Metabolism-focused startup aims to shorten time between scientific insight and therapies

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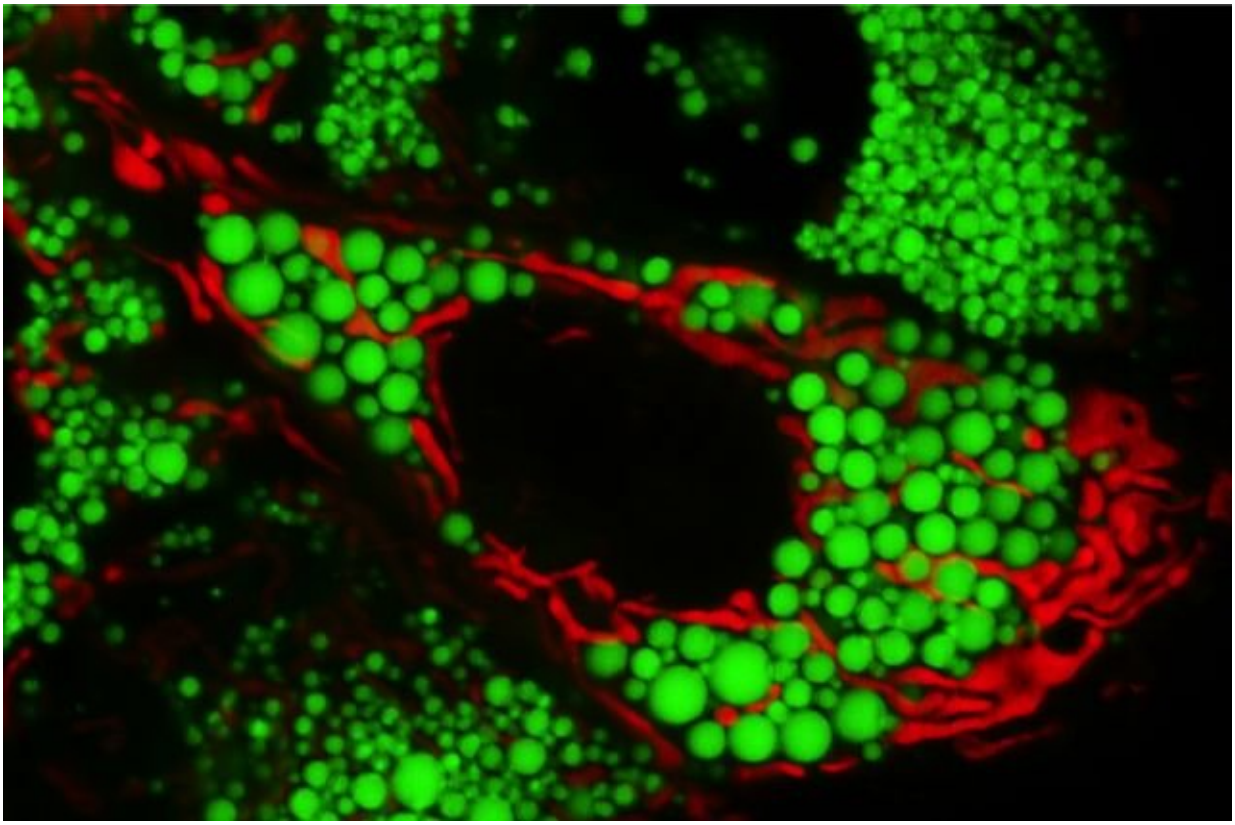

Mitochondria (red) and lipid droplets (green) are cellular organelles targeted by technologies developed at Enspire Bio. Credit: Ilan Benador

One of the major challenges in modern medicine is the length of time required to turn new scientific insights into treatments that help patients.

Now, the David Geffen School of Medicine at UCLA is launching an innovative startup company to speed up that process, with an emphasis on metabolism research and related therapies.

This new "virtual" drug development startup company, Enspire Bio, will channel the knowledge and financial resources necessary to translate basic science—the bedrock of medicine—into powerful treatments. And, in a notable departure from traditional approaches, the translation will occur in the heart of the research lab.

Enspire Bio is a collaboration between the Metabolism Research Theme at the David Geffen School of Medicine and UCLA's Technology Development Group.

"As scientists, we have a responsibility to cure disease," said Dr. Orian Shirihai, leader of the Metabolism Theme. "This company will help us accomplish that goal by ensuring researchers have the tools and the diverse expertise, not just the funding, needed to develop new drugs."

Traditionally, a new startup is launched once a potential therapy has been identified. The researchers behind it patent their intellectual property, then team up with outside investors and entrepreneurs who license the compound into a company that takes on the translational work to develop its therapeutic potential. Often this company is formed around just a single therapeutic asset.

With the new virtual portfolio model of Enspire Bio, much of the early translational work will stay on campus and the company will develop a portfolio of projects rather than just a single asset. This model has a number of potential benefits. One is building closer collaborations and knowledge exchange between the scientists driving the original discoveries and drug development experts who can translate them into help for patients. Another is that the portfolio model isn't built around a

single therapeutic asset, which maximizes its chances of success.

Enspire Bio was launched with two therapeutics projects licensed from UCLA. A number of additional projects are under discussion with the company. All projects receive a funding commitment designed to bring drugs to fruition. Ultimately, the company hopes to identify five to 10 projects within the theme that could lead to new therapies. As the company grows and demonstrates the success of the innovative virtual portfolio model, the hope is to inspire a broader adaptation of the model.

"With this approach, faculty members are all collaborating with each other, working together to leverage each other's expertise to bring discoveries to benefit the public through the partnership with Enspire," said Amir Naiberg, associate vice chancellor and president and CEO of the UCLA Technology Development Corporation. "Because it's a virtual company, without a separate lab, the funding for the preclinical research will also feed back to fuel more basic discovery."

"Collaborating with industry to further develop UCLA technologies via a portfolio model such as this allows us to increase their value and also reduce risk for investors," said Earl Weinstein, senior business development officer in the Technology Development Group. "This model can incentivize industry and investors to take on early-stage projects and transition them to clinical use to benefit patients."

The collaboration between the Geffen School Metabolism Theme and the Technology Development Group that spurred the creation of Enspire Bio highlights the power of the research theme concept. Created three years ago, the themes unify scientists and physicians across six broad disciplines to create opportunities for cross-disciplinary interactions.

"The new company is one indication that the themes work," Shirihai said. "The new drugs—our ability to help people—will be further proof

still."

Provided by University of California, Los Angeles

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