
> Greg Buchert, MD, CEO of Makani Science

In fact, the spirit of "coopetition" at ULP even led to a potential manufacturing partnership between Makani Science and another ULP resident to produce a critical sensor component—a move poised to save both companies money and solve a key operational challenge.

US Congressional Representative of the 47th District of California Dave Min meets with Makani Science at University Lab Partners' wet lab facility.

Ultimately, the University Lab Partners' name itself became an asset. According to Buchert, being based at ULP provides a certain "cachet" within the investor and research communities. He credits the ULP leadership with being more than just landlords, actively providing support and introductions to key investors.

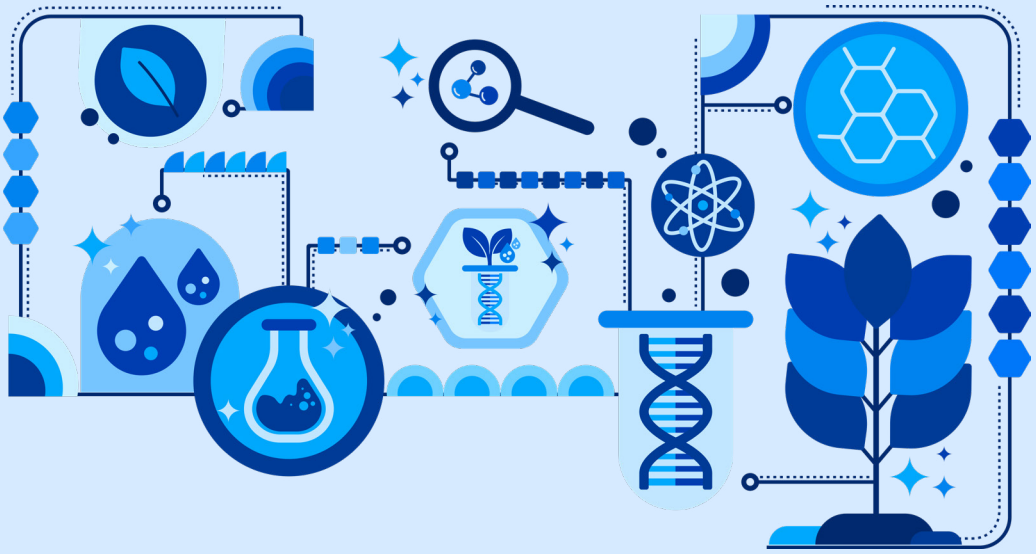
> **"The team at University Lab Partners have promoted us for speaking engagements to pitch our product. And [they've] spoken up on our behalf to say, you need to take a look at Makani Science. And so they've definitely made introductions that we may not have had otherwise, and may have influenced us as being selected to make presentations."**
>
> Greg Buchert, MD, CEO of Makani Science

Those presentations have been essential for securing critical funding from angel investors to help bring Makani Science's respiratory monitor closer to market.

For Dr. Khine, Dr. Chu, and Dr. Buchert, University Lab Partners provided the ideal synthesis of infrastructure, community, and credibility–the fertile ground needed for a promising idea to develop into a company on the cusp of commercial launch.

