



# Antinex

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## Overview

Antinex develops and provides specific medical tools as part of a novel procedure to specialized doctors, allowing them to permanently relieve facet-induced lower back pain for their patients. This problem affects **half a billion people** and contributes to the number one cause of disability worldwide. Based out of Indiana, Antinex has **developed a scalable manufacturing method and prototyped a single-use toolkit expecting to attract half a million patients annually** in a market with a 9.7% annual growing demand.

## Team

### Agathiya Tharun | Co-Founder | Purdue University BS Mechanical Engineering '24

Earning a minor in manufacturing, Agathiya is experienced in founding startups, design engineering, computer science, and project management. He also became fluent in R&D, product development, and management through his experience working at SpaceX, NASA, Boeing, and Lockheed Martin.

### Cameron Mostoufi | Co-Founder | Purdue University BS Mechanical Engineering '24

Earning a minor in computer science and a certificate of entrepreneurship & innovation, Cameron has experience in R&D and project management within the biomedical, autonomous vehicles, AI, and defense industries and through his work at TSI and Lockheed Martin.

### Jacob Whitehouse | Co-Founder | Purdue University BS Mechanical Engineering '24

Earning a minor in business management, Jacob is skilled in data analytics, manufacturing, startup management, and project management. He also has experience working at Integrated Information Systems, Raytheon Technologies, and his startup, Pluto Products, LLC.

## Product

Antinex is developing a single-use kit of biomedical devices for a new procedure that permanently relieves facet-induced lower back pain. The kit includes a Stylet, Portal, Back Stabilizer, and Denervator, designed to be ergonomic, mass-manufacturable, and compliant with FDA regulations and biocompatibility standards. This minimally invasive procedure takes just 20 minutes, allowing for immediate patient discharge without stitches. It is also cheaper and more effective than existing treatments. Its novelty lies in severing the lumbar medial branch nerve to prevent pain recurrence and side effects. Antinex plans to educate, train, and market the kit to doctors experienced in similar procedures, aiming for broad adoption within the medical community. Additionally, Antinex intends to develop similar tools for treating pain throughout the spine.

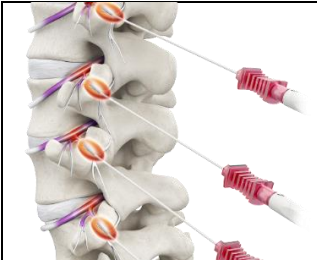
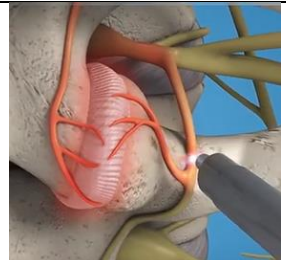
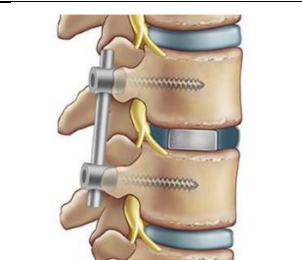

## Revenue Model

Price	Cost to Manufacture	Gross Profit	ROI
\$1500/Toolkit	\$288.07/Toolkit	\$1211.93	320.7%

## Market Size



## Procedure Comparison

			
<b>Radiofrequency Ablation</b>	<b>Endoscopic Rhizotomy</b>	<b>Spinal Fusion</b>	<b>Antinex's Solution</b>
Radio waves are used to burn the nerve. <ul style="list-style-type: none"> <li>Effective for 6-12 mo.</li> <li>Expensive over time</li> <li>Most common option</li> </ul>	An endoscope is used to guide severing the nerve. <ul style="list-style-type: none"> <li>Effective for 3-5 yrs.</li> <li>Surgical procedure</li> <li>Very expensive</li> </ul>	Surgical procedure to fuse vertebrae together. <ul style="list-style-type: none"> <li>Only 60% effective</li> <li>Surgical procedure</li> <li>3-12 days to recover</li> <li>Extremely expensive</li> </ul>	Surgically cut the nerve <ul style="list-style-type: none"> <li>Permanent solution</li> <li>Immediate results</li> <li>No recovery period</li> <li>Minimally invasive</li> <li>Performed in an office</li> </ul>

## Financing and Milestones

Round	Closing	Runway	Amount	Status	Milestones
Pre-seed	Q1 2024	Q2 2024	\$1K	Closed	Development of MVP: \$288.07 Pre-Clinical Preliminary Testing: \$150
Seed	Q3 2024	Q2 2026	\$3.5M	Future	Patenting & Clearance FDA Approval: \$50,000 Clinical Testing: \$3,000,000
Series A	Q3 2026	Q2 2028	\$5M	Future	Scaling Hiring and Distribution: \$4,000,000 Gross Revenue: \$1,500,000 (1000 <sup>th</sup> patient mark)

## Competition

	Antinex	Elliquance	NuVasive
<b>Minimally Invasive</b>	✓	✓	
<b>Permanent Pain Relief</b>	✓		✓
<b>Low Cost</b>	✓		
<b>No Surgical Center Needed</b>	✓		

## Comparables

Acquired	Acquirer	ACQ Price	Date	Revenue at ACQ	Product Category
NuVasive	Smith + Nephew	\$3.1B	Feb. 2022	\$1.2B	Spinal Fusion
Elliquance	Shanghai Kinetic Medical	\$77M	Jun. 2018	\$5.5M	Endoscopic Rhizotomy