

Marvel Biosciences Invited to Test MB-204 on Autism by French University

Calgary, Alberta (November 16, 2023)– **Marvel Biosciences Corp. (TSXV: MRVL OTC: MBCOF)** and its wholly owned subsidiary, Marvel Biotechnology Inc. (collectively the “**Company**” or “**Marvel**”), is pleased to announce a collaboration with Dr. Julie Le Merrer and Dr. Jerome Becker at iBrain Institute, Tours, France to study the effects of MB-204 in mouse models of autism.

“We are very pleased to have the opportunity to collaborate with Dr. Le Merrer and Dr. Becker who have identified a new pathway to potentially treat autism,” commented Dr. Williams, CSO of Marvel. “Normally, we would observe that social interaction is a rewarding experience but in autism this does not appear to be the case. Drs. Le Merrer and Becker have shown that mice can be treated with drugs like MB-204 which, remarkably, almost completely reverses social behaviour in multiple mouse models of autism. Autism affects nearly 1 in 36 children and there are few effective known treatments, so this is very exciting.”

“We believe that in autism, there is a common problem with the dopamine D2 reward circuitry signaling in the Nucleus accumbens which can be restored by inhibiting the A2a receptor,” said Dr. Becker, who published their findings in the May 2023 issue of Biological Psychiatry. “Having seen some of the pre-clinical data on MB-204, which targets the A2a receptor, we are keen to test effects of the molecule in pre-clinical models of autism in our laboratory.”

“There is also an intriguing overlap in symptoms between autism and especially late-stage Alzheimer’s disease,” explained Rod Matheson, CEO of Marvel. “Specifically with respect to social withdrawal and loss of verbal communication, MB-204 could represent a truly valuable new approach to treat both of these diseases and depression.”

MB-204 is a novel fluorinated derivative of the U.S. FDA-approved adenosine A2a receptor antagonist, Istradefylline which has completed cGMP manufacturing and 4-week GLP toxicology studies.

About Marvel Biosciences Corp.

Marvel Biosciences Corp., and its wholly owned subsidiary, Marvel Biotechnology Inc., is a Calgary-based pre-clinical stage pharmaceutical development biotechnology company that utilizes a “drug redevelopment” approach to drug development. Historically, when a new class of drug is developed, it is optimized for a particular target, but typically only approved for a specific disease. Often, a new disease is identified which involves the same target, however, pending the remaining patent life, the originally approved drug may not have sufficient time left for it to be commercially viable to be developed for the new disease indication. Marvel develops new synthetic chemical derivatives of the original approved drug for the new disease indication. Patent protection is sought, as the new potential asset is developed by the Company. The Company believes the business model results in significantly less risk, cost and time to develop its assets compared to traditional biotechnology companies.

Marvel Biotechnology Inc. has currently developed several new chemical entities, using synthetic chemical derivatives of known, off-patent drugs, that inhibit the A2a adenosine receptor with

application to neurological diseases (depression & anxiety, Alzheimer's, ADHD), and the non-neurological conditions of cancer and non-alcoholic steatohepatitis. Marvel is also exploring additional undisclosed targets to expand its asset pipeline.

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