

Giving Life to Bright Ideas

An invitation to partner with Brigham Young University





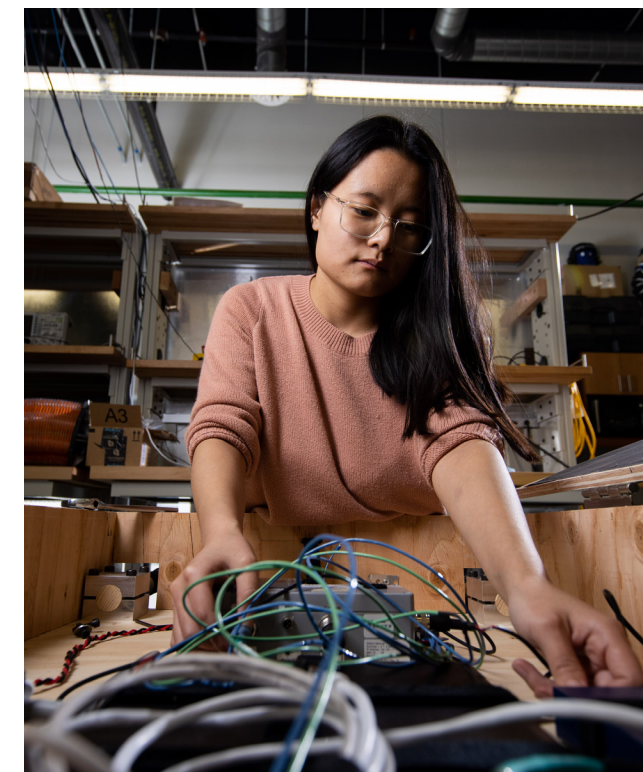
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BYU Technology Transfer Office

INSPIRING LEARNING

The focus of education at Brigham Young University can be distilled into two words: inspiring learning. “I hope we inspire our students to learn,” BYU President Kevin J. Worthen told employees. “And I hope that learning leads to inspiration. When both things happen, inspiring learning occurs, and we can then know we are on the right track to achieve the core goals set forth in our mission statement.”

Inspiring learning encompasses more than lectures, tests, and homework. Inspiring learning helps students see that what they’ve learned matters outside the classroom. They must apply what they’ve learned and discover that it works and has value in the real world. BYU’s Technology Transfer Office is central to achieving that goal.



BRIDGING THE COST-TO-MARKET CHASM

Professors must use all of their research grants solely for research. That means there’s nothing left over for prototypes, third-party validation, proof-of-concepts, patentability, or additional testing. Determining the marketability of an idea or an invention takes significant research and preparation—both of which require resources. Without funding, excellent ideas or inventions simply collect dust.

The primary purpose of the Technology Transfer Office is to facilitate the transfer of university-developed technologies to the marketplace by protecting BYU intellectual property and by licensing protected intellectual properties to companies outside the university.

Conducting marketability research is also an opportunity for mentoring students. Involving students in research needed to commercialize technologies and products is a chance for hands-on experience.

A LITTLE GOES A LONG WAY

Here’s one example of how your donation will make a difference: BYU professor Paul B. Savage spent years working with his students and colleagues to develop a biochemical compound that would work like the human immune system to combat potentially harmful microbes. Ceragenins, as they’re known today, are inexpensive patented antimicrobial compounds that fend off germs, including antibiotic-resistant bacteria.

“[Ceragenins are] fairly easy to make, stable, and they’re very good at killing bacteria,” Savage told the Deseret News. “We expect to be able to

“One reason BYU is so good at innovation is that we attract talented professors who come to know we can help them find real-world applications for their work. . . . We want to invite successful serial entrepreneurs, alumni, and others to help us evaluate BYU inventions, find a home for them, and ultimately make the world a better place.”

—Mike Alder, Director, BYU Technology Transfer

use them in the same areas in which the body’s natural defenses are used, to either augment activity or replace deficiencies.”

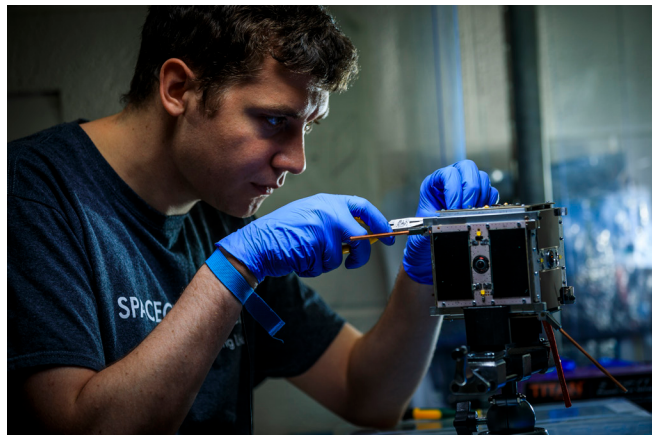
Donated funds made Professor Savage’s research possible, and the Office of Technology Transfer helped to find real-world applications where ceragenins could be used.

In 2017 the university’s Office of Technology Transfer licensed ceragenins to a privately held medical device company, N8 Medical LLC, to use on a new endotracheal tube called the CeraShield. CeraShield prevents bacteria biofilms, which can cause potentially deadly infections, from growing on the tube. Antibiotics can’t completely eliminate those infections, but CeraShield can prevent them from forming in the first place.

