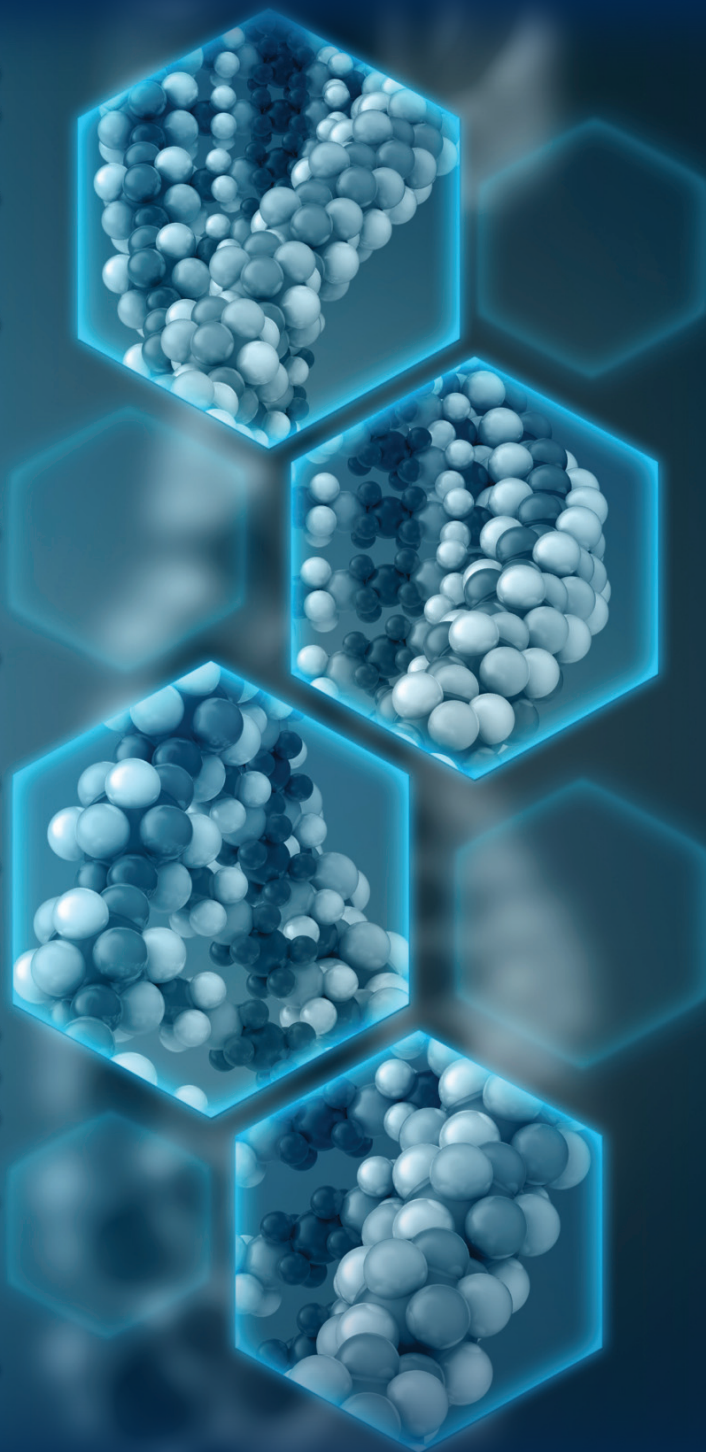
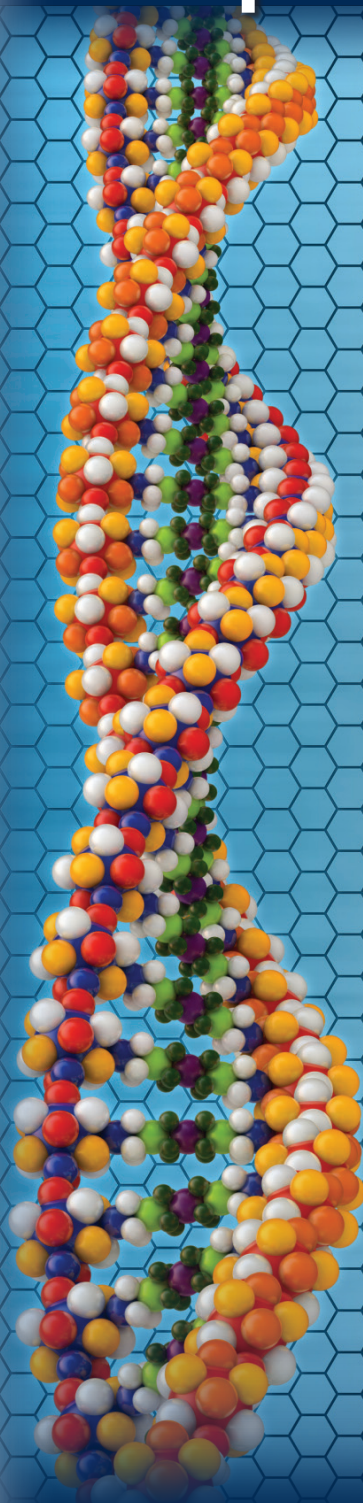


**LSU Health Sciences Center**  
**Department of Genetics**



**Annual Report**  
**Fiscal Year 2012**

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## **Department of Genetics Mission**

The mission of the Department of Genetics at LSUHSC is to provide state of the art education, research, and community outreach, in the area of genetics. To this end the Department has outstanding faculty, researchers, and community educators that can cut across disciplines to fulfill this mission.

## **Department of Genetics Graduate Program Mission**

The Graduate Program in Genetics provides students with a working knowledge of human functional and molecular genetics, genomics, and animal model systems. Students are mentored by exceptional faculty who guide them through their training and enable them to become active members of the scientific community. The departmental curriculum is designed to form the foundation for their future career development through a combination of coursework, seminars, proposal writing, and laboratory-based research. The Department of Genetics provides students with all the skills they need to become successful, independent academic investigators.

## Faculty

### Full-time:

**Judy Crabtree, PhD**  
Assistant Professor

**Paula Gregory, PhD**  
Associate Professor

**Wanguo Liu, PhD**  
Associate Professor

**Udai Pandey, PhD**  
Assistant Professor

**Edward Grabczyk, PhD**  
Associate Professor

**Andrew Hollenbach, PhD**  
Associate Professor

**Diptasri Mandal, PhD**  
Associate Professor

**Fern Tsien, PhD**  
Assistant Professor

### Conjoint:

**Yan Cui, PhD**  
Associate Professor, Microbiology,  
Immunology and Parasitology

**Michael Lan, PhD**  
Professor, Pediatrics

**Donna Neumann, PhD**  
Assistant Professor-Research  
Ophthalmology

**Alistair Ramsay, PhD**  
Professor and Head, Microbiology,  
Immunology and Parasitology,  
Director, Gene Therapy Program

**Guoshun Wang, DVM, PhD**  
Associate Professor, Microbiology,  
Immunology and Parasitology

**Yves Lacassie, MD, FACMG**  
Professor, Pediatrics

**Donald Mercante, PhD**  
Professor, Biostatistics

**Augusto Ochoa, MD**  
Professor and Director,  
Stanley S. Scott Cancer Center

**Judd Shellito, MD**  
Professor and Section Chief,  
Pulmonary Medicine

**Regina Zambrano, MD**  
Assistant Professor, Clinical  
Pediatrics

**Adjunct:**

**Prescott Deininger, PhD**

Professor & Director  
Tulane Cancer Center

**John Doucet, PhD**

Associate Professor, Interim  
Department Head, Biological  
Sciences (Nichols State University)

**Jay Kolls, MD**

Director, Richard K. Mellon Foundation  
Institute for Pediatric Research

**Tarun Mandal, PhD**

Professor (Xavier)  
Pharmaceutics

**William Richardson, PhD**

Assistant Professor (Ochsner)  
Bariatric Surgery

**Karen Weissbecker, PhD**

Assistant Professor (Tulane)  
Psychiatry and Neurology

**Emeritus Faculty:**

**Bronya J.B. Keats, PhD**

Professor, Genetics

**Genetics Graduate Faculty:**  
***(Eligible Mentors)***

**Judy Crabtree, PhD**

Assistant Professor, Genetics

**Luis Del Valle, MD**

Associate Professor,  
Hematology/Oncology

**Paula Gregory, PhD**

Associate Professor, Genetics

**Michael S. Lan, PhD**

Professor, Pediatrics

**Diptasri Mandal, PhD**

Associate Professor, Genetics

**Krzysztof Reiss, PhD**

Professor, Hematology/Oncology

**Guoshun Wang, DVM, PhD**

Associate Professor, Microbiology,  
Immunology and Parasitology

**Yan Cui, PhD**

Associate Professor, Microbiology,  
Immunology and Parasitology

**Edward Grabczyk, PhD**

Associate Professor, Genetics

**Andrew Hollenbach, PhD**

Associate Professor, Genetics

**Wanguo Liu, PhD**

Associate Professor, Genetics

**Udai Pandey, PhD**

Assistant Professor, Genetics

**Judd Shellito, PhD**

Professor and Section Chief,  
Pulmonary

**Regina Zambrano, MD**

Assistant Professor, Clinical  
Pediatrics

## Staff

### Administrative:

Stephanie Laurent  
Heather Shields

Business Manager  
Department Coordinator

### Research:

Yuan Lin

Bioinformatics Specialist

Meng-Hsuan Ho, Ph.D.  
Elisa Ledet, Ph.D.\*  
John Monaghan, Ph.D.  
Zemin Wang, Ph.D.

Postdoctoral Fellow  
Postdoctoral Fellow  
Postdoctoral Fellow  
Postdoctoral Fellow

Angelle Bencaz  
Jessica Chambliss  
Jill Hutchinson  
Nicholas Lanson, Jr.  
Astha Maltare  
Patrick Miller

Research Associate  
Research Associate  
Clinical Associate  
Research Associate  
Research Associate  
Research Associate

### Graduate Students:

Ian Casci (PhD)  
Jack DePaolo (MD/PhD)  
Anasheh Halabi (MD/PhD)  
Elisa Ledet (PhD)\*  
Elaine Maggi (PhD)  
David Ricks (PhD)  
Jyothi Vijayaraghavan (PhD)

Sun Mi Choi (MD/PhD)  
Alain D'Souza (PhD)  
Aditi Iyengar (PhD)  
Jacob Loupe (PhD)  
Nikki Nguyen (PhD)  
Michael Ripple (MD/PhD)

\*Elisa Ledet completed her PhD in the Fall 2011 and accepted a position as a Postdoctoral Fellow in the Spring of 2012.



## Research Interests

### **Judy Crabtree, Ph.D., Assistant Professor**

- Understanding biological processes & epigenetics of endocrine tumor disorders.
- Epigenetics of adaptive pancreatic islet expansion associated with obesity, pregnancy, and T2D
- miRNA influences on pancreatic neuroendocrine tumorigenesis via MEN1 and RBP2.

### **Edward Grabczyk, Ph.D., Associate Professor**

- Progressive genetic disorders caused by DNA repeat expansion such as Friedreich ataxia.
- Interactions between transcription, DNA structure and DNA mismatch repair that drive repeat expansion diseases.

