

Vetter and Microdermics Enter into a Strategic Cooperation Agreement to Develop Innovative Microneedle Drug Delivery Systems

Ravensburg, Germany, and Vancouver, Canada, May 31, 2017 – [Vetter](#), a leading and innovative provider of aseptic prefilled drug delivery systems and [Microdermics Inc.](#), a Vancouver-based medical device company developing a novel hollow, metal microneedle drug and vaccine delivery system, today announced that they have entered into a strategic cooperation agreement.

The market in novel alternatives to needle injections is forecasted to grow rapidly, reaching in excess of 480 million units by 2030 (Roots Analysis report). Microneedles are a novel technology that can offer promising advantages as an alternative to classical needle injections and other routes of administration, mainly in reducing the injectable dose needed to trigger an immune response and accelerating drug absorption by the body. The roadblocks to commercialization are mainly due to limited investment in scalable aseptic manufacture at the later phases of development. To overcome this hurdle the two companies have joined forces to lever the expertise of both firms and enable late stage process development and device manufacture on a commercial scale. Microdermics microneedle technology is commercially scalable and capable of pain-free injections into the pharmacokinetically beneficial intradermal space, providing improved comfort and treatment to patients. Microdermics has successfully demonstrated the initial safety of its microneedle system, and is planning Phase 1 human clinical trials for vaccine and therapeutic delivery, to be initiated in 2017.

As a leading contract development and manufacturing organization (CDMO), [Vetter](#) offers its customers a beneficial service through a combination of device development and associated [drug product manufacturing](#) and [packaging services](#). Vetter tries to integrate its customers in technological advancements as early as possible. By continuously participating in market development in innovative and proactive ways, the company is committed to acting with the goal of increasing patient convenience and compliance in mind.

[Microdermics](#) has developed a novel commercially scalable, low-cost, customizable, metal, hollow, microneedle platform that provides efficient delivery of vaccines and biologics – addressing the global reliance on the 160-year old hypodermic needle and the economic and health implications associated with widespread needle phobia. The company's Phase 1 clinical trials to validate the effectiveness and reliability of intradermal delivery are expected to initiate in 2017. Microdermics will focus product development and clinical activities on new delivery methods for existing commercial products, providing innovative methods for partners to differentiate via a novel intradermal delivery system, as well as pursue product life cycle extensions.

“We are very happy to enter into this agreement with Microdermics, and we are excited by the initial experience of cooperation and entrepreneurial spirit we have established with key individuals at this company,” said Dr. Claus Feussner, Vetter's Senior Vice President Development Service. “We believe that microneedles are a particularly innovative technology and may prove to be a promising future alternative for selected areas of drug delivery.”

“Microdermics is extremely excited to work with a world-class partner like Vetter, since our strategic interests align and their decades of experience and innovation in the fill and finish segment will enable us to accelerate our commercialization strategy. Vetter's vast experience with a wide variety of drug substances provides us with an invaluable opportunity

for a successful development path for our microneedle drug delivery technology,” said Grant Company, President & CEO of Microdermics. “While our individual companies differ in size, experience and structure, we are fully aligned in our vision to achieve the best possible patient convenience with our product offerings,” said Prof. Boris Stoeber, Microdermics’ Co-founder and Chief Technology Officer.



Vetter and Microdermics join forces for innovation in drug delivery. From left to right: Dr. Claus Feussner, Senior Vice President Vetter Development Service; Prof. Boris Stoeber, Co-founder and Chief Technical Officer; Grant Company, President & CEO (both Microdermics); and Dr. David Brett, Team Leader Product and Service Management at Vetter.

Picture source: Vetter Pharma International GmbH / Microdermics Inc.

About Vetter

Vetter is a global leader in the fill and finish of aseptically prefilled syringe systems, cartridges and vials. Headquartered in Ravensburg, Germany, the company operates production facilities in Germany and the United States, as well as sales offices in Singapore and Tokyo, Japan. The contract development and manufacturing organization (CDMO) is an innovative solution provider serving small, midsize, and the top 10 (bio-) pharmaceutical companies. Its portfolio spans state-of-the-art manufacturing from early clinical development through commercial filling and final packaging of parenteral drugs. Known for quality, the company of approximately 4,300 employees offers a foundation of experience spanning more than 35 years, including dozens of customer product approvals for novel compounds. More than 80% of Vetter’s active projects are biologics, and Vetter currently manufactures five of the world’ top 10. The CDMO is also committed to patient safety and compliance with user friendly solutions such as Vetter-Ject[®], as well as its dual-chamber syringe Vetter Lyo-Ject[®] and cartridge system V-LK[®]. Visit www.vetter-pharma.com.

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About Microdermics

Microdermics is a Vancouver-based medical device company (with a business office in San Francisco) revolutionizing the biopharmaceutical market for both patients and healthcare practitioners. As the only company with a low-cost, scalable, hollow, metal microneedle, Microdermics eliminates the danger of accidental needle sticks caused by hypodermic needles and addresses the global health impact related to needle phobia. Microdermics will leverage its proprietary and innovative delivery system across a spectrum of biopharmaceuticals, including a new market for biosimilars, providing biopharmaceutical companies with a means of differentiating themselves from their competitors as well as securing product life cycle extensions. Learn more at www.microdermics.com.

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