## TranS1: Innovative Products and Partnerships

## SUPPORTING SPINE SURGERY'S INVENTION ENGINE



**COMPANY SNAPSHOT** 

FOUNDED 2014

**HEADQUARTERS** 

DENVER

**PATENTS** 

100+

PATENTS ISSUED 50 PATENTS PENDING

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Minimally invasive spine surgery sounds like an oxymoron. But that's precisely the goal at TranS1, headquartered in a restored Victorian home in Denver's hip Highlands neighborhood. The company, led by CEO Jeff Schell, is focused on optimizing spine surgery while reducing patient trauma. TranS1 is accomplishing that goal with a growing line of surgical devices and a unique public-private partnership with CU Innovations, the technology transfer office at the University of Colorado.

"Sometimes the surgical approach is more traumatic than the pathology that lead to the surgery in the first place," said Schell. "That's the problem our company set out to solve."

Schell, a patent attorney with a degree in medical informatics, acquired TranS1 in 2014 after it filed for bankruptcy under a different owner. He moved it from Raleigh, North Carolina, to Denver and set about building the company back up around one of its flagship products, a minimally invasive spinal surgical system called AxiaLIF+. The system gives surgeons the ability to fuse the lowest joint in the spine, called the L5-S1 junction, in less time than other procedures, with a smaller incision, less blood loss, at a lower cost, and with a faster patient recovery time. More than 20,000 surgeries have been performed worldwide using the technique.

The success of the device allowed TranS1 to refine other products and develop new ones.

"OUR TEAM HAS 15 PROJECTS
ONGOING, WITH DIFFERENT IMPLANTS
AND DIFFERENT DESIGNS," SAID
SCHELL. "IT'S A HIGH-TECH, INNOVATIVE
COMPANY THAT WE'VE PUT TOGETHER
IN DENVER."

The company is cash flow positive, a rarity in early-stage, high-tech bio ventures. It has established distribution in 35 states, Europe, and Latin America, and is currently pursuing distribution in China.

In October 2017, TranS1 won the New Technology Award from Orthopedics This Week for another medical device, called the Pylon, which replaces a much more invasive procedure to place bone graft along the rear (postero-lateral) portion of the spine.



As Schell and his team worked to grow the company, they reached out to the renowned medical experts at the University of Colorado's Anschutz Medical Campus and its technology transfer office, CU Innovations. The facilities, testing equipment and expert faculty became invaluable resources. But it wasn't a one-sided deal for TranS1. The company holds more than 100 patents, with 50 additional patents pending, and ongoing, active submissions. With deep expertise in patent law and a board of spinal surgeons, Schell and his team determined they could help improve the efficiency of the invention engine at CU Innovations.

In September 2017, the TranS1-CU Innovations partnership was born. University of Colorado professors or faculty with ideas that could potentially improve spinal surgery can consult with TranS1 on whether the concept is patentable and worth pursuing from a market point-of-view.

"It gives CU Innovations a firm and quick answer to the question, 'Is this worth the university's time and money to explore?'" said Walker Wells, Executive Vice President and General Counsel at TranS1. The company then offers the inventor several different options to take the idea from concept to market.

But the partnership has advantages for TranS1, too. "It keeps us in a position where our engineers are in the forefront of the market," said Wells. That knowledge keeps the team on the cutting edge of innovation.

As TranS1 became firmly rooted in the Colorado bioscience sector, company leaders received invaluable support, said Schell. They were put in touch with national trade industry organizations, investor resources, health networking group and government representatives.

"It's a strong, tight-knit community," said Schell.
"It's a special place to be based."