### **Paula Gregory, Ph.D., Associate Professor**

- Research in genetics education for teachers, students, the public, and health care professionals
- Psychological barriers to understanding genetics information and the impact of predictive genetic testing on family dynamics

### **Andrew Hollenbach, Ph.D., Associate Professor**

- The regulation of transcription factors through phosphorylation
- Biochemical mechanisms of chromosomal translocation gene products in cancer formation
- Gene regulation in melanoma development

### **Wanguo Liu, Ph.D., Associate Professor**

- Genetics and biological roles of Wnt signaling in GI tumor development
- Genetics and functional analysis of DNA damage-response defects in prostate cancer susceptibility

### **Diptasri Mandal, Ph.D., Associate Professor**

- Genetic Epidemiology of hereditary lung cancer and prostate cancer in the population in Louisiana
- Genetic linkage and association analyses of complex disorders, in particular humans cancers
- Copy Number Variations (CNVs) in hereditary prostate cancer families

**Udai Pandey, Ph.D., Assistant Professor**

- Utilizing *Drosophila melanogaster* (fruit fly) as a model system to apply the power of genetics to understand the pathogenesis of neurodegeneration
- Investigating the role of protein degradation pathways in neurodegeneration

**Fern Tsien, Ph.D., Assistant Professor**

- Cytogenetic and genomic imprinting disorders
- Chromatin instability and DNA methylation mechanisms of the Immunodeficiency, Centromeric instability, and Facial anomalies (ICF) syndrome
- Chromatin instability of cancer
- Clinical laboratory sciences
- Correlation between DNA methylation with constitutive heterochromatin and gene silencing
- Genetics of the Louisiana Acadian population
- Genetics education especially in the fields of cytogenetics and epigenetics
- Science education programs for Louisiana schools
- Multicultural and diversity community outreach programs in the health sciences

## **Department of Genetics Annual Report Fiscal Year 2012**

### **Year in Review**

Fiscal year 2012 can be defined as a year of perseverance for the faculty of the Department of Genetics. Despite the challenges of the time, the faculty and students blazed forward excelling in supporting all three areas of the Health Sciences Center mission: teaching, research and service. Several faculty within the department were honored with prestigious teaching awards and were recipients of six new or competing renewal grants, and two graduate students were awarded NRSA training grants. Fiscal year 2012 was certainly another year of continued recognition of the dedication to excellence of the faculty and students in the Department of Genetics.

### **Academic Accomplishments**

The Department of Genetics congratulates Dr. Fern Tsien for her successful advancement in the FY2012 promotion and tenure application process. Dr. Tsien was granted promotion from Instructor to Assistant Professor, Tenure Track. Dr. Tsien joined the Department of Genetics in January 2003 where she was recruited after her postdoctoral fellowship in the Department of Cytogenetics and Epigenetics in the Human Genetics Program at Tulane University School of Medicine, New Orleans, LA.

Dr. Judy Crabtree was granted Adjunct Assistant Professor position with Pennington Biomedical Research Center. Dr. Diptasri Mandal was also granted an adjunct appointment at the rank of Associate in the Department of Health, Behavior and Society in Johns Hopkins Bloomberg School of Public Health.

Drs. Paula Gregory, Andrew Hollenbach and Fern Tsien were recipients of the LSU School of Medicine Alumni Excellence Awards. The awards for Excellence in Teaching and Service to the School are to recognize and honor individuals with the School of Medicine who excel at their work and without whom it would be a lesser place. Dr. Udai Pandey was selected by the School of Medicine Faculty Assembly to receive a Faculty Award for Outstanding Accomplishments by a Young Faculty Member. Interim Head, Dr. Wayne Vedeckis, was awarded the Aesculapian Society Excellence in Teaching Award. The Aesculapian Society's objective is "to promote amicable interchange of opinion between the student body and the faculty, with a view to the constant improvement of educational, medical, and scientific standards." At the end of each school year, the student body nominates both basic science and clinical faculty for the Aesculapian "Excellence in Teaching Award." As always, an outstanding job by our faculty!

Drs. Judy Crabtree, Edward Grabczyk, Paula Gregory and Andrew Hollenbach were selected as members of the newly formed SoM Houses Program. The School of Medicine invited faculty to apply to become mentors in a new program that provides longitudinal teaching and mentorship to students regarding physicianship and professionalism. Basic Science faculty will assist in teaching in the Science and Practice of Medicine 100 and 200 courses and leading one small group discussion on the role of research in the medical students' careers. Each house will meet 3 times per year for evening professionalism seminars and will develop and implement one community service project per year. The Department of Genetics is very proud to be represented by Drs. Crabtree, Grabczyk, Gregory and Hollenbach. We know the medical students are in excellent hands and will receive outstanding mentorship!

Dr. Paula Gregory organized the first LSU Medical Student Research Day. Medical Student Research Day is designed to showcase the accomplishments of the LSU School of Medicine students and provides them with the opportunity to present their projects to fellow students and faculty. The day consisted of poster presentations followed by invited speaker and concluding with student oral presentations. Dr. Gregory will continue to chair this annual event.

Drs. Fern Tsien and Udai Pandey were appointed Co-Directors of the LSUHSC-New Orleans Schools Science Partnership Program for the 2011-2012 academic year. The goals of the Partnership Program include: exposing New Orleans 4th graders with positive and diverse health science professionals as role models, making science more interesting, and improving Science LEAP scores.

Dr. Andrew Hollenbach has been given the opportunity to serve on the Association of American Medical Colleges Lesbian, Gay, Bisexual, Transgender, and Intersex (LGBTI) Patient Care Project Advisory Committee. Dr. Hollenbach's expertise, experience, and education will prove to be invaluable assets in the efforts to develop and disseminate a monograph of best practices linked to competency-based LGBTI learning resources for integration into the undergraduate medical education curriculum.

The Department of Genetics junior faculty members Drs. Judy Crabtree and Udai Pandey have both been asked by NIH to serve as early career reviewers. Dr. Pandey has also been invited to serve as an Academic Editor to the PloS ONE journal. Dr. Crabtree received a travel award from The Endocrine Society to attend the "How to Secure Promotion and Tenure Workshop and Reception" at The Endocrine Society's 94<sup>th</sup> Annual Meeting & Expo.

Congratulations to our faculty on their awards and accomplishments during FY2011-2012! The Department of Genetics continues to improve even with challenges, we rise to the occasion. We look forward to another unparalleled year!

## **Student Accomplishments**

The Department of Genetics is proud to announce the completion of the PhD by three graduate students in Fiscal year 2012: Sun Mi Choi, PhD, Alain D'Souza, PhD and Elisa Ledet, PhD. Since receiving her PhD, Sun Mi has continued her studies and is now a 3<sup>rd</sup> year medical student at LSUHSC. Dr. Sun Mi Choi was originally accepted into the LSUHSC MD/PhD Program and completed her PhD in the Department of Genetics under the mentorship of Dr. Jay K. Kolls. Dr. Alain D'Souza has gone back to his home country of India and wants to pursue a career in Biotechnology in Singapore. Dr. Elisa Ledet has accepted a postdoctoral fellowship at Tulane University with Dr. Oliver Sartor in the Department of Medicine and Urology. We are confident that they will have much success and be excellent representatives of LSU Health Sciences Center.

Graduate students Anasheh Halabi and Sun Mi Choi were each awarded a NRSA training grant (Choi: F31 and Halabi: F30). The purpose of the grants is "to support promising predoctoral applicants who have the potential to become productive, independent, highly trained physician-scientists and other clinician-scientists, including patient-oriented researchers in their scientific mission areas.

Anasheh Halabi was the recipient of an American Society for Biochemistry and Molecular Biology (ASBMB) Annual meeting travel award. The ASBMB reviewed and considered 1, 200 abstracts. Anasheh's abstract "Depletion of MutSbeta slows GAA TTC repeat expansion in a cellular model of Friedreich's Ataxia" was selected for an oral presentation within the ASBMB platform session. The ASBMB Annual Meeting was held in April 2012, in San Diego, California.

## **Research Activities and Accomplishments**

Fiscal year 2012 has also been a year of great research accomplishments by our faculty and our students. The Department of Genetics was awarded 8 grants totaling \$2,422,517 including six NIH grants/contracts, one award from the Patrick F. Taylor Foundation and one award from the Pennington Biomedical Research Institute. We currently have active grants and contracts totaling \$4,502,875.

Dr. Diptasri Mandal was awarded 5-year competing renewal contract by NHLBI on the project "Determination of Genetic Susceptibility to Lung Cancer in Families from Southern Louisiana." The total award is \$1,145,543. This project began in September 1996 under the direction of Dr. Henry Rothschild. Dr. Mandal was appointed Principal Investigator in August 2006 upon the

retirement of Dr. Rothschild. Congratulations to Dr. Mandal for the successful competitive renewal!

Dr. Mandal was also invited to join the International Consortium of Prostate Cancer Genetics that consists of 17 different research groups, located at 22 institutions located in North America, Europe and Australia. ICPCG was formed in 1996 to share a common interest in genetic susceptibility for prostate cancer.

Dr. Paula Gregory was awarded one R25 from the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and two T35 grants (NIAAA/NIDDK). The T35 grants provide medical students the opportunity to work on a basic or clinical sciences research project over the summer in an effort to cultivate their interest in research careers. Dr. Gregory is the first recipient of a T35 issued by the NIAAA. The R25 provides undergraduate and high school students with the same training opportunities. Dr. Gregory aims to create a pipeline of research training opportunities beginning with the high school experience then to undergraduate research and finally medical student research training. This program will help create a whole generation of new physician researchers who are prepared to conduct biomedical research in Louisiana.

Dr. Fern Tsien was awarded a grant by the Patrick F. Taylor Foundation titled “Improving Louisiana College Retention through Early Career Choices.” The aim of this grant is to improve Louisiana college retention of students interested in the biological sciences.

A listing of all active grants in the department can be found in the appendix, together with a list of all grants submitted during fiscal year 2012.

#### Publications and Presentations

The department faculty and staff continued their productivity by contributing a total of 14 published papers, 42 invited presentations and 22 platform and poster presentations at local, national and international meetings in fiscal year 2012.

Please refer to the Appendix for a detailed list of all publications and presentations.

## Education

### Teaching

In fiscal year 2012, our faculty taught in 26 courses within the Schools of Medicine, Graduate Studies, Nursing and Public Health. Please see Appendix for a detailed list of courses directed by Genetics Faculty and course lectures given by Genetics Faculty.

Introduction to Bioinformatics (GENET 128) developed by Dr. Edward Grabczyk was approved by the Graduate School and will be offered in fall 2013. Dr. Grabczyk developed the course to serve as an introduction/prerequisite to the more advanced and in depth course Practical Bioinformatics (GENET 256). This course is intended to serve as an introduction to the use of computer-based tools to obtain, analyze and publish biological data. One area of focus will be learning to use widely applicable database search strategies. Sessions will include introductions to DNA and protein sequence comparison, use of select bioinformatics portals and genome browsers as well as general strategies for finding, learning and using web-based bioinformatics tools.

