

# LSU Health Sciences Center Department of Genetics



**Annual Report  
Fiscal Year 2011**

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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:

**Jay K. Kolls, MD**  
Professor and Chair

**Edward Grabczyk, PhD**  
Associate Professor

**Andrew Hollenbach, PhD**  
Associate Professor

**Wanguo Liu, PhD**  
Associate Professor

**Doan Nguyen, PhD**  
Instructor

**Derek Pociask, PhD**  
Assistant Professor- Research

**Lisa Moreno-Walton, MD**  
Assistant Professor- Research

**Judy Crabtree, PhD**  
Assistant Professor

**Paula Gregory, PhD**  
Associate Professor

**Tomoo Iwakuma, MD, PhD**  
Assistant Professor

**Diptasri Mandal, PhD**  
Associate Professor

**Udai Pandey, PhD**  
Assistant Professor

**Fern Tsien, PhD**  
Instructor

**Mingquan Zheng, PhD**  
Associate Professor- Research

### 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

**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

**Guoshun Wang, DVM, PhD**

Associate Professor, Microbiology,  
Immunology and Parasitology

**Oliver Wessely, PhD**

Associate Professor, Anatomy

**Regina Zambrano, MD**

Assistant Professor, Clinical Pediatrics

**Adjunct:**

**Prescott Deininger, PhD**

Professor & Director  
Tulane Cancer Center

**John Doucet, PhD**

Associate Professor (Nichols State  
Univ), Molecular Genetics

**Barbara Kurth, PhD**

Assistant Professor (Tulane)  
Clinical Research Navigator

**Shulin Li, PhD**

Professor (LSU-BR)  
Veterinary Medicines Comparative  
Biomedical Services

**Tarun Mandal, PhD**

Professor (Xavier)  
Pharmaceutics

**William Richardson, PhD**

Assistant Professor (Oschner)  
Bariatric Surgery

**Karen Weissbecker, PhD**

Assistant Professor (Tulane)  
Psychiatry and Neurology

**Emeritus Faculty:**

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

Professor, Genetics

**Mary Z. Pelias, PhD, JD**

Professor, Genetics

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

**Jay K. Kolls, MD**

Professor and Chair, Genetics

**Yan Cui, PhD**

Associate Professor, Microbiology,  
Immunology and Parasitology

**Edward Grabczyk, PhD**

Associate Professor, Genetics

**Andrew Hollenbach, PhD**

Associate Professor, Genetics

**Shahriar Koochekpour, MD, PhD**

Assistant Professor, Urology

**Michael S. Lan, PhD**

Professor, Pediatrics

**Diptasri Mandal, PhD**

Associate Professor, Genetics

**Udai Pandey, PhD**

Assistant Professor, Genetics

**Krzysztof Reiss, PhD**

Professor, Hematology/Oncology

**Guoshun Wang, DVM, PhD**

Associate Professor, Microbiology,  
Immunology and Parasitology

**Regina Zambrano, MD**

Assistant Professor, Clinical Pediatrics

**Judy Crabtree, PhD**

Assistant Professor, Genetics

**Luis Del Valle, MD**

Associate Professor, Hematology/  
Oncology

**Paula Gregory, PhD**

Associate Professor, Genetics

**Tomoo Iwakuma, MD, PhD**

Assistant Professor, Genetics

**Yves Lacassie, MD, FACMG**

Professor, Pediatrics

**Wanguo Liu, PhD**

Associate Professor, Genetics

**Donald Mercante, PhD**

Professor, Biostatistics

**Alistair Ramsay, PhD**

Professor and Head, Microbiology  
Immunology and Parasitology  
Director, Gene Therapy

**Judd Shellito, PhD**

Professor and Section Chief,  
Pulmonary

**Oliver Wessely, PhD**

Associate Professor, Anatomy

**Mingquan Zheng, MD**

Associate Professor-Research,  
Genetics

## Staff

### Administrative:

Stephanie Laurent  
Karen Cappiello  
Heather Shields

Business Manager  
Assistant Business Manager  
Department Coordinator

### Research:

Yuan Lin

Bioinformatics Specialist

Amit Adhikari, Ph.D.  
Neeraj Agarwal, Ph.D.  
Jasminkumar Bavarva, Ph.D.  
Sue Brand, Ph.D.  
Kong Chen, Ph.D.  
Meng-Hsuan Ho, Ph.D.  
Jeremy McAleer, Ph.D.  
John Monaghan, Ph.D.  
Zemin Wang, Ph.D.

Postdoctoral Fellow  
Postdoctoral Fellow  
Postdoctoral Fellow  
Postdoctoral Fellow  
Postdoctoral Researcher  
Postdoctoral Fellow  
Postdoctoral Fellow  
Postdoctoral Fellow  
Postdoctoral Fellow

Angelle Bencaz  
Angela Flynn  
Pete Finelli  
Peter Hickman  
Jill Hutchinson  
Nicholas Lanson, Jr.  
Astha Maltare  
Patrick Miller  
Candice Fisher  
Jeffrey Wang

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

### Graduate Students:

Sun Mi Choi (MD/PhD)  
Waleed Elsegeiny (PhD)  
Aditi Iyengar (PhD)  
Elisa Ledet (PhD)  
Nikki Nguyen (PhD)  
David Ricks (PhD)

Alain D'Souza (PhD)  
Anasheh Halabi (MD/PhD)  
Swathi Iyer (PhD)  
Jacob Loupe (PhD)  
Sammeta Vamsee Raju (PhD)  
Jyothi Viayaraghavan (PhD)



## Research Interests

### Jay Kolls M.D., Chair

- Investigate mechanisms of the lung host defenses in normal and immunocompromised hosts.
- Investigate how IL-23 and IL-17 regulate neutrophil recruitment in response to infectious stimuli in the lung.
- Study cellular sources of IL-17A, IL-17F, and IL-22 in lung as well as their signaling in response to pulmonary infection.
- Long-standing interest in determining if Th 17 cells and their cytokine products contribute to airway destruction in cystic fibrosis.
- Long-standing interest in understanding cytokine biology in the lung through over-expression or dominant negative inhibitor strategies using somatic gene transfer.
- Identified that sub-populations of CD8+ T-cells polarized in vivo via cytokine gene transfer have effector activity against *P. carinii*.
- Gene Expression profiling and proteomics to define this effector activity.
- Program developing CD4-independent vaccination against AIDS-related opportunistic infections.

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

- Understanding biological processes & epigenetics of endocrine tumor disorders.
- Candidate gene transcriptional regulation via methylation in tumors from human and the Eker rat, and the functional consequences of this epigenetic regulation in uterine fibroid pathogenesis.
- Role of microRNAs in uterine fibroid etiology.
- The role of estrogen, progesterone and other hormones in the epigenetic regulation of menin expression and function in Multiple Endocrine Neoplasia Type1 (MEN1).

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

- Genetic disorders caused by unstable repetitive DNA ("dynamic mutations")
- Interactions between DNA structure, transcription, and replication that elicit repeat expansion diseases such as Friedreich ataxia

### 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
- Biochemical mechanisms of post-translational modifications in melanoma development

Tomoo Iwakuma, M.D., Ph.D., Assistant Professor

- Protein function on the p53 pathway
- Analyses of mouse models of cancer
- Dissection of the mechanism underlying osteosarcoma metastasis

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 linkage and segregation analysis of complex disorders, in particular humans cancers
- Investigation of properties of statistical genetic analysis methods through computer simulation

Doan Nguyen, Ph.D., Instructor

- Secretory lacrimal gland of the ocular surface and the contribution of the neural pathways on lacrimal gland function
- Interested in developing a web application, Gene2function, a SQL database application to consolidate high-throughput data such as microarrays relating to the lacrimal gland and dry eye syndrome. This easy to use application will allow investigators to develop their own genomics database

Udai Pandey, Ph.D., Assistant Professor

- Modeling human neurodegenerative disease such as amyotrophic lateral sclerosis and spinobulbar muscular atrophy in *Drosophila*
- Investigating the role of protein degradation pathways in neurodegeneration
- Unbiased genetic screening to identify novel modifiers of neurodegeneration

Derek Pociask, Ph.D., Assistant Professor of Research

- The role of gamma delta T cells in pulmonary injury, repair and fibrosis, as well as the genes important in their signaling and amplification.

- How extracellular peptides such as lipocalin 2 (an extracellular siderophore) helps protect the lung in the initial stages of epithelial injury.
- The long term impact of influenza injury in the lung and its role in promoting fibrosis through inducing epithelial to mesenchymal transitions.

Fern Tsien, Ph.D., Instructor

- Chromosome instability in cancer and stem cells
- Epigenetics and chromatin modifications
- Genetics education, especially in the fields of Cytogenetics and Epigenetics
- Correlation between DNA methylation with constitutive heterochromatin and gene silencing
- Genetics of the Acadian population

Lisa Moreno-Walton, M.D., Assistant Professor of Research

- The impact of alcohol and substance abuse on outcomes from trauma (especially mortality, homeostatic maintenance, and the development of sepsis)
- Issues implicit in consenting trauma patients for participation in research
- Intergenerational learning and teaching

Mingquan Zheng, M.D., Associate Professor of Research

- Investigating mechanisms of lung host defenses in normal and immunocompromised hosts.
- Developing CD4-independent vaccination against AIDS-related opportunistic infections and influenza.
- Investigating how IL-23 and IL-17 regulate neutrophil recruitment in response to infectious stimuli in the lung.
- Role of IL-17 signaling in COPD

## **Department of Genetics Annual Report Fiscal Year 2011**

### **Year in Review**

Fiscal year 2011 can be defined as a year of recognition for the faculty of the Department of Genetics. Our faculty were nominated for and received awards in all three areas supporting the mission of the Health Sciences Center: teaching, research and service. These awards have showcased what we have always known within the Department, that the Genetics faculty are among the best within the School of Medicine and the Health Sciences Center as a whole. Congratulations to Drs. Tsien, Pandey, Gregory and Kolls!

Fiscal year 2011 has also been a year of “firsts” within the Department: first T35; first fly animal model for ALS, first celebration of DNA Day and first patent to name a few. Fiscal Year 2011 has been an exciting time to be in the Genetics Department and we look forward to more trailblazing in Fiscal Year 2012!

### **Faculty**

As mentioned above, the Genetics Faculty received recognition of their contributions to teaching, research and service. The faculty assembly of the LSUHSC School of Medicine, in order to recognize the contributions of faculty to the mission of the School of Medicine, developed recognition awards for: Outstanding Service to the Institution, Outstanding Service to the Community, Outstanding Young Faculty Member and Outstanding Mentor. We are proud to announce that Dr. Fern Tsien received the 2011 LSU School of Medicine Faculty Assembly Award for Outstanding Service to the Community. Dr. Tsien’s community service includes scientific workshops at local schools, acting as a guest judge for local and state science fairs, and advisor to high school students interested in research and science as a career. Further, Dr. Tsien also organized and directed the first community outreach project at the New Orleans Audubon Zoo in celebration of DNA Day, a concept visualized by Dr. Tsien’s outreach colleague, Dr. Paula Gregory. The goal of the event was to make the general public aware of the importance of DNA and genetics in our everyday lives.

Dr. Udai Pandey was also a nominee for the Outstanding Young Faculty Award. Dr. Pandey developed the first animal model of Amyotrophic Lateral Sclerosis (ALS). His lab has found in fruit flies that blocking the abnormal movement of a protein made by a mutated gene called FUS also blocks the disease process. Dr. Pandey joined the Department of Genetics in July 2009 and has obviously made an impact in our research community!

The recognition was not limited to the Faculty Assembly. Each year the Aesculapian Society at the LSUHSC School of Medicine in New Orleans invites the medical students to nominate faculty on the basis of leadership, quality of instruction, approachability and overall excellence in teaching. Our own Dr. Paula Gregory was a nominee for this award.

Members of our faculty were also recognized by the research community at large. Dr. Jay K. Kolls is one of the few scientists in the United States selected to receive the prestigious Method to Extend Research in Time (MERIT) award by the National Institutes of Health's National Heart, Lung and Blood Institute. Through the MERIT Award, a principal investigator may receive up to ten years of research support in two five-year segments without the need to prepare a renewal application after five years. Dr. Kolls was selected as a MERIT awardee for his recent grant to further his work on a discovery that plays a critical role in the body's defense against pneumonia. This research will help advance prevention and treatment of pneumonia and also advance vaccine development against lung infections.

Congratulations again to all of our award nominees and recipients!

The Department of Genetics congratulates Dr. Wanguo Liu for his successful advancement in the FY2011 promotion and tenure application process. Dr. Liu was granted tenure and promoted from Associate Professor to Associate Professor with tenure. Dr. Liu joined the Department of Genetics in 2007 where he was recruited from The Mayo Clinic in Rochester, MN. Dr. Liu's tenure became effective July 1, 2011.

