

DIRECTOR'S NOTES

On April 9, 2003 the Center for Metabolic Bone Disease (CMBD), along with the UAB School of Engineering and the Cell Adhesion and Matrix Research Center, co-hosted a scientific symposium entitled *Research Frontiers: The Interface Between Biomaterials, Bone Cells and Matrices*. Its focus on the interface between biomaterials, bone and matrix is the subject of a new research program that will occupy two floors in the new Shelby Interdisciplinary Biomedical Research Building to be opened in 2005. Approximately 120 people attended this symposium.

Upcoming CMBD Speakers: **Bob Marcus, M.D.**, Eli Lilly and Company, is scheduled for Friday, May 30, 2003 and **David W. Rowe, M.D.**, University of Connecticut Health Center will speak on Thursday, June 12, 2003.

The CMBD NIH Institutional Training Grant has one postdoctoral fellow slot open. This slot can be filled by either a basic or clinical research fellow. Please contact me if you have an applicant.

Below is a summary of a new treatment option for Osteoporosis patients provided by Dr. Sarah Morgan and Ms. Elizabeth Kitchin.

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Another Treatment Option For Osteoporosis: Parathyroid Hormone Injections

A new treatment option is now available for osteoporosis patients. The FDA recently approved Forteo[®] - a synthetic form of parathyroid hormone (PTH). Forteo, which must be administered subcutaneously daily, is the first anabolic agent shown to build bone mass and prevent fractures. Until now, all available osteoporosis medications have been antiresorptive agents. Hormone replacement therapy, raloxifene, alendronate, risedronate, and salmon calcitonin all result in varying increases in bone mineral density (BMD) by slowing osteoclast activity.

The FDA's approval of Forteo was based on 24 clinical trials that enrolled more than 2,800 men and postmenopausal women with osteoporosis. In the phase III clinical trial data, Forteo reduced the relative risk of vertebral fractures by 65% and the absolute risk of vertebral fractures by 9.3% when compared to placebo. The relative risk of non-vertebral fractures was reduced by 53% (2.9% absolute risk reduction). The data also showed that Forteo significantly increased spinal BMD, with 96% of the female subjects increasing from baseline; 72% achieved at least a 5% increase in BMD while 44% gained greater than 10% compared with placebo. Side effects were uncommon and minor, the most common being headache, nausea, dizziness, and leg cramps.

Patients who may be considered for therapy based on physician assessment include:

- Having a history of osteoporotic fracture
- Having multiple risk factors for fracture
- Have failed previous osteoporosis therapy
- Are intolerant to previous osteoporosis therapy

Forteo is provided in a "dial up" pen device that contains 28 days of once daily injections that cost \$20/day (> \$7,000/year). Lilly has a patient assistance program to help patients with expenses. Forteo has a warning that must be discussed with all patients. Forteo was shown to increase the risk of osteosarcoma in rats. In further studies with primates and humans, no increases in the risk of osteosarcoma were found; however, it is not indicated in individuals with a high risk for osteosarcoma.

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