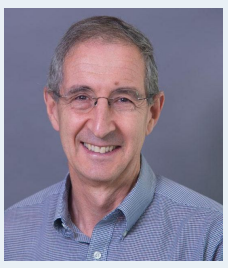
MIT DESHPANDE CENTER
FOR TECHNOLOGICAL INNOVATION

DESHPANDE BITS & BYTES

Message from the Executive Director



Greetings from the Deshpande Center!

It's a busy time of year for the center: receiving new grant proposals, meeting with our current teams, and planning for IdeaStream.

We are also excited to be on the verge of celebrating our **50th** spinout company. This is a great milestone, considering the center's mission is to assist MIT researchers in bringing their innovations into the world to have an impact.

What has that impact been so far? Not all of it can be quantified, but here's some idea: 23 companies in the field of health care, 11 in cleantech, and more in other industries. Their products include medical diagnostics, cancer therapies, drug delivery systems, bio-adhesives, PV solar, grid storage batteries, cellular communications, digital twins, water treatment, advanced materials, and 3D printing. They have raised more than $1.5 billion, won countless industry awards and touched an untold number of lives. See more about them here.

What will be the next series of spinouts? They'll likely be among the projects presenting at IdeaStream on April 14. Come and see what's on the horizon.

- Leon Sandler

IdeaStream to showcase innovators of past and present

Conference returns April 14

Spring is coming, and that means IdeaStream is just around the corner. Join the Deshpande Center on April 14 for its exclusive showcase of cutting-edge technology developed by MIT researchers.

This year's conference features innovations ranging from health care to energy to net-zero production. In addition, the center welcomes back IdeaStream alumni to share entrepreneurial insights and experiences.

Build your network, exchange ideas and see what's next in innovation.

Learn more here | Request an invitation

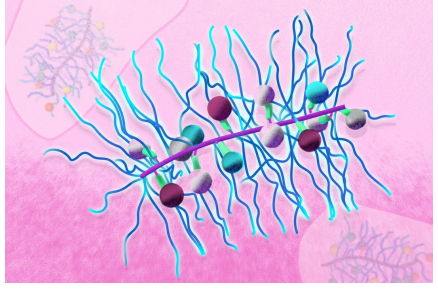
SPINOUT & GRANTEE NEWS

Angela Koehler takes on difficult cancer targets

Photo by Gretchen Ertl

Angela Koehler, an associate professor of biological engineering at MIT, has made it her mission to find ways to drug "undruggable" targets. Her approach has already yielded one potential cancer drug that is in early-stage clinical trials, with others in the pipeline. That trial is at **Kronos Bio**, which spun out from Deshpande-supported research.

Read MIT News story | **See Koehler's 2015 project**



Targeting cancer with a multidrug nanoparticle

Treating cancer with combinations of drugs can be more effective than using a single drug. However, figuring out the optimal combination, and making sure all the drugs reach the right place, can be challenging. MIT chemists from the Johnson Research Group designed a bottlebrush-shaped nanoparticle that can be loaded with multiple drugs, in ratios that can be easily controlled. The researchers were able to calculate and deliver the optimal ratio of three cancer drugs used to treat multiple myeloma. The research was supported in part by the Deshpande Center, and the technology spun out into a company, Window Therapeutics.

Read more in MIT News | **Learn more about Window Therapeutics**

Large language models help decipher clinical notes

Researchers from MIT's Computer Science and Artificial Intelligence Laboratory, led by Monica Agrawal, a PhD candidate in electrical engineering and computer science, believed that to improve Electronic Health Records, they needed to call on large language models.

To pull important medical information, they used a very big, GPT-3 style model to do tasks like expand overloaded jargon and acronyms and extract medication regimens. Their work was supported by a 2021 Deshpande Center grant.

Read more in MIT News | **AI support system for authoring clinical documentation**

Shoutouts to spinouts

- **Aeroshield**, which is developing super-insulating glass inserts, secured $4 million in a seed round.
- **Boston Metal** raised $120 million in Series C funding and was honored by Cleantech group as North American Company of the Year.
- **C2Sense** completed a second $8 million Series B round to advance work on Halo, its digitally connected diagnostic platform
- **Leuko** announced it raised $5 million in Series A to validate its noninvasive white blood cell monitoring technology for cancer patients.
- **Suono Bio** dosed its first patient in clinical trials of its therapeutic platform to treat ulcerative colitis.
- **Via Separations** was awarded nearly $10 million in a SCALEUP grant from the Department of Energy for its cleantech work in industrial manufacturing.

Make Innovation Possible: Giving Opportunities

Your gift will make the groundbreaking research by our MIT teams — and the life-changing products by their future companies — possible. You can Donate Online using MIT's secure donation page, or contact Leon Sandler to discuss named and other giving opportunities.

Corporate Engagement

Organizations that join the Deshpande Center Corporate Program gain unique insights into new technologies, impact the research, and build relationships with faculty, students, and startups. | Learn more about the Corporate Program

The MIT Deshpande Center is on LinkedIn. Don't miss important updates! Connect with us at linkedin.com/company/mit-deshpande-center/

Have updates for our Deshpande Bits & Bytes newsletter? Email news and photos to deshpandecenter@mit.edu.