THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

CMBD

CENTER FOR METABOLIC BONE DISEASE

DIRECTOR'S NOTES

Please join us for the First Annual Scientific Symposium sponsored by the Center for Metabolic Bone Disease (CMBD) Wednesday, May 19, 1999, 8:00 a.m.- 1:00 p.m., at the UAB Center for Psychiatric Medicine Conference Room, CPM 2nd Floor. I am pleased to announce that the following nationally known scientists, who are also members of the CMBD External Advisory Committee, will be joining us to give presentations relating to metabolic bone disease: Dr. Charles H. Chesnut, University of Washington Medical Center; Dr. Carol V. Gay, Pennsylvania State University; Dr. Gerard Karsenty, Baylor College of Medicine; and Dr. Roberto Pacifici, Washington University. Dr. Joan A. McGowan, Chief, Musculoskeletal Disease Branch, NIH, will also give a presentation. In addition, UAB researchers Drs. Xu Cao, Department of Pathology, and Alan W. Eberhardt, Department of Mechanical Engineering, will be presenting overviews of their on-going CMBD-funded pilot studies. Also, I will begin the Symposium with the "State of the Center" address. I look forward to seeing you at the May 19th CMBD Annual Scientific Symposium. Additional information will be forthcoming.

I am pleased to announce that the CMBD will host a monthly multidisciplinary **journal club** entitled :Bone and Cartilage: Biology and Disease". Dr. Ken Saag is leading this important effort and plans to focus on two topical journal views each month: one clinical and the other basic. These meetings will take place in the West Pavilion Conference Center on the first Thursday of each month from 4:30-5:30 p.m. beginning on ***February 4, 1999***. Pizza and soft drinks will be provided.

One of the more exciting and productive interactions the CMBD has with other UAB centers and programs is with the Biomedical Implant Center that is under the direction of Linda C. Lucas, Ph.D. Below is a synopsis of this Center.

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BIOMEDICAL IMPLANT CENTER

The University of Alabama Board of Trustees approved the Biomedical Implant Center (BIC) in 1995. The Center has established the following goals:

· **Research Goal:** Establish nationally and internationally recognized faculty and facilities to investigate the underlying biochemical, biomechanical and cellular responses elicited by the surgical implantation of a prosthesis or other material in the human body.

· **Technology Transfer Goal:** Transfer

Dale Feldman and Alan Eberhardt are developing regenerative scaffolds and modified bone cements for the treatment of osteoporosis. Evaluation of these new biomaterials in animal models has begun. Histomorphometric analyses and mechanical testing are being used to quantify structural alteration in the trabecular bone of weight bearing joints. Finite element models are being developed and validated against experimental measures for future use in assessing necessary mechanical properties of bone augmentation materials.

In 1997, the BIC received funding from the National

research innovation into national and global marketplaces and bring into being a vibrant medical device industry in the State of Alabama.

· **Education Goal:** Provide unique and effective education and training experiences for students who seek future employment within the medical device industry and academia.

Today, the BIC has approximately 60 faculty members from UAB and other colleges and universities in the State of Alabama (University of Alabama in Huntsville, Auburn University, University of South Alabama, Alabama A&M University, and Samford University).

Students and faculty in the BIC are currently working on several projects that directly relate to the interests of faculty in the CMBD. For example, Drs. Jack Lemons,

Science Foundation for the continued development of the BIC and to expand BIC operations to other universities within the state. With support from the NSF and the State of Alabama EPSCoR Steering Committee, nine pilot grants have been funded.

Last summer, the BIC submitted a grant to the Whitaker Foundation for the development of educational and training programs for students interested in biomedical implants and devices. This grant was approved for funding beginning September 1, 1999. Three new faculty positions will be created and approximately $1 million will be available for BIC activities over the next three years.

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