FOSTER SUCCESS AND ENHANCE LEARNING

In 2020 the George W. Bush Institute scored BYU higher than any other university in the United States for “innovation impact productivity.” BYU is a leader in innovation; however, bringing innovations to market requires considerable funding.





FUNDED PROJECT	DEVELOPER	FIELD OF INTEREST
Crash Simulation Software	Michael Scott	Engineering
Rapid, Inexpensive, COVID 19 Test	Brad Bundy	Engineering
Therapy for Anemia	Richard Watt	Chemistry
Vibration Therapy for Addiction	Scott Steffensen	Psychology
Expandable Spinal Disc	Anton Bowden	Engineering
Oral Cancer Test	Bryan Iverson	Engineering
Broad Spectrum Antibiotic	Paul Savage	Chemistry
Seed Coatings for Wildland Seedling Survival	Matt Madsen	Life Sciences

The BYU President’s Council approved the establishment of the BYU Technology Transfer Bridging Fund in 2014. The fund is envisioned to be an endowment that provides funding to carefully selected researchers, allowing them to do the research and preparation necessary to commercialize products or inventions.

Currently there are many projects in the Technology Transfer queue. Consequently, spendable gifts are also requested. The full amount of these donations can be immediately used to fund promising new technologies.

READY, SET, . . .

The establishment of the BYU Technology Transfer Bridging Fund is a response to an acute need. As noted, there is no shortage of great ideas at BYU. Even modest amounts between \$10,000 and \$50,000 can make the difference between failed and successful commercialization.





BYU Tech Leads to One of the Fastest Growing Companies in America

By Todd Hollingshead

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BYU is well known for being a key player in the tech startup industry. Over the past decade four companies with BYU ties have achieved unicorn status—startups that hit the billion-dollar mark before going public.

The next one might be on the way. Coreform LLC, a startup created from and fueled by BYU tech, is the fastest growing simulation company in America, ranking No. 594 in the Inc. 5000 list. The company grew out of the research of BYU professor Michael Scott and builds engineering simulation software commonly used in the automotive and defense industries.

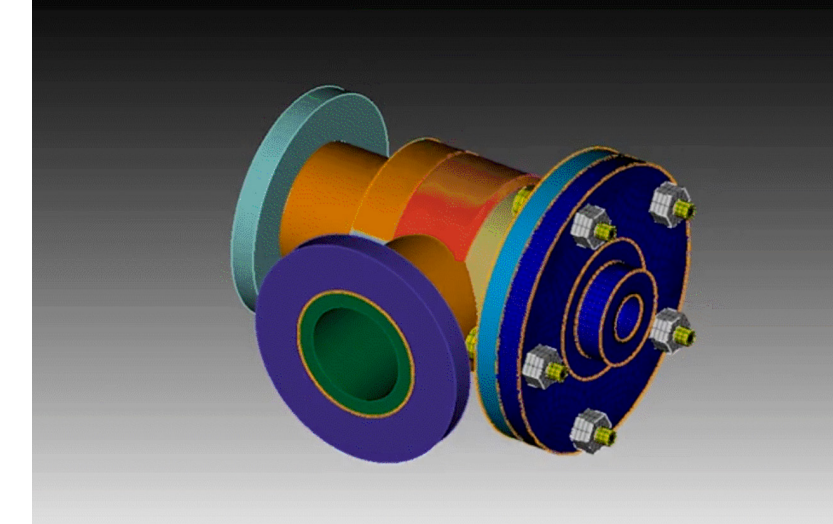
“A major application of our software is computer models that crash cars virtually rather than in real life,” Scott said. “The software allows engineers to build and run those simulations faster and more accurately than ever before with fewer expensive physical prototypes.”

Coreform is the latest example of intellectual property created through BYU faculty research and then, through the work of the BYU Tech Transfer office, licensed to a startup company. BYU ranks No. 4 in the nation among the best universities for technology transfer, according to the Milken Institute.

Scott serves as a senior advisor to Coreform, and a number of his BYU graduate and undergraduate students have also taken roles with Coreform, which is also the 15th-fastest growing company in Utah. In addition to achieving commercial success at Coreform with technology spun out of his lab, Scott is also ranked in the top 0.1 percent of researchers in his field.

Coreform CEO Matt Sederberg, a BYU grad, said the special relationship with BYU is mutually beneficial. Sederberg himself launched an entrepreneurial effort through BYU’s business plan competition (T-Splines) that was later acquired by multinational software giant Autodesk. Sederberg left a position with Autodesk to lead Coreform in 2016.

“The dynamic between Coreform and BYU is really exceptional,” Sederberg said. “The



PhD work and research happening at BYU can be shaped by actual industry needs and those students then form a great talent pipeline for us.”

Added Scott: “We’ve been able to mix the research impact and the commercial impact and also maintain a pretty unique mentored learning environment for students. BYU is the only university I’m aware of that would be open minded enough to see the value of our unique strategic relationship. It is really to their credit that they could capture the vision of what we are trying to do.”

Coreform software is used globally by hundreds of customers across many disciplines, including automotive, consumer products, and nuclear energy. They also have ongoing projects with a number of government entities, including the Department of Energy, the Navy, and the Army.

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