



For Immediate Release

OncoMed Pharmaceuticals Initiates Phase 1 Clinical Trial of Anti-Cancer Stem Cell Therapeutic OMP-52M51 (Anti-Notch1)

Enrollment of First Patient Triggers Milestone Payment from GSK

Redwood City, CA – December 21, 2012 - OncoMed Pharmaceuticals, Inc., a clinical-stage company developing novel therapeutics that target cancer stem cells (CSCs), or tumor-initiating cells, today announced that patient dosing has begun in a Phase 1 clinical trial of OMP-52M51 in patients with hematologic cancers. OMP-52M51 is OncoMed's fifth product candidate to enter clinical development. OMP-52M51 is a proprietary monoclonal antibody that targets the Notch1 receptor. Enrollment of the first patient in the Anti-Notch1 Phase 1 trial has triggered a \$4 million milestone payment from the company's strategic collaborator GlaxoSmithKline (GSK).

The first Phase 1 clinical trial of OMP-52M51 is an open-label dose escalation and expansion study in patients with hematologic cancers. These patients are assessed for safety, pharmacokinetics, pharmacodynamics, and initial evidence of efficacy, and the clinical trial will also assess a predictive biomarker-based patient selection approach. OncoMed also has filed an additional IND application with the FDA to evaluate this monoclonal antibody in patients with solid tumors.

The trial is being conducted at several sites in the United States including Sarah Cannon Research Institute (SCRI) in Nashville, Tennessee. According to Dr. Ian Flinn of SCRI, who treated the first patient with OMP-52M51, "It is exciting to bring a novel antibody such as OMP-52M51 that targets the Notch pathway, a key cancer stem cell pathway, into the clinic. There is significant scientific evidence to suggest that Notch1 could be an important therapeutic target in hematological malignancies, and we look forward to generating clinical data that might help patients with these cancers. The biomarker strategy employed in this study is also quite innovative."

"We continue to execute on our core strategy of discovering and advancing novel product candidates that target cancer stem cells," said Paul Hastings, President and Chief Executive Officer of OncoMed Pharmaceuticals. "OncoMed's clinical pipeline is broad, and with the addition of this novel Anti-Notch1 antibody, we now have 5 product candidates in the clinic, several which are advancing towards Phase 2 testing. We have made significant progress in building and developing our pipeline, and we look forward to generating important clinical data across each of our product candidates now being tested in humans."

About OMP-52M51

OMP-52M51 is a humanized monoclonal antibody targeted to the Notch1 receptor that has shown substantial anti-tumor and anti-CSC activity in Notch-dependent hematologic

malignancies and solid tumors in preclinical studies. Certain hematologic malignancies have mutations that increase Notch1 signaling activity and may be a primary driver of tumor growth, as well as resistance to chemotherapy. Predictive biomarker tests have been identified that enable analyses of potential predictive biomarkers in clinical trials for OMP-52M51 to identify those subsets of patients with certain hematologic malignancies or certain solid tumors that may benefit most from the product candidate. OMP-52M51 is part of OncoMed's strategic collaboration with GSK. In December 2007, OncoMed and GSK entered into a broad strategic alliance to discover and develop novel product candidates targeting CSCs via Notch pathway signaling modulation. GSK retains an option through the end of certain Phase 1 or certain Phase 2 clinical trials to obtain an exclusive license to OMP-52M51.

About Cancer Stem Cells

Cancer stem cells, or CSCs, are the subpopulation of cells in a tumor responsible for driving growth and metastasis of the tumor. CSCs, also known as tumor-initiating cells, exhibit certain properties which include the capacity to divide and give rise to new CSCs via a process called self-renewal and the capacity to differentiate or change into the other cells that form the bulk of the tumor. Common cancer drugs target bulk tumor cells but have limited impact on CSCs, thereby providing a path for recurrence of the tumor. OncoMed's product candidates target CSCs by blocking self-renewal and driving differentiation of CSCs toward a non-tumorigenic state, and also impact bulk tumor cells. OncoMed believes its product candidates are distinct from the current generations of chemotherapies and targeted therapies, and have the potential to significantly impact cancer treatment and the clinical outcome of patients with cancer.

About OncoMed Pharmaceuticals

OncoMed Pharmaceuticals is a clinical-stage company that discovers and develops novel therapeutics targeting cancer stem cells, the cells shown to be capable of driving tumor growth, recurrence and metastasis. OncoMed has advanced five anti-cancer therapeutics into the clinic, including demcizumab (OMP-21M18, Anti-DLL4), OMP-59R5 (Anti-Notch2/3), OMP-52M51 (Anti-Notch1), vantiutumab (OMP-18R5, Anti-Fzd7), and OMP-54F28 (Fzd8-Fc), which target key cancer stem cell signaling pathways including Notch and Wnt. In addition, OncoMed's pipeline includes several novel preclinical product candidates targeting multiple validated cancer stem cell pathways, including the RSPO-LGR pathway. OncoMed has formed strategic alliances with Bayer Pharma AG and GlaxoSmithKline. Privately held, OncoMed's investors include: US Venture Partners, Latterell Venture Partners, The Vertical Group, Morgenthaler Ventures, Phase4Ventures, Delphi Ventures, Adams Street Partners, De Novo Ventures, Bay Partners and GlaxoSmithKline. Additional information can be found at the company's website: www.oncomed.com.

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