Romosozumab Phase 2 Data Published In New England Journal Of Medicine Show Significant Increases In Bone Mineral Density At Both Spine And Hip

January 1, 2014

THOUSAND OAKS, Calif. and BRUSSELS, Jan. 1, 2014 /PRNewswire/ -- Amgen (NASDAQ:AMGN) and UCB (Euronext Brussels:UCB) today announced results from a Phase 2 trial evaluating romosozumab (AMG 785/CDP7851) in postmenopausal women with low bone mineral density (BMD). Published in the *New England Journal of Medicine* (NEJM), the trial demonstrated that, compared with placebo, romosozumab treatment for 12 months significantly increased BMD at the lumbar spine, total hip and femoral neck. Significant increases were also observed in the first BMD assessment at three months. Moreover, in exploratory analyses, increases observed at the lumbar spine and hip were significantly greater than those observed with current treatments FOSAMAX® (alendronate sodium) and FORTEO ™/FORSTEO® (teriparatide).[1]

"The results of the study demonstrate significantly increased BMD and stimulation of bone formation with romosozumab treatment in women with postmenopausal osteoporosis," said Michael McClung, M.D., director of the Oregon Osteoporosis Center and lead study investigator. "Additionally, romosozumab treatment resulted in greater increases in bone mineral density than those seen with both placebo and the active comparators. These data provide important insight into this medicine being developed for women with postmenopausal osteoporosis at high risk for fractures."

Romosozumab is an investigational medicine in Phase 3 clinical development for the treatment of osteoporosis in postmenopausal women and is not currently approved by any regulatory authority.

In this Phase 2 trial, each of the five romosozumab dose regimens significantly increased BMD compared with pooled placebo groups at the lumbar spine, total hip and femoral neck regions (all $p<0.001$). The largest increases were observed with the romosozumab 210 mg once-monthly dose, with mean increases compared with baseline of 11.3 percent at the lumbar spine, 4.1 percent at the total hip and 3.7 percent at the femoral neck.

Additionally, in exploratory analyses, BMD gains were significantly greater than active comparators at month 12, with romosozumab treatment achieving a mean increase of 11.3 percent at the lumbar spine compared to increases of 4.1 percent and 7.1 percent at the same region achieved with FOSAMAX and FORTEO, respectively. At the total hip, romosozumab treatment increased BMD 4.1 percent, while observed gains with FOSAMAX were 1.9 percent and with FORTEO were 1.3 percent (all $p<0.001$).[1]

The comparators to romosozumab were placebo, oral FOSAMAX (70 mg weekly) and subcutaneous FORTEO (20 µg daily), both of which were open-label.[1]

Adverse events were similar across groups, except for mild, generally non-recurring injection site reactions observed more frequently with romosozumab compared to placebo, but with no observed dose-related relationship. Most common adverse events included mild upper respiratory tract infection, pain in the back and joints, and headache. These reactions did not lead to study drug discontinuation or study withdrawal; the safety of romosozumab will be further addressed in subsequent larger studies.[1]

"There remains a significant need for additional treatment options that form new bone. Romosozumab is designed to stimulate bone formation, which makes it different from most available treatments that reduce bone resorption," said Prof. Dr. Iris Loew-Friedrich, chief medical officer, UCB. "We are encouraged by the emerging efficacy and safety profile, and look forward to further investigating its potential in the ongoing global Phase 3 clinical program."

"Broken bones due to osteoporosis are common and can have a significant impact on the patient, her family and the healthcare system, yet the seriousness of this health event remains underappreciated, with only two-in-10 women receiving follow-up testing or treatment after they have broken a bone," said Sean E. Harper, M.D., executive vice president of Research and Development at Amgen. "With its bone-forming ability, romosozumab may result in new treatment strategies to help manage this disease."

Study Design

The study was a Phase 2, multicenter, international, randomized, placebo-controlled, parallel-group, eight-arm study of 419 postmenopausal women aged 55 to 85 years with BMD T-score $\leq$–2.0 at the lumbar spine, total hip or femoral neck and $\geq$–3.5 at all three sites. Study participants were randomly assigned to receive subcutaneous romosozumab monthly (70, 140, or 210 mg) or every three months (140 or 210 mg), subcutaneous placebo, or oral FOSAMAX (70 mg weekly) or subcutaneous FORTEO (20 µg daily), both of which were open-label.[1]

The primary endpoint was percentage change from baseline in lumbar spine BMD at 12 months. Secondary endpoints included percentage changes in BMD and in bone turnover markers at other sites.[1]

About Osteoporosis

Osteoporosis affects many women after menopause[2,3] as their ability to form new bone cannot counter balance the rate at which bone is being removed. This bone loss leads to weakened bones over time, increasing the potential for a break.[4,5]

About half of all women over age 50 will have an osteoporosis-related fracture in their remaining lifetime.[6] Only 24 percent of women who suffered an osteoporotic fracture received treatment during the following year.[7*]

According to the National Osteoporosis Foundation, those who have sustained a hip fracture are at a four-times greater risk of a second hip fracture.[6]

The World Health Organization has officially declared osteoporosis a public health crisis, while the International Osteoporosis Foundation urges governments worldwide to make osteoporosis a healthcare priority.

