



Mithridion Announces Phase I Study Results in Alzheimer's Disease

Additional Clinical Studies Planned in 2009

CEO to Present at C21 BioVentures on April 8, 2009

Madison, Wis., Tuesday, April 7, 2009 -- Mithridion, Inc., a biopharmaceutical company focusing on serious central nervous system (CNS) disorders, announced today results from a Phase I pharmacokinetic and clinical study of MCD-386, its lead drug candidate for Alzheimer's disease (AD). MCD-386 is an M1 selective muscarinic agonist with "first-in-class" potential for improving memory and cognition symptoms, and for disease-modifying effects (or stopping disease progression) in AD.

Results of the Phase I data will be presented in a corporate overview on Wednesday, April 8 at 4:30 p.m. at the *C21 BioVentures Conference* taking place on April 7-9 in Napa, Calif. Dr. Trevor M. Twose, Chief Executive Officer of Mithridion Inc., will be available for one-on-one meetings.

Mithridion is developing a controlled release formulation with the dual objectives of extending the duration of action and avoiding elevated peak (C_{max}) concentrations, while maintaining the MCD-386 concentration above the therapeutic level. The company plans to evaluate the safety, tolerability and pharmacokinetics of MCD-386 in a randomized, double-blind, placebo-controlled, ascending multiple-dose Phase I study to commence in the fourth quarter of 2009.

Trevor M. Twose, Ph.D., Chief Executive Officer of Mithridion Inc., commented on the results, "We are very encouraged that we fully met our objectives for this study, and are confident that the combination of the good selectivity for M1-muscarinic action seen in preclinical testing and a controlled release formulation will provide the desired therapeutic action and good safety profile for a first-in-class therapeutic. In addition to MCD-386, Mithridion is developing a pipeline of products for CNS disorders."

About the Phase I Study

Conducted at the Jasper Clinic in Kalamazoo, Mich., the Phase I study was a randomized, double-blind, placebo-controlled, ascending single dose trial conducted in 24 healthy volunteers to evaluate the safety, tolerability and pharmacokinetics of MCD-386. Serum drug concentrations were successfully measured in the 18 subjects receiving MCD-386; enabling pharmacokinetic parameters to be determined. MCD-386 was rapidly absorbed, reaching maximum serum concentrations in 1 hour to 1.5 hours, and serum concentrations were linearly related to dose. The mean serum half-life was approximately 1.4 hours.

MCD-386 was well tolerated at low doses with no adverse drug related events reported. No severe adverse events were experienced in any subject. Mild or moderate sweating, salivation, somnolence and flushing was reported in some subjects at the highest dose tested and thought to be related to peak plasma concentrations or C_{max} .

James Vanderlugt, M.D., Medical Director of the Jasper Clinic, commented, "The study reached the decision endpoints in an efficient time schedule. We are encouraged that the pharmacokinetic profile demonstrated in this Phase I study supports formulation development for further clinical studies of multiple doses."

About MCD-386

In preclinical tests, MCD-386 selectively activated M1-type muscarinic receptors, while maintaining a low level of M3 activity. This differentiation is important because M3 receptor activation is known to cause sweating, salivation and other unwanted side effects. At the elevated peak serum levels of MCD-386 in the highest dose cohort, this residual M3 activity may have caused the sweating and salivation. In order to avoid potential parasympathetic actions, Mithridion is developing a controlled release formulation with the dual objectives of extending the duration of action and avoiding elevated peak (C_{max}) concentrations, while maintaining the MCD-386 concentration above the therapeutic level. In preclinical laboratory tests comparing MCD-386 to a previous M1 selective agonist, xanomeline, regarded as the best first-generation drug candidate, MCD-386 was shown to be superior to xanomeline, suggesting that MCD-386 may have an improved adverse event profile compared to previously tested muscarinic drugs.

In preclinical laboratory tests, MCD-386 has been evaluated in a standard AD model that mimics damaged cholinergic neuronal activity (neurons that use acetylcholine), similar to that caused by AD. Preclinical results show that MCD-386 appears to replace deficient cholinergic neuronal activity and to improve memory and cognition. In addition, MCD-386 has been shown to activate alpha-secretase enzymes, which might reduce or prevent the loss of brain cells in AD by preventing the formation of neurotoxic amyloid beta. This discovery suggests that MCD-386 may have important and unique disease-modifying properties.

About Alzheimer's Disease (AD)

Alzheimer's disease is a progressive and fatal brain disease that destroys brain cells, causing problems with memory, thinking and behavior severe enough to affect work, lifelong hobbies or social life. Currently five million Americans suffer from AD and the number is expected to grow significantly as baby-boomers age. The market for AD drugs exceeds \$4 billion, and may grow to greater than \$10 billion with the development of drugs that are more effective.

About Mithridion, Inc.

Mithridion, Inc. is a biopharmaceutical company that discovers and develops drugs for central nervous system (CNS) disorders, with an initial focus on Alzheimer's disease and schizophrenia. Through the company's research and development efforts, as well as its merger with Cognitive Pharmaceuticals Ltd. in June 2008, Mithridion is developing a pipeline of CNS drug candidates. MCD-386, the company's lead candidate, is in a Phase I clinical trial for AD. Through Mithridion's effective clinical execution, the company was able to advance MCD-386 to initial clinical results within nine months of the merger with Cognitive Pharmaceuticals. Mithridion has raised \$7.4 million of angel and venture funding to date.

About Jasper Clinic

Jasper Clinic is an independent clinical research organization that performs research studies for all the major pharmaceutical organizations. A Phase I clinical pharmacology service provider, Jasper Clinic specializes in innovative early clinical research studies. It has a 50-bed unit that excels in cardiac safety, pharmacokinetic/pharmacodynamic, drug interaction and methodology studies, and has proven expertise using biomarkers and pharmacogenetics into novel studies. Jasper Clinic traces its roots back to the 1960s when it began as a joint effort of the Upjohn Company and Bronson Methodist Hospital. It has been independent since 2003. With a workforce of nearly 100, Jasper Clinic conducts 15 to 20 studies annually.

The project described was supported in part by NIH SBIR grant AG20454 from the National Institute of Aging and the NIH Rapid Access of Interventional Development (RAID) Program. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute of Aging or the National Institutes of Health.

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