

No opioids after surgery: Evonik invests in Allay Therapeutics and supplies key technology for pain therapy implants

- Implants from the U.S. startup Allay Therapeutics are designed to relieve pain after knee surgery for up to three weeks
- Technology may reduce the need for opioid painkillers
- Polymers from Evonik are a key component

Essen, Germany. Evonik has invested in the biopharmaceutical company Allay Therapeutics. The U.S.- and Singapore-based startup has developed an implant for treating pain after knee surgery. It is inserted directly into the knee and may relieve pain for up to three weeks – previous solutions work for a maximum of three days. The technology may promote the recovery process and make it possible to reduce or eliminate the administration of common opioid painkillers such as morphine or oxycodone. Biodegradable polymers from Evonik are the key to the success of this new type of pain therapy: they ensure that the active ingredients are delivered over a longer period.

Knee replacements are one of the most frequently performed surgeries worldwide. The consequences of the procedure are often painful with pain that lasts for weeks, hindering recovery. Therefore, doctors use painkillers such as opioids after these surgeries. However, they have numerous side effects, including a high risk of dependence. Allay's products, which are in the early stages of clinical development, are expected to offer an alternative. "Our products may provide patients with pain relief exactly when they need it most – for weeks instead of days. This would significantly improve and accelerate the recovery process," says Adam Gridley, Chief Executive Officer (CEO) of Allay Therapeutics.

Evonik sees great potential in this technology. "Allay's pain products can become a game-changer in postoperative pain management. They may reduce the problems that opioids bring, such as dependence, further hospitalization, lengthy rehabilitation, and costs to the healthcare system," says Bernhard Mohr, head of Evonik Venture Capital.

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Allay's products are thin implants about the size of a coin. They are placed around the implanted knee joint at the end of the surgery and consist of a proven local non-opioid anesthetic and polymers from Evonik. The local anesthetic blocks the transmission of pain signals to the spinal cord, thus stopping the pain impulse before it reaches the brain. Until now, the duration of such systems was limited to a few days. Allay has succeeded in extending the delivery to up to three weeks through a novel active ingredient-polymer architecture. Evonik's polymers play a key role here: they ensure that the active ingredient is delivered in a controlled fashion over a long period. During this process, the implants gradually dissolve and are broken down by the body. The technology can be easily adapted for other orthopedic and soft tissue surgeries and Allay is currently developing a portfolio of products based on this drug-polymer architecture.

Evonik has more than 60 years of experience in technologies for the targeted delivery of medical agents. Its Health Care Business Line is a global innovation partner for the pharmaceutical industry. "We are pleased to be able to support our partner Allay in developing this promising innovation. It can fundamentally change pain management and take away patients' fear of surgery," says Paul Spencer, Head of the Drug Delivery & Products Product Line in Evonik's Health Care Business Line. Health Care supplies the biodegradable polymer processed in the Allay implant.

With more than 1.2 million knee joint interventions per year, the United States is the most relevant market for Allay's technology. The volume for the treatment of very severe, postoperative pain is estimated at \$10 billion. The dramatic increase in opioid addicts in the U.S., referred to as the opioid crisis, reinforces the relevance of alternative pain therapies.

Allay Therapeutics was founded in 2016. The company is headquartered in San Jose in the US state of California with Research and Development facilities in Singapore, where the technology was developed. "We are delighted to have one of the world's leading specialty chemical companies on our side with whom we can further develop our technology," emphasizes Adam Gridley of Allay.

Company information

Evonik is one of the world leaders in specialty chemicals. The company is active in more than 100 countries around the world and generated sales of €15 billion and an operating profit (adjusted EBITDA) of €2,38 billion in 2021. Evonik goes far beyond chemistry to create innovative, profitable and sustainable solutions for customers. More than 33,000 employees work together for a common purpose: We want to improve life today and tomorrow.

About Evonik Venture Capital

With a fund size of €400 million, Evonik Venture Capital (EVC) has made 50 investments since 2012, both direct and fund investments. From its offices in Germany, the USA and China, EVC invests in innovative technologies and business models in the area of Nutrition & Care, Smart Materials and Specialty Additives. The investments also support the digitalization and sustainability strategy of Evonik. The scope ranges from early stage to growth stage with an investment volume of up to €15 million per portfolio company.

<https://venturing.evonik.com>

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About Allay Therapeutics

Allay Therapeutics is pioneering ultra-sustained analgesic products to transform post-surgical pain management and recuperation for patients and physicians. Our proprietary technology platform combines validated non-opioid analgesics and biopolymers to create dissolvable candidates to deliver pain relief within a targeted site over weeks: an order of magnitude greater than the longest-lasting pain treatments currently available. Our platform and vision were shaped by The Foundry incubator and Lightstone Venture's Singapore Fund. Allay unites a dynamic, global team of entrepreneurs, scientists, clinicians and innovators in the San Francisco Bay Area and Singapore. Learn more at allaytx.com.