About Romosozumab

Romosozumab is an investigational bone-forming agent. By inhibiting the protein sclerostin, romosozumab is designed to increase bone formation and decrease bone breakdown.[8,9,10] Romosozumab is being studied for its potential to reduce fracture risk in an extensive global Phase 3 program. This program includes two pivotal studies evaluating romosozumab against both placebo and active comparator in more than 10,000 patients with osteoporosis. Romosozumab is being co-developed by Amgen and UCB.

About Amgen
Amgen is committed to unlocking the potential of biology for patients suffering from serious illnesses by discovering, developing, manufacturing and delivering innovative human therapeutics. This approach begins by using tools like advanced human genetics to unravel the complexities of disease and understand the fundamentals of human biology.

Amgen focuses on areas of high unmet medical need and leverages its biologics manufacturing expertise to strive for solutions that improve health outcomes and dramatically improve people's lives. A biotechnology pioneer since 1980, Amgen has grown to be the world's largest independent biotechnology company, has reached millions of patients around the world and is developing a pipeline of medicines with breakaway potential.

For more information, visit www.amgen.com and follow us on www.twitter.com/amgen.

Forward-Looking Statements Amgen
This news release contains forward-looking statements that are based on Amgen'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 any subsequent 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 Amgen's business. Unless otherwise noted, Amgen is providing this information as of Jan. 1, 2014, 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 Amgen projects. 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 Amgen to complete clinical trials and obtain regulatory approval for product marketing has in the past varied and Amgen expects similar variability in the future. Amgen develops 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 Amgen may have believed at the time of entering into such relationship. Also, Amgen or others could identify safety, side effects or manufacturing problems with Amgen's products after they are on the market. Amgen's business may be impacted by government investigations, litigation and product liability claims. If we fail to meet the compliance obligations in the corporate integrity agreement between us and the U.S. government, we could become subject to significant sanctions. Amgen depends on third parties for a significant portion of its manufacturing capacity for the supply of certain of its current and future products and limits on supply may constrain sales of certain of its current products and product candidate development.

In addition, sales of Amgen's 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 Amgen's products. In addition, Amgen competes with other companies with respect to some of its marketed products as well as for the discovery and development of new products. Amgen believes that some of its newer products, product candidates or new indications for existing products, may face competition when and as they are approved and marketed. Amgen's products may compete against products that have lower prices, established reimbursement, superior performance, are easier to administer, or that are otherwise competitive with its products. In addition, while Amgen routinely obtains patents for its products and technology, the protection offered by its patents and patent applications may be challenged, invalidated or circumvented by its competitors and there can be no guarantee of Amgen's ability to obtain or maintain patent protection for its products or product candidates. Amgen cannot guarantee that it will be able to produce commercially successful products or maintain the commercial success of its existing products. Amgen's stock price may be affected by actual or perceived market opportunity, competitive position, and success or failure of its products or product candidates. Further, the discovery of significant problems with a product similar to one of Amgen's products that implicate an entire class of products could have a material adverse effect on sales of the affected products and on Amgen's business and results of operations.

The scientific information discussed in this news release related to Amgen's 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.

About UCB
UCB, Brussels, Belgium (www.ucb.com) is a global biopharmaceutical company focused on the discovery and development of innovative medicines and solutions to transform the lives of people living with severe diseases of the immune system or of the central nervous system. With 9,000 people in approximately 40 countries, the company generated revenue of EUR 3.4 billion in 2012. UCB is listed on Euronext Brussels (symbol: UCB).

Forward-Looking Statements UCB
This press release contains forward-looking statements based on current plans, estimates and beliefs of management. 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 information, expected legal, political, regulatory or clinical results and other such estimates and results. By their nature, such forward-looking statements are not guarantees of future performance and are subject to risks, uncertainties and assumptions which could cause actual results to differ materially from those that may be implied by such forward-looking statements contained in this press release. Important factors that could result in such differences include: changes in general economic, business and competitive conditions, the inability to

obtain necessary regulatory approvals or to obtain them on acceptable terms, costs associated with research and development, changes in the prospects for products in the pipeline or under development by UCB, effects of future judicial decisions or governmental investigations, product liability claims, challenges to patent protection for products or product candidates, changes in laws or regulations, exchange rate fluctuations, changes or uncertainties in tax laws or the administration of such laws and hiring and retention of its employees. UCB is providing this information as of the date of this press release and expressly disclaims any duty to update any information contained in this press release, either to confirm the actual results or to report a change in its expectations. There is no guarantee that new product candidates in the pipeline will progress to product approval or that new indications for existing products will be developed and approved. Products or potential products which are the subject of partnerships, joint ventures or licensing collaborations may be subject to differences between the partners. Also, UCB or others could discover safety, side effects or manufacturing problems with its products after they are marketed. Moreover, sales may be impacted by international and domestic trends toward managed care and health care cost containment and the reimbursement policies imposed by third-party payers as well as legislation affecting biopharmaceutical pricing and reimbursement.

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**Fracture sites: hip, vertebrae or wrist. Data are drawn from a retrospective database study from seven health maintenance organizations.*

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