Animal Models in Research (GENET 242) was offered for the first time in spring 2012. Directed by Drs. Judy Crabtree and Udai Pandey; this elective course examines the different types of animal models that mimic human genetic disorders and discusses some of the underlying biochemical principles that result from these genetic alterations. By the end of the course, students should understand how various types of animal models such as *Drosophila*, mouse, rat and non-human primates are used to understand human genetic disorders including congenital diseases and cancer.

### Graduate Program

Dr. Diptasri Mandal (Graduate Student Coordinator) and Dr. Andrew Hollenbach (Associate Coordinator).

During fiscal year 2012, the Department of Genetics accepted two new students into its graduate program for the 2012-2013 academic year from the School of Graduate Studies Interdisciplinary Program: Joseph Gavin Daigle and Matthew Dean under the mentorship of Drs. Udai Pandey and Krzysztof Reiss, respectively. In fiscal year 2012 the department directly admitted one student, Ian Casci, Ian has joined Dr. Udai Pandey's laboratory for his graduate work.

In total, last year the Department of Genetics had 13 graduate students in the program, of whom three have graduated: Sun Mi Choi under the mentorship of Dr. Jay Kolls (Dissertation Project: STAT3, Reg3 $\gamma$ , and acute alcohol in pulmonary host defense against MRSA USA300), Alain D'Souza under the mentorship of Dr. Judd Shellito (Dissertation Project: Acute Ethanol Suppresses Murine Macrophage Proteasome Function Leading to Altered Macrophage Cellular Functions) and Elisa M. Ledet under the mentorship of Dr. Diptasri Mandal (Dissertation Project: Determination of genetic susceptibility in hereditary prostate cancer families)

Sun Mi Choi has returned to LSU Medical School to complete the MD portion of her degree, Alain D'Souza has gone back to his home country in India and wants to pursue a career in Biotechnology in Singapore and Elisa Ledet has accepted a Postdoctoral Fellow position at Tulane University with Dr. Oliver Sartor in the Department of Medicine and Urology,

The Graduate Program in the Department of Genetics performed a number of student recruitment activities in fiscal year 2012. We presented the overview of research interest of our faculty members and the program expectation to the interviewing MD/PhD Students. We hosted two departmental tours to introduce the new Interdisciplinary Program graduate students and MD/PhD students to research activities ongoing within the Department. These presentations aid as a foundation for recruitment into the Genetics graduate program and a platform for faculty to discuss their research interests with prospective students. Dr. Hollenbach represented LSUHSC School of Graduate Studies at the American Society for Biochemistry and Molecular Biology (ASBMB) annual meeting held in San Diego, CA.

The Graduate Student Oversight Committee held meetings to evaluate progress of each student and to monitor their tentative timelines towards graduation. With the approval of the Interim Chair Dr. Vedeckis, official letters were sent out to each student and their respective mentors informing about their progress and reminding them about the Departmental and Institutional degree requirements and expectation. The members of this committee for fiscal year 2012 were Drs. Crabtree, Hollenbach, and Mandal.

The graduate program submitted the NSF/NIH Fall 2011 Survey of Graduate Students and Post doctorates in Science and Engineering (GSS). This survey is conducted annually and the graduate program always ensures timely submission of this report.

Faculty members in the Department of Genetics are also working on developing new courses for the graduate program. In fiscal year 2012, Introduction to Bioinformatics (GENET 128) was developed by Dr. Edward Grabczyk and approved by the Graduate School and will be offered in fall 2013. This course is intended to serve as an introduction to the use of computer-based tools to obtain, analyze and publish biological data. One area of focus will be learning to use widely applicable database search strategies. Sessions will include introductions to DNA and protein sequence comparison, use of select bioinformatics portals and genome browsers as well as general strategies for finding, learning and using web-based bioinformatics tools.

Overall, the graduate program worked diligently to fulfill the mission of the school. A special thanks to the departmental coordinator, Ms. Heather Shields in assisting the graduate program with maintaining records, organizing the student visits, and performing other activities to accomplish the program goals and objectives.



### Seminar Series

The Department of Genetics conducts an annual seminar series, directed by Drs. Fern Tsien and Andrew Hollenbach. The series is offered as an opportunity for graduate students, postdoctoral fellows and faculty to broaden their knowledge beyond their specific area of research and/or studies. The department's aim is to offer a dynamic, interactive seminar series that encourages an exchange of ideas among researchers and students. The Seminar Series Committee works to provide a full agenda of speakers who are known globally and represent academia, industry and government. The intention is to balance the topics across all areas of the Department while also integrating a few speakers who traverse the traditional Genetics boundary into new and exciting areas.

New in fiscal year 2012, postdoctoral researchers were added to the graduate student seminar series. The Seminar Series Committee thought this was an excellent opportunity for postdoctoral researchers to share their scientific research and gain invaluable experience presenting. The Department hosts seminars given by each graduate student, each postdoctoral researcher, in addition to local and national researchers.

Invited outside speakers included:

- **William Hansel, Ph.D.**, Professor  
**Sita Aggarwal, Ph.D.**, Instructor-Research  
William Hansel Cancer Prevention  
Pennington Biomedical Research Center, Baton Rouge, LA  
*“Targeting Cancer Cells with Conjugates of LHRH and Lytic Peptides, Curcumin or Calorie Restriction Mimetics”*  
October 14, 2011
- **Katy Phelan, Ph.D.**, FACMG  
Director, Cytogenetics  
Tulane University Health Sciences Center, New Orleans, LA  
*“Phelan-McDermid Syndrome: An Update”*  
November 11, 2011
- **Mark Batzer, Ph.D.**  
Boyd Professor and Dr. Mary Lou Applewhite Distinguished Professor  
Department of Biological Sciences  
Louisiana State University, Baton Rouge, LA  
*“The Mobilome”*  
February 10, 2012

- **Robert A. Koza, Ph.D.**  
Assistant Professor  
Department of Molecular Genetics Epigenetics & Obesity Laboratory  
Pennington Biomedical Research Center, Baton Rouge, LA  
***“Identification of Epigenetic Determinants of Obesity”***  
March 9, 2012
  
- **Loree C. Heller, Ph.D., M, MB (ASCP)**  
Associate Professor  
Frank Reidy Research Center for Bioelectrics  
Old Dominion University, Norfolk, VA  
**“Plasmid DNA electrotransfer for cancer therapy”**  
May 11, 2012

A full copy of the 2011-2012 seminar series schedule can be found in the Appendix.

## **Outreach Activities**

### Summer Research Internship Program

The Summer Research Internship Program directed by Drs. Paula Gregory and Fern Tsien, accepted 89 students (13 high school, 41 undergraduates, and 35 medical students) out of 259 applicants. The program is designed to expose students to cutting edge research and provide an introduction to medical and graduate school as a means of preparing students for careers in basic and translational research. Students learn about how to design experiments, and how to analyze and interpret data. Furthermore, they gain valuable hands-on laboratory and clinical research experience during the summer.

Funding to support this program comes from both intramural and extramural funding. Overall the program is funded by: LSU School of Medicine, Tulane School of Medicine, the Louisiana Vaccine Center, the Patrick F. Taylor Foundation, National Heart, Lung and Blood Institute, the National Institute on Alcohol Abuse and Alcoholism and the National Institute of Diabetes and Digestive and Kidney Diseases.

The summer program is modeled after the NIH Summer Internship Program. Summer Interns work directly with faculty and graduate students on a research project of their choice at LSUHSC, Tulane School of Medicine, Pennington Biomedical Research Center, or Children's Hospital. Many of the faculty of the Genetics Department successfully mentored these students. The second component of the program is didactic presentations, seminars, journal clubs, and lab meetings. The program hosts a weekly seminar series that covers a variety of topics related to research techniques, careers in the biomedical fields, and responsible conduct of research. The third component of the program focuses on communication and presentation skills. The students summarize their research in an abstract, design a research poster and learn strategies for effective scientific oral presentations.

At the end of the summer, the high school, undergraduate and Tulane Medical students presented their results at the Summer Research Internship Poster Day which is attended by the students, the mentors, the lab members, and the scientific community. This year, Poster Day was held on Monday, July 30<sup>th</sup>, 2012 in the atrium of the Medical Education Building (MEB) at LSU Health Sciences Center. This was the first year that immediately following the poster session, an awards ceremony was held to recognize the outstanding posters of the top presenters. The list of awardees and mentors can be found in the Appendix.

LSU Medical Students will present the results of their summer research on October 12, 2012 at Medical Student Research Day. The winner will be eligible for a travel award to present at The National Student Research Forum in Galveston, Texas.

### Middle and High School Workshops

Dr. Paula Gregory and Dr. Fern Tsien are both dedicated to educational outreach programs and have directed various programs throughout the state. Dr. Gregory has an intense hands-on partnership with Mandeville High School, Benjamin Franklin High School, St. Mary's Dominican High School, The New Orleans Charter School, Math and Science High School and O. Perry Walker High School.

### Summer DNA Technology Camp

Based on their long-standing partnership, Dr. Gregory and Ms. Laura Decker (Mandeville H.S. A.P. Biology teacher) organized the DNA Technology Camp which is held for a week in June at Mandeville High School. A variety of faculty and graduate students worked with the 15 students to cover all aspects of DNA technology such as chromosome analysis, gel electrophoresis and PCR. The camp was a huge success again this year! Based on the positive response, the Summer DNA Technology Camp is now a planned annual camp!

### Ochsner STAR

Dr. Gregory worked with the Ochsner STAR program, a free, educational summer camp sponsored by the Academic Division of Ochsner Health System. The program's mission is to inspire, educate, and prepare students for the future. The knowledge and skills acquired in the program provided students with a solid foundation on which to build an advanced education and a successful career in science, medicine, or health care. Dr. Gregory conducted hands on lab experiments and lectures on the PTC taster genes.

### STEM Program

Dr. Gregory began working with Warren Easton High School and their STEM program in 2011. The STEM Academy is designed to address the critical need for well-trained engineers and scientists by educating high school students in Science, Technology, Engineering and Math (STEM). It prepares students for post-secondary science and engineering education, internships and career opportunities. Dr. Gregory met monthly with the students in the STEM academy and provided hands on activities for them.

### LSUHSC/Patrick F. Taylor Foundation Hands-on workshop program

Through her Patrick F. Taylor Foundation award, Dr. Fern Tsien has hosted high school biology class field trips at LSUHSC and hands-on workshops at middle and high schools with the hope to encourage students to become interested in biomedical sciences. During the morning-long or day-long field trips at LSUHSC, students learn about careers in the medical sciences, including research, forensics science, and clinical medicine. Genetic Department graduate students and LSU medical students assist with the experiments, which include: swabbing DNA from items found in a "crime scene", extracting the DNA from the swabs and comparing it with suspect DNA via PCR and gel electrophoresis, and chromosome preparation and analysis from cancer,

Down syndrome, and normal individuals. Anatomical specimens of human organs are displayed; including normal lungs, emphysema and cancerous lungs caused by smoking, normal liver, and cirrhotic liver due to alcohol consumption, and enlarged heart due to hypertension, as well as normal brain and intestines. Students are also given lab tours, including a highly interactive visit to the Human Simulation Lab, and are given presentations on careers in the forensic sciences, genetic research, and clinical medicine. For the middle school and high school workshops, Dr. Tsien and the graduate and medical student instructors perform age-appropriate experiments at the school. Both field trip and workshop topics are closely coordinated between Dr. Tsien and the teachers to maximize the students' understanding of the material as it pertains to their classroom curriculum. Participating middle and high schools of the 2011-2012 academic year included: Destrehan High School (St. Charles Parish), East Ascension High School (Ascension Parish), Hahnville High School (St. Charles Parish), Holy Name of Jesus Middle School (Orleans Parish), Louise Mc Gehee High School (Orleans Parish), Lusher Middle School (Orleans Parish), Patrick F. Taylor Science and Technology Academy (Jefferson Parish), St. Martin's Episcopal School (Jefferson Parish), St. Amant High School (Ascension Parish), Sarah Reed High School (Orleans Parish) and South Lafourche High School (Lafourche Parish). More than 300 students were reached through these workshops during the 2011-2012 academic year.

