

DIRECTOR'S NOTES

On January 31, 2002, the UAB Center for Metabolic Bone Disease (CMBD) and the Center for AIDS Research, will co-host a winter symposium entitled "Metabolic Complications Associated with HAART". Topics for discussion will include insulin resistance, lipodystrophy, fatty acid metabolism, metabolic bone disorders, and the role of mitochondrial dysfunction. More detailed information will be forthcoming in the near future.

The CMBD will host a scientific symposium focused on bone biology and disease on Wednesday, April 10, 2002, followed by an external review of the Center. Details of the symposium will appear in the January 2002 CMBD Newsletter.

Partial funding is being provided by the CMBD for the Small Animal Phenotyping Core directed by Timothy R. Nagy, Ph.D., Associate Professor, Department of Nutrition Sciences. For detailed information about this core, please contact Dr. Nagy at 205-934-4088 or email him at tnagy@uab.edu.

Since its inception, the CMBD membership has grown to include 83 members in 8 schools and 25 departments and continues to accept new members who can contribute to achievement of the CMBD mission. For membership information, please contact me at the address below.

Included in the recently funded NIH/NIAMS "UAB Core Center for Musculoskeletal Disorders" are two important scientific cores: 1) Human Bone Cell Production Core, P.I.: Xu Cao, Ph.D. and 2) Histomorphometry and Molecular Analyses Core, P.I.: Gene P. Siegal, M.D., Ph.D. Below are synopses of these cores.

Jay M. McDonald, M.D., Director, Center for Metabolic Bone Disease

Email: CMBD@path.uab.edu; *Office:* 205-934-6666; *Website:* <http://cmbd.path.uab.edu>

Human Bone Cell Production Core (HBCPC)

The HBCPC is designed to assist investigators at UAB who want to initiate programs using human bone cells and bone cell precursors. The HBCPC is currently funded through an NIH Metabolic Bone Research Core Center Grant. As its first focus of activity, the HBCPC provides human osteoblast stem cells and mouse osteoclasts.

Both human primary osteoblast and mouse osteoclast precursors are available to UAB investigators who are interested in bone-related research. Osteoblast precursors have potential to differentiate into many different lineages, such as osteoblast, chondrocytes, adipocytes. The primary osteoclast precursors are capable of differentiating into osteoclasts *in vitro* under osteoclastogenic condition, serving as a useful tool to investigate osteoclast differentiation. Furthermore, *in vitro* generated osteoclasts are available for investigators who are interested in studying mature osteoclast function.

We believe this is a unique facility and encourage investigators to contact us at the address listed below to discuss potential research applications and uses of the Core Facility expertise.

Xu Cao, PhD, Associate Professor, Dept. of Pathology
Email: cao@path.uab.edu; Office: 205-934-0162

Histomorphometry and Molecular Analyses Core (HMAC)

The HMAC provides investigators access to routine and advanced technical preparations for analysis of bone preparations that are too complex for individual projects to support efficiently. Light microscopy on frozen, paraffin, ground and plastic embedded bone sections, state-of-the-art histomorphometry, epifluorescent microscopy of undecalcified sections and histochemical analysis along with expert interpretation are provided. Investigators have access to sophisticated techniques such as electron microscopy and image analysis of bone.

Other services available include special stains, immunohistochemistry and flow cytometry. Through arrangements with other Cores, CMBD investigators have access to technologically advanced expert assistance in molecular techniques including the capacity to detect and quantitate vector sequences and specific endogenous gene products within bone, as well as provide access to quantitative RT-PCR, tissue *in-situ* hybridization, and laser capture microdissection for molecular analysis of bone cells.

Gene Siegal, MD, PhD, Professor, Dept. of Pathology
Email: siegal@path.uab.edu; Office: 205-934-6608