Virpax to Initiate Investigational New Drug (IND) Enabling Studies for Probudur™ for Postoperative Pain

BERWYN, PA, March 22, 2021 — Virpax® Pharmaceuticals, Inc. ("Virpax" or the "Company") (NASDAQ:VRPX), today announced that preclinical studies of Probudur™, a proprietary patented injectable, long-acting "local anesthetic" Liposomal (Hydro) Gel Technology for postoperative pain management, have been initiated under an agreement with Charles River Laboratories. Under the terms of this agreement, Charles River Laboratories will perform seven preclinical animal studies including method, dosage, and toxicity as part of the required U.S. Food and Drug Administration ("FDA") enabling trials for an Investigational New Drug Application ("IND") for Probudur™.

Anthony Mack, Chairman & Chief Executive Officer of Virpax stated, "We now have three product candidates in preclinical IND enabling studies. As anticipated, our pipeline is moving forward and we are confident that we will be able to engage in our first-in-human trials in the near future."

About Probudur ™

Probudur™ is a drug product candidate based on a unique liposomal delivery system utilizing large multivesicular vesicles ("LMVVs") encapsulating a high dose of the local anesthetic bupivacaine. These drugloaded liposomes are composed of lecithin and cholesterol which are generally recognized as safe by the FDA. These LMVVs are embedded in hydrogel beads to form a Lipogel. The system delivers a local anesthetic/analgesic medicine from the Lipogel. As a result of the Pre-Investigational New Drug ("Pre-IND") review, the FDA has indicated that it is reasonable for the Company to pursue a 505(b)(2) accelerated New Drug Application ("NDA"). Once the preclinical IND enabling studies are completed, Probudur™ may advance directly to the Phase 2A clinical trials.

About Virpax Pharmaceuticals

Virpax is developing branded, non-addictive pain management products candidates using its proprietary technologies to optimize and target drug delivery. Virpax is initially seeking FDA approval using its three patented drug delivery platforms. Epoladerm™ is a topical diclofenac metered-dose spray film formulation being developed to manage acute musculoskeletal pain and osteoarthritis. Probudur™ is a single injection liposomal bupivacaine formulation being developed to manage postoperative pain. Envelta™ is an intranasal molecular-envelope enkephalin formulation being developed to manage acute and chronic pain, including pain associated with cancer. Virpax is also using its intranasal Molecular Envelope Technology (MET) to develop its PES200 product candidate to manage post-traumatic stress disorder (PTSD) and its MMS019

product candidate to inhibit viral replication caused by influenza or SARS-CoV-2. For more information, please visit www.virpaxpharma.com.

Forward-Looking Statement

This press release contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 and Private Securities Litigation Reform Act, as amended, including those relating to the Company's planned preclinical and clinical trials, product development, clinical and regulatory timelines, market opportunity, competitive position, possible or assumed future results of operations, business strategies, potential growth opportunities and other statements that are predictive in nature. These forward-looking statements are based on current expectations, estimates, forecasts and projections about the industry and markets in which we operate and management's current beliefs and assumptions.

These statements may be identified by the use of forward-looking expressions, including, but not limited to, "expect," "anticipate," "intend," "plan," "believe," "estimate," "potential," "predict," "project," "should," "would" and similar expressions and the negatives of those terms. These statements relate to future events or our financial performance and involve known and unknown risks, uncertainties, and other factors, including the potential impact of the recent COVID-19 pandemic and the potential impact of sustained social distancing efforts, on the Company's operations, clinical development plans and timelines, which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include those set forth in the Company's filings with the Securities and Exchange Commission. Prospective investors are cautioned not to place undue reliance on such forward-looking statements, which speak only as of the date of this press release. The Company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

Contact:
Christopher M. Chipman, CPA
Chief Financial Officer
cchipman@virpaxpharma.com
610-727-4597

Or:
Betsy Brod
Affinity Growth Advisors
betsy.brod@affinitygrowth.com
212-661-2231