

2000 - 2001
SUMMARY OF SCHOLARLY ACTIVITIES
DEPARTMENT OF COMPARATIVE MEDICINE

I. ARTICLES PUBLISHED IN BOOKS AND JOURNALS

A. Full length published articles.

W.B. Denny, D.L. Valentine, P.D. Reynolds, D.F. Smith, and J.G. Scammell. Squirrel Monkey Immunophilin FKBP51 Is a Potent Inhibitor of Glucocorticoid Receptor Binding. *Endocrinology* 141:4107-4113 (2000).

J.C. Liu, K.D. Makova, R.M. Adkins, S. Gibson, and W.H. Li. Episodic Evolution of Growth Hormone in Primates and Emergence of the Species Specificity of Human Growth Hormone Receptor. *Mol. Biol. Evol.* 18(6):945-953 (2001).

J.G. Scammell, J.L. Wright, and C.M. Tuck-Muller. The Origin of Four Squirrel Monkey Cell Lines Established by Karyotype Analysis. *Cytogenet. Cell Genet.* 93:263-264 (2001).

R.R. Yeoman, F.H. Wegner, S.V. Gibson, L.E. Williams, D.H. Abbot, and C.R. Abee. Midcycle and Luteal Elevations of Follicle Stimulating Hormone in Squirrel Monkeys (*Saimiri boliviensis*) During the Estrous Cycle. *Am. J. Primatol.* 52(4):207-11 (2000).

B. Articles in press.

B.J. Bernacky, S.V. Gibson, M.E. Keeling, and C.R. Abee. Nonhuman Primates. IN: J.G. Fox and L. Anderson (Eds.) Laboratory Animal Medicine, Academic Press, San Diego, CA (2001).

J.G. Scammell, W.B. Denny, D.L. Valentine, and D.F. Smith. Overexpression of the FK506-Binding Immunophilin FKBP51 Is the Common Cause of Glucocorticoid Resistance in Three New World Primates. *Gen. Comp. Endocrinol.* (2001).

II. PUBLISHED ABSTRACTS

A.G. Brady, J.W., Watford, C.V. Massey, S.V. Gibson, and C.R. Abee. Aged Squirrel Monkeys and Heart Failure: An Echocardiograph Survey. *Contemp. Top. Lab. Anim. Sci.* 39:(4):59 (2000).

III. BOOKS PUBLISHED

None.

IV. PRESENTATIONS

C.R. Abee. Using Natural Biology of the Squirrel Monkey to Address Human Health Problems. Tulane Medical School, New Orleans, LA (2000).

C.R. Abee. Introduction, Workshop Goals, and History of the Squirrel Monkey Breeding and Research Resource. Malaria Vaccine Resource Workshop: Field Studies of the Bolivian Squirrel Monkey, Mobile, AL (2001).

C.R. Abee. A History of the Squirrel Monkey Breeding Project and Research Resource at the University of South Alabama. Squirrel Monkey Field Study Workshop, Cochabamba, Bolivia (2001).

A.G. Brady. Aged Squirrel Monkeys and Heart Failure: An Echocardiograph Survey. AALAS, San Diego, and Stanford University, Palo Alto, CA (2000).

L.E. Williams. Primate Records System at the Squirrel Monkey Breeding and Research Resource. Colony Records Analysis Workshop, San Antonio, TX (2001).

L.E. Williams. Squirrel Monkey Captive Reproduction. Squirrel Monkey Field Studies Workshop, Mobile, AL (2001).

L.E. Williams. Captive Squirrel Monkey Demographics and Implications for Aging. Am. Aging Assoc., Madison, WI (2001).

L.E. Williams. Primate Records System and Genetic Management. NCRR Directors Meeting, Bar Harbor, ME (2001).

L.E. Williams. Captive Squirrel Monkey Demographics and Database Records System. Squirrel Monkey Field Study Workshop, Cochabamba, Bolivia (2001).

V. NATIONAL PROFESSIONAL RECOGNITION

Christian R. Abee, D.V.M., Chair of the Department, became The Charles M. Baugh Professor of Comparative Medicine (March 30, 2000); he is also a member of the Council on Accreditation of the Association for Assessment and Accreditation of Laboratory Animal Care International, 2000-2003; member, Comparative Medicine Group of the Association of American Veterinary Medical Colleges; and served as Special Guest Editor of the National Research Council's ILAR Journal, Volume 41, 2000.