## **Research**

### Grants and Contracts

In fiscal year 2011, the Department of Genetics faculty members were awarded 9 grants totaling \$946,176 including 3 NIH awards/contracts, 3 Private Foundation awards and 3 awards from state agencies. We currently have 30 active grants and contracts totaling \$13,165,818

Notably, Dr. Gregory received a T35 Training grant from National Heart, Lung and Blood Institute. The T35 funding allows Dr. Gregory to support five medical students every year in the Summer Research Internship program. The program provides medical students the opportunity to work in basic or clinical sciences research in an effort to cultivate their interest in research careers. Students will conduct intensive hands-on clinical or basic science research for 10 weeks in the summer, working with LSUHSC faculty. Those students who participate for a second summer will act as peer mentors to incoming participants, thus providing an important mentoring component to the program. This program will create a whole generation of new physician researchers who are prepared to conduct biomedical research in Louisiana. This is the first T35 for the entire LSU Health Sciences Center!

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 2011.

### Research Accomplishments

As noted above, Dr. Pandey developed the first animal model of Amyotrophic Lateral Sclerosis (ALS). Dr. Pandey's lab has found in fruit flies that blocking the abnormal movement of a protein made by a mutated gene called FUS also blocks the disease process. The research is available online in the Advanced Access section of the journal Human Molecular Genetics website, posted April 12, 2011.

The Department of Genetics is also proud to announce Dr. Andrew Hollenbach and co-inventor Kelly Johanson had their patent entitled: “System for pulling out regulatory elements in yeast” issued on April 26, 2011. This patent was issued for the development of a novel system that utilizes yeast to identify genomic regulatory elements that are directly bound by a known transcription factor or DNA binding protein. Kelly Johanson is a former postdoctoral fellow in Dr. Hollenbach’s lab and she is currently an Assistant Professor in the Department of Chemistry at Xavier University in New Orleans, LA. This is the first patent for the Department of Genetics.

#### Publications and Presentations

Department faculty and staff continued their productivity by contributing a total of 49 published papers, 60 invited presentations and 44 platform and poster presentations at local, national and international meetings in fiscal year 2011.

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

#### Research Infrastructure

We are pleased to announce the appointment of Mr. Yuan Lin, Bioinformatics Specialist, for the LSU School of Medicine. Mr. Lin’s primary appointment is within the Department of Genetics but will provide services to all departments within the School of Medicine. Mr. Lin received his Bachelor’s degree in Microbiology from Fudan University, Shanghai, China in 1995. He next attended graduate school at Iowa State University where he received a Master’s degree in Bioinformatics and Computational Biology in 2001 and a second Master’s degree in Computer Sciences in 2003.

Mr. Lin has over ten years of experience in the fields of bioinformatics and computational biology, most recently at GeneDx Incorporated. There, he worked as the leading software engineer and bioinformatics scientist to develop a next-generation sequencing data process and analysis workflow for clinical genetic testing. Before that, Mr. Lin worked at the J. Craig Venter Institute, where his most noteworthy contributions were toward decoding the first genome of an individual human and developing a comparative genome browser. He also spent 4 years with Integrated DNA Technologies Incorporated as a Bioinformatics Application Developer. He led the development of a computation engine of IDT SciTools and developed several novel algorithms and computational software packages for designing optimal oligo products for biological research.

Since arriving at LSU, Mr. Lin has been working with the faculty in the Cancer Center, the section of Pulmonary Critical Care, and the Department of Genetics to develop data analysis pipelines for RNA-Seq mapping and analysis, as well as Metagenomics.

Dr. Kolls was awarded an enhancement grant from the Louisiana Board of Regents for the development of single hairpin RNA (shRNA) screening facility. The facility will house shRNA libraries and facilitate the development of shRNA screening to interrogate gene function. Previously, there was no high throughput facility at LSUHSC to allow unbiased approaches to study gene function.

## Education

### Teaching

In fiscal year 2011, our faculty taught in 20 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.

In fiscal year 2011, the Genetics Journal Club (GENET 290) course was approved and offered for the first time. The course developed by Drs. Iwakuma, Liu and Tsien examines the types of genetic alterations that contribute to genetic disease, how to identify the genetic components and alterations, genotype-phenotype correlations, and functional analyses of responsible genes using recently published articles. In this course, students and postdoctoral fellows will discuss genetics-focused journal articles. Participants will present the interpretation of experimental design, analysis of results, and clinical relevance, using recently published scientific articles related to the field of genetics. By the end of the course, students should understand that various genetic alterations are responsible for the development of genetic disease.

Additionally, Animal Models in Research (GENET 242) was finalized and will be offered in FY2012. This new elective course on animal models, developed and co-directed by Drs. Crabtree, Iwakuma and Pandey, will be available to all LSUHSC graduate students and will examine the different types of animal models that mimic human genetic disorders and discusses some of the underlying biochemical principles that result from these genetics alterations. By the end of the course students should understand how various types of animal models such as *Xenopus*, *Drosophila*, and mouse are used to understand human genetic disorders including congenital diseases and cancer.

### Graduate Program

During fiscal year 2011, the Department of Genetics accepted five new students into its graduate program for the 2011-2012 academic year, including three MD/PhD students (Michael Ripple, Jack DePaolo and Anasheh Halabi under the mentorship of Drs. Luis Del Valle, Judy Crabtree and Ed Grabczyk, respectively), one student from the School of Graduate Studies Interdisciplinary Program (Elaine Maggi under the mentorship of Dr. Judy Crabtree), and one student directly admitted to the Genetics Department, Ian Casci.

In total, last year the Department of Genetics had 12 graduate students, of whom one has graduated (Sammeta Vamsee Raju under the mentorship of Dr. Guoshun Wang). At present Dr. Raju is a Post-Doctoral Fellow at Cystic Fibrosis Research Center in University of Alabama at Birmingham.

The Graduate School Program in the Department of Genetics performed a number of student recruitment activities in fiscal year 2011. 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 provide a foundation for recruitment into our graduate program and a platform for faculty to discuss their research interests with prospective students.

The Graduate Student Oversight Committee held meetings and contacted students and their respective mentors to keep them on track for the taking of their Departmental and Institutional degree requirements. The members of this committee for fiscal year 2011 included Drs. Mandal, Hollenbach, Iwakuma and Wessely. Dr. Judy Crabtree has since been appointed by Department Chair, Dr. Jay Kolls, to replace Dr. Wessely after his transfer to Cleveland Clinic in Cleveland, Ohio.

The Department also appointed two new training faculty members, Yves Lacassie, M.D. and Regina Zambrano, M.D. from the Children's Hospital, New Orleans. Finally, Department Chair Dr. Jay Kolls appointed Dr. Andrew Hollenbach, Ph.D. as Associate Graduate Coordinator for the Department of Genetics Graduate Program.

### 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. In fiscal year 2011, seminars were presented by each of the graduate students, in addition to local and national researchers. Invited outside speakers included:

- **Yi Zheng, Ph.D.**  
Professor, Department of Pediatrics  
University of Cincinnati, College of Medicine  
Cincinnati, OH  
*"Rho GTPases: Physiological Functions and Translational Implications"*  
November 18, 2010
- **J. Paul Taylor, M.D., Ph.D.**  
Associate Member, Developmental Neurobiology  
St. Jude Children's Research Hospital  
Memphis, TN  
*"VCR; The Rosetta Stone of Human Degenerative Diseases"*  
December 10, 2010



- **Marco Colonna, M.D**  
Professor, Department of Pathology and Immunology  
BJC Institute of Health at Washington University  
St. Louis, MO  
*“NK Cells in Mucosal Immunity”*  
February 11, 2011
- **Romana Nowak, PhD**  
Associate Professor  
Department of Animal Sciences  
University of Illinois  
Urbana-Champaign, IL  
*“Uterine Leiomyomas: New Strategies for Identifying Potential Therapeutic Agents”*  
April 8, 2011

A full copy of the 2010-2011 seminar series schedule can be found in the Appendix.

## **Outreach Activities**

### **Summer Internship Research Program**

The summer research program, directed by Drs. Paula Gregory and Fern Tsien, accepted 64 students (7 high school, 30 undergraduate, and 27 medical students) out of 237 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 the scientific method, how to design experiments, and how analyze and interpret data. Furthermore, they gain valuable hands-on laboratory experience during their summer months. Funding to support this program comes from both intramural and extramural funding. Overall the program is funded by the Louisiana Vaccine Center, National Heart, Lung and Blood Institute, the LSU School of Medicine, Tulane School of Medicine, the National Institutes of Health through the NIH ARRA stimulus supplements, and the Patrick F. Taylor Foundation. New funding was made available this year to the program, Dr. Gregory was a recipient of a National Heart, Lung and Blood Institute T35 Training grant, which funded five medical students. Additionally, the Dean of the LSUHSC School of Medicine provided funding for ten Xavier undergraduate students to enhance minority research.

The summer program is modeled after the NIH Summer Internship Program and has three main components. Students work directly with faculty and graduate students on a research project of their liking 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 encompasses didactic learning through seminars, journal clubs, and lab meetings. The program hosts a seminar series that covers a variety of topics related to basic laboratory techniques, careers in the biomedical fields, and responsible conduct of research. The third component of the program focuses on communication and presentation skills. Students are to design posters and learn strategies for effective data presentation.

At the end of the summer, the interns presented their results at one of two scientific meetings attended by students, mentors, lab members, and the scientific community. Medical students were encouraged to give an oral presentation of their results at the Medical Student Research Symposium on July 22, 2011 at the CSRB on the LSUHSC campus. High school, undergraduate, and medical students who did not participate in the Symposium presented their summer projects at the Summer Internship Poster Session held in the J. Bennett Johnston Building at TUHSC on July 29<sup>th</sup>, 2011. Awards were given out to top posters and oral presentations in each academic category (High School, Undergraduate, and Medical students). The list of awardees and mentors can be found in the appendix.

### **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.

### ***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 second annual DNA Technology Camp 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

***LSUHSC/Patrick F. Taylor K-12 Hands-on Workshop Program:***

Dr. Tsien directs the LSUHSC/Patrick F. Taylor K-12 workshop program and is assisted by medical and graduate students in instructing the hands-on workshops. The goals of the program are:

- Make science more interesting to students.
- Enable students to learn curriculum by hands-on experiments, which utilize scientific methods commonly used in research and medical diagnostics labs.
- Spark students' interest in a medical or scientific career.
- Exposure to routine scientific experiments, which are often mentioned in the media.

Workshop topics are closely coordinated with the teachers to maximize the students' understanding of the material as it pertains to their classroom curriculum. A total of 10 schools participated in 17 workshops from September 2010 until September 2011, reaching more than 450 students. Pre- and post-workshop quizzes and teacher comments revealed that many students who attended the workshops have improved their grades and have become interested in pursuing medical and/or research careers. Many of the students from previous high school workshops return to LSUHSC as summer interns and then continued on as student workers at LSUHSC. These workshops promote the Genetics Department, LSUHSC, and LSUSOM in making the public aware of the high quality learning opportunities available at our institution.

Fiscal Year 2011 medical and graduate Student instructor assistants include former Genetics graduate student: Dr. Sammeta Vamsee Raju; Genetics graduate students: Elisa Ledet, Aditi Iyengar, Nikki Nguyen, Jacob Loupe and Waleed Elsegeiny; medical students: Victoria Givens, and Jerry Zifodya; undergraduate assistants: Bradley Howe, Jana James, and Marjorie Bateman. Additional details regarding workshops and field trips funded by Patrick F. Taylor grant can be found on the next page:

**a.) Elementary and middle school students' workshops:** Topics include scientific measurements, organs and systems, heredity, cells, DNA, and chromosome instability in cancer. The students learn to measure colored water from volumetric flasks and beakers, and converting values from the metric to English system. For the study of organs and systems, normal and diseased human organs are brought to the classroom, where students also learn about the effects of smoking on the lungs. They learn about cells and DNA by isolating DNA from strawberries, and chromosome instability in cancer is illustrated by the biting of candy swirls (DNA double helices).

**b.) High school students' field trips:** During the morning-long or day-long field trips to LSUHSC, students learn about careers in the medical sciences, including genetics research, forensics science, and clinical medicine. Experiments include: swabbing DNA from items found at 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. Students are given lab tours, including highly interactive visits of the Human Simulation Lab and Dr. Udai Pandey's *Drosophila* laboratory. The students are finally given information on careers in genetics research, clinical medicine, and other career opportunities offered at LSUHSC schools. Some high school graduates decide to work in LSUHSC laboratories while in college during the academic year or as summer interns in years following the workshops as they consider LSUHSC for their advanced education.

