Amgen Submits Application to Expand Indication for XGEVA® (Denosumab) to Prevent or Delay Spread of Prostate Cancer to the Bone

June 27, 2011

THOUSAND OAKS, Calif., June 27, 2011 /PRNewswire via COMTEX/ --

Amgen (NASDAQ: AMGN) today announced the submission of a supplemental Biologics License Application (sBLA) to the U.S. Food and Drug Administration (FDA) to expand the indication for XGEVA® (denosumab) to treat men with castrate-resistant prostate cancer to reduce the risk of developing bone metastases. If approved, XGEVA would be the first therapy licensed to prevent or delay the spread of cancer to the bone.

The sBLA submission is based on a pivotal Phase 3 Study ('147) evaluating XGEVA versus placebo in 1,432 men with castrate-resistant prostate cancer. Results of the '147 study demonstrate that XGEVA significantly prolonged bone metastasis-free survival by more than four months compared with placebo (29.5 versus 25.2 months, respectively) in men with castrate-resistant prostate cancer that had not yet spread to the bone. Bone metastasis-free survival is a composite measure of the development of bone metastases or death.

"The successful outcome of this study provides clinical evidence supporting the view that tumors activate the RANK Ligand pathway to penetrate bone," said Roger M. Perlmutter, M.D., Ph.D., executive vice president of Research and Development at Amgen. "XGEVA has the potential to become a significant advance for patients with castrate-resistant prostate cancer who currently have no treatment options to help prevent the spread of cancer to their bones."

Bone is one of the most common places for cancer to spread. In fact, up to 90 percent of men with advanced prostate cancer will have their tumor spread to the bone.(i),(ii),(iii) With effective therapies now in place for both early (castrate-sensitive) prostate cancer and advanced (castrate-resistant) metastatic prostate cancer, there is a gap in the treatment plan for those patients who are castrate-resistant but have not yet developed metastatic disease.

In the '147 trial, adverse events and serious adverse events were relatively similar between the XGEVA and placebo arms. Hypocalcemia and osteonecrosis of the jaw (ONJ) were reported with increased frequencies in the XGEVA treated patients. The yearly rate of ONJ in the XGEVA arm was similar to prior XGEVA trial results. Back pain was the most common adverse event reported in the XGEVA arm of the trial.

About XGEVA

XGEVA is the first and only RANK Ligand inhibitor approved by the FDA indicated for the prevention of skeletal-related events (SREs) in patients with bone metastases from solid tumors. XGEVA was approved following a six month priority review by the FDA. XGEVA is not indicated for the prevention of SREs in patients with multiple myeloma. XGEVA is the first novel bone metastases treatment for advanced cancer patients in nearly a decade. Delivered as an every four week 120 mg subcutaneous injection, XGEVA provides a unique option for urologists and oncologists to prevent SREs in patients with advanced cancer.

XGEVA is a fully human monoclonal antibody that binds to RANK Ligand, a protein essential for the formation, function and survival of osteoclasts (the cells that break down bone). XGEVA prevents RANK Ligand from activating its receptor, RANK, on the surface of osteoclasts, thereby decreasing bone destruction.

XGEVA has been studied in over 7,000 patients with cancer. In clinical trials, XGEVA demonstrated a clinically meaningful improvement compared to the previous standard of care in preventing bone complications. XGEVA is also being investigated for the potential use to delay the onset of bone metastasis in adjuvant breast cancer.

XGEVA Skeletal-Related Events Regulatory Status

XGEVA is currently approved in the U.S. for the prevention of SREs in patients with bone metastases from solid tumors. XGEVA was approved following a six month priority review by the FDA. In the U.S., XGEVA is not indicated for the prevention of SREs in patients with multiple myeloma.(iv) XGEVA is also approved in Canada for reducing the risk of developing SREs in patients with bone metastases from breast cancer, prostate cancer, non-small cell lung cancer, and other solid tumors. In Canada, XGEVA is not indicated for reducing the risk of developing SREs in patients with multiple myeloma.

Amgen has also submitted marketing applications for XGEVA in Australia, Mexico, Russia, Switzerland and the European Union. In Japan, Amgen is working with its licensing partner, Daiichi Sankyo Company, Limited and a marketing application was submitted in August. In addition,Amgen and GlaxoSmithKline (GSK) have a collaboration agreement for the commercialization of XGEVA in a number of countries where Amgen does not currently have a commercial presence. In these countries, marketing applications are filed by GSK.

For more information on XGEVA, please visit www.XGEVA.com.

Denosumab is also marketed as Prolia® in other indications.

