



Bionomics Announces Update on the $\alpha 7$ Nicotinic Acetylcholine Receptor (nAChR) Positive Allosteric Modulator (PAM) Collaboration with MSD

September 14, 2023

- ***Bionomics has collaborated with MSD to identify novel $\alpha 7$ nAChR PAMs suitable for the treatment of cognitive disorders like Alzheimer's Disease***
- ***Based on the learnings from Bionomics' candidate BNC375, additional candidates have been developed with improved drug like and pharmacological properties that are currently in Phase 1 safety, tolerability, pharmacokinetics and biomarker studies***

ADELAIDE, Australia, and CAMBRIDGE, Mass., Sept. 14, 2023 (GLOBE NEWSWIRE) -- Bionomics Limited (Nasdaq: BNOX) (Bionomics or Company), a clinical-stage biotechnology company developing novel, first-in-class, allosteric ion channel modulators to treat patients suffering from serious central nervous system ("CNS") disorders with high unmet medical need, today announced an update on the company's $\alpha 7$ Nicotinic Acetylcholine Receptor (nAChR) Positive Allosteric Modulator (PAM) collaboration with MSD (known as Merck & Co., Inc., Rahway NJ, USA in the US and Canada). Data for MK-4334, a novel clinical candidate developed by MSD and derived from Bionomics' original $\alpha 7$ nAChR PAM candidate (BNC375), was recently presented at the Society for Chemical Industry (SCI) and Royal Society of Chemistry (RSC) 22nd Medicinal Chemistry Symposium, held in Cambridge, UK, September 10-13, 2023.

"Bionomics has a long-standing collaboration with MSD to identify novel $\alpha 7$ nAChR PAMs suitable for the treatment of cognitive disorders that address the limitations seen with nAChR agonists, such as lack of selectivity against related ligand-gated ion channels, desensitization of the receptor with sustained exposure, and an inverted U-shaped dose response function," said Spyros Papapetropoulos, M.D., Ph.D., President and CEO of Bionomics. "We are excited to see the progress being made in our collaboration with MSD."

The original lead molecule BNC375, a Type I $\alpha 7$ nAChR PAM, showed a robust and sustained dose-dependent efficacy over a broad dose range and across multiple cognitive animal models. MSD has subsequently developed MK-4334, a novel clinical candidate, which in early preclinical studies has shown improved drug like and pharmacological properties relative to BNC375. In addition to Phase 1 safety, tolerability and clinical pharmacokinetics studies, clinical biomarker studies are ongoing to further evaluate the pharmacological response of $\alpha 7$ nAChR PAMs in humans.

Under the 2014 exclusive Research Collaboration and License Agreement, MSD funds all research and clinical development, and worldwide commercialization of any resulting products. This collaboration generated payments of \$20M upfront and \$10M for a Phase 1 milestone. Bionomics is eligible to receive up to \$465M in additional milestone payments for certain development and commercial milestones plus royalties on net sales of licensed drugs.

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About Bionomics Limited

Bionomics (NASDAQ:BNOX) is a clinical-stage biotechnology company developing novel, first-in-class, allosteric ion channel modulators to treat patients suffering from serious central nervous system ("CNS") disorders with high unmet medical need. Bionomics is advancing its lead drug candidate, BNC210, an oral, proprietary, selective negative allosteric modulator of the $\alpha 7$ nicotinic acetylcholine receptor, for the acute treatment of Social Anxiety Disorder (SAD) and chronic treatment of Post-Traumatic Stress Disorder (PTSD). Beyond BNC210, Bionomics has a strategic partnership with MSD (known as Merck & Co., Inc., Rahway NJ, USA in the US and Canada) with two drugs in early-stage clinical trials for the treatment of cognitive deficits in Alzheimer's disease and other central nervous system conditions. Bionomics' pipeline also includes preclinical assets that target Kv3.1/3.2 and Nav1.7/1.8 ion channels being developed for CNS conditions of high unmet need.

www.bionomics.com.au

Forward-Looking Statements

Bionomics cautions that statements included in this press release that are not a description of historical facts are forward-looking statements. Words such as "may," "could," "will," "would," "should," "expect," "plan," "anticipate," "believe," "estimate," "intend," "predict," "seek," "contemplate," "potential," "continue" or "project" or the negative of these terms or other comparable terminology are intended to identify forward-looking statements. These statements include the Company's plans to advance the development of its product candidates, the timing of achieving any development or regulatory milestones, and the comparability and potential of such product candidates, including to achieve any benefit or profile or any product approval or be effective. The inclusion of forward-looking statements should not be regarded as a representation by Bionomics that any of its plans will be achieved.

Actual results may differ materially from those set forth in this release due to the risks and uncertainties inherent in the Company's business and other risks described in the Company's filings with the Securities and Exchange Commission (SEC), including the Company's Annual Report on Form 20-F filed with the SEC on October 14, 2022, and its other reports. Investors are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof, and Bionomics undertakes no obligation to revise or update this news release to reflect events or circumstances after the date hereof. Further information regarding these and other risks is included in Bionomics' filings with the SEC which are available from the SEC's website (www.sec.gov) and on Bionomics' website (www.bionomics.com.au) under the heading "Investor Center." All forward-looking statements are qualified in their entirety by this cautionary statement. This caution is made under the safe harbor provisions of Section 21E of the Private Securities Litigation Reform Act of 1995.