***DNA Day at the Audubon Zoo:***

The LSUHSC Department of Genetics celebrated DNA Day at the Audubon Zoo on April 15, 2011. The goal of the event was to make the general public aware of the importance of DNA and genetics in our everyday lives. Everyone was encouraged to participate in the activities, which were both fun and educational. Children, parents, and teachers benefited from interactive projects that they could use at home or in the classroom. Dr. Fern Tsien directed the event. Also on hand to instruct the participants were Genetics Department faculty Dr. Udai Pandey, Department of Biochemistry faculty Dr. Sunyoung Kim, Department of Genetics graduate Dr. Sammeta Vamsee Raju, Genetics and Biochemistry graduate students Aditi Iyengar, Nikki Nguyen, Jacob Loupe, Rebecca Buckley, Elisa Ledet, and Waleed Elsegeiny, University of New Orleans student and LSUHSC Department of Genetics student worker Bradley Howe, and Xavier University research associate Grace Ledet. Aditi Iyengar and Dr. Tsien were interviewed on WWL-TV Morning News to promote this highly successful event.

Participants learned how to isolate DNA from strawberries using household supplies. Students also learned about the structure of the DNA double helix by making their own miniature DNA model they were able to take home. Coloring pages of animal heredity involved the genetic traits of some of the animals found in the Audubon Zoo. Fruit flies were brought in from Dr. Pandey's lab to demonstrate the use of *Drosophila* in genetic research. Educational material was made available explaining the use of genetics research for preserving endangered species, and the impact of genetics on the public's health.

## **Other Departmental Activities**

### State of the Department Address

In fiscal year 2011, Dr. Kolls issued his second annual report and gave the second annual state of the department address to review the year and define the goals and objectives for fiscal year 2011. As in the previous year, Dr. Kolls felt it essential for the Genetics Department to practice transparency. To support this level of openness all interested parties were invited to attend the State of the Department Address and receive a copy of the annual report. The State of the Department Address given by Dr. Kolls was well attended by the entire department including full-time and joint faculty, staff, researchers and students. This transparency allows the department to work as a unified front towards achieving our collective goals.

### Annual Team Building Event

The Department of Genetics believes in fostering team spirit and understands that as a department we must all work together to achieve goals and objectives. To this end, the Department of Genetics hosted its third annual team building event and crawfish boil on May 27, 2011. The atmosphere also provided a casual forum for researchers to discuss their specific scientific research interests and to be introduced to different collaboration possibilities. Members of the department participated in team activities such as football, horseshoes and washers. By participating in the games, individual team members with very different roles in the department worked together to achieve a common goal, which highlighted the value of each person's skill set and how well these skill sets can complement one another when applied as a unified effort. The fun, relaxed afternoon got the department out of their "normal" roles and routines, and encouraged everyone to get to know one another in a different environment. This team building activity improved morale and cohesiveness that translated back to a better, more productive work environment within the department.

## **Plans for the Coming Year**

Effective September 1, 2011, Dr. Wayne V. Vedeckis was named Interim Head of the Department of Genetics. Dr. Jay K. Kolls stepped down as Department Head to accept the position as Director of the Richard King Mellon Institute for Pediatric Research at Children's Hospital of Pittsburgh at the University of Pittsburgh Medical Center. Thus, the primary goal for the coming year is to recruit a Department Chair with a strong vision of excellence for the Department and with a focus on developing multi-disciplinary program projects, center grants, training programs, and fostering 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. In addition, initiatives to facilitate intra-departmental communication and camaraderie, via a seminar series or retreat, will be explored.

Significant achievements in the teaching arena have occurred in the past two years. The department will build upon this by augmenting the involvement of junior faculty in the teaching mission as their careers develop. In addition, there will be an increased visibility of the course content and instructor participation in teaching by posting detailed course schedules on the Genetics website. Finally, the teaching mission of the department will be further fostered by encouraging faculty to become members of the Academy for the Advancement of Educational Scholarship ("Teaching Academy"), with the hope of fostering educational scholarship and publications of educational research.

Finally, the department will continue to provide the excellent and highly recognized outreach and community service projects in which many of the faculty participate. 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, outreach activities will be expanded to include activities involving the LSUHSC-New Orleans Public Schools Partnership Program. Drs. Fern Tsien and Udai Pandey have been asked to serve as Co-Directors of this Program. We look forward to the opportunities this will present 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

## Teaching Activities

### *Courses Directed by Genetics Faculty*

<b>Course</b>	<b>School</b>	<b>Director</b>	<b>Genetics Lecturer(s)</b>	<b>Semester</b>
Human Molecular Genetics (GENET 231)	Graduate Studies	Dr. Gregory	Drs. Gregory, Tsien, Kolls, Crabtree, Mandal, Pandey	Summer 2010
Responsible Conduct of Research (INTER 260)	Graduate Studies	Dr. Gregory	Dr. Gregory	Summer 2010
Molecular Biology (INTER 122)	Graduate Studies	Dr. Hollenbach	Drs. Tsien, Grabczyk, Iwakuma	Fall 2010
Cell Biology and Microanatomy (ANAT 192)	Medicine	Dr. Gregory	Dr. Gregory	Fall 2010
Genetics Journal Club (GENET 290)	Graduate Studies	Drs. Liu, Iwakuma and Tsien	Presentations only	Fall 2010
Human Cytogenetics (GENET 292)	Graduate Studies	Dr. Tsien	Dr. Tsien	Fall 2010
Genetic Epidemiology and Population Genetics (GENET 236)	Graduate Studies	Dr. Mandal	Drs. Mandal, Iwakuma, Pandey	Fall 2010
Genetics (SPTHAUD 7225)	Allied Health Professionals	Dr. Tsien	Dr. Tsien	Fall 2010
Seminar (GENET299)	Graduate Studies	Dr. Tsien	Presentations only	Fall 2010
Epigenetics (GENET 234)	Graduate Studies	Dr. Tsien	Drs. Tsien, Crabtree	Spring 2011
Control of Gene Expression C (INTER 123)	Graduate Studies	Dr. Hollenbach	Drs. Tsien, Grabczyk, Iwakuma, Crabtree, Mandal, Pandey	Spring 2011
Proposal Writing (GENET 247)	Graduate Studies	Dr. Gregory	Dr. Gregory	Spring 2011
Practical Bioinformatics (GENET 256)	Graduate Studies	Dr. Grabczyk	Dr. Grabczyk	Spring 2011



**Course Lectures Given by Genetics Faculty**

<b>Course</b>	<b>School</b>	<b>Lecturer</b>	<b>Semester</b>
Cell Biology (INTER 121)	Graduate Studies	Drs. Crabtree, Gregory	Fall 2010
Biological Systems (INTER 132)	Graduate Studies	Dr. Gregory	Fall 2010
Genetic Health Across the Life Span (NURS 3451)	Nursing	Dr. Gregory	Fall 2010, Spring 2011
Cell Signaling and Cell Cycle Control (INTER 124)	Graduate Studies	Dr. Iwakuma	Spring 2011
Pathophysiology (PHTH7123)	Medicine	Dr. Gregory	Spring 2011
Medical Biochemistry (BIOCH100)	Medicine	Drs. Gregory, Tsien	Spring 2011
Medical Pharmacology (PHARM 200)	Medicine	Dr. Gregory	Spring 2011

**Department of Genetics  
Fall 2010/Spring 2011 Seminar Series Schedule**

- September 10, 2010**      **Joomyeong “Joo” Kim, Ph.D.**  
Associate Professor, Department of Biological Sciences  
Louisiana State University  
Baton Rouge, LA
- October 8, 2010**      **John Supan, Ph.D.**  
Associate Research Professor  
Director- Sea Grant Bivalve Hatchery  
Louisiana Sea Grant College Program  
Louisiana State University  
Baton Rouge, LA
- October 29, 2010**      Graduate Student Seminar: **Nikki Nguyen**
- November 18, 2010**      **Yi Zheng, Ph.D.**  
Professor, Department of Pediatrics  
University of Cincinnati, College of Medicine  
Cincinnati, OH
- November 19, 2010**      Graduate Student Seminar: **Alain D’Souza**
- December 10, 2010**      **J. Paul Taylor, M.D., Ph.D.**  
Associate Member, Developmental Neurobiology  
St. Jude Children’s Research Hospital  
Memphis, TN
- December 17, 2010**      Graduate student seminar – **Sun Mi Choi**
- January 14, 2010**      **Michael Marble, M.D.**  
Professor, Department of Pediatrics  
Children’s Hospital  
New Orleans, LA
- February 11, 2011**      **Marco Colonna, M.D.**  
Professor, Department of Pathology and Immunology  
BJC Institute of Health at Washington University  
St. Louis, MO
- February 25, 2011**      Graduate Student Seminar: **David Ricks**

**March 14, 2011**

**Dongxiao Zhu, Ph.D.**

Assistant Professor, Department of Computer Science  
University of New Orleans  
New Orleans, LA

**April 1, 2011**

Graduate Student Seminar: **Elisa Ledet**

**April 6, 2011**

Graduate student Dissertation Seminar– **Sammata Vamsee Raju**

**April 8, 2011**

**Romana Nowak, Ph.D.**

Associate Professor, Department of Animal Sciences  
University of Illinois  
Urbana-Champaign, IL

**April 29, 2011**

Graduate Student Seminar: **Aditi Iyengar**

## 2011 Summer Research Internship Winners

### Medical Student Symposium

#### MD/PhD Student Category

1<sup>st</sup> Place: Stephen Ford

Mentor: Dr. Lisa Harrison-Bernard, LSUHSC Department of Physiology

2<sup>nd</sup> Place: Scott Melton

Mentor: Dr. Michael Hagensee, LSUHSC Department of Medicine

#### MD Student Category

1<sup>st</sup> Place: Elise Boos

Mentor: Dr. Patricia Molina, LSUHSC Department of Physiology

2<sup>nd</sup> Place: Douglas James

Mentor: Dr. Taby Ahsan, Tulane Department of Biomedical Engineering

### Poster Session Winners

#### Medical Students

1<sup>st</sup> Place: Byron Hills

Mentors: Drs. Ted Weyand, Rennie Jacobs and Eric Richter, LSUHSC Neuroscience Center of Excellence

2<sup>nd</sup> Place: Brittani McClain

Mentors: Drs. Alberto Musto and Nicolas Bazan, LSUHSC Neuroscience Center of Excellence

3<sup>rd</sup> Place: Rashad Johnson

Mentors: Dr. Lisa Moreno-Walton, Departments of Internal Medicine, Emergency Medicine, and Genetics, LSUHSC

#### Undergraduate Students

1<sup>st</sup> Place: Michelle Nguyen, Tulane University

Mentor: Dr. Ping Wang, Children's Hospital of New Orleans

2<sup>nd</sup> Place: Matthew Haskins, Louisiana Scholars' College at Northwestern State University

Mentor: Dr. Diptasri Mandal, LSUHSC Department of Genetics

3<sup>rd</sup> Place: Jordana Williams, Yale University

Mentors: Drs. Jay Kolls and Derek Pociask, LSUHSC Department of Genetics

High School Category

1<sup>st</sup> Place: Jesus Perez, Chalmette High School

Mentor: Dr. Udai Pandey, LSUHSC Department of Genetics

2<sup>nd</sup> Place: Caitlin Mitchell, Patrick F. Taylor Science and Technology Academy

Mentor: Dr. Katy Phelan, Hayward Genetics Center, Tulane School of Medicine

3<sup>rd</sup> Place: Maxwell Wang, Isidore Newman School

Mentors: Drs. Jay Kolls and Mingquan Zheng, LSUHSC Department of Genetics

## Mentoring

### Dr. Kolls:

Graduate Student Advisor	Sun Mi Choi (MD/PhD) Waleed Elsegeiny (PhD) Nikki Nguyen (PhD) David Ricks (PhD)
Postdoctoral Advisor	Kong Chen, Ph.D. Jeremy McAleer, Ph.D. Tanya Johnson, Ph.D.
Summer Research Mentor	Jordana Williams
Dissertation Committee Member	Alain D'Souza Sammeta Raju

### Dr. Crabtree:

Graduate Student Advisor	John DePaolo (MD/PhD) Elaine Maggi (PhD) Jyothi Vijayaraghavan (PhD)
Lab Rotation Advisor	Elaine Maggi (IDP) Jyothi Vijayaraghavan
Dissertation Committee Member	Nikki Nguyen

### Dr. Grabczyk:

Graduate Student Advisor	Anasheh Halabi (MD/PhD)
Lab Rotation Advisor	Jyothi Vijayaraghavan Patrick Doring (IDP)
Postdoctoral Advisor	Sue Brand, Ph.D.
Summer Research Mentor	Claire Fitzgerald

### Dr. Gregory

Junior Faculty Advisor	Melanie Edwards, M.D. Tara Lin, M.D. Jesus Lovera, M.D. Diana McDermott, M.D. Eric Richter, M.D. Janet Rossi, M.D. Lenay Santana, M.D. Carmen Villavosa, M.D. Lisa Moreno-Walton, M.D. Jane Wey, M.D.
SOM Mentoring Committee	Li Shen, M.D., Ph.D. Melissa Gorman, M.D.

