# Press Release

Omeros Identifies Small Molecules for Class B GPCR

**- Expands "Unlocking" Capability Beyond Class A Orphan GPCRs -**

SEATTLE, Jan. 16, 2013 /PRNewswire/ -- Omeros Corporation (NASDAQ: OMER) today announced that its proprietary Cellular Redistribution Assay (CRA) technology, which to date has successfully "unlocked" 46 of the 80 total Class A orphan G Protein-Coupled Receptors (GPCRs) for drug development, has identified small molecules that interact with a Class B GPCR. Like the Class A GPCRs, Class B receptors are important players in a broad range of disorders, having been linked to various types of cancer (e.g., breast, brain, prostate, kidney, liver, pancreatic and gastrointestinal); multiple sclerosis, attention deficit-hyperactivity, learning and memory impairments, depression and other neuropsychiatric disorders; multiple metabolic disorders including diabetes and obesity; immunologic disorders; osteoporosis and infertility.

Of the 49 Class B GPCRs, 34 are orphans. An orphan receptor is one for which there is no known ligand, or functionally active molecule. In developing drugs against a given receptor, ligands are used as templates for medicinal chemistry and, without them, drug development is extremely difficult.

In addition to continuing its screening of Class A orphan GPCRs, Omeros has begun screening orphan and non-orphan Class B receptors. Of the non-orphan Class B receptors, the Company will prioritize those for which there are already commercially successful drugs – peptide or protein drugs that require intravascular or intramuscular injection. Class B GPCRs have large extracellular domains and their natural ligands are generally large peptides, making the development of orally active, small-molecule drugs against these receptors, such as glucagon and parathyroid hormone (PTH), a persistent challenge. Despite the fact that oral agents are not available, the markets for the Class B GPCR-targeting peptide drugs are large, with sales of PTH drugs alone, for example, exceeding $1 billion annually. Omeros' CRA technology finds functionally active small molecules for GPCRs, and could lead to the development of oral medications for many of the Class B GPCRs.

"We continue to demonstrate the strength of our CRA technology and our team's expertise in unlocking orphan GPCRs," stated Gregory A. Demopulos, M.D., chairman and chief executive officer of Omeros. "While we continue our efforts to increase the number of our unlocked Class A receptors, establishing the intellectual property position around each, our ability to identify small molecules for Class B receptors further expands our GPCR platform and our partnering opportunities. The promise of developing orally active drugs against a class of receptors that have been, by necessity, largely served by peptides and proteins, is exciting, particularly for those Class B GPCRs whose biology has already been validated by

marketed drugs."

**Ongoing GPCR Program**
Omeros is screening orphan and difficult-to-drug Class A and Class B GPCRs against its small-molecule chemical libraries using its proprietary, high-throughput cellular redistribution assay (CRA). The CRA detects receptor antagonists, agonists, inverse agonists and allosteric modulators for a given GPCR without requiring the receptor's ligand or any knowledge of the receptor's signaling pathway(s). Omeros has announced that it has identified and confirmed sets of compounds that interact selectively with 46 Class A orphan receptors linked to metastatic melanoma (GPR19), esophageal squamous cell carcinoma and obesity-related type-2 diabetes (GPR39), hepatocellular carcinoma (GPR80), several types of cancer (GPR65/TDAG8), squamous cell carcinoma (GPR87), ovarian cancer (GPR150), pancreatic cancer (GPR182), acute lymphoblastic leukemia (P2Y8/P2RY8), ovarian and prostate cancer (OGR1), arterial stiffness (GPR25), sleep disorders (OPN4), cognitive disorders (GPR12), torpor or "suspended animation" and bipolar disorder (GPR50), anxiety disorders (GPR31), schizophrenia (GPR52, GPR153), autism (GPR63), bipolar disorder and schizophrenia (GPR78), memory and inflammatory conditions (GPR83), psychotic and metabolic disorders (GPR27, GPR85, GPR173), cognition (GPR151), cognitive impairments (MAS1), inflammatory responses (GPR32), obesity and diabetes (GPR21), appetite control (GPR82, GPR101), immunological disorders (CCRL2), rheumatoid arthritis and HIV-mediated enteropathy (GPR15), respiratory and immune disorders (GPR141), humoral immunity (GPR183), multiple sclerosis (GPR17), osteoarthritis (GPR22), motor control (GPR139), congenital cataracts and birth defects of the brain and spinal cord (GPR161), regulation of hematopoietic stem cell differentiation (GPR171), cancer stem cells and the self-renewal and maintenance of adult stem cells (LGR4), long-term wound repair, including the formation of new hair follicles (LGR6) and pain (MRGE). In addition, Omeros has unlocked GPR20, GPR45, GPR135, GPR162, MRGF and OPN5, which have not yet been definitively tied to any specific indications but are expressed preferentially in the gastrointestinal tract (GPR20), brain (GPR45, GPR135 and GPR162) and eye, brain, testes, spinal cord (OPN5) and dorsal root ganglia (MRGF).

**About G Protein-Coupled Receptors**
GPCRs, which mediate key physiological processes in the body, are one of the most valuable families of drug targets. According to Insight Pharma Reports, GPCR-targeting drugs represent 30 to 40 percent of marketed pharmaceuticals. Examples include Claritin® (allergy), Zantac® (ulcers and reflux), OxyContin® (pain), Lopressor® (high blood pressure), Imitrex® (migraine headache), Reglan® (nausea) and Abilify® (schizophrenia, bipolar disease and depression) as well as all other antihistamines, opioids, alpha and beta blockers, serotonergics and dopaminergics.

The industry focuses its GPCR drug discovery efforts mostly 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 80 GPCRs). There are approximately 120 GPCRs with no known ligands, which are termed "orphan GPCRs." Without a known ligand, drug development for a given receptor is extremely difficult.

Omeros uses its proprietary high-throughput CRA to identify small-molecule agonists, antagonists and allosteric modulators for orphan and difficult-to-drug 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. 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 targeting inflammation, coagulopathies and disorders of the central nervous system. The Company's most clinically advanced product candidates, OMS302 for lens replacement surgery and OMS103HP for arthroscopy, are derived from its proprietary PharmacoSurgery™ platform designed to improve clinical outcomes of patients undergoing a wide range of surgical and medical procedures. Omeros has five clinical development programs. Omeros may also have the near-term capability, through its GPCR program, to add a large number of new drug targets and their corresponding compounds to the market. Behind its clinical candidates and GPCR platform, Omeros is building a diverse pipeline of protein and small-molecule preclinical programs targeting inflammation, coagulopathies 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, Omeros' expectations regarding its planned screening of GPCRs; and that Omeros may have capability, through its GPCR program, to add a large number of new drug targets and their corresponding compounds to the market. 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 November 9, 2012. 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.

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