#### The Louisiana State University Health Sciences Center (LSUHSC)-New Orleans Schools Science Partnership Program

Drs. Fern Tsien and Udai Pandey were the Directors of the LSUHSC-New Orleans Schools Science Partnership Program for the 2011-2012 academic year. LSUHSC believes that New Orleans students need a strong educational foundation in the sciences and should be exposed to professional role models from the scientific community to enhance their academic enthusiasm and opportunity for success.

The goals of the program include:

- making science more interesting, easier to understand, and accessible in the classroom through hands-on science activities in coordination with the school administrators and teachers based on their current curriculum
- improving 4th grade science standardized Louisiana Educational Assessment Program (LEAP) test scores
- exposing 4th graders attending New Orleans public, charter, and recovery district schools to positive and diverse science professionals and trainees as role models

Volunteer instructors include students, post-doctoral fellows, and faculty from the Schools of Medicine, Allied Health Professions, Dentistry, Public Health, and Nursing. Currently we teach at the two partner schools, Benjamin Banneker Elementary School and Langston Hughes Academy Charter School twice a week. We plan to partner with additional New Orleans Schools in the near future.

Highly successful campus-wide School Supply and Holiday Book Drives for the partnering schools were held; more than 200 school supply items, 150 books, and 900 comic books were delivered to the schools which are attended by many students from underprivileged backgrounds. The year-long program culminates with a field trip to LSUHSC. This past spring it was held on Friday, May 18<sup>th</sup>, 2012 with an attendance of almost 100 children. LSUHSC laboratory activities included: DNA isolation from strawberries and the use of DNA in forensics by Dr. Fern Tsien and Bradley Howe; human organ demonstrations including the effects of smoking on the human lungs by Dr. Michael Hall and Ayesha Umrigar; videos demonstrating how cells repair wounds by Dr. Shyamal Desai; alcohol simulation goggles to show how alcohol consumption impairs the senses by MD/PhD and graduate students Felix Nau, Sophie Teng, and Aditi Iyengar; and how caffeine affects the nervous system by Dr. Charles Nichols and Dr. Jaime Becnel.

Volunteers Suriyodipta (Bibo) Battocharjee, Kavaljit Chhabra, Dr. Gin Chuang, Dr. Oralee Johnson, Dr. Sarah Mahne, Whitney Nichols, and Jessica Shields escorted the 4<sup>th</sup> graders to the various laboratory activities.

#### Mentoring in Medicine at LSUHSC

On Saturday, April 21, 2012, more than 100 area high school students took part in the first annual Mentoring in Medicine Day in New Orleans, at the LSU Health Sciences Center from 10:00 AM to 1:30 PM. The day was filled with current graduate, medical, nursing, audiology, and dental school speakers, an anatomical specimen demonstration by Dr. Fern Tsien, and exhibits. The group's mission is to diversify the workforce by mentoring and exposing underrepresented students to careers in health care. Drs. Dereck Rovaris and Lisa Moreno are the directors of the program, and Dr. Fern Tsien presented anatomical specimens (including normal and cancerous lungs, normal and cirrhotic livers, heart from a patient with hypertension, and others) throughout the day. Assisting Dr. Tsien were Ayesha Umrigar, Dr. Michael Hall, Dr. Sonia Gasparini, and Dr. Shyamal Desai. Student participants included those from New Orleans area high schools, including Eleanor McMain High School, Lake Area New Tech Early College High School, Joseph Clark High School, and New Orleans Charter Science and Mathematics High School.

#### Superscholar EXCEL Program tours LSUHSC

Dr. Fern Tsien partnered with Xavier University of Louisiana to host more than 60 high school seniors from throughout the United States who attended the intensive 4-week SuperScholar/EXCEL program. This program prepares students who are underrepresented in the sciences, technology, engineering, and mathematics (STEM) to participate in college preparatory activities such as standardized test preparation and non-credit courses that strengthen the students' critical thinking, reading, writing, mathematics and oral presentation skills. The students attended a workshop at LSUHSC as part of their curriculum on July 12, 2012. Medical students, graduate students, and students from Xavier University assisted Dr. Tsien who also mentored the students.

## **Plans for the Coming Year**

Effective August 14, 2012 Dr. Wayne V. Vedeckis Interim Head of the Department of Genetics retired and Dr. Kathleen McDonough was named Interim Head of the Department of Genetics. Thus, the primary goal for the coming year is to recruit a Department Chair with a strong vision of excellence for the Department and focus on developing multi-disciplinary program projects, center grants, funded training programs, and who will lead efforts to foster meaningful translational research. The initial response has yielded a very competitive and promising applicant pool. The search committee, headed by Dr. Wayne Backes, is encouraged by the response and is optimistic that an outstanding permanent Department Chair will be named in a timely fashion.

Another important goal of the department will be to maximize the research potential of the department faculty. The department is healthy and active, so future initiatives will focus primarily on assisting faculty, via individual mentoring and through official mentoring committees, to grow their research programs.

Finally, the department will continue to provide the excellent and highly recognized outreach and community service projects in which many of the faculty participated. This will include active involvement in Summer Research Programs and Internships, elementary and high school workshops, and other activities that foster education and health care awareness in the Greater New Orleans area and beyond. In FY2012, led by Co- Directors Drs. Fern Tsien and Udai Pandey, outreach activities expanded to include activities involving the LSUHSC-New Orleans Public Schools Partnership Program. We look forward to the opportunities to further the service mission of the Health Sciences Center, to interact with the children of New Orleans, and to expand the presence of genetics in education.

# Appendix



## Appendix

### Teaching Activities

#### *Courses Directed by Genetics Faculty*

Course	School	Director	Genetics Lecturer(s)	Semester
Intro to Research and Resources (Inter101)	Graduate Studies	Dr. Hollenbach		Summer 2011
Human Molecular Genetics (Genet231)	Graduate Studies	Dr. Gregory	Drs. Pandey, Tsien, Crabtree, Hollenbach, Mandal	Summer 2011
Responsible Conduct in Research (Inter260)	Graduate Studies	Dr. Gregory		Summer 2011
Intro to Molecular Biology (Inter122)	Graduate Studies	Dr. Hollenbach	Drs. Crabtree, Grabczyk, Pandey, Tsien	Fall 2011
Genetic Epidemiology and Population Genetics (Genet236)	Graduate Studies	Dr. Mandal	Drs. Liu, Pandey	Fall 2011
Cancer Molecular Genetics and Applications (Genet245)	Graduate Studies	Dr. Hollenbach	Drs. Liu, Mandal, Tsien	Fall 2011
Human Cytogenetics (Genet292)	Graduate Studies	Dr. Tsien		Fall 2011
Genetics Journal Club (Genet290)	Graduate Studies	Drs. Liu, Pandey, Tsien		Fall 2011
Seminar in Human Genetics (Genet299)	Graduate Studies	Drs. Hollenbach, Tsien		Fall 2011 Spring 2012
Control of Gene Expressions (Inter123)	Graduate Studies	Dr. Hollenbach	Drs. Crabtree, Mandal, Pandey, Tsien	Spring 2012
Epigenetics (Genet234)	Graduate Studies	Dr. Tsien	Dr. Crabtree	Spring 2012

Animal Models of Human Disease (Genet242)	Graduate Studies	Drs. Crabtree, Pandey	Dr. Liu	Spring 2012
Proposal Writing (Genet247)	Graduate Studies	Dr. Gregory		Spring 2012
Practical Bioinformatics (Genet256)	Graduate Studies	Dr. Grabczyk		Spring 2012
Molecular Pathology (rotation)	Graduate Studies	Drs. Gregory, Tsien		Spring 2012

***Course Lectures Given by Genetics Faculty***

<b>Course</b>	<b>School</b>	<b>Lecturer</b>	<b>Semester</b>
Cell Biology (Inter121)	Graduate Studies	Drs. Crabtree, Gregory	Fall 2011
Cleft Palate and Craniofacial Disorders (Spthaud6220)	Allied Health Professions	Dr. Tsien	Fall 2011
Cell Biology and Microanatomy (Anat192)	Graduate Studies	Dr. Gregory	Fall 2011
Biological Systems B (Inter132)	Medicine	Dr. Gregory	Fall 2011
Genetic Health Across the Life Span (Nurs3451)	Nursing	Drs. Gregory, Tsien	Fall 2011 Spring 2012
Pathophysiology (Phth7123)	Medicine	Dr. Gregory	Spring 2012
Medical Pharmacology (Pharm200)	Medicine	Dr. Gregory	Spring 2012
Molecular Diagnostics and Genetics (Mtec5119)	Allied Health Professions	Dr. Tsien	Spring 2012
Cancer Epidemiology (Epid6222)	Public Health	Dr. Mandal	Spring 2012
Medical Biochemistry (Bioch100)	Medicine	Drs. Gregory, Tsien	Spring 2012

## Department of Genetics Fall 2011/Spring 2012 Seminar Series Schedule

- September 9, 2011**                      **Luis Del Valle, MD**  
Associate Professor, Departments of Medicine & Pathology  
Stanley S. Scott Cancer Center  
LSU Health Sciences Center  
New Orleans, LA
- October 14, 2011**                      **William Hansel, Ph.D.**  
Professor  
**Sita Aggarwal, Ph.D.**  
Instructor-Research  
William Hansel Cancer Prevention  
Pennington Biomedical Research Center  
Louisiana State University System  
Baton Rouge, LA
- October 16, 2011**                      Graduate Student Dissertation Seminar- **Elisa Ledet**
- October 21, 2011**                      Graduate Student Seminar: **John Monaghan**
- November 11, 2011**                      **Katy Phelan, Ph.D., FACMG**  
Director, Cytogenetics  
Tulane University Health Sciences Center  
New Orleans, LA
- December 9, 2011**                      **Donna Neumann, Ph.D.**  
Assistant Professor-Research Department of Pharmacology  
& Experimental Therapeutics, LSU Eye Center,  
LSU Health Sciences Center  
New Orleans, LA
- February 10, 2012**                      **Mark Batzer, Ph.D.**  
Boyd Professor and Dr. Mary Lou Applewhite  
Distinguished Professor  
Department of Biological Sciences  
Louisiana State University  
Baton Rouge, LA
- February 24, 2012**                      Graduate Student Seminar: **Aditi Iyengar**