**Dr. Hollenbach:**

Graduate Student Advisor	Mohamed Abdraboh Kevin Dietz Aditi Iyengar Jacob Loupe
Summer Research Mentor	Thomas John
High School Intern Mentor	Steven Childress
Junior Faculty Advisor	Kelly Johanson, Ph.D. (Xavier University) Gloria Thomas, Ph.D. (Xavier University) Donna Neumann, Ph.D. Tomoo Iwakuma, Ph.D.
Dissertation Committee Member	Sammeta Vamsee Raju Purvaba Sarvaiya Rebecca Buckley Nikki Nguyen Fabrizio Picchione (Erasmus University, Rotterdam, The Netherlands)

**Dr. Iwakuma:**

Dissertation Advisor	Swathi Iyer
Postdoctoral Advisor	Neeraj Agarwal

**Dr. Liu:**

Lab Rotation Advisor	Ji Won Park (IDP)
Postdoctoral Advisor	Jianhui Guo, Ph.D. Zemin Wang, Ph.D. Yingchun Li, Ph.D.
Summer Research Mentor	George Washington
Junior Faculty Advisor	Nick Makridakis, Ph.D. (Tulane)
Dissertation Committee Member	Zemin Wang Julia Burke Elisa Ledet

**Dr. Mandal:**

Graduate Student Advisor	Elisa Ledet
Summer Research Mentor	Matthew Haskins
Dissertation Committee Member	Sammeta Vamsee Raju Aditi Iyengar
MSPH Placement Supervisor	Emily Nykaza

**Dr. Pandey:**

Postdoctoral Advisor	John Monaghan, PhD
Summer Research Mentor	Jesus Perez Kenia Carvajal Kyriate Henry Megan Sutton

**Dr. Pociask**

Summer Research Mentor	Jordana Williams
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**Dr. Tsien:**

K-12 Student Instructor Trainee Mentor	Victoria Givens (MD) Jerry Zifodya (MD) Sammeta Vamsee Raju (PhD) Elisa Ledet (PhD) Jacob Loupe (PhD) Aditi Iyengar (PhD) Waleed Elsegeiny (PhD) Nikki Nguyen (PhD) Jessica Richards (PhD) Rebecca Buckley (PhD)
Summer Research Mentor	Ayesha Umrigar

**Dr. Moreno-Walton:**

Medical Student Advisor	Paul Hurd Stephen Kaiser Crystal Leach Rashad Johnson Carla McClain (Tulane) Kyle Chong (Tulane) Christopher Terndrup (Tulane) Erin Simmer (Tulane)
Junior Faculty Advisor	Glen Michael Sara W. Nelson Julie Slick Christine Butts Christopher Willoughby



**Dr. Zheng:**

Research Mentor	David Ricks Waleed Elsegeiny Michael Ripple Amy Yu
Summer Research Mentor	Maxwell Wang

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

### Dr. Kolls:

- “Th17 Cytokines and Mucosal Immunity”. China Treg/Th17 symposium, Shanghai, China July 2010.
- “Th17 Cytokines and Mucosal Immunity”. University of Calgary, October 2010.
- “Th17 responses, Neutrophilia, and Steroid Resistant Asthma “ Pittsburgh Lung Conference, December 2010.
- “Mucosal Immunity in a Vaccine Context” Keystone Conference, Vancouver, BC. February 2011.
- “Th17 Cytokines and Mucosal Immunity”. AAAAI San Francisco, March 2011.
- “Th17 Cytokines and Mucosal Immunity”. Amgen Seattle, March 2011.
- “Th17 Cytokines and Mucosal Immunity”. Netherlands Respiratory Society, Utrecht, Netherlands, April 2011.
- “Th17 Cytokines and Mucosal Immunity”. ATS Scientific research Award, Denver CO, May 2011
- “Th17 Cytokines and Asthma, Aspen Allergy Conference July 2011.”

### Dr. Grabczyk:

- "Transcription-coupled GAA•TTC Expansion Via Mismatch Repair in Human Cells" International Friedreich's Ataxia Scientific Conference, Strasbourg, France

### 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 - West Jefferson High School
- DNA-based identification - Ben Franklin High School
- DNA-based identification - Higgins High School
- Post Katrina DNA-based identification - Haynes Academy High School
- DNA-based identification - Mt Carmel High School
- “Grant Writing” - Clinical Translational Research Center Faculty Development Training
- Week long DNA Camp for high school students

### Dr. Hollenbach:

- “The regulation of Pax3 and Pax3-FOXO1 by phosphorylation”, Xavier University, Department of Chemistry, September 2010.

### Dr. Iwakuma:

- “Targeting osteosarcoma metastasis in mouse models”, University of Mississippi Medical School, Department of Biochemistry Seminar Series; November, 2010
- “Targeting osteosarcoma metastasis in mouse models”, University of Kansas Medical School, Cancer Center Seminar Series; January, 2011
- “Mouse models of human cancer” Tulane University, Hayward Genetics Center; January, 2011

- “Understanding osteosarcoma metastasis”,: The American Cancer Society Relay For Life Rally for volunteers at Lafayette, LA; January, 2011
- “MDM2 Binding Protein plays a crucial role in mitotic progression, chromosome stability, and tumor progression”, LCRC speaker series at Tulane University, New Orleans, LA; March, 2011
- “Dissecting osteosarcoma metastasis in mouse models.” LSUHSC, Biochemistry and Molecular Biology Seminar Series; March, 2011

**Dr. Liu:**

- “A Novel Wnt Signaling Target as an Attractive Candidate for Drug Targeting in Colorectal Cancer” Li Y, Bavarva JH, Wang Z, Thibodeau SN, Golemis EA, and Liu W. at 8<sup>th</sup> International Drug Discovery Science and Technology Conference, Beijing, China. October 23-26, 2010.

**Dr. Mandal:**

- Genetic Epidemiology and Public Health: Tulane Hayward Genetics Center. April, 2011.

**Dr. Pandey**

- “Genetic interaction between FUS and TDP-43 influences ALS phenotype” in Molecular Mechanism of Neurodegeneration meeting in Milan, Italy, May, 2011
- “Molecular Basis of ALS” in Department of Cell Biology and Anatomy at LSUHSC on May, 2011
- Invited speaker, The Robert Packard Center for ALS at Johns Hopkins on April, 2011

**Dr. Tsien:**

- Keynote speaker, "Genetics and Hearing Loss: What Every Audiologist Should Know", Educational Audiology Association Summer Workshop, Las Vegas, NV.
- “Epigenetics of Cancer”, Department of Pathology, LSUHSC, NO, LA
- “Methods in Epigenetic research”, 4 hours, Research Methods, Department of Genetics, Tulane University School of Medicine
- “Forensics”, Destrehan High School, LSUHSC, NO, LA (note: attended twice)
- “Hands-on Medical and research career opportunities Workshop at LSUHSC”, Patrick F. Taylor Science and Technology Academy, LSUHSC, NO, LA (note: attended twice)
- “Hands-on Medical and research career opportunities Workshop at LSUHSC”, St. Martin’s Episcopal School, LSUHSC, NO, LA (note: attended twice)
- “Forensics and chromosomes”, Greater Gentilly High School, at GGHS, NO, LA
- “Careers in the Health Sciences”, Greater Gentilly High School, NO, LA
- “Forensics workshop” and “Careers in the Health Sciences”, Sarah T. Reed High School, NO, LA
- “Chromosome instability in cancer workshop”, Hahnville High School, at LSUHSC, NO, LA
- “Chromosome instability in cancer”, Benjamin Franklin High School, LSUHSC, NO, LA
- “Cells, DNA, and cancer”, Lusher Middle School, NO, LA

- “Lab notebook organization and record keeping”, Children’s Hospital of New Orleans, Research Institute for Children, New Orleans, LA
- “How to present at a scientific conference”, Children’s Hospital of New Orleans, Research Institute for Children, New Orleans, LA
- “Lab notebook organization and record keeping”, Summer Research Internship Program, LSUHSC, New Orleans, LA
- “Laboratory, biological, and bloodborne pathogen safety training”, Summer Research Internship Program, LSUHSC, NO, LA
- “How to present at a scientific conference”, Summer Research Internship Program, LSUHSC, NO, LA

**Dr. Moreno-Walton:**

- “Trauma in Pregnancy”, First Arab Women’s Health Conference, Abu Dhabi, United Arab Emirates, December 2010.
- “Introduction to Research for Beginners”, First Trauma and Disaster Conference, Al Rahba Hospital, Abu Dhabi, United Arab Emirates, December 2010.
- “Introduction to Basic Trauma Care”, First Trauma and Disaster Conference, Al Rahba Hospital, Abu Dhabi, United Arab Emirates, December 2010.
- “Special Considerations in Trauma Resuscitation of the Elderly”, First Trauma and Disaster Conference, Al Rahba Hospital, Abu Dhabi, United Arab Emirates, December 2010.
- “Should We Be Using Tranexamic Acid in Trauma Resuscitation?” American Academy of Emergency Medicine Scientific Assembly, Orlando FL, February 2011.
- “Bell’s Palsy: Steroids? Anti-virals? Both? Neither?” American Academy of Emergency Medicine Scientific Assembly, Orlando FL, February 2011.
- “Out of Our Comfort Zone: Developing a Cultural Competency Curriculum for Emergency Medicine Residency”, Council of Residency Directors in Emergency Medicine Academic Assembly, San Diego CA, March 2011.
- “Diversity and Disparities in Healthcare, Research and Medical Education”, Department of Internal Medicine Grand Rounds, Louisiana State University Health Sciences Center, New Orleans, March 2011.
- “When Good Electrolytes Go Bad”, Critical Concepts in Emergency Medicine conference, New Orleans, April 2011.
- “The New Spin on Mentorship: Successful Models for Modern Emergency Medicine”, Society for Academic Emergency Medicine Scientific Assembly, Boston, June 2011.
- “Teaching Professionalism in the Age of Gen Y and Facebook”, Society for Academic Emergency Medicine Scientific Assembly, Boston, June 2011.

## Platform and Poster Presentations at Scientific Meetings

### Dr. Grabczyk:

- Scott Ditch, Jeffrey Wang, Mimi C. Sammarco, Ayan Banerjee and **Ed Grabczyk** "Transcription and Mismatch Repair Facilitate GAA•TTC Expansion in Human Cells" Louisiana Cancer Research Consortium Annual Scientific Retreat, New Orleans LA, April, 2011
- Ayan Banerjee, Mimi C. Sammarco, Fred Harbinski, Eugene C. Petrella and **Ed Grabczyk** "High-Throughput Screen Using a Dual Reporter FXN Minigene in Human Cells" International Friedreich's Ataxia Scientific Conference, Strasbourg France, May, 2011
- **Ed Grabczyk**, Scott Ditch, Jeffrey Wang, Anasheh Halabi, Mimi C. Sammarco and Ayan Banerjee "Transcription and DNA repair trigger purine•pyrimidine repeat expansion in human cells" FASEB Summer Research Conferences: Polycystic Kidney Disease: From Bench to Bedside, Saxtons River, VT, June, 2011.

