

USU Spider Silk Lab uses CRISPR to Advance Synthetic Spider Silk Manufacture

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USU researchers, from left, Randy Lewis, Justin Jones and Xiaoli Zhang investigate use of transgenic silkworms for commercial-scale production of high-performance synthetic spider silk

Utah State University researchers, under the direction of USU USTAR Professor Randy Lewis, have pioneered initial, lab-scale production of synthetic spider silk through the use of transgenic goats, bacteria, alfalfa and silkworms. Now, the researchers are using emerging CRISPR technology to harness the spinning power and efficiency of silkworms. Their results demonstrate promise for use of transgenic silkworms as natural spider silk spinners for industrial production of high-performance fibers.

Spider silk is an engineer's dream material. Lightweight, strong, elastic and biocompatible, it's an ideal building block for a myriad of applications, including medical implants, body armor and vehicle components. But trying to farm spiders, which eat each other and yield relatively small quantities of silk, is impractical.

[Read the entire story here.](#)