- March 9, 2012**                      **Robert A. Koza, Ph.D.**  
Assistant Professor  
Department of Molecular Genetics Epigenetics &  
Obesity Laboratory  
Pennington Biomedical Research Center  
Louisiana State University System  
Baton Rouge, LA
- March 30, 2012**                      Graduate Student Dissertation Seminar- **Sun Mi Choi**
- March 30, 2012**                      Graduate Student Dissertation Seminar- **Alain D'Souza**
- April 13, 2012**                      Graduate Student Seminar: **Jacob Loupe**
- April 27, 2012**                      Graduate Student Seminar: **Anasheh Halabi**
- May 11, 2012**                      **Loree C. Heller, Ph.D., M, MB (ASCP)**  
Associate Professor  
Frank Reidy Research Center for Bioelectrics  
Old Dominion University  
Norfolk, VA
- May 25, 2012**                      Graduate Student Seminar: **Nikki Nguyen**

## **Summer Research Internship Poster Day Winners**

### **High School**

1<sup>st</sup> Place: Junru Yan

Mentor: Dr. Edward Grabczyk, LSUHSC

2<sup>nd</sup> Place: Senthil Natarajan

Mentor: Dr. Udai Pandey, LSUHSC

3<sup>rd</sup> Place: Justin Magrath

Mentor: Dr. Tarun Mandal, Xavier

### **Undergraduate**

1<sup>st</sup> Place: Matthew Haskins

Mentor: Dr. Diptasri Mandal, LSUHSC

2<sup>nd</sup> Place: Madushani Wijetunge

Mentor: Dr. Astrid Engel, Tulane

3<sup>rd</sup> Place: Raven Ward

Mentor: Dr. Mairi Noverr, LSUHSC School of Dentistry

### **Tulane Medical Student**

1<sup>st</sup> Place: Peter Gold

Mentor: Dr. Bruce Bunnell, Tulane SOM

## Mentoring

### Dr. Crabtree

Graduate Student Advisor	Elaine Maggi Jyothi Vijayaraghavan
Summer Research Mentor	Vilija Vaitaitis
Dissertation Committee Member	Nikki Nguyen Michael Ripple Jacob Loupe

### Dr. Grabczyk

Graduate Student Advisor	Anasheh Halabi
Summer Research Mentor	Claire Fitzgerald Junru Yan
Dissertation Committee Member	Alain D'Souza David Ricks Jennifer Simkin

### Dr. Gregory

Faculty Advisor	Erich Richter, MD
Junior Faculty Advisor	Diana McDermott, MD Carlos S. Busso, PhD
SOM Mentoring Committee	Janet Rossi, MD Li Shen, MD, PhD Melissa Gorman, MD
Dissertation Committee Member	Lori Hutcherson Sun Mi Choi Bo Zhang

### Dr. Hollenbach

Graduate Student Advisor	Aditi Iyengar Jacob Loupe
Summer Research Mentor	Thomas John
Junior Faculty Advisor	Kelly Johanson, PhD Gloria Thomas, PhD Donna Neuman, PhD Nicole LeCapitaine, PhD Jennifer Lentz, PhD
Dissertation Committee Member	Nikki Nguyen Purvaba Sarvaiya Fabrizio Picchione Rebecca Buckley Patrick Raber Michael Ripple

**Dr. Liu**

Graduate Student Advisor	Jack J. DePaolo
Junior Faculty Advisor	Eric Buckles, PhD
Summer Research Mentor	George N. Washington
Dissertation Committee Member	Elisa Marie Ledet Anasheh Halabi Aditi Iyengar Julia Burke
Postdoctoral Advisor	Jianhui Guo, PhD Zemin Wang, PhD Zun Liu, PhD
Lab Rotation Advisor	Ian Casci

**Dr. Mandal**

Graduate Student Advisor	Elisa Ledet
Summer Research Mentor	Matthew Haskins
Dissertation Committee Member	Aditi Iyengar
MSPH Placement Supervisor	Emily Nykaza
Lab Rotation Advisor	Ian Casci

**Dr. Pandey**

Graduate Student Advisor	Gavin Daigle Ian Casci
Summer Research Mentor	Jesus Perez Kenia Carvajal Kyriate Henry Megan Sutton
Postdoctoral Advisor	John Monaghan, PhD
Lab Rotation Advisor	Regina Chutz

**Dr. Tsien**

K-12 Student Instructor Trainee Mentor	Aditi Iyengar;    Jacob Loupe Jessica Richards; Victoria Givens Rashad Johnson; Elise Bevier Adele Williams; Alan Tseng Jaime Becnel;    Elisa Ledet Michael Hall
High School Student Advisor	Laney Langesnstein
Undergraduate Student Advisor	Ayesha Umrigar Sharon Rainey Bradley Howe

## Invited Presentations (seminars, mini-courses, etc.)

### Dr. Crabtree

- “Of Mice and MEN1: Epigenetics of MEN1.” COBRE/Cancer Genetics meeting, Tulane University, October 2011.
- “Genetics and Epigenetics of Uterine Leiomyoma.” LSUHSC OB/Gyn Grand Rounds, November 2011.
- “LHRH conjugates as a therapy for uterine fibroids and ovarian cancer.” Pennington Biomedical Research Center “Work in Progress” Seminar, Baton Rouge, January 2012.

### Dr. Grabczyk

- "Dual Reporter HTS in Human Cells to Discover Friedreich Ataxia Therapeutics." Novartis Institutes for BioMedical Research Cambridge, MA October 2011.
- "Repeat Expansion: The Other Edge of the Mismatch Repair Blade." Tulane University Cancer Center, New Orleans, LA May 2012.

### Dr. Gregory

- “Pharmacogenomics” Tulane Medical School, Dept of Pharmacology.
- DNA-based identification, St. Mary’s Dominican High School
- DNA-based identification, Mandeville High School
- DNA-based identification, New Orleans Charter Math and Science High School
- DNA-based identification, Ben Franklin High School
- DNA-based identification, Perry Walker High School
- Post Katrina DNA-based identification, Haynes Academy High School
- “Grantsmanship 101” Children’s Hospital Research Presentation

### Dr. Hollenbach

- “Chronic Alcohol and Muscle Wasting: FOXO1-Centric Inflammatory Mechanisms”, Physiology Alcohol Research Group, Department of Physiology, Louisiana State University Health Sciences Center, February 16, 2012.

### Dr. Liu

- “ARD1, AR acetylation, and prostate tumorigenesis”. at Department of Biochemistry & Molecular Biology, LSUHSC, January 27, 2012.
- “Exome sequencing identified germ-line mutations in AA families with prostate cancer”. at Louisiana Cancer Research Consortium Annual Scientific Retreat, March 9-10, 2012.

### Dr. Mandal

- Genetic Epidemiology and Public Health: Tulane Hayward Genetics Center. April 13, 2012.



**Dr. Pandey**

- “Drosophila as a model system to understand molecular mechanisms of human neurodegenerative diseases”. Human Genetics Grand Round Series, Tulane University Medical Center, New Orleans, LA.
- “Molecular mechanisms of FUS-related ALS: Lessons from Drosophila models” The Robert Packard Center for ALS research, Annual Symposium, Johns Hopkins Medical Center, Baltimore, MD, March 2012.
- Invited talk “Genetic modifiers of FUS/TLS mediated toxicity” Johns Hopkins Medical Center, Baltimore, MD.
- “Drosophila as a model system to understand molecular mechanisms of neurodegeneration” Molecular Medicine Series, Department of Child Neurology, Children’s Hospital of Pittsburgh, University of Pittsburgh Medical Center, Pittsburgh, PA, September 2011.
- Invited talk “Genetic interaction between FUS and TDP-43 influences ALS phenotype” in Molecular Mechanism of Neurodegeneration meeting in Milan, Italy, May 2011.
- Invited talk “Molecular Basis of ALS” in Department of Cell Biology and Anatomy at LSUHSC, May 2011.

**Dr. Tsien**

- “Genetics of Auditory Disorders”, Clinical Genetics Course, Hayward Genetics Center, Tulane School of Medicine, New Orleans, LA, January 2012.
- “Basic Genetics of Auditory Disorders”, American Speech-Language-Hearing Association, video workshop, May, 2012.
- “How to present at a scientific conference”, Summer Research Internship Program, LSUHSC, New Orleans, LA, July 2011.
- “Working in a lab: what you need to know”, Summer Research Internship Program, LSUHSC, New Orleans, LA, June 2012.
- “Lab notebook organization and record keeping”, Summer Research Internship Program, New Orleans, LA, June 2012.
- “Numerical chromosome abnormalities: clinical implications and mechanisms”, Leadership Education in Neurodevelopmental and related Disabilities (LEND), School of Allied Health Professions, LSUHSC, October 2011. (CME credit)
- “Methods in Epigenetic research”, Research Methods Course, Department of Genetics, Tulane University School of Medicine, New Orleans, LA, November 2011.
- Keynote speaker, “Genetics of audiology: Today and tomorrow” Indian Health Service Medical Audiology Workshop, Albuquerque, NM, May, 2012. (CME credit)
- “Basic Genetics of Auditory Disorders”, American Speech-Language-Hearing Association, video workshop, May, 2012. (CME credit)
- “Chromosome instability in cancer”, Benjamin Franklin High School, LSUHSC, New Orleans, LA, Fall 2011.
- “Forensics workshop” and “Careers in the Health Sciences”, Chalmette High School, at LSUHSC, New Orleans, LA, Fall 2011.
- “Organs and systems”, Holy Name of Jesus Middle School, New Orleans, LA, Fall 2011.
- “Organs and systems”, St. Martin’s Episcopal School, New Orleans, LA, Fall 2011.

- “Forensics workshop”, “Careers in the Health Sciences”, and “Organs and systems”, Mc Gehee High School, at LSUHSC, New Orleans, LA, Spring 2012.
- “Forensics workshop”, “Careers in the Health Sciences”, and “Organs and systems”, St. Martin’s Episcopal School, LSUHSC, New Orleans, LA, Spring 2012.
- “Hands-on Medical and research workshop at LSUHSC”, Ascension Parish Gifted and Talented Program, LSUHSC, New Orleans, LA, Spring 2012.
- “Cells, DNA, and cancer”, Lusher Middle School, New Orleans, LA, Four (4) workshops to 7th graders in one day, Spring 2012.
- “Human anatomy demonstration”, National Mentoring in Medicine Program, LSUHSC, New Orleans, LA, Spring 2012.
- “DNA isolation from strawberries” LSUHSC-New Orleans Schools Science Partnership Program Field Day, LSUHSC, New Orleans, LA, Spring 2012.

