For Immediate Release

OncoMed Anti-Cancer Stem Cell Antibody OMP-21M18 Demonstrates Potent Activity in Preclinical Studies Against Human Colon Cancer Tumors Regardless of KRAS Mutation Status

Data Published in Cancer Research Demonstrate Efficacy as Single-Agent Therapy or in Combination with Standard-of-Care Chemotherapy

Redwood City, CA – March 1, 2011 - OncoMed Pharmaceuticals, Inc., a company developing novel therapeutics that target cancer stem cells, today announced the publication of preclinical data demonstrating that its lead candidate, OMP-21M18, inhibits tumor growth and reduces cancer stem cell frequency when administered alone or in combination with chemotherapy in human colorectal cancer tumors with or without KRAS mutations. This study was published in the March 1, 2011 issue of *Cancer Research*, a publication of the American Association of Cancer Research.

"Using xenograft models developed at OncoMed, we observed that OMP-21M18 is equally efficacious against colon tumors with oncogenic KRAS mutations and colon tumors with a normal KRAS gene. In contrast, cetuximab was inactive against KRAS mutant tumors," said Timothy Hoey, Ph.D., Senior Vice President, Cancer Biology of OncoMed Pharmaceuticals and a co-author of the paper. "Further, OMP-21M18 was seen to reduce cancer stem cell frequency while promoting apoptosis in tumor cells and this activity was greatly enhanced when our agent was combined with chemotherapy. These findings suggest that OMP-21M18 demonstrates potent anti-cancer activity in xenograft models of colorectal cancer with the potential to be an important treatment for this disease."

OMP-21M18 is a monoclonal antibody that blocks Delta-like 4 ligand (DLL4), an activator of Notch signaling, a pathway known to be important in stem cells and cancer. Blocking DLL4 results in broad-spectrum anti-tumor activity via multiple mechanisms, including inhibiting cancer stem cell growth, promoting cell differentiation and disrupting angiogenesis. OncoMed researchers conducted a series of experiments using the company's proprietary xenograft models to examine the efficacy of anti-DLL4 antibodies in KRAS-mutated and normal colorectal tumors derived from patients. Treatment with anti-DLL4 was compared with the EGFR-targeted monoclonal antibody cetuximab (Erbitux®). Colon tumors with KRAS mutations were insensitive to cetuximab treatment, while cetuximab inhibited growth of wild-type tumors demonstrating that activity of therapeutics in these patient-derived xenografts correlates well with established clinical findings. In contrast, OMP-21M18 demonstrated potent activity against both KRAS-mutated and wild-type tumors when administered as a single-agent, or in combination with the standard chemotherapeutic irinotecan. In addition, analysis of the ratio of cancer stem cells to non-tumorigenic cells using an *in vivo* limiting dilution assay demonstrated that treatment with OMP-21M18 reduced cancer stem cell frequency, and that the combination of anti-DLL4 treatment with irinotecan resulted in a still greater decrease in the presence of cancer stem cells.

"Results from the studies published in *Cancer Research* further support our clinical strategy for OMP-21M18, which is currently in multiple Phase 1b clinical trials in colorectal, pancreatic and other cancers," said Paul Hastings, President and Chief Executive Officer of OncoMed Pharmaceuticals. "In our preclinical and Phase 1 clinical studies of OMP-21M18 we have seen encouraging evidence of an anti-cancer effect in a variety of tumor types. We are extremely excited by the promise of our novel anti-cancer stem cell therapeutic to dramatically impact the treatment of solid tumors and look forward to confirming that potential in the clinic. "

These data are published in current edition of *Cancer Research* in an article titled "Anti-DLL4 Inhibits Growth and Reduces Tumor Initiating Cell Frequency in Colorectal Tumors with Oncogenic KRAS Mutations". The authors of the article include, Dr. Hoey, Marcus Fischer, Wan-Ching Yen, Ph.D., Ann Kapoun, Ph.D., Min Wang, Ph.D., Gilbert O'Young, John Lewicki, Ph.D., and Austin Gurney, Ph.D., of OncoMed Pharmaceuticals, where OMP-21M18 was discovered and is being developed. OMP-21M18 was evaluated using OncoMed's proprietary xenograft tumor models established from primary human tumors. These models are designed to be more directly representative of human tumors than the cell lines used in standard cancer research.

About Colorectal Cancer

According to the American Cancer Society, colorectal cancer is the second leading cause of cancer-related deaths in the United States. Treatment for colon cancer typically includes surgery, and depending on the stage of disease, location and history of resistance to prior treatments, may incorporate radiation therapy, treatment with chemotherapeutic agents and/or targeted anti-cancer agents. Up to forty percent of colorectal cancers contain mutated KRAS genes, which have proven to be insensitive to treatment with monoclonal antibodies, such as cetuximab (Erbitux®) or panitumumab (Vectibix™), that target the epidermal growth factor receptor (EGFR). As a result, a significant need exists for additional agents, particularly those that may be combined with chemotherapy, which can address both wild type and KRAS mutant tumor types.

About OMP-21M18

OncoMed is currently evaluating OMP-21M18 in a Phase 1 single agent study of patients with advanced solid tumors and in multiple Phase 1b combination studies in patients with colon cancer, pancreatic cancer or non-small cell lung cancer. Preliminary results from OncoMed's Phase 1 dose-escalating single-agent study of OMP-21M18 demonstrate evidence of disease control and tumor response as measured by RECIST criteria. In addition, biomarker measurements show that OMP-21M18 is a potent inhibitor of Notch signaling. Initial clinical data from this ongoing study were presented at the 22nd EORTC-NCI-AACR symposium on "Molecular Targets and Cancer Therapeutics" held November 16-19, 2010 in Berlin, Germany. OMP-21M18 is part of OncoMed's Notch pathway collaboration with GlaxoSmithKline.

About Cancer Stem Cells

Cancer stem cells, a small, resilient subset of cells found in tumors, have the capacity to self-renew and differentiate, leading to tumor initiation and driving tumor growth, recurrence and metastasis. Also referred to as "tumor-initiating cells," these cells were first discovered by OncoMed's scientific founders in breast cancer and have subsequently been identified in many other types of solid tumor cancers, including cancer of head and neck, lung, prostate, pancreas and glioblastoma. Cancer stem cells appear to be preferentially resistant to both standard chemotherapy and radiotherapy. OncoMed's strategy is to improve cancer treatment by specifically targeting the key biologic pathways that are thought to be critical

to the activity and survival of cancer stem cells. OncoMed's antibody therapeutics target cancer stem cell proteins and have the potential to be developed against a range of tumor types.

About OncoMed Pharmaceuticals

OncoMed Pharmaceuticals is a clinical-stage company that discovers and develops novel therapeutics targeting cancer stem cells, the cells believed to be capable of driving tumor growth, recurrence and metastasis. A leader in cancer stem cell research, the company has established a library of antibodies to cancer stem cell proteins for the treatment of solid tumors such as pancreatic, breast, colorectal and lung cancers. OncoMed has advanced two anti-cancer stem cell monoclonal antibodies into the clinic, OMP-21M18 and OMP-59R5, which both target the Notch signaling pathway. In addition, OncoMed's pipeline includes several novel preclinical product candidates targeting multiple validated cancer stem cell pathways. OncoMed has formed strategic alliances with Bayer HealthCare Pharmaceuticals and GlaxoSmithKline. Privately-held, OncoMed's investors include: US Venture Partners, Latterell Venture Partners, The Vertical Group, Morgenthaler Ventures, Phase4 Ventures, 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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