For Immediate Release

OncoMed Pharmaceuticals Recaps New Data Presented at AACR

Redwood City, CA – April 3, 2012– OncoMed Pharmaceuticals, Inc., a privately held, clinical-stage company developing novel therapeutics that target cancer stem cells, or tumor initiating cells, today highlighted new data presented this week in an oral presentation and three posters at the Annual Meeting of the American Association for Cancer Research (AACR) in Chicago, IL.

As part of minisymposium MS.TB0201, Regulation of Cancer Stem Cells, OncoMed's Marcus M. Fischer, lead author of #1014, "Targeting cancer stem cells by a Notch 2/Notch3 cross-reactive antibody inhibits tumor growth and delays tumor recurrence in pancreatic cancer", presented new data demonstrating that OncoMed's anti-Notch2/3 antibody OMP-59R5 was active both as a single agent and in combination with gemcitabine in a panel of patient-derived pancreatic xenografts. Anti-Notch2/3 delayed tumor recurrence after gemcitabine treatment and reduced cancer stem cell frequency. This Notch2/3 antibody is part of OncoMed's collaboration with GlaxoSmithKline.

Poster LB-196, "Anti-DLL4 reduces tumor growth and tumorigenicity in B-RAF^{V600E} melanomas including those with acquired resistance to B-RAF inhibitors", was presented by Lucia Beviglia of OncoMed. This work suggests that OncoMed's anti-DLL4 antibody OMP-21M18 can be effective in reducing tumor growth and tumor initiating cell frequency in melanomas with oncogenic B-RAF mutations, including patients that have developed resistance to B-Raf kinase inhibitors.

As part of poster session, PO.TB02.06, "Identification and Targeting of Cancer Stem Cells," John Lewicki, OncoMed's Chief Scientific Officer, presented poster 3356/1 "Development of a novel Wnt pathway antagonist antibody, OMP-18R5, that reduces tumor initiating cell frequency in breast cancer". Treatment with OncoMed's anti-FZD7 antibody OMP-18R5 reduced tumor growth and the frequency of tumor initiating cells in combination with paclitaxel in several breast tumor models and can restore chemosensitivity in drug resistant breast tumors. OMP-18R5 is part of OncoMed's collaboration with Bayer HealthCare.

Poster 3357/2, "Targeting cancer stem cells by an anti-DLL4 antibody inhibits epithelial-to-mesenchymal transition, delays tumor recurrence and overcomes drug resistance in breast and pancreatic cancer," was presented by Wan-Ching Yen of OncoMed. The poster showed that tumors were enriched with cancer stem cells after conventional chemotherapy. In contrast, treatment with anti-DLL4 antibody OMP-21M18 decreased cancer stem cell frequency and suppressed many gene expression changes induced in chemo-resistant tumors. These results

suggest that anti-DLL4 may be a useful therapeutic approach for patients who are refractory to chemotherapeutic agents.

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 tumor types, including brain, colon, lung, prostate, and pancreatic cancer. 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 shown 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 three anti-cancer stem cell monoclonal antibodies into the clinic, demcizumab (OMP-21M18), OMP-59R5 and OMP-18R5, 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 HealthCare Pharmaceuticals 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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