THE ULP COMMUNITY AS A LAUNCHPAD FOR LIFE SCIENCE INNOVATION

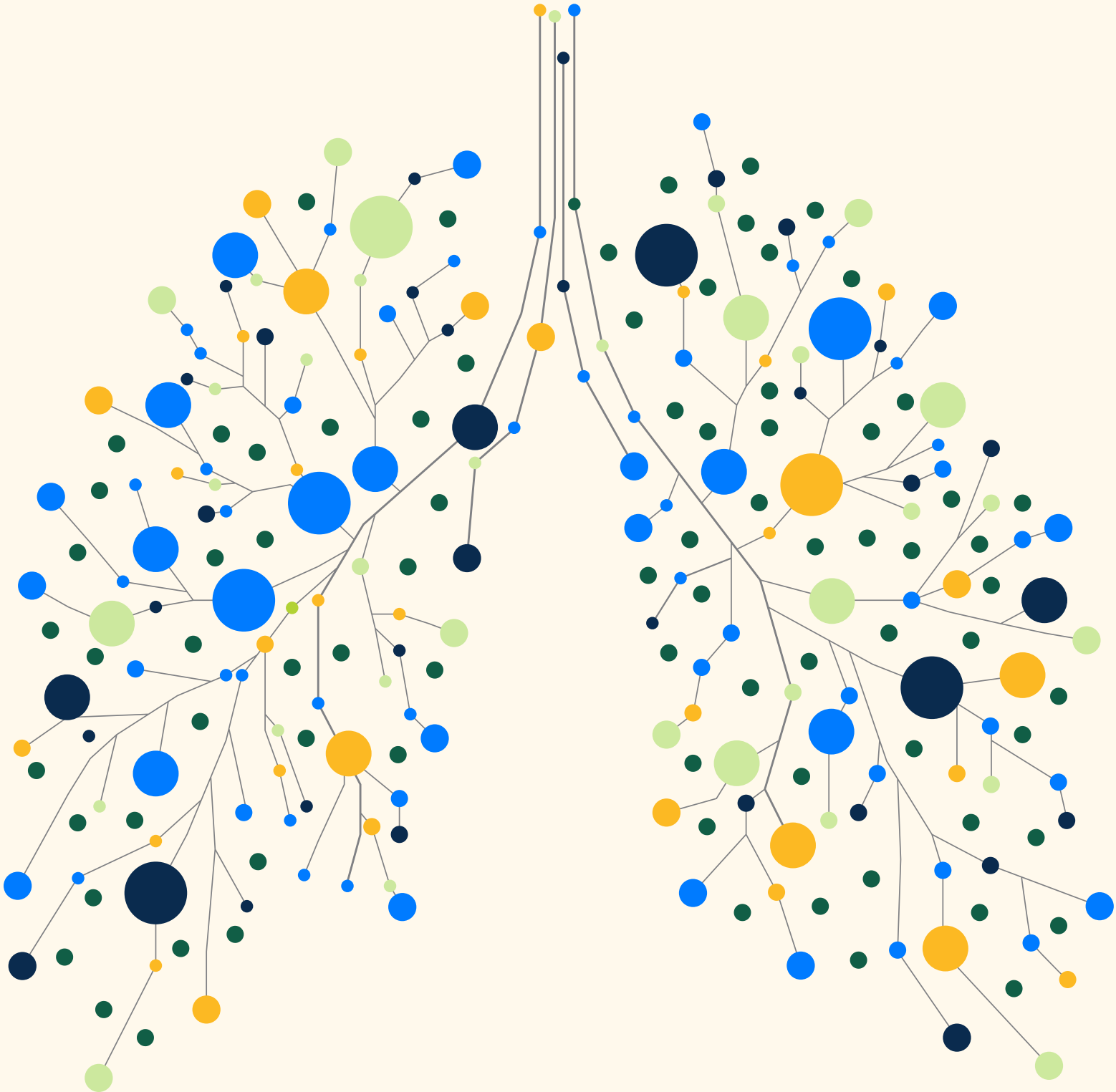
Like so many startups, Makani Science found their home at University Lab Partners. Their story offers more than just a narrative of a single company's rise; it acts as a blueprint for other early-stage life science ventures.



> **"It's easy to be there. It's comfortable to be there. And I'm proud to call University Lab Partners home."**
>
> Greg Buchert, MD,
> CEO of Makani Science

For those navigating the challenging path from concept to commercialization, these insights highlight that the physical environment you work in is important, but perhaps even more impactful is the community that surrounds your business.

The Makani Science experience at ULP demonstrates that a strategic partner providing more than just physical space–offering community, credibility, connections, and dedicated support–can significantly reduce risks in the startup journey. It fosters an ecosystem where innovation is not just housed, but actively nurtured, accelerated, and given the best possible chance to address critical unmet needs.



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