

Omeros Successfully Unlocks Orphan GPCRs

June 29, 2010 5:09 PM ET

Opportunity for Development of Unprecedented Number of Novel Drug Targets -

SEATTLE, June 29, 2010 /PRNewswire via COMTEX News Network/ -- Omeros Corporation (Nasdaq: OMER) today announced that it has successfully identified compounds that interact with three orphan G protein-coupled receptors (GPCRs) linked to cancer, metabolic disorders and appetite control. This breakthrough demonstrates Omeros' unique capability to introduce a large number of new drug targets to the pharmaceutical industry, which could lead to the development of novel therapeutics across a wide range of diseases and disorders. GPCRs represent the premier family of drug targets, with more than 30 percent of currently marketed drugs targeting only 46 GPCRs. There are approximately 120 orphan GPCRs, and Omeros expects to unlock a large percentage of these for drug development.

"To my knowledge, Omeros' team is the first and only group to be able to unlock orphan GPCRs in high-throughput," stated Marc G. Caron, Ph.D., James B. Duke Professor of Cell Biology at Duke University. Dr. Caron is a leading expert in GPCRs and, together with his colleagues, was the first to purify and clone a GPCR. "I expect that this will result in a long line of wholly new and exciting drug targets, which will have a profound impact on the pharmaceutical industry," continued Dr. Caron.

"These initial successes in our GPCR program represent more than 10 years of hard work by our first-rate group of scientists, and I am immensely proud of what they have accomplished," stated Gregory A. Demopoulos, M.D., chairman and chief executive officer of Omeros. "We plan to complete high-throughput screening of all orphan GPCRs and pursue a commercialization strategy focused on both partnering and internal development. Based on our success to date, we expect to unlock a large percentage of the remaining orphan GPCRs."

Ongoing GPCR Program

Omeros has begun screening an initial set of five orphan GPCRs against its small-molecule chemical libraries using a proprietary, high-throughput assay. With less than 40 percent of its libraries screened to date, Omeros has already identified and confirmed sets of compounds that interact selectively with, and modulate signaling of, three of these orphan receptors. The assay detects receptor antagonists and agonists. Antagonists comprise the majority of marketed drugs, and all of the compounds identified so far by Omeros are antagonists.

About G Protein-Coupled Receptors

GPCRs, which mediate key physiological processes in the body, are the most valuable family of drug targets. Annual worldwide drug sales exceed \$700 billion and, according to Insight Pharma Reports, GPCR-targeting drugs represent 30 to 40 percent of marketed pharmaceuticals. Examples include Claritin(R) (allergy), Vicodin(R) (pain), Lopressor(R) (high blood pressure), Imitrex (R) (migraine headache) and Reglan(R) (nausea) as well as all other antihistamines, opioids, alpha and beta blockers and serotonergics.

The industry focuses its GPCR drug discovery efforts on non-sensory GPCRs. Of the 363 total non-sensory GPCRs, approximately 240 have known ligands (molecules that bind the receptors) with nearly half of those targeted either by marketed drugs (46 GPCRs) or by drugs in development (about 70 GPCRs). Without a known ligand, drug development for a given receptor is extremely difficult. There are approximately 120 GPCRs with no known ligands, which are termed "orphan GPCRs."

Omeros uses a proprietary high-throughput assay to identify small-molecule agonists and antagonists for orphan GPCRs, unlocking them to drug development. Omeros believes that it is the first to possess the capability to unlock orphan GPCRs in high-throughput, and that currently there is no other comparable technology. The Company believes that there may be more than 65 new drugable targets among the orphan GPCRs. Unlocking these receptors could lead to the development of drugs that act at these new targets. There is a broad range of indications linked to orphan GPCRs including cardiovascular disease, asthma, diabetes, pain, obesity, Alzheimer's disease, Parkinson's disease, multiple sclerosis, schizophrenia, learning and cognitive disorders, autism, osteoporosis, osteoarthritis and several forms of cancer.

About Omeros Corporation

Omeros is a clinical-stage biopharmaceutical company committed to discovering, developing and commercializing products focused on inflammation and disorders of the central nervous system. The Company's most clinically advanced product candidates are derived from its proprietary PharmacoSurgery(TM) platform designed to improve clinical outcomes of patients undergoing a wide range of surgical and medical procedures. Omeros has five ongoing clinical development programs, including four from its PharmacoSurgery(TM) platform and one from its Addiction platform, the most advanced of which is in Phase 3 clinical trials. Omeros also has the near-term capability, through its GPCR program, to add an unprecedented number of wholly new drug targets to the market. Behind its clinical candidates and GPCR platform, Omeros is building a diverse pipeline of antibody and small-molecule preclinical programs targeting inflammation and central nervous system disorders.

Forward-Looking Statements

This press release contains forward-looking statements as defined within the Private Securities Litigation Reform Act of 1995, which are subject to the "safe harbor" created by those sections. These statements include, but are not limited to, statements regarding the Company's capability to introduce a large number of new drug targets to the pharmaceutical industry leading to the development of novel therapeutics across a wide range of diseases and disorders; the Company's expectation that it will be able to unlock a large percentage of the remaining orphan GPCRs for drug development; the impact of unlocking these orphan GPCRs on the pharmaceutical industry; the Company's plan to complete high-throughput screening of all orphan GPCRs and pursue a commercialization strategy focused on both partnering and internal development; and the number of new drugable targets among the orphan GPCRs. Forward-looking statements are based on management's beliefs and assumptions and on information available to management only as of the date of this press release. Omeros' actual results could differ materially from those anticipated in these forward-looking statements for many reasons, including, without limitation, the risks, uncertainties and other factors described under the heading "Risk Factors" in the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 12, 2010. Given these risks, uncertainties and other factors, you should not place undue reliance on these forward-looking statements, and the Company assumes no obligation to update these forward-looking statements publicly, even if new information becomes available in the future.

SOURCE Omeros Corporation

Copyright (C) 2010 PR Newswire. All rights reserved