VIRPAX PHARMACEUTICALS REPORTS 2021 SECOND QUARTER RESULTS AND RECENT DEVELOPMENTS

--Company Advances Product Candidate Pipeline--

BERWYN, PA, August 10, 2021 — Virpax® Pharmaceuticals, Inc. ("Virpax" or the "Company") (NASDAQ:VRPX), today announced its financial results for the quarter ended June 30, 2021, and other recent developments.

"We continue to advance our product candidate pipeline focused on pain, CNS and anti-viral indications. Two of our product candidates, Epoladerm™ and Probudur™, will utilize an accelerated 505(b)(2) pathway and are currently being funded through proceeds from our initial public offering which closed in February of 2021. Epoladerm, a metered-dose spray film product candidate is currently being evaluated for two indications: acute musculoskeletal pain and chronic pain from osteoarthritis of the knee. For Probudur, our injectable bupivacaine liposomal hydrogel for postoperative pain management, we are currently enhancing the formulation to increase stability for manufacturing and expect that we will be able to extend the patent protection with the newer formulation," stated Anthony Mack, Chairman and CEO of Virpax.

"For programs where we are developing new chemical entities, such as our Envelta™ product candidate, an intranasal spray for acute and chronic pain, we are performing the IND enabling studies under a Cooperative Research and Development Agreement with the National Center for Advancing Translational Sciences. Recently, we announced that two of the four initial in vitro studies were successfully completed and that once the Envelta IND enabling studies are submitted to the FDA for the current indications, we expect to use the parent IND as a cross reference for additional indications.

For our MMS019 intranasal molecular masking spray, which is being developed as an anti-viral barrier, we recently announced results from an animal study that demonstrated inhibited viral replication and decreased levels of virus in animal brain tissue. We have engaged Syneos Health to work with us on MMS019 in developing the regulatory pathway and trials necessary to file an NDA. A pre-IND briefing package has been submitted to the FDA for this product candidate," continued Mr. Mack.

"I believe we are making progress in all of our current programs and are laying the foundation for the future. We are working with highly respected clinical research organizations for our IND enabling studies and are pleased with the progress to date. We have engaged Torreya Capital to assist us in our partnering and licensing efforts outside of the U.S. Finally, we announced the addition of two new members to our Board, both of which have exceptional financial and commercialization experience in a move that we believe strengthens our Board as we move forward," concluded Mr. Mack.

RECENT DEVELOPMENTS

- On April 22, 2021, Virpax announced that it has engaged Torreya Capital to advise on partnering and licensing in strategic global markets outside of the U.S.
- Subsequent to the end of the quarter, on July 7, 2021, Virpax provided an update on four of its product candidates, Epoladerm™, Probudur™, Envelta™ and MMS019, to the market. https://ir.virpaxpharma.com/prviewer/release_only/id/4766418

- Subsequent to the end of the quarter, on July 30, 2021, Virpax announced the appointment of Gerald W. Bruce and Michael F. Dubin, CPA to its Board of Directors.

SCIENTIFIC ACHIEVEMENTS

- On April 5, 2021, Virpax released results of a sciatic nerve preclinical study in rabbits designed to evaluate nerve damage from locally injected Probudur™, Virpax's liposomal bupivacaine product candidate. Results demonstrated that Probudur™ produced no evidence of motor or sensory nerve damage at a dose that was 10 times higher than free bupivacaine, and that there were no signs of nerve damage.
- On April 19, 2021, Virpax announced the results of an animal study model for MMS019, its anti-viral product candidate for respiratory viruses. The animal study demonstrated inhibition of viral replication as well as decreased levels of the virus in animal brain tissue. As a result of the study, Virpax has engaged Syneos Health to assist with the development of a regulatory pathway in addition to the performance of drug development trials required to file an NDA for FDA approval of MMS019.
- Subsequent to the end of the quarter, on June 21, 2021, Virpax announced that the Investigational New Drug (or IND) Application enabling studies for Envelta™ being performed under a Cooperative Research and Development Agreement entered into by Virpax and the National Center for Advancing Translational Sciences (or NCATS) for acute and chronic pain, will also be used as a source for INDs for two additional indications, for cancer pain and Post-Traumatic Stress Disorder.

