Adamis Pharmaceuticals Announces Publication of Comparative Pharmacokinetics of Community Use Naloxone Formulations

November 18, 2019

SAN DIEGO, Nov. 18, 2019 (GLOBE NEWSWIRE) -- Adamis Pharmaceuticals Corporation (NASDAQ: ADMP) ("Adamis") announced today that an article entitled "Comparative Pharmacokinetic Analysis of Community Use Naloxone Formulations for Acute Treatment of Opioid Overdose" was accepted for publication in the peer reviewed Journal of Addiction Research and Adolescent Behavior (Link to Article).

The article compares the pharmacokinetics of two community naloxone formulations (2mg intramuscular (IM) and NARCAN® 4mg intranasal (IN)) to Adamis' investigational drug ZIMHI (5mg IM) in healthy subjects. Overall, the systemic levels of naloxone associated with the 2mg IM and 4mg IN were similar. By comparison, the naloxone levels associated with ZIMHI are higher with more rapid absorption. The authors concluded that "These results support the notion that higher doses of naloxone result in greater bioavailability, which may be required for reversal due to the more potent synthetic opioids such as fentanyl."

Naloxone is an opioid antagonist used to treat narcotic overdoses. Naloxone works by reversing the detrimental effects of the opioid, including slowed breathing, brain dysfunction, loss of consciousness and death. Common opioids include morphine, heroin, tramadol, oxycodone, hydrocodone and fentanyl.

According to statistics published by the Centers for Disease Control and Prevention (CDC), in 2017, drug overdoses resulted in approximately 72,000 deaths in the United States – greater than 195 deaths per day. Drug overdoses are now the leading cause of death for Americans under 50. The current epidemic of drug overdoses is killing people at a faster rate than the peak of the HIV epidemic. New provisional data from the CDC suggests a slight drop in overall deaths due to overdoses in 2018, but the number of deaths due to illicitly manufactured synthetic opioids, such as fentanyl, continues to rise.

"Rapid and higher levels of naloxone by intramuscular injection may be required for resuscitation of overdoses due to the more potent opiates such as fentanyl. Death after opioid exposure can occur within minutes. In this comparison, ZIMHI resulted in higher and more rapid levels of naloxone compared to the other marketed formulations. In addition, a recent large field trial of opioid overdoses demonstrated that intramuscular injection of naloxone was superior to intranasal administration on several important clinical outcomes (Link to Article). We believe that the higher and more rapid blood levels provided by ZIMHI intramuscular injection could provide a competitive advantage and could be part of the solution for this devastating epidemic," said Dr. Dennis J. Carlo, President and Chief Executive Officer of Adamis.

About Adamis Pharmaceuticals

Adamis Pharmaceuticals Corporation is a specialty biopharmaceutical company primarily focused on developing and commercializing products in various therapeutic areas, including respiratory disease, allergy and opioid overdose. The company's SYMJEPI (epinephrine) Injection 0.3mg and SYMJEPI (epinephrine) Injection 0.15mg products were approved by the FDA for use in the emergency treatment of acute allergic reactions, including anaphylaxis. In July, Sandoz, a division of Novartis Group, announced it had fully launched both in the U.S. Please refer to www.SYMJEPI.com for additional product information. Adamis is developing additional products, including a naloxone injection product candidate, ZIMHI, for the treatment of opioid overdose, and a metered dose inhaler and dry powder inhaler product candidates for the treatment of asthma and COPD. The company's subsidiary, U.S. Compounding, Inc., compounds sterile prescription drugs for human and veterinary use, and certain nonsterile drugs for use by hospitals, clinics and surgery centers throughout most of the United States.

Adamis Forward Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. *Such forward-looking statements include those that express plans, anticipation, intent, contingencies, goals, targets or future development and/or otherwise are not statements of historical fact.* These statements relate to future events or future results of operations, including, but not limited to the following statements: the company's beliefs concerning the timing and outcome of the FDA's review of the company's New Drug Application (NDA) relating to its ZIMHI™ (naloxone) Injection product candidate; the data and interpretation of the data from the company's studies pertaining to the ZIMHI product candidate; the company's ability to commercialize its product and product candidates, itself or through commercialization partners; the company's beliefs concerning the ability of its products and product candidates to compete successfully in the market; the company's beliefs concerning the safety and effectiveness of ZIMHI and its other products and product candidates; and other statements concerning our future operations and activities. Such forward-looking statements include those that express plans, anticipation, intent, contingencies, goals, targets or future development and/or otherwise are not statements of historical fact. These statements are only predictions, are not guarantees, involve known and unknown risks, uncertainties and other factors, and concern matters that could subsequently differ materially from those described in this press release, which may cause Adamis' actual results to be materially different from those contemplated by these forward-looking statements. There can be no assurances regarding the timing or the outcome of the FDA's review process concerning the company's NDA relating to ZIMHI. There can be no assurances that the FDA will agree with our interpretation of study data, will approve our NDA relating to our naloxone product candidate or will give final approval to our proposed brand name for the product, concerning the timing of any such approval, that the product will be commercially successful if approved and introduced, or concerning the outcome of any discussions with third parties concerning commercialization of the product. In addition, forward-looking statements concerning our anticipated future activities assume that we are able to obtain sufficient funding to support such activities and continue our operations and planned activities. As discussed in our filings with the Securities and Exchange Commission, we may require additional funding, and there are no assurances that such funding will be available if required. We cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. You should not place undue reliance on any forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made, and except as may be required by applicable law, we undertake no obligation to update or release publicly the results of any revisions to these

forward-looking statements or to reflect events or circumstances arising after the date of this press release. Certain of these risks, and additional risks, uncertainties, and other factors are described in greater detail in Adamis' filings from time to time with the SEC, including its annual report on Form 10-K for the year ended December 31, 2018, and our subsequent filings with the SEC, which Adamis strongly urges you to read and consider, all of which are available free of charge on the SEC's web site at http://www.sec.gov.

Contacts:

Mark Flather
Senior Director, Investor Relations
& Corporate Communications
Adamis Pharmaceuticals Corporation
(858) 412-7951
mflather@adamispharma.com

Source: Adamis Pharmaceuticals Corporation