



Virpax's® MMS019 Inhibits SARS-COV-2 in Ex-Vivo Airway Model

West Chester, PA – December 8, 2020 Virpax® Pharmaceuticals Inc. (“Virpax”), a company specializing in developing pharmaceutical products for pain management, today announced that based on recent ex-vivo studies, MMS019, a high-density mucoadhesive polymer, has demonstrated reduction of infectivity from respiratory viruses like influenza and SARS-COV-2. MMS019 contains a positively charged polymer that has been through an extensive Good Laboratory Practice (GLP) toxicology screen and has the potential to act as a molecular masking spray to prevent or treat respiratory infections. The polymer is currently being developed as a pharmaceutical excipient for clinical use under Investigational New Drug (IND) enabling studies using an analgesic molecule, with the ongoing research funded by the National Center for Advancing Translational Sciences (NCATS), an institute/center of the National Institutes of Health (NIH), U.S. Department of Health and Human Services.

During the ex-vivo study, viral replication inhibition was observed and evaluated after infecting MucilAir™, a bronchial epithelial model reconstituted from healthy human donor cells, with the SARS-CoV-2 virus in the presence of MMS019. The analysis demonstrated that MMS019 at non-toxic concentrations effectively hampered SARS-CoV-2 replication ex-vivo. The existing safety data and antiviral activity support clinical testing of MMS019 as a viral inhibitor nasal or pharyngeal spray.

“There are currently no effective preventive therapies or treatments for a wide variety of viral infections, including the ones caused by emerging flaviviruses and coronaviruses, which regularly cause local outbreaks, epidemics, and pandemics. We believe that MMS019, used as a molecular mask nasal spray, has the potential to be applied to a wide variety of viral infections from the common cold to lethal coronavirus pandemics, and we look forward to the initiation of clinical trials,” said Jeffrey Gudin, MD, co-founder and Chief Medical Officer of Virpax.

About Virpax Pharmaceuticals

Virpax Pharmaceuticals is focused on developing branded prescription products and providing more efficient drug treatments using its proprietary, cutting-edge delivery technologies designed to satisfy unmet global market needs. Virpax's pipeline consists of non-addictive products being studied to manage acute musculoskeletal pain, osteoarthritis pain, neuropathic pain, post-operative pain, acute and chronic pain, and pain associated with cancer. While Virpax is leading research and development of non-addictive pain management products, Virpax is also developing its patented delivery technologies to manage post-traumatic stress disorder (PTSD), and to help prevent viral replication caused by influenza and SARS-CoV-2. For more information, please visit www.virpaxpharma.com.

Forward-Looking Statement

This news release contains "forward-looking statements" as defined by the Private Securities Litigation Reform Act of 1995. Forward-looking statements are identified by terminology such as "may," "should," "expects," "plans," "anticipates," "could," "intends," "target," "projects," "contemplates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these terms or other similar words. These statements are only predictions. 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 MMS019 regulatory filings and clinical milestones and other risks and

uncertainties. Accordingly, you should not rely upon forward-looking statements as predictions of future events. Forward-looking statements reflect the Company's 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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