  NCATS has commenced the IND enabling studies of Envelta to support Virpax's future application for clearance from the FDA to initiate Virpax's first-in-human clinical trials. The Company believes the same Phase I Single Ascending Dose /Multiple Ascending Dose study could be used to advance all three indications.

FINANCIAL RESULTS FOR THE THREE AND SIX MONTHS ENDED JUNE 30, 2021 AND 2020

Three Months Ended June 30, 2021 and 2020

Operating Expenses

General and administrative expenses were approximately $2.0 million for the second quarter of 2021, an increase of approximately $0.9 million from last year's second quarter. The increase was due to legal expenses and an increase in directors and officers insurance (or D&O insurance) expense, partially offset by a decrease in stock-based compensation.

Research and development expenses were approximately $0.3 million for the second quarter of 2021 compared to approximately $0.2 million in last year's second quarter. The increase in research and development expenses was primarily attributable to an increase in pre-clinical activities related to Epoladerm and Probudur in addition to an increase in regulatory activities for MMS019.

The operating loss for the second quarter of 2021 was approximately $2.3 million, as compared to approximately $1.2 million for the second quarter of 2021.

Six Months Ended June 30, 2021 and 2020

Operating Expenses

General and administrative expenses were approximately $3.3 million for the six months ended June 30, 2021, an increase of approximately $1.8 million from the same period last year. The increase was mainly due to legal expenses and an increase in D&O insurance expense as well as slight increases in both exchange listing fees and accounting consulting costs. This was slightly offset by a decrease in investor relation costs. Research and development expenses were approximately $1.4 million for the six months ended June 30, 2021 compared to approximately $0.3 million during the same period last year. The increase in research and development expenses was primarily attributable to a milestone payment made to Nanomerics associated with MMS019, as well as increases in pre-clinical activity related to Epoladerm and Probudur as well as an increase in regulatory activities associated with MMS019. This was slightly offset by a decrease in pre-clinical activities associated with Envelta.

Cash Flows

Cash used in operations was approximately $4.9 million for the six months ended June 30, 2021, compared to approximately $0.6 million for the six months ended June 30, 2020. The increase in cash used in operations was primarily the result of the increase in net loss and an increase in prepaid insurance premiums.

Financing Activities

Cash provided by financing activities was approximately $15.3 million during the six months ended June 30, 2021, attributable primarily to net proceeds received from the Company's initial public offering in February 2021 of approximately $15.8 million, after deducting underwriting discounts and offering expenses. This was offset by repayment in full of the Company's convertible promissory note of approximately $0.5 million in February 2021. Cash provided by financing activities was $966,000 during the six months ended June 30, 2020, primarily attributable to proceeds of approximately $1,268,900 from the sale of 128,303 shares of the Company's common stock.

At June 30, 2021, Virpax had cash of approximately $10.5 million.

About Virpax Pharmaceuticals

Virpax is developing branded, non-addictive pain management product 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 post-operative 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

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.

