For Immediate Release

OncoMed Pharmaceuticals Initiates Phase I Clinical Trial of Anti-Cancer Stem Cell Therapeutic OMP- 54F28 (Fzd8-Fc)

Redwood City, CA – July 12, 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 I clinical trial of OMP-54F28 in patients with advanced solid tumor cancers. OMP-54F28 is OncoMed's fourth drug to enter clinical development. OMP-54F28 is a proprietary fusion protein based on a truncated form of the Frizzled8 receptor, or Fzd8, and is the company's second Wnt pathway modulator to enter the clinic as part of the collaboration between OncoMed and Bayer HealthCare Pharmaceuticals. OncoMed's first Wnt pathway targeting drug in the clinic is OMP-18R5, a monoclonal antibody targeting the Frizzled receptors. OMP-18R5 continues to advance in the clinic.

The Phase I clinical trial of OMP-54F28 is an open-label dose escalation study in patients with advanced solid tumors for which there is no remaining standard curative therapy. These patients are assessed for safety, immunogenicity, pharmacokinetics, biomarkers, and initial signals of efficacy.

The trial is being conducted at Pinnacle Oncology Hematology in Scottsdale, Arizona, the University of Michigan Comprehensive Cancer Center, Ann Arbor, Michigan, and the University of Colorado Cancer Center under the direction of Principal Investigators Dr. Michael S. Gordon, Dr. David Smith and Dr. Antonio Jimeno, respectively. According to Dr. Gordon, who treated the first patient with OMP-54F28, "It is exciting to bring novel agents such as OMP-54F28 that target key cancer pathways such as Wnt into the clinic. We believe that this investigational therapy has great potential based on its preclinical evidence of anti-tumor activity."

OncoMed believes that OMP-54F28 is a potent antagonist of the Wnt pathway, a key cancer stem cell pathway. OMP-54F28 has shown evidence of anti-tumor activity and reduction of CSC frequency in multiple preclinical models either as a single agent or when combined with chemotherapy. OncoMed has worked collaboratively with Bayer's US affiliate Bayer HealthCare, LLC to manufacture the clinical supply of OMP-54F28 for this program. Bayer Pharma AG retains an option to exclusively license OMP-54F28 at any point through completion of certain Phase I trials.

"The advancement of a second clinical molecule targeting the Wnt pathway is an important milestone for us and our collaboration with Bayer," said Paul Hastings, President and Chief Executive Officer of OncoMed Pharmaceuticals. "In less than two years, we have successfully created a strong body of preclinical data for two distinct approaches and thereby expanded our clinical pipeline of potential first-in-class anti-cancer stem cell therapeutics."

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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. We believe OncoMed's 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 the Wnt Pathway
The Wnt pathway is an evolutionarily conserved signaling pathway that mediates cellular communication and regulates stem cell fate. Wnt signals through Frizzled receptors to stabilize beta-catenin and subsequently regulate gene expression. Fzd8-Fc acts as a "decoy receptor" and functions by sequestering Wnts so that they are unable to bind to Frizzled receptors. The Wnt pathway has been intensively studied and is now known to be inappropriately activated in many major tumor types, including colon, breast, liver, lung and pancreatic cancers, and is critical for the function of CSCs. Because of this extensive validation, the Wnt pathway has been a major focus of anti-cancer drug discovery efforts. OncoMed believes that Fzd8-Fc (OMP-54F28) and anti-Fzd7 (OMP-18R5) are two of the first therapeutic agents targeting this key pathway to enter clinical testing.

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 four anti-cancer therapeutics into the clinic, demcizumab (OMP-21M18), OMP-59R5, OMP-18R5, and OMP-54F28, 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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