### Dr. Iwakuma:

- Agarwal N, Adhikari AS, Swathi Iyer, Welch DR, and **Tomoo Iwakuma**, Metastasis Research Society Conference, September 12, 2010: MTBP inhibits ACTN4-mediated filopodia formation and cell migration.
- Neeraj Agarwal, Yuki Tochigi, Amit S. Adhikari, Shuo Cui, Yan Cui, and **Tomoo Iwakuma**, The 15<sup>th</sup> International p53 Workshop, October 8-12, 2010: Crucial role of Mdm2 Binding Protein in mitotic progression and chromosome segregation.
- Swathi Iyer, Amit S. Adhikari, Neeraj Agarwal, and **Tomoo Iwakuma**, LSUHSC Research Day, October 20, 2010: The role of gain-of-function mutant p53 in cancer stem cell-like properties in osteosarcoma.
- Neeraj Agarwal, Yuki Tochigi, Amit S. Adhikari, Shuo Cui, Yan Cui, and **Tomoo Iwakuma**, LCRC Retreat, April 8-9, 2011: MTBP plays a crucial role in mitotic progression and chromosome segregation.
- Swathi Iyer, Amit S. Adhikari, Neeraj Agarwal, and **Tomoo Iwakuma**, LCRC Retreat, April 8-9, 2011: Downregulation of mutant p53 attenuates cancer stem cell-like properties of osteosarcoma

### Dr. Liu:

- "HEF1, a Novel Wnt Signaling Target, Promotes Colonic Cell Migration and Cancer Progression" Li Y, Bavarva J, Wang Z, Thibodeau SN, Golemis EA and **Liu W.** in 2010 European Wnt meeting at Karolinska Institute, Stockholm, Sweden October 27-30, 2010.
- "Frequent Truncating Mutations of TFAM Induce mtDNA Depletion and Apoptotic Resistance in Colorectal Cancer" Guo J, at Louisiana Cancer Research Consortium (LCRC) Annual Meeting New Orleans, LA, April 8-9, 2011

### Dr. Mandal:

- Linkage study of prostate cancer in high-risk African American families from Louisiana. American Society of Human Genetics Annual Meeting.. Washington D.C., November, 2010

- Identification of Copy Number Variation in high-risk African-American men with prostate cancer. Graduate Student Research Day.. New Orleans. October 2010

**Dr. Pociask:**

- Pulmonary Fibrosis in response to pharmaceutical grade Bleomycin Is independent of IL-17- Poster presentation – American Thoracic Society, Denver, CO
- IL-22 is Required for Repair of the Bronchiolar Epithelium Poster presentation, American Thoracic Society, Denver, CO

**Dr. Tsien:**

- Guo D, Kibe R, Marrero L, Bateman M, Durum S, Cui Y, **Tsien F**, Iwakuma T, Potential molecular mechanism of IL-7 signaling in maintaining genomic stability, Summer Research Internship Poster session, LSUHSC, NO, LA, 2010
- **Tsien, F**, Howe B, Hands-on Workshop Program for Louisiana K-12 schools: motivating youth toward clinical and research careers focusing on cancer, genetics, and the medical sciences, Louisiana Cancer Research Center Retreat, Xavier University, NO, LA, 2011

**Dr. Moreno-Walton:**

- Lewis D, **Moreno-Walton L**, Butts C. “The Use of Bedside Ultrasound to Distinguish Between Cellulitis and Cutaneous Abscess”, National Medical Association Conference, Orlando FL, July 2010. (Honorable Mention)
- Peoples L, **Moreno-Walton L**, Mills LM. “Emergency Ultrasound for the Diagnosis of Traumatic Eye Injuries”, National Medical Association Conference, Orlando FL, July 2010. (Honorable Mention)
- **Moreno-Walton L**, Brunett P, Akhtar S, DeBlieux PMC. “Report from the ACADEMIC EMERGENCY MEDICINE publication on Teaching across the generation gap”, European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- **Moreno-Walton L**, Sulzer J, Engle J, Stuke L, Molina P. “Differential Impact of Alcohol Abuse Patterns in Host Inflammatory Response Following Traumatic Injury”, LSU Medicine Research Day, New Orleans, January 2011.
- Choi SM, **Moreno-Walton L**, Johnson TR, Kolls JK. “The Effect of Acute Alcohol Intoxication on Pulmonary Response to MRSA vs. Klebsiella”, Western Regional Research Forum, Keystone, CO, February 2011.
- **Moreno-Walton L**, Sulzer J, Engle J, Stuke L, Molina P. “Alcohol Abuse and Inflammatory Response in Traumatic Injury”, Western Regional Research Forum, Keystone, CO, February 2011
- Kaiser S, **Moreno-Walton L**. “Factors influencing plastic surgeons’ decision to take ED call”, Western Regional Research Forum, Keystone, CO, February 2011.
- Butts C, Hue T, Stevens-Carrier A, Myers L, **Moreno-Walton L**. “Can Ultrasound of the optic nerve sheath be used to predict and monitor changes in intra-cranial pressure?” American College of Emergency Physicians Annual Scientific Assembly, Las Vegas, September 2010.

- Stafford RS, Butts C, **Moreno-Walton L**. “Bedside cardiac ultrasonography in evaluation of oncology patients with shortness of breath, hypotension and tachycardia”, European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- Butts C, Hue T, Stevens-Carrier A, Myers L, **Moreno-Walton L**. “The use of ultrasound of the optic nerve sheath to monitor changes in intra-cranial pressure” European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- Peeples L, **Moreno-Walton L**, Mills LM. “Ophthalmic ultrasound goes to the retina”, European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- Mutter L, Piazza VM, Butts C, **Moreno-Walton L**. “The Use of Bedside Ultrasound Guided Pericardiocentesis as a Life Saving Intervention in the Emergency Department”, European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- **Moreno-Walton L**, Ryan MT, Harper M, Haydel M, “Improved health care to survivors of sexual assault following the introduction of a sexual assault response team”, European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- **Moreno-Walton L**, Haughey-Barrios M, Hagan J, Alexander G, Katz E. “Influenza Vaccine Health Literacy and Attitudes Survey”, European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- Avegno J, Murphy-Lavoie H, **Moreno-Walton L**. “Medical students’ perception of an emergency medicine clerkship: an analysis of self-assessment surveys”, European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- Azuibuike F, **Moreno-Walton L**, Radeos MS, Baquero A, Ryan MT. “A Randomized Controlled Clinical Trial of 1000 cc vs. 500 cc Oral Contrast in Adults Undergoing Abdominal CT Scans”, European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- Lewis D, **Moreno-Walton L**, Butts C. “The Use of Bedside Ultrasound to Distinguish Between Cellulitis and Cutaneous Abscess”, European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- Prasankumar R, **Moreno-Walton L**, Lugo B, Waseem M. “Who gets analgesia in the ED: Does age make a difference?” European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- Gruber M, **Moreno-Walton L**. “Idiopathic Thrombotic Thrombocytopenic “Purpura Presenting as a Stroke”, European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- **Moreno-Walton L**, Katz V, Shah A, Lieb J. “Examining the Social Factors Which Predict Penetrating Trauma”, European Society of Emergency Medicine Congress, Stockholm, Sweden, October 2010.
- Gruber M, **Moreno-Walton L**. “The Total Pentad”, LSU Medicine Research Day, January 2011
- Butts C, Hue T, Stevens-Carrier A, Myers L, **Moreno-Walton L**. “Bedside Ultrasound for the Measurement of Intracranial Pressure: Imaging the Optic Nerve” , LSU Medicine Research Day, January 2011
- Choi SM, **Moreno-Walton L**, Johnson TR, Kolls JK. “Alcohol as a Risk Factor for Pneumonia”, LSU Medicine Research Day, January 2011 (First Prize)
- De Wulf A, D’Andrea S, Beran D, **Moreno-Walton L**. “Emergency Medicine: Advocating for Ethical Standards in International Medical Care”, American College of

Emergency Physicians Leadership and Advocacy Conference, Washington DC, May 2011.

- **Moreno-Walton L**, Sulzer JK, Engle J, Stuke LE, Molina PE. “Differential Impact of Alcohol Abuse Patterns on Host Inflammatory Response Following Traumatic Injury”, Society for Academic Emergency Medicine Scientific Assembly, Boston, June 2011.
- **Moreno-Walton L**, Sulzer JK, Engle J, Stuke LE, Molina PE. “Differential Impact of Alcohol Abuse Patterns on Host Inflammatory Response Following Traumatic Injury”, Research Society on Alcoholism 34<sup>th</sup> Annual Scientific Meeting, Atlanta, June 2011.

**Dr. Zheng:**

- **Mingquan Zheng**, Kong Chen, Derek Pociask, Jeremy McAleer, McGarry Houghton, Steven D. Shapiro, James L. Kreindler, and Jay K Kolls. Role of IL-17 and IL-17R signaling in Cigarette Smoke Induced Emphysema in Mice. Presented at the 2011 American Thoracic Society International Conference, Denver, Colorado.
- **Mingquan Zheng**, David Ricks, and Jay Kolls. MiniKexin vaccination against *Pneumocystis carinii* infection in mice. Presented at 2011 Gordon Research Conferences “Immunology of Fungal Infections”, Galveston, Texas.



## Consulting

### Dr. Kolls:

- Consultant, Lycera, Plymouth, MI 48170

### Dr. Gregory:

- NHGRI Grant Writing Course – taught grant writing skills to post doctoral fellows at the NIH

### Dr. Iwakuma:

- Dr. Yan Cui: The role of p53 in IL-7 signaling
- Dr. Suresh Alahari: In vivo analysis of Nischrin

### Dr. Liu:

- Served as a adjunct professor (role as a voluntary consultant) in College of Life Science in Yunnan University, Kunming, China

### Dr. Tsien:

- Michael Marble, MD, Children's Hospital, "Molecular Cytogenetic Studies of Patients with Genetic Diseases"
- Yan Cui, PhD and Tomoo Iwakuma, MD, PhD, LSUHSC, "Cross-talk between IL-7R $\alpha$  signaling and p53 pathway in maintaining chromosomal stability during thymopoiesis and preventing lymphomagenesis"
- John Doucet, PhD, Nicholls State University, "The Louisiana Genetics and Hereditary Health Care Education Center"
- Tomoo Iwakuma, "The role of MDM2 Binding Protein (MTBP) in maintenance of chromosome stability"

### Dr. Zheng:

- Consultant, Minivax Corporation, New Orleans, LA

## Other Academic Activities and Achievements

### Dr. Crabtree

- Selected in competitive process for AAMC Early Career Faculty Development Program
- Elected to Faculty Assembly (2011-2014)
- School of Medicine Committee on Women's Affairs
- Department of Genetics Graduate Student Oversight Committee
- Hosted Romana Nowak, PhD as part of Genetics Department Seminar Series
- Manuscript reviewer: Journal of Clinical Endocrinology and Metabolism (3)  
Human Reproduction (1)  
FEBS Letters (1)
- Association of Women in Science – South Louisiana Chapter, Treasurer
- Press interview: Shana Rose, WWL Radio, Epigenetics
- Attended The Endocrine Society annual meeting
- Attended the 3<sup>rd</sup> Annual International Congress on Uterine Leiomyoma
- Active scientific collaborations:
  - Dr. William Hansel, Pennington Biomedical Research Center and Hector Alila, Esperance Pharmaceuticals: Use of lytic peptides as therapies for uterine fibroids
  - Dr. Arnold Zea, LSUHSC: Renal cell carcinoma and arginase metabolism in the Eker rat model.

### Dr. Gregory:

- Coordinated summer research internships for med students, undergrads and high school students
- Coordinated LSU medical student (3 students) participation in National Student Research Forum competition
- Organized and sponsored Medical Student Research Interest Group
- Started New Faculty Receptions (fall and spring) and online orientation
- Revised the Tulane (CTRECP) MS in Clinical Research curriculum, creating three new courses
- Mentored 3 junior faculty MSCR scholars; 2 have been promoted, 1 has submitted a K23
- Revised Genetics Curriculum which has been moved into Medical Biochemistry
- Conducted hands on DNA experiments with 7 high schools (4 new schools)
- Created and field-tested new DNA activity supported by NSF-funded GENA program with Haynes Academy
- Submitted Education Component of CTSA grant application
- Worked with the SoM Women's Affairs Committee to coordinate a variety of activities for women faculty, including: "Moms in Science", Translational Research Mixer
- Started South Louisiana AWIS chapter
- Organized a variety of faculty development programs via the First Tuesday sessions
- Created Master of Science in Pathology Translational Track – will be the Director of this program
- Created first week-long "DNA Camp" for high school students on the Northshore (MHS)

- Organized a Post Doctoral Fellows group for career development and mentoring

**Dr. Hollenbach:**

- Co-director 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 (presently serving second 3-year term)
- Member – The School of Medicine Faculty Assembly Executive Board (elected 6/11)
- Faculty advisor – The School of Medicine Postdoctoral Association
- In the process of performing a detailed analysis of the hiring and retention practices of LSU SOM full time faculty from the years 2000 – 2011 to determine if discrepancies exist based on ethnicity or gender. (Performed for the School of Medicine Multicultural and Diversity Committee.)
- Member – The Graduate Faculty of the LSUHSC School of Graduate Studies
- Member – The Interdisciplinary Program Graduate School Curriculum Committee
- Member – The Graduate School Recruitment Committee
- Member – The Graduate School Multicultural and Diversity Committee
- Member – The Faculty Senate Website subcommittee
- Ad Hoc Reviewer – National Institutes of Health, Interdisciplinary Molecular Sciences & Training Review Panel F09 Study Section on Oncological Sciences (March 23 – 24, 2011)
- Ad Hoc Reviewer – National Institutes of Health, Interdisciplinary Molecular Sciences & Training Review Panel F08 Study Section on Genes, Genomes, and Genetics (July 14 – 15).
- Grant Reviewer – Italian Ministry of Health
- Grant Reviewer – James and Esther King Biomedical Research Program
- Grant Reviewer – Bankhead-Coley Florida Cancer Research Program
- Grant Reviewer – Swiss National Science Foundation
- Ad hoc reviewer – Carcinogenesis (Journal)
- Ad hoc reviewer – Journal of Molecular Biology
- Ad hoc reviewer – Molecular and Cellular Biology
- Volunteer – Representative from The School of Graduate Studies at the Xavier University GradStar graduate school fair
- Volunteer – Representative from The School of Graduate Studies for the LSUHSC Recruitment Caravan to Dillard University
- Volunteer – Representative from The School of Graduate Studies for the LSUHSC Recruitment Caravan to Xavier University

