

April 3, 2019



## **Moleculin Announces Preclinical Pancreatic Cancer Data Presented at American Association for Cancer Research Annual Meeting**

HOUSTON, April 3, 2019 /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, today announced that preclinical data supporting activity of its STAT3-inhibiting Immune/Transcription Modulators was presented by Dr. Waldemar Priebe, Founder and Chair of the Scientific Advisory Board of Moleculin, Inc. at the 2019 Annual Meeting of the American Association for Cancer Research ("AACR") in Atlanta, GA.



***Please click the link below to view the Abstract for WP1066 and WP1732.***

AACR Abstract:

<https://www.moleculin.com/inhibition-of-stat3-in-pancreatic-ductal-adenocarcinoma-and-immunotherapeutic-implications/>

The presentation included data resulting from preclinical evaluation in pancreatic cancer models of STAT3 inhibitors WP1066 and WP1732, both discovered at The University of Texas MD Anderson Cancer Center and licensed by Moleculin. WP1066 is an orally bioavailable drug with significant brain uptake that is currently in Phase I clinical studies in patients with brain tumors. Complementary to WP1066, STAT3 inhibitor WP1732 is suitable for IV administration and demonstrates high uptake by the pancreas without uptake to the brain. In vitro efficacy of both inhibitors was assessed using proliferation and apoptosis induction assays in a panel of patient-derived and commercially-available Pancreatic Ductal Adenocarcinoma ("PDAC") cell lines. Both WP1066 and WP1732 were similarly potent and shown to induce apoptosis and inhibit p-STAT3 and its nuclear localization in all tested PDAC cell lines. Observed IC50 values ranged from 0.5 to 2  $\mu$ M. WP1732 was well tolerated by mice (LD50 85 mg/kg given IV). Pharmacokinetic and biodistribution studies revealed very high uptake of WP1732 in the pancreas of mice and rats exceeding up to ~30 fold more than the drug levels in plasma. Importantly, both agents show in-vivo efficacy in preliminary experiments when tested alone or in combination with T cell immune checkpoint inhibitors.

The presentation concluded that WP1066 and WP1732 are inhibitors of p-STAT3 with demonstrated in vitro and in-vivo activity against PDAC tumor models, and that preliminary data warrant the further pre-clinical and clinical evaluation of these oncology agents alone and in combination with immunotherapy as promising new therapeutics for pancreatic cancer.

"The scientific community has been increasingly focused on inhibition of p-STAT3 as a new area for developing cancer therapies," commented Walter Klemp, Moleculin's Chairman and CEO. "Our Immune/Transcription Modulators have a unique ability to both inhibit p-STAT3 and other key oncogenic transcription factors and to stimulate a natural immune response. We believe available preclinical data and the data presented at this AACR Conference form a solid basis to pursue translational efforts for pancreatic cancer as one of our primary indications."

### **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 and WP1732 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.

## **Contacts**

Joe Dorame, Robert Blum or Joe Diaz

Lytham Partners, LLC

602-889-9700

[mbrx@lythampartners.com](mailto:mbrx@lythampartners.com)

View original content to download multimedia <http://www.prnewswire.com/news-releases/moleculin-announces-preclinical-pancreatic-cancer-data-presented-at-american-association-for-cancer-research-annual-meeting-300823606.html>

SOURCE Moleculin Biotech, Inc.