

Silkworms may be key to improving blood preservation, medical testing

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.

The boxes arrive from Japan, full of what look like packing peanuts. But these white oblong shapes aren't there just to protect some other cargo. These are silkworm cocoons. Snip them open, throw out the brownish grub inside, boil down the casing, and you are left with a [near-magical material](#).

David Kaplan has used silk to make [vaccines](#) and [antibody drugs](#) that don't need to be refrigerated. And now, in a [paper](#) published in the Proceedings of the National Academy of Sciences, the Tufts University bioengineer and his colleagues have shown that silk could be used to preserve blood samples at room, or even body temperatures.

"We're still a ways away from having a viable technology that can be brought to the patient's doorstep," said Roger Peck, a diagnostics specialist at the global health nonprofit PATH. But, he noted, the technology could make diagnostic tests more accessible to rural communities — and potentially more accurate.

Jonathan Kluge used to work at Tufts and is now director of R&D at [Vaxess Technologies](#), a company that spun out of Kaplan's lab. Back when he was still in academia, he and his lab mates created both a silk powder and a silk solution. They mixed these substances with blood, let the mixtures dry, and found that even at high temperatures, the silk-preserved blood still yielded almost all of the proteins more reliably than either frozen blood samples or dried blood spots.

Read full, original post: [Silk could transform the blood-testing business](#)