## Platform and Poster Presentations at Scientific Meetings

### Dr. Crabtree

- Vijayaraghavan, E.C. Maggi and **J.S. Crabtree** “miR24-1 Targets MEN1 To Enhance Beta Cell Expansion in Pancreatic Islets.” Endocrine Rev 33: MON-106. The Endocrine Society Annual Meeting, Houston, TX, June 22-26, 2012 \*Presented by mentored student J. Vijayaraghavan
- Jack S. DePaolo, Elaine C. Maggi, Jyothi Vijayaraghavan and **Judy S. Crabtree** “Inhibition of HMGA2 by miR-26a may regulate uterine fibroid proliferation.” Graduate Student Research Day Poster Session, LSUHSC, New Orleans, LA
- Elaine C. Maggi, Jyothi Vijayaraghavan, Jack DePaolo, Sita Aggarwal, William Hansel, Hector Allila and **Judy S. Crabtree** “Targeting LHRH Receptors as a Therapy for Uterine Fibroids.” Graduate Student Research Day Poster Session, LSUHSC, New Orleans, LA
- Jyothi Vijayaraghavan, Elaine Maggi, Jack DePaolo and **Judy S. Crabtree** “miR24-1 targets MEN1 to enhance beta cell expansion in pancreatic islets.” Graduate Student Research Day Poster Session, LSUHSC, New Orleans, LA.
- Jack DePaolo, Elaine Maggi, Jyothi Vijayaraghavan and **Judy Crabtree** “Inhibition of HMGA2 by miR-26a may regulate uterine fibroid proliferation.” Medical Student Research Day Poster Session, LSUHSC, New Orleans, LA.
- Darcy Guo, David J. Tate, Jr., John Patterson, IV, Astrid Bedoya, **Judy Crabtree** and Arnold H. Zea. “Eker rat cell line responses to IFNs as a model of RCC treatment Summer Student Poster Session, Stanley S. Scott Cancer Center, LSUHSC, New Orleans, LA

### Dr. Grabczyk

- Anasheh Halabi, Scott Ditch, Jeffrey Wang and **Ed Grabczyk** "MutSbeta promotes GAA•TTC repeat expansion in human cells" Louisiana Cancer Research Consortium Annual Scientific Retreat, New Orleans LA, April, 2012
- Anasheh Halabi, Scott Ditch, Jeffrey Wang, **Ed Grabczyk** "Depletion of MutSbeta slows GAA•TTC repeat expansion in a cellular model of Friedreich Ataxia" FASEB J March 29, 2012 26:936.2 American Society for Biochemistry and Molecular Biology Annual Meeting, San Diego, CA, April, 2012 \*Won a travel award and was bumped up to an oral presentation based on the strength of this work

**Dr. Hollenbach**

- Iyengar, A. S. and **Hollenbach, A. D.** “Altered states of Pax3 phosphorylation contribute to regulation in melanocytes and melanoma” Louisiana State University Health Sciences Center Graduate Research Day (November 4, 2011).
- Loupe, J. M., Miller, P. J., Iyengar, A. S., and **Hollenbach, A. D.** “A means to an end: a role for phosphorylation in the degradation of Pax3” Louisiana State University Health Sciences Center Graduate Research Day (November 4, 2011).
- Iyengar, A. S., Loupe, J. M., Miller, P. J., and **Hollenbach, A. D.** “Altered states of Pax3 phosphorylation contribute to melanoma development” American Association of Biochemistry and Molecular Biology Annual Meeting, San Diego, California, April 2012 (Poster A22).
- Loupe, J. M., Miller, P. J., Iyengar, A. S., and **Hollenbach, A. D.** “Pax3 phosphorylation: in the driver’s seat of myogenesis” American Association of Biochemistry and Molecular Biology Annual Meeting, San Diego, California, April 2012 (Poster A23).
- **Hollenbach, A. D.**, Loupe, J. M., Miller, P. J., Iyengar, A. S. “Phosphorylation of Ser209 by the Protein Kinase CK2 on Pax3 Preferentially Utilizes GTP During Early Myogenic Differentiation” American Association of Biochemistry and Molecular Biology Annual Meeting, San Diego, California, April 2012 (Poster A24).

**Dr. Liu**

- Wang Z, Lin Y, Qian C, Zabaleta J, Sartor O, Ledet E, Hu JJ, Mandal D, and **Liu W.** Exome sequencing identifies germline mutations associated with prostate cancer risk in African American families. LCRC Annual Scientific Retreat, New Orleans, LA, March 9-10, 2012; p27.
- Wang ZH, Wang ZM, Guo J, Li Y, Qian C, Tan D, and **Liu W.** Coactivator ARD1 acetylates androgen receptor for prostate tumorigenesis. Advances in Prostate Cancer Research, An AACR Special Conference, Orlando, FL, February 6-9, 2012; p88:B10.

**Dr. Mandal**

- C. L. Simpson, T. Green, B. Doan, C. I. Amos, S. M. Pinney, E. Kupert, M. de Andrade, P. Yang, A. G. Schwartz, P. R. Fain, A. Gazdar, J. Minna, J. S. Wiest, H. Rothschild, **D. M. Mandal**, M. You, T. A. Coons, C. Gaba, M. W. Anderson, J. E. Bailey-Wilson. Covariate-based Linkage Analysis of Lung Cancer Risk Reveals Novel Loci on 9p21 and 20q12.20th Annual International Genetic Epidemiology Society Meeting. Heidelberg, Germany, September 18-20, 2011.
- E. M. Ledet, **D. M. Mandal.** Novel regions of suggestive linkage in African American hereditary prostate cancer families. 12th International Congress of Human Genetics/61st

Annual Meeting of The American Society of Human Genetics. Montréal, Canada.  
October 11-15, 2011.

- Z. Wang, Y. Lin, C. Qian, J. Zabaleta, O. Sartor, E. Ledet, J. Hu, **D. M. Mandal**, W. Liu. Exome Sequencing Identifies Germline Mutations Associated with Prostate Cancer Risk and African American Families. LCRC Annual Scientific Retreat. New Orleans, 2012.
- E. M. Ledet, X. Hu, M. Li, **D. M. Mandal**. Identification of Susceptibility Loci in African American Prostate Cancer Families. LCRC Annual Scientific Retreat. New Orleans, 2012.

**Dr. Pandey**

- Selected for a talk “Genetic and physical interaction between FUS and TDP-43 influences neurodegeneration” 6<sup>th</sup> Brain Research Conference on RNA binding protein, Washington DC.

**Dr. Tsien**

- Umrigar A, Howe B, **Tsien F**, Trisomy 21 Karyotype without the Down Syndrome Phenotype: Molecular Cytogenetic Analysis of the Down Syndrome Region, Summer Research Internship Poster session, LSUHSC, New Orleans, LA.
- **Tsien F**, Hands-on Workshop Program for Louisiana K-12 schools: motivating youth toward clinical and research careers focusing on cancer, genetics, and the medical sciences, The Academy for the Advancement of Educational Scholarship Symposium, LSUHSC, New Orleans, LA.

## Other Academic Achievements and Activities

### Dr. Crabtree

- Attended AAMC Early Career Faculty Development Program (July 2011)
- Appointed Adjunct Assistant Professor at Pennington Biomedical Research Center (effective 1/2012)
- Received a travel award to attend a special session at the Endocrine Society Annual Meeting on How to Secure Promotion and Tenure, Houston, TX June 22-26, 2012.
- Member, School of Medicine, Women's Affairs committee (2009-2012)
- Member, School of Medicine, Communications Committee (2011-2014)
- Member, Faculty Assembly (2011-2014)
- Member, Association of Women in Science, South Louisiana Chapter (2010-present)
- Member, Department of Genetics Graduate Oversight Committee (2010-present)
- Community Outreach: Presented to sophomores from Louise McGehee High School during laboratory tour of the LSUHSC Department of Genetics, April 2012.
- Hosted seminar speakers for the Department of Genetics Seminar Series:
  - William Hansel, PhD/Sita Aggarwal, PhD 10/14/11
  - Loree Heller, PhD 5/11/12
- Manuscript reviewer:
  - Journal of Clinical Endocrinology and Metabolism (x2)
  - Human Reproduction
  - Endocrinology (x3)
  - Nutrition and Diabetes
- Attended The Endocrine Society Annual Meeting in Houston, TX, June 22-26, 2012
- Active scientific collaborations:
  - Drs. William Hansel (PBRC), Sita Aggarwal (PBRC) and Hector Allila (Esperance Pharmaceuticals): Lytic peptides as a therapy for uterine fibroids.
  - Drs. Danny Barnhill (LSUHSC), Ted Gauthier (LSU Ag Center), William Hansel (PBRC) and Sita Aggarwal (PBRC): Use of FSH pretreatment to increase efficacy of ovarian cancer chemotherapies.
  - Dr. Arnold Zea (LSUHSC): Renal cell carcinoma and arginase metabolism in the Eker rat model.
  - Drs. Loree Heller (Old Dominion University) Gene Therapy Investigations for Androgenetic Alopecia
  - Dr. Matthew Burow (Tulane SOM): Potential co-mentor for graduate student Elaine Maggi on F31 application, Role of miR24 in regulation of RBP2 in pancreatic neuroendocrine tumors.
  - Dr. Eugene Woltering (LSUHSC): Role of miR24 in regulation of RBP2 in pancreatic neuroendocrine tumors.
  - Drs. Paula Gregory (LSUHSC) and Danny Barnhill (LSUHSC): Microsatellite instability testing in endometrial cancers associated with Lynch Syndrome.

**Dr. Grabczyk**

- Reappointed to the LSUHSC Institutional Biosafety Committee (IBC).
- Nominated as an LSUHSC Faculty Assembly Delegate.
- Received an appointment as an Adjunct Associate Professor in the Department of Cell and Molecular Biology, School of Science and Engineering, Tulane University, New Orleans.
- One of the New Orleans Regional Interviewers of Harvard College Applicants for the Harvard Admissions Office.

**Dr. Gregory**

- School of Medicine Women's Affairs Committee - coordinate a variety of activities for women faculty, including: "Moms in Medicine"; Meet the New Women Leaders
- Curriculum Oversight Committee, LSUHSC, School of Medicine
- Lafayette Med School Curriculum Committee
- Organized and serve as faculty sponsor for Medical Student Research Association
- Coordinated LSU medical student (2 students) participation in National Student Research Forum competition
- Conducted New Faculty Receptions (fall and spring), LSUHSC, School of Medicine
- Created and taught in the inaugural MS in Clinical Methods course at Tulane
- Organized a New Faculty Orientation session, LSUHSC, School of Medicine
- Presented Molecular Pathology training session for Dept of Pathology residents
- Planned and implemented the first Medical Student Research Day for all LSUHSC medical students
- Member, IDP Admissions Committee
- Member, IDP Mentoring Committee
- Coordinated summer research internships for med students, undergrads and high school students
- Conducted a week-long "DNA Camp" for high school students on the northshore (MHS)

**Dr. Hollenbach**

- Co-organizer of the Department of Genetics seminar series
- Director – The Department of Genetics Second Year Qualifying Exam
- Member – The Department of Genetics Curriculum Committee
- Member – The Department of Genetics Graduate Student Oversight Committee
- Member – The Department of Genetics Admissions Committee
- Associate Graduate Coordinator for the Department of Genetics
- Member and Chair – School of Medicine Committee for Improving Communications
- Head editor – School of Medicine Newsletter, "The Pulse"
- Member – The School of Medicine Multicultural and Diversity Committee
- Member – The School of Medicine Faculty Assembly
- Member – The School of Medicine Faculty Assembly Executive Board (an elected position)
- Faculty advisor – The School of Medicine Postdoctoral Association
- Member – The School of Medicine Houses Mentorship Program

