

game changers.

A NOT-SO-TANGLED WEB

The story of **Bolt Threads** starts with a box full of spiders.

By Annie Gieser

BOLT THREADS co-founder and CEO Dan Widmaier lived in a studio apartment in San Francisco — him, his girlfriend and the spiders. “My girlfriend — now wife — was not very happy about that,” says Widmaier.

But it wasn’t the spiders Widmaier was fascinated with; it was their webs. “Spider silk is one of the best-known examples of a biology-made material that is incredible by all standards,” Widmaier argues, explaining that he grew passionate about biomaterials while at grad school at UCSF, where he met Bolt Threads co-founder and CTO David Breslauer, who was working on his Ph.D. at UC Berkeley.

“It went from an interest to an obsession,” says Widmaier. “By the time we had finished our Ph.D.s, we thought there was a pressing need for this to solve the future of society, and humanity, in the form of a business product.”

Biomaterials are an antidote to synthetics. The idea behind Bolt Threads (www.boltthreads.com) is to take material found in nature (i.e., spider silk or mushrooms) and utilize it or the biological concepts behind it in products in place of synthetics that are harmful to human bodies or the planet. Goods made from the earth that biodegrade back into our planet — without compromising on quality or capability.

“Humanity is putting immense pressure on our planet. Through the changing climate and degradation of the environment, we need to come up with ways to support the future of humanity, our resources, and how we use them wisely,” says Widmaier. “The solutions we’ve come up with in the past just aren’t going to work, and we can’t continue to do more of the same. We thought biomaterials were an elegant solution to that.”

Bolt Threads b-silk is a bio-based and vegan polypeptide that replaces

Bolt Threads co-founder and CEO Dan Widmaier



silicone elastomers in beauty and personal care products. Its composition is inspired by spider silk but made up of bioengineered yeast (no more boxes of spiders lying around). B-silk is already in products you might have in your bathroom now, like Vegamour shampoo & conditioner and Kelly Slater’s Freaks of Nature sunscreen.

The success of b-silk is huge for Bolt Threads (the company went public earlier this year) and is just the beginning for the company. “The hope is that we can develop a new platform of technology to make sustainable and environmentally friendly versions of technologies,” says Widmaier. “They might not be exactly the same, but they propel the same functions. Maybe we can get all the benefits to humanity without all the negatives.”

Bolt Threads has a lot more to offer, with 64 granted patents and 170 pending patent applications up its sleeve.

“Humanity has big problems in our future,” says Widmaier. “We think that sustainability and protecting our natural resources and the environment to work with humanity — not against each other — is going to be a megatrend for 50 to 100 years. Until we solve the problem or extinct ourselves.” For all of our sakes, let’s hope Bolt Threads can help avoid the latter. **ml**