XGEVA Important Safety Information

XGEVA can cause severe hypocalcemia. Correct pre-existing hypocalcemia prior to XGEVA treatment. Monitor calcium levels and administer calcium, magnesium, and vitamin D as necessary. Advise patients to contact a healthcare professional for symptoms of hypocalcemia.

ONJ can occur in patients receiving XGEVA. Patients who are suspected of having or who develop ONJ while on XGEVA should receive care by a dentist or an oral surgeon. In these patients, extensive dental surgery to treat ONJ may exacerbate the condition.

The most common adverse reactions in patients receiving XGEVA were fatigue/asthenia, hypophosphatemia, and nausea. The most common serious

adverse reaction in patients receiving XGEVA was dyspnea. The most common adverse reactions resulting in discontinuation of XGEVA were osteonecrosis and hypocalcemia. Please visit www.amgen.com for full prescribing information.

Bone Metastases and Skeletal-Related Events: Prevalence and Impact

Bone metastases occur in more than 1.5 million patients with cancer worldwide and are most commonly associated with cancers of the prostate, lung, and breast, with incidence rates as high as 90 percent of patients with metastatic disease.(v),(vi),(vii),(viii)

Approximately 50-70 percent of cancer patients with bone metastases will experience debilitating SREs.(ix),(x),(xi) Events considered to be SREs include fractures, spinal cord compression and severe bone pain that may require surgery or radiation.(xii) Such events can profoundly disrupt a patient's life and can cause disability and pain.(xiii),(xiv),(xv)

About Amgen

Amgen discovers, develops, manufactures and delivers innovative human therapeutics. A biotechnology pioneer since 1980, Amgen was one of the first companies to realize the new science's promise by bringing safe and effective medicines from lab, to manufacturing plant, to patient. Amgen therapeutics have changed the practice of medicine, helping millions of people around the world in the fight against cancer, kidney disease, rheumatoid arthritis, bone disease and other serious illnesses. With a deep and broad pipeline of potential new medicines, Amgen remains committed to advancing science to dramatically improve people's lives. To learn more about our pioneering science and our vital medicines, visit www.amgen.com.

Forward-Looking Statements

This news release contains forward-looking statements that are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and assumptions that could cause actual results to differ materially from those described. All statements, other than statements of historical fact, are statements that could be deemed forward-looking statements, including estimates of revenues, operating margins, capital expenditures, cash, other financial metrics, expected legal, arbitration, political, regulatory or clinical results or practices, customer and prescriber patterns or practices, reimbursement activities and outcomes and other such estimates and results. Forward-looking statements involve significant risks and uncertainties, including those discussed below and more fully described in the Securities and Exchange Commission (SEC) reports filed by Amgen, including Amgen's most recent annual report on Form 10-K and most recent periodic reports on Form 10- Q and Form 8-K. Please refer to Amgen's most recent Forms 10-K, 10-Q and 8-K for additional information on the uncertainties and risk factors related to our business. Unless otherwise noted, Amgen is providing this information as of June 27, 2011 and expressly disclaims any duty to update information contained in this news release.

No forward-looking statement can be guaranteed and actual results may differ materially from those we project. Discovery or identification of new product candidates or development of new indications for existing products cannot be guaranteed and movement from concept to product is uncertain; consequently, there can be no guarantee that any particular product candidate or development of a new indication for an existing product will be successful and become a commercial product. Further, preclinical results do not guarantee safe and effective performance of product candidates in humans. The complexity of the human body cannot be perfectly, or sometimes, even adequately modeled by computer or cell culture systems or animal models.

The length of time that it takes for us to complete clinical trials and obtain regulatory approval for product marketing has in the past varied and we expect similar variability in the future. We develop product candidates internally and through licensing collaborations, partnerships and joint ventures. Product candidates that are derived from relationships may be subject to disputes between the parties or may prove to be not as effective or as safe as we may have believed at the time of entering into such relationship. Also, we or others could identify safety, side effects or manufacturing problems with our products after they are on the market. Our business may be impacted by government investigations, litigation and products liability claims. We depend on third parties for a significant portion of our manufacturing capacity for the supply of certain of our current and future products and limits on supply may constrain sales of certain of our current products and product candidate development.

In addition, sales of our products are affected by the reimbursement policies imposed by third-party payers, including governments, private insurance plans and managed care providers and may be affected by regulatory, clinical and guideline developments and domestic and international trends toward managed care and healthcare cost containment as well as U.S. legislation affecting pharmaceutical pricing and reimbursement. Government and others' regulations and reimbursement policies may affect the development, usage and pricing of our products. In addition, we compete with other companies with respect to some of our marketed products as well as for the discovery and development of new products. We believe that some of our newer products, product candidates or new indications for existing products, may face competition when and as they are approved and marketed. Our products may compete against products that have lower prices, established reimbursement, superior performance, are easier to administer, or that are otherwise competitive with our products. In addition, while we routinely obtain patents for our products and technology, the protection offered by our patents and patent applications may be challenged, invalidated or circumvented by our competitors and there can be no guarantee of our ability to obtain or maintain patent protection for our products or product candidates. We cannot guarantee that we will be able to produce commercially successful products or maintain the commercial success of our existing products. Our stock price may be affected by actual or perceived market opportunity, competitive position, and success or failure of our products or product candidates. Further, the discovery of significant problems with a product similar to one of our products that implicate an entire class of products could have a material adverse effect on sales of the affected products and on our business and results of operations.