TABLES FOLLOW

VIRPAX PHARMACEUTICALS, INC.
CONDENSED BALANCE SHEETS

	June 30, 2021 (Unaudited)	December 31, 2020*
ASSETS		
Current assets		
Cash	$ 10,466,774	$ 54,796
Prepaid expenses and other current assets	920,922	18,273
Total current assets	11,387,696	73,069
Deferred financing costs	—	392,337
Total assets	$ 11,387,696	$ 465,406
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Accounts payable and accrued expenses	$ 2,779,866	$ 3,115,924
Notes payable	50,510	543,990
Total current liabilities	2,830,376	3,659,914
Notes payable, net of current portion	21,590	21,590
Related party notes payable	1,000,000	1,000,000
Total long-term liabilities	1,021,590	1,021,590
Total liabilities	3,851,966	4,681,504
Commitments and contingencies		
Stockholders' equity (deficit)		
Preferred stock, par value $0.00001, 10,000,000 shares authorized, no shares issued and outstanding	—	—
Common stock, $0.00001 par value; 100,000,000 shares authorized, 4,960,153 shares issued and outstanding as of June 30, 2021; 3,145,153 shares issued and outstanding as of December 31, 2020	50	31
Additional paid-in capital	22,906,214	6,431,715
Accumulated deficit	(15,370,534)	(10,647,844)
Total stockholders' equity (deficit)	7,535,730	(4,216,098)
Total liabilities and stockholders' equity (deficit)	$ 11,387,696	$ 465,406

* Derived from audited financial statements

VIRPAX PHARMACEUTICALS, INC.
CONDENSED STATEMENTS OF OPERATIONS
(UNAUDITED)

	For the Three Months Ended June 30, 2021	For the Three Months Ended June 30, 2020	For the Six Months Ended June 30, 2021	For the Six Months Ended June 30, 2020
OPERATING EXPENSES				
General and administrative	$ 1,988,972	$ 1,061,850	$ 3,262,544	$ 1,510,835
Research and development	316,565	168,673	1,391,565	335,553
Total operating expenses	2,305,537	1,230,523	4,654,109	1,846,388
Loss from operations	(2,305,537)	(1,230,523)	(4,654,109)	(1,846,388)
OTHER (EXPENSE) INCOME				
Interest expense	(34,049)	(43,261)	(64,748)	(83,891)
Other income (expense), net	(3,833)	4,000	(3,833)	4,000
Loss before tax provision	(2,343,419)	(1,269,784)	(4,722,690)	(1,926,279)
Benefit from income taxes	—	—	—	—
Net loss	$(2,343,419)	$(1,269,784)	$(4,722,690)	$(1,926,279)
Basic and diluted net loss per share	(0.47)	(0.41)	$ (1.06)	$ (0.63)
Basic and diluted weighted average common stock outstanding	4,958,999	3,086,384	4,454,877	3,065,636

VIRPAX PHARMACEUTICALS, INC.
CONDENSED STATEMENTS OF CASH FLOWS
(UNAUDITED)

	For the Six Months Ended June 30, 2021	For the Six Months Ended June 30, 2020
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (4,722,690)	$(1,926,279)
Adjustments to reconcile net loss to net cash used in operating activities:		
Non-cash interest expense	64,748	83,891
Stock-based compensation	691,311	702,681
Common stock issued in payment of consulting services and settlement of accounts payable	-	2,906
Change in operating assets and liabilities:		
Prepaid expenses and other current assets	(902,649)	346,940
Deferred financing costs	-	(73,000)
Subscription receivable	-	(375,000)
Accounts payable and accrued expenses	(8,469)	647,234
Net cash used in operating activities	(4,877,749)	(590,627)
CASH FLOWS FROM FINANCING ACTIVITIES		
Repayment of notes payable	(493,480)	-
Proceeds from the issuance of debt	-	72,100
Proceeds from related party notes payable	100,000	-
Repayment of related party notes payable	(100,000)	
Proceeds from the issuance of stock	-	893,900
Offering costs related to initial public offering	(2,216,793)	-
Proceeds from initial public offering of common stock	18,000,000	-
Net cash provided by financing activities	15,289,727	966,000
Net change in cash	10,411,978	375,373
Cash, beginning of period	54,796	41,536
Cash, end of period	$10,466,774	$ 416,909
Supplemental disclosure of cash and non-cash financing activities		
Cash paid for interest	$ 34,707	$ —
Cash paid for taxes	$ —	$ —
Debt issued in payment of consulting services and settlement of accounts payable	$ —	$ 169,740

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