- Member – The Graduate Faculty of the LSUHSC School of Graduate Studies
- Member – The Interdisciplinary Program Graduate School Curriculum Committee
- Member and Chair – The Graduate School Recruitment Committee
- Member – The Graduate School Multicultural and Diversity Committee
- Member – The Graduate Advisory Committee
- Member – The Faculty Senate Website Advisory subcommittee
- Primary Faculty Advisor – LGBT+Ally Organization for Cultural Understanding in the Health Sciences (LOCUS), a student organization to promote LGBT awareness at LSUHSC. (As the Primary Faculty Advisor, I worked closely with students from all six schools of LSUHSC to organize, develop, and found LGBT+Allies in the Health Care Professions, a student organization to promote LGBT awareness at LSUHSC.)
- Ad Hoc Reviewer – Department of Defense, Topic Area Blood Cancers (January 2012)
- Ad Hoc Reviewer – The Bankhead Coley Foundation
- Ad Hoc Reviewer – The Italian Ministry of Health
- Ad Hoc Reviewer – Kansas City Area Life Sciences Institute, Patton Trust Research Development Grant
- Reviewer – American Journal of Physiology, Cell Physiology
- Reviewer – Journal of Biomedicine and Biotechnology
- Reviewer – Molecular Carcinogenesis
- Reviewer – Nucleic Acids Research
- Reviewer – Oncogene
- Volunteer – Representative from The School of Graduate Studies at the Xavier University GradStar graduate school fair
- Volunteer – Representative from The School of Graduate Studies and the School of Medicine for the LSUHSC Recruitment Caravan to Dillard University
- Volunteer – Representative from The School of Graduate Studies and the School of Medicine for the LSUHSC Recruitment Caravan to Xavier University
- Volunteer – Poster Judge: The American Society for Biochemistry and Molecular Biology Undergraduate Poster Competition, April 21, 2012, San Diego, CA
- Volunteer – Representative from The LSUHSC School of Graduate Studies recruitment table at The American Society for Biochemistry and Molecular Biology Undergraduate Recruitment Fair, April 21, 2012, San Diego, CA
- Volunteer to assist in the preparation of reagents needed for the St. Martin's Episcopal School (Metairie, LA) General Biology laboratory on the concept of bacterial growth and antibiotic resistance.

#### **Dr. Liu**

- Served as the deputy director for Genetics program in LSU cancer center
- Served as a member of the LCRC Tissue Utilization Review Committee (TURC).
- Served as a member of the Junior faculty mentoring committee in LSU Cancer Center
- Served as a member of the LSU faculty development and evaluation committee
- Served as a member of the LCRC Seed Fund Review Committee
- Served as a member of the Tulane COBRE mentoring committee
- Served as a member of the Department PhD student qualify exam committee



- Served as an adjunct professor in College of Life Science at Yunnan University, Kunming, China

**Dr. Mandal**

- Graduate Student Coordinator, Department of Genetics, LSUHSC
- Promotion & Tenure Committee, Department of Genetics
- Chair, Graduate Student Oversight Committee, Department of Genetics
- Chair, Curriculum Committee, Department of Genetics
- Summer Mentor, Summer Cancer Research Internship Program, Louisiana Cancer Research Consortium of New Orleans
- Judge, Summer Research Internship Program, Department of Genetics
- Member, Graduate Advisory Council, LSUHSC
- Member, Council on Professional Conduct, LSUHSC
- Chair, Curriculum Committee, Graduate School, LSUHSC
- Member, Curriculum Oversight Committee, Department of Medicine, LSUHSC
- Member, Promotion & Tenure Committee, Department of Biochemistry, LSUHSC
- Member, Chancellor's award committee, Graduate School, LSUHSC
- Member, Ethical, Legal and Social Issues (ELSI) Committee, International Genetic Epidemiology Society
- Judge, DNA day essay contest by American Society of Human Genetics
- Reviewer: Italian Ministry of Health General Directorate for Health and Technologies Research
- Ad hoc member NCI-G Study Section
- Member, ICPCG – International Consortium of Prostate Cancer Genetics
- Associate, Johns Hopkins Bloomberg School of Public Health
- Genetic Epidemiology and Public Health: Tulane Hayward Genetics Center. April 13, 2011.

**Dr. Pandey**

- Faculty Assembly Award for Outstanding Accomplishments by a Young Faculty Member
- Selected as an ad hoc member in the CMND study section, NIH (Santa Monica, CA)
- Invited to Chair a session on Drosophila models of human diseases, Annual Drosophila Research Conference, Chicago, IL
- Invited to serve as a grant reviewer for international/national private foundations (The Mayo Clinic, European Research Council, The ALS Society of Canada, Motor Neuron Disease Association, UK and Fredrick Ataxia Association, Australia)
- Nominated for the Faculty Assembly Award for Outstanding Accomplishments by a Young Faculty Member (2011)
- The Board of Regents (State of Louisiana) Travel Grant for Emerging Faculty (TGEF)
- Served as a Judge for the Graduate Research Day held at Dental School, LSUHSC
- Served as a reviewer for the Department of Genetics Graduate student's qualifying exams
- Journal reviewer (Ad hoc): Nature Genetics, Human Molecular Genetics, Autophagy, Brain Research, Biophysical Journal, FASEB Letters, Molecular Neurobiology,

Neuroscience Letters, Neurobiology of Aging, Neural Regeneration Research, Plos One, Progress in Neurobiology, WIREs RNA

- Co-Director, LSUHSC-Public School Partnership Program
- Member, Council on Professional Conduct Committee
- Member, Research Enhancement Funds Committee
- Member, Multicultural and diversity Committee
- External expert in Azy Kia's thesis committee (Currently a Graduate student in Dr. Piera Pasinelli's lab), Center for Neuroscience, Thomas Jefferson Medical Center, Philadelphia
- Grader, Qualifying Exam (Anasheh Halabi, MD/PhD Candidate, Ed Grabczyk lab)
- Grader, Qualifying Exam (Aditi Ayengar, PhD Candidate, Andrew Hollenbach lab)
- Grader, Qualifying Exam (Nikki Lynn Hue Nguyen, MS student, Jay Kolls lab)
- Dissertation Committee Member (Allison C. Augustus-Wallace, Arthur Haas lab, Biochemistry at LSUHSC)
- Academic Editor of PloS ONE

#### **Dr. Tsien**

- Reviewer-International Journal of Audiology
- Member of the LSUHSC- New Orleans Graduate School Multicultural/Diversity Committee
- Member, Mentoring in Medicine committee
- Co-Director of the Summer Internship Research Program
- Co-Director of the Department of Genetics Seminar Series, LSUHSC, New Orleans, LA.
- Co-Director of the LSUHSC-New Orleans School Science Partnership Program
- Organizer and judge, Greater New Orleans Regional Science and Engineering Fair
- Judge, State level science and engineering fair
- Judge, Benjamin Franklin High School science fair
- Super Science Saturday at the Louisiana Children's Museum: helped children perform hands-on science experiments representing LSUHSC and the American Association of Women in Science
- Recruitment fair: attended Xavier University with LSUHSC faculty and students, including Dr. Andrew Hollenbach and Dr. Dereck Rovaris as part of the Multicultural/Diversity Committee to describe the various educational programs offered at LSUHSC
- National Mentoring in Medicine Day: Presented to almost 70 high school students at the National Mentoring in Medicine Program at LSUHSC. This is collaboration between LSUHSC and the local church and New Orleans community to expose highly qualified but underprivileged high school students to opportunities in the health sciences.
- LSUHSC-New Orleans School Science Partnership Program Field Day at LSUHSC: Directed and organized activities for 4th graders to rotate among various laboratories for hands-on activities.

## Professional Affiliations

### **Judy Crabtree, Ph.D.**

- The Endocrine Society
- American Society of Human Genetics
- Association of Women in Science
- The American Association for Cancer Research

### **Edward Grabcyk, Ph.D.**

- American Association for the Advancement of Science
- American Society for Biochemistry & Molecular Biology

### **Paula Gregory, Ph.D.**

- American Association for Cancer Research
- Association of Professors of Human and Medical Genetics
- American Society for Human Genetics
- American Society for Gene Therapy
- American Association for Cancer Education

### **Andrew Hollenbach, Ph.D.**

- The American Society for Biochemistry and Molecular Biology
- The Gay and Lesbian Medical Association

### **Wanguo Liu, Ph.D.**

- American Society of Human Genetics
- The American Association of Cancer Research

### **Diptasri Mandal, Ph.D.**

- The American Society of Human Genetics
- The International Genetic Epidemiology Society

### **Udai Pandey, Ph.D.**

- Genetics Society of America

### **Fern Tsien, Ph.D.**

- DNA Methylation Society
- LSUHSC Stanley S. Scott Cancer Center
- American Society of Human Genetics
- Center for Acadiana Genetics and Hereditary Health Care
- Greater New Orleans Science and Engineering
- Association of Women in Science
- LSUHSC Multicultural and Diversity Committee
- Louisiana Vaccine Center

## Publications

### Dr. Gregory:

1. Ladan Espandar, MD; Bruce Bunnell, PhD; Guo Yong Wang, MD, PhD; **Paula Gregory, PhD**; Christine McBride, MS; Majid Moshirfar, MD, Adipose-Derived Stem Cells on Hyaluronic Acid-Derived Scaffold: A New Horizon in Bioengineered Cornea. *Arch Ophthalmol.* 2012;130 (2):202-208.

### Dr. Hollenbach:

1. Iyengar, A. S. and **Hollenbach, A. D.** “Altered states of Pax3 phosphorylation contribute to regulation in melanocytes and melanoma” American Society for Biochemistry and Molecular Biology Annual Meeting, San Diego, California, April 2012 (Abstract 734.6).

2. Loupe, J. M., Miller, P. J., Iyengar, A. S., and **Hollenbach, A. D.** “A means to an end: a role for phosphorylation in the degradation of Pax3” American Society for Biochemistry and Molecular Biology Annual Meeting, San Diego, California, April 2012 (Abstract 734.7).

3. **Hollenbach, A. D.**, Loupe, J. M., Iyengar, A. S., and Miller, P. J. “Analysis of Pax3 phosphorylation in regulating DNA binding in early myogenic differentiation” American Society for Biochemistry and Molecular Biology Annual Meeting, San Diego, California, April 2012 (Abstract 734.78).

### Dr. Liu:

1. Li Y, Bavarva JH, Qian C, Thibodeau SN, Golemis EA, and **Liu W.** HEF1, a Novel Target of Wnt Signaling, Promotes Colonic Cell Migration and Cancer Progression. *Oncogene* 2011, 30(23):2633-43.

2. Wang ZH, Wang ZM, Guo J, Li Y, Bavarva JH, Qian C, Brahimi-Horn MC, Tan D, and **Liu W.** Inactivation of Androgen-Induced Regulator ARD1 Inhibits Androgen Receptor Acetylation and Prostate Tumorigenesis. *Proc Natl Acad Sci USA* 2012, 109(8):3053-8.

3. Wang Z, Lin Y, Qian C, Zabaleta J, Sartor O, Ledet E, Hu JJ, Mandal D, and **Liu W.** Exome sequencing identifies germline mutations associated with prostate cancer risk in African American families. LCRC Annual Scientific Retreat, New Orleans, LA, March 9-10, 2012; p27

4. Wang ZH, Wang ZM, Guo J, Li Y, Qian C, Tan D, and **Liu W.** Coactivator ARD1 acetylates androgen receptor for prostate tumorigenesis. Advances in Prostate Cancer Research, An AACR Special Conference, Orlando, FL, February 6-9, 2012; p88:B10.

