

The startup company — translating research into patient care

It starts with a good idea. An idea derived from years of dedicated research in the lab. Or the results of a team working day and night to understand the genetic basis of a new virus. Or an a-ha moment inspired by a conversation between a neurosurgeon and a biomedical engineer. In 2013, Neil Roundy, M.D., an OHSU neurosurgery resident at the time, conceived of a surgical clip that could replace the delicate suturing of the dura mater (the membrane protecting the brain and spinal cord). If this membrane could be repaired by a clip that is bioabsorbable (dissolves in the human body) rather than the painstaking process of suturing, surgical complexity and time under anesthesia could be dramatically reduced — a significant benefit both to patient and hospital.

Today, that concept is the basis of NeuraMedica Inc., an OHSU medical device startup company founded in 2014 and based in Oregon City, focused on bringing this “dural clip” to market. “Our goal is to improve human health, first and foremost, but in the process, we intend to build a significant medical device company headquartered in Oregon,” said NeuraMedica CEO Rachel Dreilinger, a biomedical engineer. Dreilinger is also a member of the Diné (Navajo) Nation.

Startup companies are one avenue through which research moves into patient care. But reaching the proof-of-concept stage can be challenging. That’s why OHSU works hard to identify and support the ideas and research with the attributes needed to succeed in this model. The Oregon Clinical and Translational Institute at OHSU selected NeuraMedica for its Biomedical Innovation Program. With this support, the company tested a series of prototypes, submitted two patent applications and developed a license agreement with OHSU, among other foundational efforts. Since then, the company has raised \$2.5 million from private and public sources.

With about 200,000 spinal surgeries performed annually and an estimated \$324 million in cost savings to the U.S. health care system, the clip has the potential to improve patient outcomes while stimulating Oregon’s economy. NeuraMedica is one of 75 startups formed by OHSU since 1998 focused on the commercialization of OHSU research discoveries including vaccines, pharmaceuticals, diagnostics, software, medical devices and more. “Year after year, we are experiencing increased interest in OHSU discoveries and in the launch of startup companies, with several attracting outside partners and investors,” said Andrew Watson, Ph.D., senior director of OHSU tech transfer. “And that’s just what we want. The more we can support the success of these startup companies, the faster research discoveries move to market and the faster we deliver improved outcomes to patients.”

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