- Volunteer – Representative from The School of Graduate Studies for the LSUHSC Recruitment Caravan to Louisiana State University, Baton Rouge
- Volunteer – Assisted in the development and execution of the St. Martin's Episcopal School (Metairie, LA) General Biology laboratory on the concept of antibiotic resistance in bacteria
- Volunteer – Representative from LSUHSC at the University of New Orleans recruitment fair (April 7, 2011)
- Began communications and proceedings with Lucigen, Corp., to investigate the interest in and feasibility of marketing our new technique, *in vitro* PORE.
- Invited to attend the Association of American Medical Colleges (AAMC), Graduate Research, Education, and Training (GREAT) conference (October 21 – 23, 2010, New Orleans, LA)

**Dr. Iwakuma:**

- 2010, 2011: Serve as a committee for International Travel
- 2011: Genetics Admission Committee, Graduate Oversight Committee and the Curriculum Committee.
- Served as committee for the Ph.D. qualifying examination of Aditi S Iyengar in the Department of Genetics (2010).
- Serve as a judge for the LSUHSC Medical Student Summer Research Symposium on July 26, 2010.
- Serve as a judge for the LSUHSC Research Day on October 22, 2010.
- Serve as committee for the Ph.D. prospectus of Aditi Iyengar in the Department of Genetics on May 16, 2011.
- Give a presentation at the American Cancer Society Relay For Life Rally for volunteers at Lafayette (January 29<sup>th</sup>, 2011).
- Give a presentation at the American Cancer Society Relay For Life Rally for volunteers at New Orleans (April 16<sup>th</sup>, 2011).
- Reviewed the article Histochemistry and Cell Biology (HCB-1694-10-Drenckhahn), Authors: M. Tanaka, T. Kamitani. Cytoplasmic relocation of Daxx induced by Ro52 and FLASH (July 6, 2010)
- Reviewed the article Molecular Cancer (7159343484145298\_article), Authors: Chun-Hui Su1, Ruiying Zhao, Guermarie Velazquez-Torres, Jian Chen, Christopher Gully, Sai-Ching J. Yeung, and Mong-Hong Lee. Nuclear export regulation of COP1 by 14-3-3 $\sigma$  in response to DNA damage (July 16, 2010)
- Reviewed the article BMC Cancer (2907343404469620\_article), Authors: Jane M Valentine, Sonia Kumar, Abdeladim Moumen. A p53-independent role for the MDM2 antagonist Nutlin-3 in DNA damage response initiation (October 4, 2010 and January 18, 2011)
- Reviewed a review article for Cancer Research (2009CC2060), Authors: Zhi Shi, Amit K Tiwari, Atish Patel, Li-Wu Fu, Zhe-Sheng Chen, Roles for Sildenafil in Enhancing Drug Sensitivity in Cancer (February 20, 2011).
- Reviewed a review article for Expert Opinion On Investigational Drugs (EOID-2011-0086), New RNA Polymerase Inhibitors for Solid Cancers (May 27, 2011).

- Reviewed the article Journal of Cellular Biochemistry (JCB11-0333\_Research article), Authors: Ning Guo, Ru Fu Chen, Zhi Hua Li, Yong Gang Liu, Di Cheng, Quan Bo Zhou, Jia Jia Zhou, Qing Ling. Transfection of HCVc in hilar cholangiocarcinoma cells improves expression of SMYD3 through NF- $\kappa$ B pathway (June 23, 2011)

**Dr. Liu:**

- LCRC Tissue Utilization Review Committee (TURC).
- Junior faculty mentoring committee in LSU Cancer Center
- Faculty search committee in Department of Genetics
- LSU faculty development and evaluation committee
- LCRC Seed Fund Review Committee
- Tulane COBRE mentoring committee
- Department PhD student qualify exam committee

**Dr. Mandal:**

- Graduate Student Coordinator, Department of Genetics, LSUHSC
- Chair, Graduate Admission Committee, Department of Genetics
- Member, Emergency Policy Guide Committee
- Chair, Promotion & Tenure Committee, Department of Genetics
- Chair, Graduate Student Oversight Committee, Department of Genetics
- Chair, Curriculum Committee, Department of Genetics
- Member, Graduate Advisory Council, LSUHSC
- Member, Council on Professional Conduct, LSUHSC
- Chair, Curriculum 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

**Dr. Pandey**

- Invited to serve as a co-chair in Annual Drosophila meeting scheduled to be held in Chicago, IL in March 7<sup>th</sup> to 11, 2012
- Nominated for the Faculty Assembly Award for Young Faculty Member for an Outstanding Contribution at LSUHSC
- Served as a Judge for the Graduate Research Day held at Dental School, LSUHSC Nov 2010
- Served as a reviewer for the Department of Genetics Graduate student's qualifying exams

**Dr. Tsien:**

- LSU School of Medicine Faculty Assembly Award for Outstanding Service to the Community
- Member, Stanley S. Scott Cancer Center, LSUHSC
- Education Facilitator, Louisiana Vaccine Center, LSUHSC
- Director, LSUHSC/Patrick F. Taylor K-12 Hands-on Workshop Program
- Co-director of the Department of Genetics Seminar Series, LSUHSC, NO, LA.
- Co-director, Summer Research Internship Program

- Co-Editor, The Louisiana Genetics and Hereditary Health Care Education Center website
- LSUHSC-NO 2010-2011 LSUHSC Graduate School Multicultural/Diversity Committee
- Volunteer to organize the Greater New Orleans Regional Science and Engineering Fairs
- Volunteer to judge Greater New Orleans Regional Science and Engineering Fairs
- Volunteer to judge State level science and engineering fairs
- Volunteer to judge Benjamin Franklin High School science fair
- Attended after-school career fairs at Greater Gentilly High School to promote future career opportunities at LSUHSC.
- Directed DNA Day at the Audubon Zoo
- Instructed high school students from Sarah T. Reed High School on how to write competitive resumes for application to colleges and internship programs.

**Dr. Moreno-Walton:**

- Judge, Summer Research Internship Poster Session, Louisiana State University School of Medicine, July 2010.
- Mentor, American College of Emergency Physicians Teaching Fellowship, 2010-2011.
- Advanced Trauma Life Support Trauma Scenarios Workshop moderator: First Trauma and Disaster Conference, Al Rahba Hospital, Abu Dhabi, United Arab Emirates, December 2010.
- Judge, Medicine Research Day, Louisiana State University Health Sciences Center, January 2011.
- Ethics Committee, Society for Academic Emergency Medicine, 2/2011- present.
- Chair, Special Interest Track, Council of Residency Directors in Emergency Medicine Academic Assembly, March 2011-present.
- Panelist, Tulane Research Forum for Medical Students, March 23, 2011.
- Panelist, LSU School of Medicine Medical Research Society, March 30, 2011.
- Panelist, "Moms in Medicine", LSU School of Medicine, April 19, 2011.
- Instructor, Medical Spanish course, LSU School of Medicine, April 2011.
- Chair, Emergency Medicine Diversity Committee, LSUHSC, April, 2011- present
- Assisted Earl K. Long Medical Center, Baton Rouge in presenting a Medicine Research Day, May 2011.
- Trinity Episcopal Church annual medical mission to Jinotega, Nicaragua, November 2011
- Oral Abstract Moderator: Imaging. Mediterranean Emergency Medicine Congress, Kos, Greece, September 2011.
- Track Chair: Administration. Mediterranean Emergency Medicine Congress, Kos, Greece, September 2011.
- Society for Academic Emergency Medicine Scientific Assembly, December 2010.
- LSU School of Medicine Department of Medicine Research Day, January 2011
- American Academy of Emergency Medicine Scientific Assembly, December 2010
- Council of Residency Directors Academic Assembly, January 2011
- Western Journal of Emergency Medicine, May 2010-present.
- Journal of the National Medical Association, Mar 2011-present

## Professional Affiliations

### Jay K. Kolls, M.D.

- Southern Medical Association
- American Thoracic Society
- American Society of Microbiology
- American Society of Gene Therapy
- American Society of Clinical Investigation
- American Association of Physicians

### Judy Crabtree, Ph.D.

- The Endocrine Society
- American Society of Human Genetics
- The Society for the Study of Reproduction

### Edward Grabczyk, Ph.D.

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

### Paula Gregory, Ph.D.

- 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

### Tomoo Iwakuma, Ph.D.

- Japanese Orthopedics Society
- American Association for Cancer Research
- Metastasis Research Society

### Wanguo Liu, Ph.D.

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

### Diptasri Mandal, Ph.D.

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

### Doan Nguyen, Ph.D.

- Association for Research in Vision and Ophthalmology
- Tear Film and Ocular Surface
- International Society for Computational Biology

**Derek Pociask, Ph.D.**

- American Thoracic Society

**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
- DNA Methylation / Epigenetics Society
- American Society of Human Genetics

**Lisa Moreno-Walton, M.D.**

- Society of Academic Emergency Medicine
- American College of Emergency Physicians
- American Academy of Emergency Medicine
- National Hispanic Medical Association
- Conference of Residency Directors in Emergency Medicine
- Louisiana Chapter, American Academy of Emergency Medicine

**Mingquan Zheng, Ph.D.**

- American Thoracic Society
- American Society of Gene Therapy



## Publications

### Dr. Kolls:

1. Ho AW, Shen F, Conti HR, Patel N, Childs EE, Peterson AC, Hernández-Santos N, **Kolls JK**, Kane LP, Ouyang W, Gaffen SL. IL-17RC is required for immune signaling via an extended SEF/IL-17R signaling domain in the cytoplasmic tail. *J Immunol.* 2010 Jul 15; 185(2):1063-70.
2. Kreindler JL, Steele C, Nguyen N, Chan YR, Pilewsk JM, Alcorn JF, Aujla AJ, Finelle P, Blancahard M, Ziegler SF, Logar A, Hartigan E, Kurs-Lasky M, Rockette H, Ray A, and **Kolls JK**. Vitamin D3 attenuates Th2 responses to *Aspergillus fumigatus* mounted by CD4+ T cells from cystic fibrosis patients with allergic bronchopulmonary aspergillosis. *J Clin Invest.* 2010 Sep 1;120(9):3242-54.
3. Ki SH, Park O, Zheng M, Morales-Ibanez O, **Kolls JK**, Bataller R, Gao B. Interleukin-22 treatment ameliorates alcoholic liver injury in a murine model of chronic-binge ethanol feeding: Role of signal transducer and activator of transcription 3. *Hepatology.* 2010 Jul 16.
4. Park SW, Chen SW, Kim M, Brown KM, **Kolls JK**, D'Agati VD, Lee H.T. Cytokines induce small intestine and liver injury after renal ischemia or nephrectomy. *Lab Invest.* 2010 Aug 9.
5. Mitsdoerffer M, Lee Y, Jäger A, Kim HJ, Korn T, **Kolls JK**, Cantor H, Bettelli E, Kuchroo VK. Proinflammatory T helper type 17 cells are effective B-cell helpers. *Proc Natl Acad Sci U S A.* 2010 Aug 10;107(32):14292-7.
6. Liu B, Tan W, Barsoum A, Gu X, Chen K, Huang W, Ramsay A, **Kolls JK**, Schwarzenberger P. IL-17 is a potent synergistic factor with GM-CSF in mice in stimulating myelopoiesis, dendritic cell expansion, proliferation, and functional enhancement. *Exp Hematol.* 2010 Oct; 38(10):877-884.e1.
7. Hardison SE, Wozniak KL, **Kolls JK**, Wormley FL Jr. IL-17 is not Required for Classical Macrophage Activation in a Pulmonary Mouse Model of *Cryptococcus neoformans* Infection. *Infect Immun.* 2010 Oct 4.
8. Cai S, Batra S, Lira SA, **Kolls JK**, Jeyaseelan S. CXCL1 Regulates Pulmonary Host Defense to *Klebsiella* Infection via CXCL2, CXCL5, NF- $\kappa$ B, and MAPKs. *J Immunol.* 2010 Oct 11.
9. Rapaka RR, Ricks DM, Alcorn JA, Chen K, Khader SA, Zheng M, Plevy S, Bengtén E., and **Kolls JK**. Conserved natural IgM antibodies mediate innate and adaptive immunity against the opportunistic fungus *Pneumocystis*. *J Exp Med.* 2010 Dec 20; 207(13):2907-19.
10. Scurlock AM, Frazer LC, Andrews CW Jr, O'Connell CM, Foote IP, Bailey SL, Chandra-Kuntal K, **Kolls JK**, Darville T. Interleukin-17 Contributes to Generation of Th1 Immunity and Neutrophil Recruitment during *Chlamydia muridarum* Genital Tract Infection but Is Not Required for Macrophage Influx or Normal Resolution of Infection. *Infect Immun.* 2011

Mar;79(3):1349-1362.