Alan G. Brady, D.V.M., Associate Professor, is a member of the Board of Directors, American College of Laboratory Animal Medicine Foundation, and head of grant reviews for the ACLAM Foundation; a member of the Board of Directors, Alabama Association for Biomedical Research, 1992-present; secretary, Association of Primate Veterinarians; member of the Board of Directors, and editor of the APV Newsletter, 1997-present; and a consultant on animal care to the U.S. Air Force, Keesler Air Force Base, MS, 2001-present.

Susan V. Gibson, D.V.M., Associate Professor, is chair of the Committee on Continuing Education, American College of Laboratory Animal Medicine, 1999-2002.

Lawrence E. Williams, Ph.D., Associate Professor, is a member of the Membership and Finance Committee and the Education Committee, American Society of Primatologists, 1994-2001.

VI. BRIEF SUMMARY OF DEPARTMENT ACTIVITIES AND PROGRESS

The Department of Comparative Medicine is one of the six basic medical science departments of the College of Medicine. In addition to research and educational responsibilities, the department provides professional and technical support for all animal research laboratory facilities and for the administration of the laboratory animal care and use program for the University. Comparative Medicine occupies approximately 47,000 square feet divided between two geographically separate sites. Renovation of existing facilities within the Medical Sciences Building Biologic Research Laboratory was completed in 1996 and has increased the overall size of this facility to approximately 35,000 square feet. The Primate Research Laboratory occupies 12,000 square feet. The department is composed of five core units. These are the laboratory animal medicine core, the animal diagnostic laboratory core, the biological resource core, the computer operations/database core, and the administrative core.

The department's Primate Research Laboratory maintains a large breeding and research colony of Bolivian squirrel monkeys (*Saimiri boliviensis*). Departmental research efforts are primarily in two areas. Studies of the reproductive biology of the squirrel monkey have been carried out as a multi-disciplinary program, including investigators from the Departments of Pharmacology and Comparative Medicine. A second area of

investigation is focused on development of medical and husbandry management strategies to optimize squirrel monkey reproduction in captivity. This is a major program for the department, which has resulted in the development of one of the largest neotropical primate breeding colonies in the United States.

The department is carrying out a major research program aimed at improving our understanding of blood product safety. With the emergence of a new variant of Creutzfeldt-Jakob Disease (vCJD) associated with Bovine Spongiform Encephalopathy in Europe, considerable concern has been raised regarding the safety of human blood products. This research program is investigating the transmissibility of CJD and vCJD from blood and tissues obtained from patients suffering from these diseases.

In 2001, a large colony of owl monkeys (*Aotus* spp.) was acquired. This colony is supported by the National Institute of Allergy and Infectious Disease for the production of owl monkeys for malarial research and for research into the basic biology, reproduction, and diseases of the owl monkey. Our previous experience with this primate revealed a high occurrence of heart disease, concentric left ventricular hypertrophy, dissecting aortic aneurysms, and congestive heart failure consistent with hypertension. Investigations to document hypertension and progression of heart disease will be a focus of departmental research with emphasis on model development. With the addition of this colony, the department has the largest breeding center for neotropical primates in the United States.

The department is committed to meeting the needs of the complex biomedical research program within the College of Medicine and providing an environment conducive to departmental and interdepartmental research. Comparative Medicine is composed of four full-time, one joint, and three adjunct faculty members. Dr. Jonathan Scammell, Professor, has a primary appointment in the Department of Pharmacology with a joint appointment in the Department of Comparative Medicine. Dr. Marcelo G. Horenstein, Assistant Professor, has a primary appointment in the Department of Pathology with a joint appointment (April 2001) in the Department of Comparative Medicine. Dr. Dan H. Lochner, Adjunct Assistant Professor, served on a part-time basis in the departmental pathology laboratory through March 2001. Dr. Julio Ruiz, Director of the Argentine Primate Center (CAPRIM), serves as Adjunct Associate Professor. Full time faculty in the Department of Comparative Medicine include one professor and three associate professors. In addition, there are 27 administrative, technical, and research staff.