Denosumab Osteoporosis Study Meets Primary and All Secondary Bone Mineral Density Endpoints in Alendronate (FOSAMAX(R)) Transition Study

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Patients Transitioned from Alendronate to Denosumab Therapy Achieved Superior Gains in Bone Mineral Density Versus Those Continuing on Alendronate Therapy

THOUSAND OAKS, Calif.--(BUSINESS WIRE)--May 19, 2008--Amgen (NASDAQ: AMGN) today announced findings from a head-to-head, double-blind trial comparing the effects of denosumab in post-menopausal women with low bone mass transitioned from weekly alendronate (FOSAMAX(R)) versus continued alendronate therapy on bone mineral density (BMD). The study demonstrated superior results for the primary and all secondary endpoints.

In this one-year, non-pivotal Phase 3 study, the group treated with twice-yearly subcutaneous injections of denosumab achieved significantly greater BMD gains at all sites measured including the total hip (primary endpoint), lumbar spine, femoral neck, distal radius, and hip trochanter compared with the group that continued on alendronate. For the primary endpoint, the relative magnitude of BMD improvement at the total hip was approximately 80 percent greater in the denosumab versus the alendronate group.

The incidence and types of adverse events observed in this study, including neoplasm and infection, were well-balanced between the denosumab and alendronate treatment groups. The most common adverse events across both treatment arms were back pain, arthralgia, and nasal pharyngitis.

"This is the second Phase 3 head-to-head study demonstrating that administration of denosumab resulted in superior BMD gains versus those achieved with alendronate," said Roger M. Perlmutter, M.D., Ph.D., executive vice president of Research and Development at Amgen. "Particularly important was the finding that in this population that had previously been treated with alendronate, patients transitioned to denosumab achieved greater BMD gains than those continuing on alendronate therapy."

Study Design

This was a randomized, double-blind, active controlled, parallel group study. Eligible patients had T-scores of less than or equal to -2.0 and greater than or equal to -4.0 at the lumbar spine or total hip and had previously been treated with alendronate. A total of 504 women with low BMD participated in the study, with approximately 250 patients in each arm.

The study's primary endpoint was to evaluate the effect of denosumab treatment (twice yearly 60 mg) on total hip BMD in women with low bone mass compared to that in patients continuing alendronate therapy (weekly 70 mg) at 12 months. The secondary endpoints included evaluation of the effects of transitioning to denosumab compared to continuing treatment with alendronate on percent change from baseline in BMD at the lumbar spine, hip trochanter, femoral neck, and distal radius.

About Denosumab

Denosumab is the first fully human monoclonal antibody in late stage clinical development that specifically targets RANK Ligand, an essential regulator of osteoclasts (the cells that break down bone). Denosumab is being investigated for its potential to inhibit all stages of osteoclast activity through a targeted mechanism. Denosumab is being studied in a range of bone loss conditions including post-menopausal osteoporosis, rheumatoid arthritis, and cancer treatment-induced bone loss (in breast cancer and prostate cancer patients), as well as for its potential to delay bone metastases and inhibit and treat bone destruction across many stages of cancer.

Osteoporosis: Impact and Prevalence

Often referred to as the "silent epidemic," osteoporosis is a global problem that is increasing in significance as the population of the world both increases and ages. The World Health Organization (WHO) has recently identified osteoporosis as a priority health issue along with other major non-communicable diseases.

Although fractures to the vertebrae and hip are the most commonly discussed osteoporotic fractures, they do not account for the majority of fractures. In fact, fractures at skeletal sites such as the wrist, pelvis, humerus, clavicle, femur, and lower leg (tibia/fibula) make up an estimated 59 percent of all osteoporotic fractures in the United States (U.S.)(i).

The economic burden of osteoporosis is comparable to that of other major chronic diseases; for example, in the U.S. the costs associated with osteoporosis-related fractures are equivalent to those of cardiovascular disease and asthma(ii)(iii)(iv). It has been reported that osteoporosis results in more hospital bed-days than stroke, myocardial infarction or breast cancer(v).

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, 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 May 19, 2008 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 payors, 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 health care cost containment as well as United States (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 related to our product candidates is preliminary and investigative. Such product candidates are not approved by the U.S. Food and Drug Administration (FDA), and no conclusions can or should be drawn regarding the safety or effectiveness of the product candidates. Only the FDA can determine whether the product candidates are safe and effective for the use(s) being investigated. Further, 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 FDA 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 can determine whether the products are safe and effective for these uses. Healthcare professionals should refer to and rely upon the FDA-approved labeling for the products, and not the information discussed in this news release.

FOSAMAX is a registered trademark of Merck & Co., Inc.

(i) Johnell O, Kanis JA. Osteoporosis Int. 2006; 17:1726-1733.

(ii) Burge R, et al. J Bone Miner Res. 2007; 22:465-475

(iii) "Osteoporosis Fast Facts." Washington (DC): National Osteoporosis Foundation. Accessed at http://www.nof.org/osteoporosis/stats.html.

(iv) "Economic Cost of Cardiovascular Diseases." Dallas (TX): American Heart Association. Accessed at http://www.americanheart.org/statistics/10econom.html.

(v) Lippuner K, et al. "Incidence and direct medical costs of hospitalisations due to osteoporotic fractures in switzerland." Osteoporosis International. 1997; 7:414-25.

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