The scientific information discussed in this news release relating to new indications for our products is preliminary and investigative and is not part of the labeling approved by the U.S. FDA, European Medicines Agency (EMA) or similar regulatory bodies for the products. The products are not approved for the investigational use(s) discussed in this news release, and no conclusions can or should be drawn regarding the safety or effectiveness of the products for these uses. Only the FDA, EMA or similar regulatory bodies can determine whether the products are safe and effective for these uses. Healthcare professionals should refer to and rely upon the approved labeling for the products, and not the information discussed in this news release.

(i) Tannock IF, Wit R, Berry WR, Horti J, Pluzanska A, Chi K, et al. Docetaxel plus prednisone or mitoxantrone plus prednisone for advanced prostate cancer. N Engl J Med 2004;351(15):1502-12.

(ii) Petrylak DP, Tangen CM, Hussain MH, Lara PN, Jones JA, Taplin ME, et al. Docetaxel and estramustine compared with mitoxantrone and

prednisone for advanced refractory prostate cancer. N Engl J Med 2004;351(15):1513-1520.

(iii) Prostate cancer clinical trial end points: "RECIST"ing a step backwards. American Association for Cancer Research website. clincancerres.aacrjournals.org. Accessed on February 16, 2011.

(iv) XGEVA® (denosumab) [prescribing information]. Thousand Oaks, Calif: Amgen; 2010.

(v) Tannock IF, Wit R, Berry WR, Horti J, Pluzanska A, Chi K, et al. Docetaxel plus prednisone or mitoxantrone plus prednisone for advanced prostate cancer. *N Engl J Med.* 2004;351(15):1502-12.

(vi) Petrylak DP, Tangen CM, Hussain MH, Lara PN, Jones JA, Taplin ME, et al. Docetaxel and estramustine compared with mitoxantrone and prednisone for advanced refractory prostate cancer. *N Engl J Med*. 2004;351(15):1513-1520.

(vii) Prostate cancer clinical trial end points: "RECIST"ing a step backwards. American Association for Cancer Research website. clincancerres.aacrjournals.org. Accessed on February 16, 2011.

(viii) Coleman RE. Skeletal complications of malignancy. *Cancer.* 1997; 80(suppl): 1588-1594.

(ix) Lipton A, Theriault RL, Hortobagyi GN. Pamidronate prevents skeletal complications and is effective palliative treatment in women with breast carcinoma and osteolytic bone metastases. *Cancer.* 2000;88:1082-1090.

(x) Saad F, Lipton A, Cook R, Chen YM, Smith M, Coleman R. Pathologic fractures correlated with reduced survival in patients with malignant bone disease. *Cancer*. 2007;110:1860-1867.

(xi) Rosen LS, Gordon D, Tchekmedyian NS, et al. Nonsmall cell lung carcinoma and other solid tumors. *Cancer*. 2004;100:2613-2621.

(xii) Costa L, Badia X, Chow E, Lipton A, Wardley A. Impact of skeletal complications on patients' quality of life, mobility, and functional independence. *Support Care Cancer*. 2008; 16: 879-889.

(xiii) Norgaard M, Jensen AO, Jacobsen JB, Cetin K, Fryzek JP, Sorensen HT. Skeletal related events, bone metastasis and survival of prostate cancer: a population based cohort study in Denmark (1999 to 2007).*J Urol.* 2010; 184:162-167.

(xiv) Johnell O, Kanis JA. An estimate of the worldwide prevalence and disability associated with osteoporotic fractures. *Osteoporos In.t* 2006;17:1726-1733.

(xv) Saad F, Gleason DM, Murray R, et al. A Randomized, Placebo-Controlled Trial of Zoledronic Acid in Patients With Hormone-Refractory MetastaticProstate Carcinoma. *Journal Ntl Cancer Inst.* 2002;19:1458-1468.

CONTACT: Amgen, Thousand Oaks
Christine Regan, 805-447-5476 (U.S. media)
Arvind Sood, 805-447-1060 (investors)

(Logo: http://photos.prnewswire.com/prnh/20081015/AMGENLOGO)

SOURCE Amgen