11. Kudva A, Scheller EV, Robinson KM, Crowe CR, Choi SM, Slight SR, Khader SA, Dubin PJ, Enelow RI, **Kolls JK**, Alcorn JF. Influenza A inhibits Th17-mediated host defense against bacterial pneumonia in mice. *J Immunol.* 2011 Feb 1; 186(3):1666-74.
12. Newcomb DC, Boswell MG, Zhou W, Huckabee MM, Goleniewska K, Sevin CM, Khurana Hershey GK, **Kolls JK**, Peebles RS Jr. Human T (H) 17 cells express a functional IL-13 receptor and IL-13 attenuates IL-17A production. *J Allergy Clin Immunol.* 2011 Jan 12.
13. Qin S, Alcorn JF, Craigo JK, Tjoeng C, Tarwater PM, **Kolls JK**, Reinhart TA. Epigallocatechin-3-Gallate Reduces Airway Inflammation in Mice through Binding to Proinflammatory Chemokines and Inhibiting Inflammatory Cell Recruitment. *J Immunol.* 2011 Feb 9.
14. Pociask DA, Chen K, Mi Choi S, Oury TD, Steele C, **Kolls JK**.  $\gamma\delta$  T Cells Attenuate Bleomycin-Induced Fibrosis through the Production of CXCL10. *Am J Pathol.* 2011 Mar; 178(3):1167-76.
15. Wozniak KL, Hardison SE, **Kolls JK**, Wormley FL.. Role of IL-17A on Resolution of Pulmonary *C. neoformans* Infection. *PLoS One.* 2011 Feb 17; 6(2):e17204.
16. Fei M, Bhatia S, Oriss TB, Yarlagadda M, Khare A, Akira S, Saijo S, Iwakura Y, Fallert Junecko BA, Reinhart TA, Foreman O, Ray P, **Kolls J**, Ray A. TNF- $\alpha$  from inflammatory dendritic cells (DCs) regulates lung IL-17A/IL-5 levels and neutrophilia versus eosinophilia during persistent fungal infection. *Proc Natl Acad Sci U S A.* 2011 Mar 14.
17. Pickens SR, Chamberlain ND, Volin MV, Gonzalez M, Pope RM, Mandelin AM 2nd, **Kolls JK**, Shahrara S. Anti-CXCL5 therapy ameliorates IL-17-induced arthritis by decreasing joint vascularization. *Angiogenesis.* 2011 Jul 21. [Epub ahead of print]
18. Esplugues E, Huber S, Gagliani N, Hauser AE, Town T, Wan YY, O'Connor W Jr, Rongvaux A, Van Rooijen N, Haberman AM, Iwakura Y, Kuchroo VK, **Kolls JK**, Bluestone JA, Herold KC, Flavell RA. Control of TH17 cells occurs in the small intestine. *Nature.* 2011 Jul 17; 475(7357):514-8. doi: 10.1038/nature10228.
19. Zheng M, Rapaka RR, Yu AC, Shellito JE, **Kolls JK**. Role of interleukin-23-dependent antifungal immune responses in dendritic cell-vaccinated mice. *Infect Immun.* 2011 Sep; 79(9):3778-83.
20. Rangel-Moreno J, Carragher DM, de la Luz Garcia-Hernandez M, Hwang JY, Kusser K, Hartson L, **Kolls JK**, Khader SA, Randall TD. The development of inducible bronchus-associated lymphoid tissue depends on IL-17. *Nat Immunol.* 2011 Jun 12; 12(7):639-46.
21. Chen K, Pociask DA, McAleer JP, Chan YR, Alcorn JF, Kreindler JL, Keyser MR, Shapiro SD, Houghton AM, **Kolls JK**, Zheng M. IL-17RA is required for CCL2 expression,

macrophage recruitment, and emphysema in response to cigarette smoke. *PLoS One*. 2011; 6(5):e20333.

**Dr. Hollenbach:**

Peer Reviewed

1. Sidhu, A., Miller, P. J., and **Hollenbach, A. D.** FOXO1 stimulates ceruloplasmin promoter activity in human hepatoma cells treated with IL-6. *Biochim. Biophys. Res. Commun.* **404**, 963 – 7 (2011).
2. Dietz, K. N., Miller, P. J., Iyengar, A. S., Loupe, J. M., and **Hollenbach A. D.** Identification of serines 201 and 209 as sites of Pax3 phosphorylation and the altered phosphorylation status of Pax3-FOXO1 during early myogenic differentiation. *Int. J. Biochem. and Cell Biol.* **43(6)**, 936 – 45 (2011)
3. Abdraboh, M. E., Gaur, R. L, **Hollenbach, A. D.**, Sandquist, D., Raj, M. H. G., and Outhitit, A. Survivin, a novel target of CD44-promoted breast tumor invasion. *Am. J. of Pathol.* (2011, June 14, epub ahead of print).

Non-Peer Reviewed

1. Sidhu, A., Miller, P. J., and Hollenbach, A. D., “The *in vitro* PORE: An Improved Technique to Pull Out Regulatory Elements.” (2010) *eLucidations*. (NOTE: This publication is the Lucigen, Corp. newsletter that is mailed to customers and distributed at scientific meetings and trade shows.)

**Dr. Iwakuma:**

1. Post SM, Quintás-Cardama A, Pant V, Iwakuma T, Hamir A, Jackson JG, Maccio DR, Bond GL, Johnson DG, Levine AJ, Lozano G. A High-Frequency Regulatory Polymorphism in the p53 Pathway Accelerates Tumor Development. *Cancer Cell* 2010, Sep 14; 18(3):220-230. PMID: 20832750, PMCID: PMC2944041
2. Adhikari AS, Agarwal N, and Iwakuma T<sup>#</sup>. Metastatic potential of Tumor-Initiating Cells in Solid Tumors. *Frontiers in Bioscience* 2011, Jan 1; 16:1927-1938. PMID: 21196274
3. Agarwal N, Tochigi Y, Amit S. Adhikari AS, Cui S, Cui Y, and Iwakuma T<sup>#</sup>. MTBP plays a crucial role in mitotic progression and chromosome segregation. *Cell Death & Differentiation*. 2011, 18, 1208–1219; doi:10.1038/cdd.2010.189; PMID: 21274008
4. Ruiying Zhao, Sai-Ching J. Yeung, Jian Chen, Tomoo Iwakuma, Chun-Hui Su, Bo Chen, Changju Qu, Fanmao Zhang, You-Tzung Chen, Yu-Li Lin, Dung-Fang Lee, Feng Jin, Rui Zhu, Tattym Shaikenov, Dos Sarbassov, Aysegul Sahin, Huamin Wang, Hua Wang, Chien-Chen Lai, Fuu-Jen Tsai, Guillermina Lozano, and Mong-Hong Lee, COP9 signalosome subunit 6 promotes tumorigenesis through stabilization of MDM2. *J. Clin. Invest.* 2011 Mar 1; 121(3):851-65. PMID: 21317535, PMCID: PMC3049400
5. Shuzhong Zhang, Mingquan Zheng, Ryoko Kibe, Yunping Huang, Luis Marrero, Samantha Warren, Arthur W. Zieske, Tomoo Iwakuma, Jay K. Kolls, Yan Cui. *Trp53* negatively

regulates autoimmunity via the STAT3-Th17 axis. *FASEB J.* 2011 Jul; 25(7):2387-98. PMID: 21471252, PMCID: PMC3114529

6. Vinod Pant, Shunbin Xiong, Tomoo Iwakuma, Quintás-Cardama A, and Guillermina Lozano. Heterodimerization of Mdm2 and Mdm4 is critical for regulating p53 activity during embryogenesis but dispensable for p53 and Mdm2 stability. *Proc. Natl. Acad. Sci. USA* 2011 Jul 5, In press. PMID: 21730132

**Dr. Liu:**

Peer-reviewed publications:

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. Guo J, Zheng L, Liu WY, Wang X, Wang Z, French AJ, Kang D, Thibodeau SN, and **Liu W.** A Truncating Mutation of *TFAM* Results in Mitochondrial DNA Depletion and Apoptotic Resistance in Most Microsatellite Unstable Colorectal Cancer. *Cancer Res* 2011, 71(8):2978-87.

**Dr. Mandal:**

1. Suggestive evidence of linkage identified at chromosomes 12q24 and 2p16 in African American prostate cancer families from Louisiana. Elisa M. Ledet, Oliver Sartor, Walter Rayford, Joan E. Bailey-Wilson, Diptasri M. Mandal. *Submitted.* Prostate. June 2011.

**Dr. Pandey:**

1. Lanson NA Jr, Maltare A, King H, Smith R, Kim JH, Taylor JP, Lloyd TE, **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
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**Dr. Pociask:**

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**Dr. Moreno-Walton:**

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2. Moreno-Walton L, Sulzer JK, Engle J, Stuke LE, Molina PE. “Differential Impact of Alcohol Abuse Patterns on Host Inflammatory Response Following Traumatic Injury”, Academic Emergency Medicine; vol. 18, no. 5, p. S138, May 2011.
3. Moreno-Walton L, Sulzer JK, Engle J, Stuke LE, Molina PE. “Differential Impact of Alcohol Abuse Patterns on Host Inflammatory Response Following Traumatic Injury”, Alcoholism; 35:6, 222A.
4. Butts C, Stevens-Carrier A, Moreno-Walton L, Myers L. “Can ultrasound of the optic nerve sheath be used to predict and monitor changes in intracranial pressure?” Journal of Emergency Medicine 2011; 41:2, 213.
5. Kaiser S, Moreno-Walton L. “A Statewide survey investigation of the reasons for lack of availability of plastic surgeons for emergency department call”, Journal of Emergency Medicine 2011; 41:2, 208.

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1. Moreno-Walton L, Tuckler V. “Anti-Fungal Agents” chapter in Kazzi and Shih (eds). The AAEM/ RSA Toxicology Handbook, Second Edition. United Press: 2011.
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3. Moreno-Walton L. “Phimosis and Paraphimosis”. In GEMSoft [electronic media]. Lin M, Fraser G, et al (eds). GEMSoft (General Emergency Medicine Software. Queensland, Australia: Pemsoft Pty Ltd. Available at <http://www.gemsoftonline.net>. Access <2012>.

