



The Michale E. Keeling Center for Comparative Medicine and Research Department of Veterinary Sciences

2006-2007 FACTS

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ABOUT THE KEELING CENTER: The University of Texas M. D. Anderson Cancer Center established the Veterinary Sciences Division of the Science Park in 1975 to provide a wide range of veterinary services and specialized animal species for biomedical research, and to conduct research at numerous Texas institutions. Located on about 381 acres near Bastrop, Texas, it is one of two M. D. Anderson research facilities in Central Texas. The other facility, Science Park-Research Division (SPRD), is located in Smithville. In 2004, the M. D. Anderson Department of Veterinary Sciences in Bastrop was renamed the Michale E. Keeling Center for Comparative Medicine and Research, in honor of the late Dr. Michale E. Keeling, who served as the director of the Center from 1975 until 2003. There are more than 100 employees at the Keeling Center, including veterinarians, animal caretakers, basic scientists, research technicians and administrative staff. The facility offers training opportunities for undergraduate, graduate and veterinary medical students from several universities, including The University of Texas M. D. Anderson Cancer Center, The University of Texas at Austin and Texas A&M University. At the Keeling Center, there are active research programs in cancer, hepatitis, HIV, diabetes, hypertension, obesity, vaccine development, cellular immunology, aging and behavior. Research at the Keeling Center has led to the development of synthetic peptide vaccines for AIDS and human papilloma virus, the precursor to cervical cancer, and techniques to prefabricate molded bone to replace cancerous bone. Several cancer pain medications have been safety tested, as well as two drugs which have been approved for clinical trials. Researchers have also conducted studies on chemoprevention of ovarian cancer as well as early detection of the disease. Other studies conducted by research faculty in Bastrop contribute to enhanced health and welfare of laboratory animals.

LOCAL GEOGRAPHY: Bastrop is located between Austin and Houston. It is approximately 32 miles (45 minutes) from Austin, 135 miles (2.5 hours) from Houston and 13 miles from Smithville. The M. D. Anderson Cancer Center Science Park-Research Division (SPRD) is located in Smithville, and is a short drive from the Keeling Center.

FACULTY: The Keeling Center has made an intensive effort to enhance their basic research program in recent years. Further improvements and enrichments of the program are planned in the near future, including the addition of new laboratory facilities and the recruitment of additional faculty.

Basic research faculty:

Gary Johannung, Ph.D.: Nutrition and cancer; animal models of postnatal nutrition and obesity; folic acid and resistance to chemotherapy. Regular Member, Graduate School of Biomedical Sciences (GSBS).

Feng Wang-Johanning, M.D., Ph.D.: Human endogenous retrovirus expression in cancer; tumor-associated antigens, cancer vaccines, human papillomavirus expression in cervical cancer. Regular Member, GSBS.

Kirstin Barnhart, D.V.M., Ph.D.: Animal models of human disease; cancer biology; screening chimpanzee blood samples to identify cancer-related proteins; organotypic keratinocyte culture; comparative pathology; dermatopathology; cytopathology. Associate member, GSBS.

Pramod Nehete, Ph.D.: Immunologic parameters that correlate with the progression of diseases, particularly cancer and infectious diseases; immunogenic potential of synthetic peptides corresponding to proteins encoded by HIV. Associate member, GSBS.

Research and service:

Christian Abee, D.V.M., Wallace Baze, D.V.M., Ph.D., Bruce Bernacky, D.V.M., Stephanie Buchl, D.V.M., Mark McArthur, D.V.M., William Satterfield, D.V.M., Steven Schapiro, Ph.D.

HOUSING:

The Lodge at Lost Pines, 3950 Hwy 71 East, Bastrop, TX 78602, Phone: 512-321-5320 Apartments range from 688 square ft. for a 1/1 to 917 square ft. for a 2/2. The rental rates start at \$637.00.

The Arbors of Bastrop, 202 Childers Drive, Bastrop, TX 78602, Phone: 512-308-0408. Apartment sizes range from 542 square feet for a 1/1 to 1008 square feet for a 2/2. The rental rate start from \$535

There are many additional apartments for rent, and houses for rent and purchase in the Bastrop area. The on-site advisor at the Keeling Center will assist students in identifying housing that fits their budget.



SEMINARS, COURSES AND OTHER EDUCATIONAL OPPORTUNITIES:

The Keeling Center has funds available to invite outside speakers to present seminars at the Keeling Center. In addition, the SPRD in Smithville sponsors the Mike Hogg Distinguished Lecture Series, which includes lectures from leaders in the field of cancer research. All M. D. Anderson Cancer Center seminars that originate from facilities in Houston and Smithville that have videoconference capabilities are available to students in Bastrop.

Seminars available from departments and programs at UT Austin include:

1. Biochemistry (<http://www.cm.utexas.edu/seminars/>)
2. Molecular Genetics and Microbiology (<http://www.biosci.utexas.edu/MGM/events/seminars/default.htm>)
3. Molecular Cell and Developmental Biology (<http://www.biosci.utexas.edu/calendar/viewMonthList.asp?calendarID=29>)
4. The Institute for Cellular and Molecular Biology (<http://www.icmb.utexas.edu/calendar/viewMonthList.asp?calendarID=16>).

Didactic courses taught on the Smithville campus include:

GS040083, Basic Concepts of Tumor Biology (Richie, Ellen. 3 sem. hrs. Fall, even-numbered years)
GS040113, Mechanisms of Carcinogenesis (Richie, Ellen. 3 sem. hrs. Spring, odd-numbered years)
GS120134, Introduction to Histology (Conti, Claudio. 4 sem. hrs. Fall, odd-numbered years)
GS120144, Introduction to Pathology (Gimenez-Conti, Irma. 4 sem. hrs. Spring, even-numbered years).

