

Virpax[®] Pharmaceuticals Licenses Molecular Envelope Technology (MET) Intranasal Formulation From Nanomerics Ltd.

Virpax[®] to Develop a Non-Opioid Molecular Envelope Technology (MET) Intranasal Formulation for the Management of Chronic Pain

MALVERN, PA – April 16, 2019 – Virpax[®] Pharmaceuticals Inc. (“Virpax”), a company specializing in developing pharmaceutical products for pain management by using new drug delivery systems, signed a technology license agreement with Nanomerics Ltd. Under the agreement, Virpax has exclusive global rights to use the Nanomerics nanotechnology for the delivery of a metabolically labile intranasal peptide for the management of chronic pain. NES100 is the first investigational product formulation delivered via the nasal route to enhance enkephalin transport to the brain. NES100 uses a preassembled device and cartridge to propel the enkephalin formulation through the nose to the brain via the olfactory nerve. The Nanomerics Molecular Envelope Technology (MET) will help to carry the drug to the brain to promptly suppress pain. NES100 has analgesic potential without the concerns for opioid tolerance and withdrawal, respiratory depression, euphoria or addiction. Virpax expects to file a Pre-Investigational New Drug Application (Pre-IND) Meeting Request with the U.S. Food and Drug Administration (FDA) by the end of Q2 2019.

“With the addition of NES100, we are fortunate to have a strong pipeline of novel delivery technologies in multiple categories of pain management,” said Lucille Russell, MD, Chief Scientific Officer of Virpax.

About NES100

NES100 is a drug product based on a type of nanotechnology. The nanotechnology enables the exclusive delivery of a metabolically labile peptide drug into the brain on intranasal delivery. NES100 is manufactured using industrially relevant equipment and processes (high pressure homogenization and spray drying). There is pharmacological evidence of activity of MET enabled enkephalin in morphine-tolerant animals. The MET nanoparticles are well tolerated via the nasal route at the dose administered. NES100 demonstrated comparable preclinical activity to morphine in all animal pain models tested without the drug seeking and tolerance associated with opioids.

“There is a push among prescribers, regulators, patients, as well as government research funding initiatives to seek non-opioid treatment options. Advances in non-opioid drug delivery offer prescribers better options to manage chronic pain,” said Anthony Mack, CEO of Virpax. “We believe the nasal enkephalin product licensed from Nanomerics Ltd. offers a significant step forward.”

About Virpax Pharmaceuticals

Virpax develops branded pharmaceutical products for pain management by using cutting-edge technology to enhance patients’ quality of life, all while creating value for its investors and partners. The company is focused on becoming a global leader in pain management by developing and delivering innovative pharmaceutical products to its customers. For more information, please visit www.virpaxpharma.com.

About Nanomerics Ltd.

Nanomerics is a specialty pharmaceutical company focused on the development of pharmaceutical products with enhanced bioavailability. Biocompatible polymers are tailored to form containers that package the drug and carry it across epithelial barriers to the target site. Nanomerics’ proprietary technology is based on world leading know-how and scientific leadership in polymeric nanotechnology. The company’s MET

delivers a step change in target tissue availability of drugs and biological APIs such as peptides across a number of epithelial barriers. The founding scientists Professor Ijeoma F. Uchegbu and Professor Andreas G. Schätzlein developed the technology at the Universities of Strathclyde and Glasgow and, latterly at the UCL School of Pharmacy.

Forward-Looking Statement

This news release contains "forward-looking statements" as defined by the Private Securities Litigation Reform Act of 1995. Virpax cautions readers that forward-looking statements are based on management's expectations and assumptions as of the date of this news release and are subject to certain risks and uncertainties that could cause actual results to differ materially, including, but not limited to, those associated with the timing of the NES100 regulatory filings and clinical milestones and other risks and uncertainties identified in the Company's filings with the Securities and Exchange Commission. Forward-looking statements reflect our analysis only on their stated date, and Virpax takes no obligation to update or revise these statements except as may be required by law.

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