**Dr. Zheng:**

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2. Chen K, Pociask DA, McAleer J, Chen Y, Alcon JR, Kreindler JL, Shapiro SD, Houghton AM, Kolls JK, and **Zheng M**. IL-17 RA is required for CCL2 expression, macrophage recruitment, and emphysema in response to cigarette smoke. PLoS One. 2011;6(5):e20333. Epub 2011 May 27.
3. **Mingquan Zheng**, Rekha R. Amy Yu, Rapaka, Judd E. Shellito, and Jay K Kolls. IL-23 dependent anti-fungal immune responses in using dendritic cell-based Vaccination in mice. Infect Immun. 2011 Jul 11. [Epub ahead of print]

**DEPARTMENT OF GENETICS ACTIVE EXTRAMUAL FUNDING  
FISCAL YEAR 2010 - 2011**

<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>
Gregory, Paula	LSUHSC Summer Internship Program	NHLBI	T-35	3/1/2011	2/29/2016	\$ 107,150
Hollenbach, Andrew	Mechanism of regulation for the oncogenic Pax3-FOXO1 in Alveolar Rhabdomyosarcoma	NCI	R01	6/1/2009	3/31/2014	\$ 1,473,250
Iwakuma, Tomoo	Mechanisms of lung carcinogenesis induced by asbestos and cigarette smoke	NCI/ Tulane (Prime)	R01	5/1/2008	4/30/2013	\$ 32,000
Iwakuma, Tomoo	Dissecting Roles of MTBP in Osteosarcoma Metastasis	NCRR/ Tulane (Prime)	P-20 COBRE	8/1/2009	7/31/2014	\$ 314,950
Kolls, Jay	Alcohol, ROS, and Macrophage Epigenetics	NIAAA	R01	3/1/2009	8/31/2011	\$ 812,369
Kolls, Jay	Non-CD4 Host Defense against P. Carinii Pneumonia	NHLBI	R01	4/1/2009	3/31/2014	\$ 1,775,000
Kolls, Jay	Host Factors in Fungal Allergy and Fibrosis	NHLBI/ Univ of Pittsburgh (Prime)	P-50 SCCOR	1/1/2009	7/31/2011	\$ 251,731
Kolls, Jay	The Role of IL-17 in RSV-induced Mucus and Airway Responsiveness	NHLBI	R01	1/1/2009	7/31/2011	\$ 115,340
Kolls, Jay	Th-17 Cytokines and Lung Immunity	NHLBI	R01	1/1/2010	12/31/2014	\$ 2,086,527
Kolls, Jay	Alcohol, ROS, and Macrophage Epigenetics	NIAAA	R01 - ARRA Student Supplement	7/1/2009	8/31/2011	\$ 9,727
Kolls, Jay	Alcohol, ROS, and Macrophage Epigenetics	NIAAA	R01 - Diversity Supplement	9/1/2009	8/31/2011	\$ 259,742
Kolls, Jay	Alcohol, ROS, and Macrophage Epigenetics	NIAAA	R01 - Equipment Supplement	9/30/2010	8/31/2011	\$ 37,000
Kolls, Jay	Alcohol Infection and Host Response (CARC Project 3)	NIAAA (Nelson PI)	P-60	12/1/2009	11/30/2014	\$ 700,849
Kolls, Jay	T-cells and P carinii Pneumonia	NHLBI	R01	7/13/2010	5/31/2015	\$ 1,863,606
Kolls, Jay	Novel Macrolide Th17 Inhibitors	NHLBI	R21	4/8/2011	3/31/2013	\$ 370,868
Mandal, Diptasri	SNP analysis of endometriosis candidate genes	NICHD/ Ponce SoM (Prime)	R01	4/1/2006	3/31/2011	\$ 78,368
Mandal, Diptasri	Determination of Genetic Susceptibility to Lung Cancer in Families from Southern Louisiana	NHLBI	Contract	9/30/2006	9/29/2011	\$ 950,151
Mandal, Diptasri	Genetic Epidemiology of Lung Cancer	NCI/ Univ of Cincinnati (Prime)	U01	9/30/2009	9/29/2011	\$ 166,638
<b>Total Federal Grants/Contracts Funding</b>						<b>\$ 11,405,266</b>
Grabczyk, Edward	Transcription-coupled GAA-TTC expansion in human cells	FARA	N/A	11/1/2009	10/31/2010	\$ 102,416
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	Medical research opportunities for the Patrick F. Taylor Science and Technology Academy and Taylor Opportunity Program for Students (TOPS)	Patrick F. Taylor Foundation	N/A	8/1/2009	7/31/2011	\$ 220,000
Tsien, Fern	Medical research opportunities for the Patrick F. Taylor Science and Technology Academy and Taylor Opportunity Program for Students (TOPS)	Patrick F. Taylor Foundation	N/A	8/1/2011	7/31/2012	\$ 80,000
<b>Total Private Foundation Grants/Contracts Funding</b>						<b>\$ 902,374</b>
Crabtree, Judy	Mouse xenograft model generation to support in vivo investigations of CARM1 function.	BoR	P-Fund	3/1/2011	2/28/2012	\$ 10,000
Gregory, Paula	Clinical and Translational Research Education and Commercialization Program	BoR	RC/EEP	9/1/2007	7/31/2011	\$ 559,917
Kolls, Jay	The Southeast Louisiana shRNA Screening Facility	BoR	Enhancement	6/1/2009	5/31/2011	\$ 170,000
Mandal, Diptasri	Germ-like copy number variation in high-risk African American families	BoR	P-Fund	3/1/2011	2/29/2012	\$ 10,000
Pandey, Udai	Molecular mechanisms of neurodegeneration	BoR	Travel Award	N/A	N/A	\$ 1,200
Pociask, Derek	Gamma delta T cells are integrin mediators of interstitial pulmonary fibrosis	BoR	RCS	6/1/2010	6/30/2013	\$ 107,061
<b>Total State Grants/Contracts Funding</b>						<b>\$ 858,178</b>
<b>TOTAL GRANTS/CONTRACTS FUNDING (ALL SOURCES)</b>						<b>\$ 13,165,818</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 LSUO.  
(2) Grants/Contracts highlighted in yellow reflect new awards in FY 2010 -2011.

**EXTERNAL DEPARTMENTAL FACULTY FUNDING  
ACTIVE EXTRAMURAL FUNDING  
FISCAL YEAR 2010 – 2011**

<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	7/31/2011	\$1,241,386
Liu, Wanguo	DNA Damage-Response Defects in Prostate Cancer Risk,	NCI	R01 - ARRA Fellow Supplement	9/30/2009	9/29/2011	\$202,875
Liu, Wanguo	Mentoring a Cancer Genetics Program (Role: Mentor)	NCRR	P20	9/15/2009	7/31/2011	\$37,555
<i>Total Federal Grants/Contracts Funding</i>						<b>\$1,481,816</b>
<i>Grants Administered by the Cancer Center:</i>						
Iwakuma, Tomoo	Uncovering the mechanisms of osteosarcoma metastasis suppression by MTBP	ACS	N/A	7/1/2009	6/30/2013	\$720,000
<i>Total Private Foundation Grants/Contracts Funding</i>						<b>\$720,000</b>
NONE						
<i>Total State Grants/Contracts Funding</i>						<b>\$ -</b>
<b>TOTAL GRANTS/CONTRACTS FUNDING (ALL SOURCES)</b>						<b>\$2,201,816</b>

**DEPARTMENT OF GENETICS SUBMITTED GRANT/CONTRACT APPLICATIONS  
FISCAL YEAR 2010 - 2011**

<b>PRINCIPAL INVESTIGATOR</b>	<b>TITLE OF PROJECT</b>	<b>AGENCY</b>	<b>FUNDING MECHANISM</b>
Choi, Sun Mi	IL-17 Induced Host Defense Against Staphylococcus Pneumonia	NHLBI	F-30
Choi, Sun Mi	Alcohol and Pulmonary Immunity to MRSA	NIAAA	F-31
Crabtree, Judy	Mouse xenograft model generation to support in vivo investigations of CARM1 function.	BoR	P-Fund
Crabtree, Judy	Regulation of Uterine Fibroid Growth by CARM1-Mediated Transcriptional Activation	NICHD	R21
Crabtree, Judy	Regulation of uterine Fibroid pathogenesis by CARM1-Mediated Transcriptional Activation	BoR	RCS
Grabczyk, Edward	Transcription-coupled GAA-TTC expansion in human cells (renewal)	FARA	N/A
Grabczyk, Edward	Genesis of the "second hit" in ADPKD	NIDDK	R21
Gregory, Paula	Rebuilding Science education in New Orleans	NCRR	R25
Gregory, Paula	LSUHSC Infectious Disease Internships	NIAID	T35
Gregory, Paula	Short Term Training for Medical Students	NIDDK	T35
Gregory, Paula	Medical Student Alcohol Research Internship	NIAAA	T35
Gregory, Paula	BEST Science!	NIAAA/ Ochsner Clinic Fdtn (Prime)	R25
Hollenbach, Andrew	Phosphorylation and the control of gene regulation in melanocyte development	BoR	P-Fund
Hollenbach, Andrew	Mechanism of regulation for the oncogenic Pax3-FOXO1 in Alveolar Rhabdomyosarcoma	NCI	R01 - Supplement
Hollenbach, Andrew	Analysis of the role of changing miRNA expression in myogenesis and the development of Alveolar Rhabdomyosarcoma	Exiqon	N/A
Hollenbach, Andrew	Apoptosis vs. Survival: FOXO1-dependent gene expression in hepatic cell fate	NIAAA	R21
Iengar, Aditi	Molecular Mechanisms in Melanoma Development	Sigma Delta Epsilon	Women in Science Fellowship
Iwakuma, Tomoo	The role of mutant p53 gain of function in cancer stem cell-like properties of osteosarcoma	Liddy Shriver Sarcoma Initiative	N/A
Iwakuma, Tomoo	The Role of MTBP in Mitotic progression and Tumorigenesis	NCI	R01
Kolls, Jay	Novel Macrolide Th17 Inhibitors	NHLBI	R21
Kolls, Jay	Alcohol, ROS, and Macrophage Epigenetics (Equipment Supplement)	NIAAA	R01
Kolls, Jay	The role of IL-13 in regulating TH17 cytokine productio (resubmission)	NHLBI	R21
Kolls, Jay	Immune-Airway Epithelial Interactions in Steroid Refractory Severe Asthma	NIAID/ Univ of Pittsburgh (Prime)	U19
Kolls, Jay	IL-17 Receptor Signaling in the Oral Mucosa	NIAID/Univ of Pittsburgh (Prime)	U01
Kolls, Jay	Th17 Cytokines and alcohol liver diseases	NIAAA	R01
Kolls, Jay	Vaccine Development for PCP	NIAID/ Minivax Inc. (Prime)	R41/R42
Kolls, Jay	Host Defense Against HIV Pulmonary Infections (Project 2)	NHLBI (Shellito PI)	P01
Kolls, Jay	Safety and antigen-specificity of Th17 mucosal adjuvants upon exposure to heterologous stimuli	NIAAA/ Univ of Pittsburgh (Prime)	R21



<b>PRINCIPAL INVESTIGATOR</b>	<b>TITLE OF PROJECT</b>	<b>AGENCY</b>	<b>FUNDING MECHANISM</b>
Kolls, Jay	A prophylactic PCP vaccine for scheduled immunosuppression	NIAID/ Minivax Inc. (Prime)	R41/R42
Kolls, Jay	Monoclonal antibodies to treat/prevent PCP	NIAID	R41/R42
Kolls, Jay	Development of Nrf2 targeted therapeutic intervention for exacerbation of COPD	NHLBI/ Johns Hopkins Univ (Prime)	P01
Kolls, Jay/Gregory, Paula	LSU Mentored Career Development in Emergency Medicine Clinical Research	NHLBI	K12
Mandal, Diptasri	Graduate Training in Molecular Biology, Genetic Control of Inflammation and Cancer	BoR	Graduate Fellows Program
Mandal, Diptasri	Germ-like copy number variation in high-risk African American families	BoR	Pfund
Mandal, Diptasri	Identify rare risk alleles in familial lung cancer	NCI/ Univ of Cincinnati (Prime)	R01
Mandal, Diptasri	Determination of Genetic Susceptibility to Lung Cancer	NHLBI	Contract
Mandal, Diptasri	Returning incidental sequencing results to lung cancer families	NCI/ Univ of Cincinnati (Prime)	R01
Mandal, Diptasri	Common risk variants for familial lung cancer	NCI/ Wayne State Univ (Prime)	R01
McAleer, Jeremy	Synergy between TLR2 and IL-22R in airway epithelial cells during MRSA challenge	NIAID	F32
Pandey, Udai	Molecular basis of FUS/TLS-related amyotrophic lateral sclerosis	Amyotrophic Lateral Sclerosis Association	N/A
Pandey, Udai	Molecular mechanisms of neurodegeneration	BoR	Travel Award
Pandey, Udai	Dissecting molecular mechanism of FUS/TLS-related amyotrophic lateral sclerosis	Muscular Dystrophy Association	N/A
Pandey, Udai	Molecular and Genetic Dissection of FUS/TLS Function in Neurodegeneration	NINDS	R01
Pandey, Udai	High caloric or high fat diet to ameliorate Lou Gehrig's disease	Pennington Nutrition Obesity Research Center	N/A
Pandey, Udai	Molecular library screen for suppression of FUS proteinopathy	NIMH/Henry Jackson Fdn (Prime)	R03
Pandey, Udai	Identifying Genetic Modifiers of FUS-related Amyotrophic Lateral Sclerosis	The Association for Frontotemporal Degeneration	N/A
Pociask, Derek	The role of IL-22 in airway epithelial maintenance and repair	NHLBI	R01
Pociask, Derek	Influenza A Potentiates the Pulmonary Fibrotic Response through Regulation of Epithelial to Mesenchymal Transition	American Thoracic Society	N/A
Tsien, Fern	Medical research opportunities for the Patrick F. Taylor Science and Technology Academy and Taylor Opportunity Program for Students (TOPS)	Patrick Taylor Foundation	N/A
Zheng, Mingquan	Host Defense Against HIV Pulmonary Infections (Antigen Discovery Core)	NHLBI (Shellito PI)	P01
<b>Total Number of Applications Submitted = 50</b>			