

# Researcher focuses on the repair of spinal cords

November 11 2013, by Lainie Rusco

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A spinal cord injury can be a devastating condition, often resulting in life-long disability and a range of secondary complications.

Wichita State biological sciences assistant professor Li Yao has dedicated his research to finding therapeutic strategies that would repair those injuries and allow patients to live a more comfortable life.

Yao came to WSU in 2011 and has since established a research lab on the fifth floor of Hubbard Hall to investigate [spinal cord repair](#). His lab includes undergraduate and graduate students and a post-doctoral researcher.

He said he's received a lot of support from the university in terms of equipment and space, including a surgical room.

Together Yao and his students are investigating different methods to promote the repair and regeneration of injured spinal cords and peripheral nerves. Their approaches include using biomaterial scaffolds, stem cells, gene vectors and electric signals.

It's a continuation of work Yao did prior to coming to Wichita State.

He was trained on [spinal cord injuries](#) at the Mayo Clinic in Rochester, Minn. After that, he performed the spinal cord regeneration research in animals at the National University of Ireland, Galway.

Yao developed a biodegradable neural conduit to treat wounded spinal cords. The conduit provided guidance architecture to direct tissue formation after spinal cord injuries and provided a reservoir for prolonged therapeutic gene vector delivery.

Through that research, he and his team reported significant regeneration in damaged [spinal cord](#), work he is expanding further now.

"The complicated pathological process presents significant challenge to clinicians and scientists to repair the injured spinal cords," Yao said.

"Our findings will potentially lead to the development of novel clinical strategies to treat patients."

Provided by Wichita State University

Citation: Researcher focuses on the repair of spinal cords (2013, November 11) retrieved 11 February 2023 from <https://medicalxpress.com/news/2013-11-focuses-spinal-cords.html>

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