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Moleculin Announces Breakthrough Discovery for its WP1066

WP1066 shown to counteract resistance to checkpoint blockades

HOUSTON, Dec. 04, 2018 (GLOBE NEWSWIRE) -- Moleculin Biotech, Inc., (Nasdaq: MBRX) ("Moleculin" or the "Company"), a clinical stage pharmaceutical company focused on the development of oncology drug candidates, all of which are based on license agreements with The University of Texas System on behalf of the M.D. Anderson Cancer Center, today announced that its own sponsored research has now confirmed a recent published study demonstrating the ability of its clinical-stage immuno-stimulating STAT3 inhibitor, WP1066, to inhibit a key immune checkpoint target known as PD-L1.

"We have known for some time that WP1066 had the potential to stimulate a natural immune response," commented Dr. Donald Picker, Moleculin's Chief Science Officer. "But, this data suggests that our drug may be capable of having a major impact on the field of checkpoint blockades. With this information combined with findings from other recently published studies demonstrating the important role of STAT3 in cancer immunology, we plan to run additional in vitro and in vivo studies, some of which are already underway, with WP1066 in combination with well-known checkpoint inhibitors to gather more data on this response."

Walter Klemp, Moleculin's Chairman and CEO added, "This potential was initially reported in a 2017 Japanese study (Journal of clinical and experimental hematopathology, Vol. 57 No.1, 21-25, 2017), but we have now been able to confirm this activity with our own sponsored research at MD Anderson. Also, very recent independent research (Front Pharmacol. 2018 May 22;9:536. doi: 10.3389/fphar.2018.00536. eCollection 2018.) has linked STAT3, HIF1- α and c-Myc (all targets of WP1066) to the mechanism (a ligand known as PD-L1) believed to be largely responsible for resistance to current checkpoint blockade therapies. We believe this could put WP1066 center-stage in the field of immunotherapy. It's potentially a tremendous breakthrough for our company."

About Moleculin Biotech, Inc.

Moleculin Biotech, Inc. is a clinical stage pharmaceutical company focused on the development of oncology drug candidates, all of which are based on discoveries made at M.D. Anderson Cancer Center. The Company's clinical stage drugs are Annamycin, an 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, and WP1066, an immuno-stimulating STAT3 inhibitor targeting brain tumors, pancreatic cancer and AML. Moleculin Biotech is also engaged in preclinical development of additional drug candidates, including additional STAT3 inhibitors and compounds targeting the metabolism of tumors.

For more information about the Company, please visit <http://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 WP1066 to show safety and efficacy in patients. Although Moleculin Biotech 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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