### Dr. Mandal:

1. Suggestive evidence of linkage identified at chromosomes 12q24 and 2p16 in African American prostate cancer families from Louisiana. E.M. Ledet, O. Sartor, W. Rayford, J.E. Bailey-Wilson, **D.M. Mandal.** The Prostate. 2012 Jun 15;72(9):938-47. doi: 10.1002/pros.21496. Epub 2011 Oct 5.

**Dr. Pandey:**

1. Lanson NA, **Pandey UB**. FUS-related Proteinopathies: Lessons from Animal Models. *Brain Research*. 2012 Jun 26;1462:44-60. doi: 10.1016/j.brainres.2012.01.039. Epub 2012 Jan 25
2. Nichols CD, Bechnel J, **Pandey UB**. Methods to assay Drosophila behavior. *Journal of Visualized Experiments*, 2012 Mar 7;(61). pii: 3795. doi: 10.3791/3795
3. Lanson NA, Maltare A, King H, Smith R, Kim JH, Taylor JP, Lloyd TE and **Pandey UB**. A Drosophila model of FUS-related neurodegeneration reveals genetic interaction between FUS and TDP-43. *Human Molecular Genetics* 2011 Jul 1;20(13):2510-23.
4. **Pandey UB** and Nichols CD. Human disease models in Drosophila melanogaster, and the role of the fly in therapeutic drug discovery. *Pharmacol Rev* 2011, Jun;63(2):411-36.

**Dr. Tsien:**

1. Kibe R, Zhang S, Marrero L, **Tsien F**, Zieske A, Huang J, Durum S, Iwakuma T, Cui Y, IL-7Ra deficiency in p53null mice exacerbates thymocyte telomere erosion and lymphomagenesis, *Cell Death and Differentiation*; advance online publication, 27 Jan (2012).

**DEPARTMENT OF GENETICS ACTIVE EXTRAMUAL FUNDING  
FISCAL YEAR 2011 – 2012**

<i>PRINCIPAL INVESTIGATOR</i>	<i>TITLE OF PROJECT</i>	<i>AGENCY</i>	<i>FUNDING MECHANISM</i>	<i>BEGINNING DATE</i>	<i>ENDING DATE</i>	<i>TOTAL PROJECT COSTS</i>
Choi, Sun Mi	Alcohol and Pulmonary Immunity to MRSA	NIAAA	F31	9/12/2011	5/31/2015	\$ 206,260
Gregory, Paula	LSUHSC Summer Internship Program	NHLBI	T35	3/1/2011	2/29/2016	\$ 107,150
Gregory, Paula	Short Term Training for Medical Students	NIDDK	T35	4/1/2012	3/30/2017	\$ 283,305
Gregory, Paula/ Molina, Patricia	Medical Student Alcohol Research Internship	NIAAA	T35	4/1/2012	3/31/2017	\$ 118,045
Gregory, Paula/ Molina, Patricia	Louisiana SURE Program	NIAAA	R25	4/5/2012	3/31/2017	\$ 447,920
Halabi, Anasheh	Targeting DNA mismatch repair in age related repeat expansion	NIA	T30	4/1/2012	3/31/2015	\$ 128,237
Hollenbach, Andrew	Mechanism of regulation for the oncogenic Pax3-FOXO1 in Alveolar Rhabdomyosarcoma	NCI	R01	6/1/2009	3/31/2014	\$ 1,473,250
Mandal, Diptasri	Determination of Genetic Susceptibility to Lung Cancer	NHLBI	Contract	10/3/2011	10/2/2016	\$ 1,145,543
<b>Total Federal Grants/Contracts Funding</b>						<b>\$ 3,909,710</b>
Grabczyk, Edward	Transcription-coupled GAA-TTC expansion in human cells	FARA	N/A	1/1/2011	12/31/2011	\$ 89,958
Pandey, Udai	A drosophila model to investigate the role of FUS in ALS	Robert Packard Center for ALS Research at Johns Hopkins	N/A	7/1/2010	6/30/2012	\$ 170,000
Pandey, Udai	Molecular basis of FUS/TLS-related amyotrophic lateral sclerosis	Amyotrophic Lateral Sclerosis Association	N/A	8/1/2011	7/31/2014	\$ 240,000
Tsien, Fern	Improving Louisiana College Retention through Early Career Choices	Patrick F. Taylor Foundation	N/A	8/1/2012	7/30/2016	\$ 83,288
<b>Total Private Foundation Grants/Contracts Funding</b>						<b>\$ 583,246</b>
Crabtree, Judy	Testing Iytic peptides in a mouse xenograft model of uterine fibroids	Pennington Biomedical Research Center	N/A	9/12/2011	7/31/2012	\$ 9,919
<b>Total State Grants/Contracts Funding</b>						<b>\$ 9,919</b>
<b>TOTAL GRANTS/CONTRACTS FUNDING (ALL SOURCES)</b>						<b>\$ 4,502,875</b>

Notes: (1) Active awards for Dr. Wanguo Liu are not listed. His grants/contracts are administered through the Stanley. S. Scott Cancer Center at LSUNO. Please see next page.

(2) Grants/Contracts highlighted in yellow reflect new awards in FY 2011 -2012.

**EXTERNAL DEPARTMENTAL FACULTY FUNDING  
ACTIVE EXTRAMUAL FUNDING  
FISCAL YEAR 2011-2012**

<i>PRINCIPAL INVESTIGATOR</i>	<i>TITLE OF PROJECT</i>	<i>AGENCY</i>	<i>FUNDING MECHANISM</i>	<i>BEGINNING DATE</i>	<i>ENDING DATE</i>	<i>TOTAL PROJECT COSTS</i>
<i>Grants Administered by the Cancer Center:</i>						
Liu, Wanguo	DNA Damage-Response Defects in Prostate Cancer Risk	NCI	R01	9/29/2007	7/31/2012	\$1,241,386
Liu, Wanguo	DNA Damage-Response Defects in Prostate Cancer Risk,	NCI	R01 - ARRA Fellow Supplement	9/30/2009	9/29/2013	\$202,875
<i>Total Federal Grants/Contracts Funding</i>						<b>\$1,444,261</b>
NONE						
<i>Total Private Foundation Grants/Contracts Funding</i>						<b>\$ -</b>
NONE						
<i>Total State Grants/Contracts Funding</i>						<b>\$ -</b>
<b>TOTAL GRANTS/CONTRACTS FUNDING (ALL SOURCES)</b>						<b>\$1,444,261</b>

**DEPARTMENT OF GENETICS  
SUBMITTED GRANT/CONTRACT APPLICATIONS  
FISCAL YEAR 2011 – 2012**

<b>PRINCIPAL INVESTIGATOR</b>	<b>TITLE OF PROJECT</b>	<b>AGENCY</b>	<b>FUNDING MECHANISM</b>
Iyengar, Aditi	Contributions of Pax3 Phosphorylation to Melanoma Development: A Potential Novel Therapeutic Target	The Joanna M. Nicolay Melanoma Foundation	N/A
Halabi, Anasheh	Targeting DNA mismatch repair in age related repeat expansion	NIA	F30
Judy Crabtree	MEN1 Regulation in Type 2 Diabetes	Novo Nordisk	Early Explorataion Award
Judy Crabtree	miRNA regulation of menin controls adaptive beta cell expansion	NIH	R01
Judy Crabtree	Epigenetic mechanisms regulating pancreatic neuroendocrine tumors	AACR	Carcinoid Tumor and Pancreatic Neuroendocrine Tumor Research
Judy Crabtree	FSH Pretreatment to Increase Efficacy of LHRD Conjugates for Epithelial Ovarian Carcinoma	Mary Kay Foundation	N/A
Judy Crabtree	Testing Iytic peptides in a mouse xenograft model of uterine fibroids	Pennington	N/A
Gregory, Paula	Louisiana SURE Program	NIAAAA	R25
Gregory, Paula	LSU Health Sciences Fellowship Program	American Heart Association	Fellowship Program
Gregory, Paula	Medical Student Research Program	NIAID	T35
Gregory, Paula	Building a Pipeline to Careers in Biomedical Research	NHLBI	R25
Gregory, Paula	FOCUS-A Short Term Eye Research Internship	NEI	T35
Hollenbach, Andrew	Chronic alcohol and muscle wasting: FOXO1-centric inflammatory mechanisms	NIH	R21
Hollenbach, Andrew	Analyzing Pax3 phosphorylation as a molecular target for melanoma treatment	Melanoma Research Fdtn	Established Investigator Grant
Hollenbach, Andrew	Pax-3-FOXO1-dependent transcriptome and miRNA level changes in myogenesis and ARMS	NCI	R03
Loupe, Jacob	Regulation of oncogenic Pax3 FOXO1 activity and stability by phosphorylation	NCI	F31
Loupe, Jacob	Regulation of oncogenic Pax3 FOXO1 activity and stability by phosphorylation	NCI	F-31
Monaghan, John	Investigating the mitochondrial pathology in FUS related ALS	ALS	Postdoc Fellowship
Mandal, Diptasri	Identify rare risk alleles in familial lung cancer	NHLBI	R01
Mandal, Diptasri	Prostate cancer Susceptibility: The ICPCG Study	NCI	R01
Mandal, Diptasri	Prostate cancer Susceptibility: The ICPCG Study (resubmission)	NCI	R01
Ripple, Michael	Effects of JC Virus on cell signaling and DNA repair pathways in colon cancer	NCI	F-30



**DEPARTMENT OF GENETICS  
SUBMITTED GRANT/CONTRACT APPLICATIONS  
FISCAL YEAR 2011 – 2012**

<b>PRINCIPAL INVESTIGATOR</b>	<b>TITLE OF PROJECT</b>	<b>AGENCY</b>	<b>FUNDING MECHANISM</b>
Pandey, Udai	Dissecting molecular mechanism of FUS/TLS-related amyotrophic lateral sclerosis	Muscular Dystrophy Association	N/A
Pandey, Udai	Molecular pathogenesis of FUS-related amyotrophic lateral sclerosis	Frick Foundation	N/A
Pandey, Udai	An in vivo screen for small molecules that protect against neurodegeneration	NIH	R21
Pandey, Udai	Investigating the role of HDAC6 in age-related neurodegeneration	American Federation for Aging Research	N/A
Pandey, Udai	High caloric or high fat diet to ameliorate Lou Gehrig's disease	PBRC Nutrition Obesity Research Center (NORC)	N/A
Pandey, Udai	Molecular library screen for suppression of FUS proteinopathy	NIMH	R03
Pandey, Udai	Cellular and Molecular Mechanisms of FUS-related Amyotrophic Lateral Sclerosis (ALS)	NIH	R01
Tsien, Fern	REU Site: Summer Research Experiences for Undergraduates in Basic Genetics Research at LSUHSC	NSF	REU
Tsien, Fern	Improving Louisiana College Retention through Early Career Choices	Patrick F. Taylor Foundation	N/A
<b>Total Number of Applications Submitted = 31</b>			