A training session in the course GS210032, Use of Experimental Animals in Biomedical Research (Sastry, Jagannadha. 2 sem. hrs. Fall, annually) is held on the Bastrop campus. Courses available on the Austin campus to Bastrop students include Bio595C, Molecular Biology I; Bio595D, Molecular Biology II; and Mol395C, Molecular Biology II. Advanced elective courses that are required, based on recommendations by the mentor and Advisory Committee, may be taken on the UT-Austin campus or by videoconference from GSBS instructors in Houston or Smithville. M. D. Anderson Cancer Center courses that originate from facilities in Houston and Smithville that have videoconference capabilities are available to students in Bastrop.

Faculty members at the Keeling Center who are members of the GSBS serve as Advisors and Advisory Committee members for GSBS students at Bastrop. Advisors in Bastrop participate in courses relevant to graduate student training, including Tutorial Research Experience (GS000514), Research in Biomedical Sciences (GS000520), Literature Survey (GS000620), Special Project: Research (GS000530), Thesis for Master of Science (GS000910), and Dissertation for Doctor of Philosophy (GS000920).

The Keeling Center is committed to providing resources to meet the needs of graduate students to perform research tutorial rotations here. A shuttle service to Smithville and Austin will be available to graduate students in Bastrop for classroom instruction, tutorials, seminars, conferences, journal clubs, student government and school-sponsored social events for students. The shuttle service will also be available for formal and informal interactions with faculty and other students, such as meetings to discuss research projects.

The faculty and staff will support students in Bastrop who choose to do rotations at other GSBS Departments in Houston, or other locations that are not within a daily driving distance of Bastrop. Students may have to pay rent at two sites while doing these tutorials. To ease this financial burden, the on-site advisor at Bastrop, in collaboration with the GSBS and MDACC, will help the students identify appropriate short-term housing for their rotation outside of the Bastrop area. Many Smithville students and fellows live in Bastrop, which indicates that Keeling Center students living in Bastrop can easily complete a rotation at the Science Park-Research Division in Smithville.

Our New Home **Basic Research and Education** **Building** **To be completed in 2007**



FACILITIES AT THE KEELING CENTER:

Laboratory: The research facilities at the Keeling Center are excellent, and include two research laboratories, with one additional new large modular laboratory planned to open in 2007. The laboratories are equipped with state-of-the-art equipment for the performance of cutting-edge research. A number of shared resources and services are also available at the Science Park Research Division at Smithville.

Information technology infrastructure and capabilities: The Keeling Center provides broadband access to the internet through the institutional network. This institutional broadband access also enables participation in video conferences and streaming video. High-speed broadband cable internet access (Road Runner and Earthlink) and satellite broadband internet access (Earthlink and HughesNet) services are available to apartments and homes in the Bastrop area.

Library/reading room: The library and reading room consists of 1,008 bound journal volumes, 1,355 unbound journal issues, 4 current journal subscriptions and 735 library books. The library has a dedicated computer with access to the online books and journals available at the main campus of M. D. Anderson in Houston. Students also have access (after free registration), to the online journal collection at the Houston Academy of Medicine - Texas Medical Center (HAM-TMC) Library.

In addition to the library at the Keeling Center, the SPRD at Smithville has a large assortment of journals. A list of these journals, which are physically available in the SPRD library, is available at the following website: <http://sciencepark.mdanderson.org/library/Journal-list.html>. All students at the Keeling Center have access to the volumes in the SPRD library. The link to the SPRD library is the following: <http://sciencepark.mdanderson.org/library/library.html>. This website also provides a comprehensive list of online books and journals available from the M. D. Anderson Cancer Center Research Medical Library.



LIFESTYLE: Bastrop, Texas was probably named Bastrop by Stephen F. Austin in honor of the Baron de Bastrop, a longtime friend. Bastrop has rich heritage, pines, prairies, and a beautiful river valley. Gift and antique stores adorn Main Street. Nestled on the banks of the Colorado River, the historic district is filled with a variety of shops and restaurants, and nearby neighborhoods contain over 130 historical sites. The number of buildings listed in the National Register of Historic Places recently earned Bastrop the title "Most Historic Small Town in Texas."

Chestnut Square is the new family entertainment center with movie theatres, bowling, pool tables and miniature golf. Local parks add to family fun with a walking trail from Fisherman's Park to the other end

of downtown Bastrop. Bed and breakfast inns, along with hotels and motels provide visitor accommodations. There are three 18-hole golf courses within just a few miles of downtown Bastrop, and one of the oldest opera houses in Texas. Bastrop County has two state parks, both within short driving distance from Bastrop.

Bastrop is a growing community with plentiful shopping and many local establishments with lots of color and character. Eating out is easy with lots of choices. There are rodeos and festivals, art shows and golf tournaments, football and soccer games.

Sources: Bastrop Chamber of Commerce, The Handbook of Texas Online and www.bastrop texas.com. The link to the Bastrop Chamber of Commerce is: <http://www.bastropchamber.com/visitor/index.asp>.

OTHER ADVANTAGES: Bastrop offers a country lifestyle without the hustle and bustle of a large city. It is a short drive from Bastrop to Austin, and the drive to Houston is only about 2-3 hours, so the cultural and entertainment amenities in these cities are readily available to residents of Bastrop. In fact, many personnel from the Keeling Center live in Austin. There are numerous exciting new developments in this area, including the Hyatt Regency Lost Pines Resort and Spa, located adjacent to the McKinney Roughs Nature Park just west of Bastrop. The Keeling Center campus is located in a rural setting with the nearby presence of primates that include chimpanzees, rhesus monkeys, owl monkeys, squirrel monkeys, sheep and rodents. Everyone at the Keeling Center knows each other, and there is a very collegial and friendly atmosphere on the campus.