



DIRECTOR'S NOTES

The annual meeting of the American Society for Bone and Mineral Research was held in Cincinnati, Ohio on September 10-11, 1997. There is considerable interest in metabolic bone disease nationally with 1,690 scientific abstracts being presented. Investigators at UAB presented seven posters and/or seminars. The National Osteoporosis Foundation gave a preview of their soon to be published guidelines for the diagnosis and treatment of osteoporosis. The National Osteoporosis Foundation took an evidenced-based approach to developing guidelines. The preliminary overview appears that they are rather restrictive in terms of the categories of patients being treated. When the guidelines become available, I shall make them available to all CMBD members.

The Osteoporosis Treatment and Prevention Clinic continues to attract patients. In 1997, 491 patients were seen and a total of 1,315 DEXA scans were performed. This year we project an increase to 556 patients and 1,601 DEXA scans.

Drs. Jack Lemons, John Cuckler and their team of multidisciplinary investigators have obtained an HSF/GEF grant entitled "Core and Infrastructure for Multidisciplinary Analyses of Surgical Implants." This program represents an important multidisciplinary interface between biomaterials, biology and implant survival. Dr. Jack Lemons describes below the focus and efforts of THIS outstanding research group.

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SURGICAL IMPLANT ANALYSIS CORE FACILITY

A Multidisciplinary core research activity for the evaluation of explanted surgical implant devices is being established with the support of a two-year Health Services Foundation-General Education Fund grant. This expanded facility will help serve local, regional and national needs in this area.

The overall plans are to: 1) expand collaborations within UAB to further the investigative protocols; 2) interact with those interested in devices used for reconstructive surgery within a broader context; 3) provide new opportunities for education, research and service support related to the physical properties and characteristics of surgical implants; and 4) enhance educational interactions by offering core facilities' support within this area of study.

Although the implant research program has operated regularly, for more than 20 years, recent interest and recognition of the value(s) of physical science studies of explanted prostheses has altered this program to a significantly increased level of study. We have analyzed 4000 devices and the current accrual has increased to more than 300 new specimens per year. For the most part, orthopaedic and dental implant devices have been received, investigated and stored for ongoing research. One value of this inventory of stored prostheses is that many questions about longer-term clinical outcomes can be independently evaluated through sampling and testing of the devices and materials previously used for reconstructive surgery. The core laboratory facilities will be

utilized to expand research activities and seeks interaction with clinical investigators throughout the region.

Detailed protocols are available for the handling and transferring of explanted devices and associated tissues to the core laboratory facilities. Most devices are placed in 10% buffered formalin in a strong sealable container. After receipt, each device is examined using a stereomicroscope video imaging system by faculty investigators, residents and graduate students participating in the reviews. Investigative protocols are established as a consensus opinion and any follow-up studies are conducted as indicated to answer questions raised from biological and physical science viewpoints. All records are maintained as confidential related to patient and clinician. We report all results and opinions about the physical properties of the devices to the provider. When adequate results are accumulated, the overall study information is published within professional journals.

If questions or areas of interest exist, please call or join our monthly "explant analysis" meeting (Kathy Franklin at 4-9208, Preston Beck at 4-4415 or Jack Lemons at 4-9206). The principal investigator is J. Lemons at 4-9206). The principal investigator is J. Lemons and co-investigators include, J. Cuckler, M.D., Orthopaedic Surgery, W. Bernreuter, M.D., Radiology, W.Lacefield, Ph.D., Dental Biomaterials, L. Lucas, Ph.D., Biomedical Engineering, G.Segal, M.D. Ph.D., Pathology.

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