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Moleculin Signs Agreement with UTMB to Test WP1122 on a Range of Viruses, Including Coronavirus

Independent research suggests new approach to inhibiting the viral replication capability of a range of viruses, including Coronavirus

HOUSTON, March 17, 2020 /PRNewswire/ -- Moleculin Biotech, Inc., (Nasdaq: MBRX) ("Moleculin" or the "Company"), a clinical stage pharmaceutical company with a broad portfolio of drug candidates targeting highly resistant tumors, announced that it has entered into an agreement with the University of Texas Medical Branch at Galveston (UTMB) to conduct research on Moleculin's patented portfolio of molecular inhibitors, including drug candidate, WP1122, for antiviral properties against a range of viruses, including Coronavirus. UTMB's Center for Biodefense and Emerging Infectious Diseases collaborates with the Galveston National Laboratory, which is funded by NIAID, the U.S. Department of Defense, the U.S. Centers for Disease Control & Prevention and other federal agencies, as well as academic partners, private foundations, and the biopharmaceutical industry.

"Published research has revealed that viral replication can be highly dependent on specific monosaccharides and has demonstrated the effectiveness of a compound known as '2-DG,' a dual decoy of glucose and mannose, in the treatment of certain viruses[1]," commented Walter Klemp, Moleculin's Chairman and CEO. "And, this is rooted in an emerging field of research focused on the role of glycolysis and glycosylation, or more specifically, on glucose and mannose metabolism in viral activity, including the coronavirus[2]. Importantly, although 2-DG has shown promise in the laboratory in relevant in vivo models, its potential as a therapy is severely limited by its lack of drug-like properties, including circulation time and organ uptake. Our drug candidate, WP1122, is a prodrug of 2-DG (2-deoxy-D-glucose) that, based on recently developed preclinical data appears to overcome 2-DG's lack of drug-like properties and is able to significantly increase tissue/organ concentration."

Dr. Donald Picker, Chief Science Officer for Moleculin added: "the in vivo research supporting the use of 2-DG as dual inhibitor of glycolysis and glycosylation to defeat viruses like Coronavirus through multiple effects critical to the progression of viral infection is promising. And, with the improved drug-like properties of WP1122 and an apparent ability to increase concentration of the drug in the infected organs, we are excited to begin testing

against coronavirus, as well as others. Our hope for this kind of therapeutic approach is not only as a potential treatment for infected patients, but even as a possible preventative measure."

Under the agreement, Moleculin will supply the lead drug candidate, WP1122, and related inhibitors, as well as technical support and UTMB will begin testing these candidates against various viral disease models, including COVID-19, in connection with the UTMB Center for Biodefense and Emerging Infectious Diseases.

The UTMB Center for Biodefense and Emerging Infectious Diseases (CBEID) was established in 2003, the same year the National Institutes of Health (NIH), National Institute for Allergy and Infectious Diseases (NIAID) selected UTMB as one of eight institutions to lead a Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research (RCE) and to receive a grant to construct on the UTMB campus one of two National Biocontainment Laboratories, now known as the Galveston National Laboratory.

About Moleculin Biotech, Inc.

Moleculin Biotech, Inc. is a clinical stage pharmaceutical company focused on the development of a broad portfolio of oncology drug candidates for the treatment of highly resistant tumors. The Company's clinical stage drugs are: Annamycin, a Next Generation Anthracycline, designed to avoid multidrug resistance mechanisms with little to no cardiotoxicity being studied for the treatment of relapsed or refractory acute myeloid leukemia, more commonly referred to as AML, WP1066, an Immune/Transcription Modulator capable of inhibiting p-STAT3 and other oncogenic transcription factors while also stimulating a natural immune response, targeting brain tumors, pancreatic cancer and hematologic malignancies, and WP1220, an analog to WP1066, for the topical treatment of cutaneous T-cell lymphoma. Moleculin is also engaged in preclinical development of additional drug candidates, including additional Immune/Transcription Modulators, as well as compounds like WP1122, capable of Metabolism/Glycosylation Inhibition.

For more information about the Company, please visithttp://www.moleculin.com.

Forward-Looking Statements

Some of the statements in this release are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, Section 21E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995, which involve risks and uncertainties. Forward-looking statements in this press release include, without limitation, the ability of WP1122 to prove safe and effective viruses, including Coronavirus and COVID-19. Although Moleculin believes that the expectations reflected in such forward-looking statements are reasonable as of the date made, expectations may prove to have been materially different from the results expressed or implied by such forward-looking statements. Moleculin Biotech has attempted to identify forward-looking statements by terminology including "believes," "estimates," "anticipates," "expects," "plans," "projects," "intends," "potential," "may," "could," "might," "will," "should," "approximately" or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements. These statements are only predictions and involve known and unknown risks, uncertainties, and other factors, including those discussed under Item 1A. "Risk Factors" in our most recently filed Form 10-K filed with the Securities and Exchange Commission

("SEC") and updated from time to time in our Form 10-Q filings and in our other public filings with the SEC. Any forward-looking statements contained in this release speak only as of its date. We undertake no obligation to update any forward-looking statements contained in this release to reflect events or circumstances occurring after its date or to reflect the occurrence of unanticipated events.

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