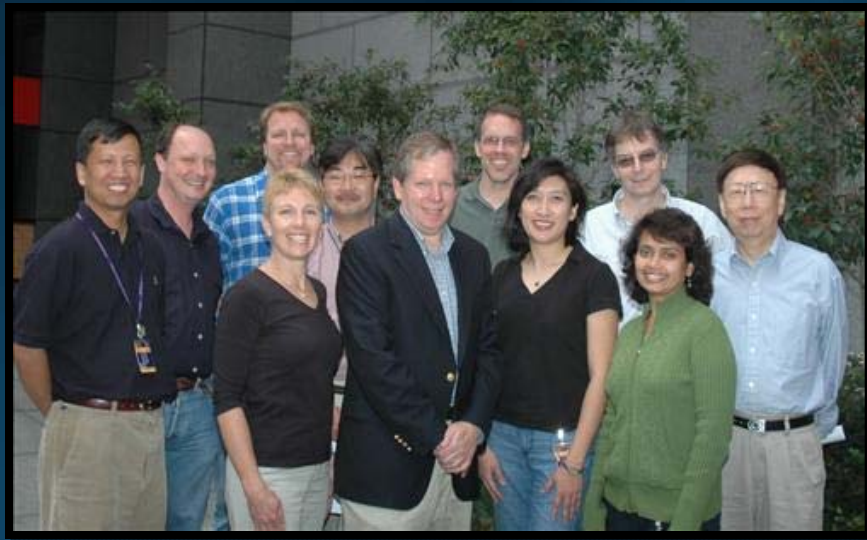




# LSU Health Sciences Center Department of Genetics



## Annual Report Fiscal Year 2009

## Table of Contents

Mission.....	1
Departmental	
Overview.....	1
Recruitment.....	1
Research.....	2
Teaching.....	2
Summer Research Program.....	2-3
Plans for the Coming Year.....	3
Faculty.....	4
Staff.....	5
Teaching Activities.....	6
Mentoring.....	7-8
Presentations	
Invited Presentations.....	9-10
Platform and Poster Presentations.....	10-12
Consulting.....	13-14
Grants.....	15-21
Research Interests.....	22-24
Other Academic Activities and Achievements.....	25-26
Professional Affiliations.....	27-28
Publications.....	29-32

# **Department of Genetics Annual Report Fiscal Year 2009**

## **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.

## **Departmental Overview**

Fiscal year 2009 has been a year of transition for the Department of Genetics. In 2008, Chair, Bronya Keats retired and Dr. Wayne Vedeckis acted as Interim Chair from July 2008 to January 2009. In January 2009, Dr. Steve Nelson, Dean of the School of Medicine at LSU Health Sciences Center New Orleans, appointed Jay K. Kolls, MD, as Professor and Chairman of the Department of Genetics.

A pediatric pulmonologist and immunologist, Dr. Kolls led the LSUHSC Gene Therapy Program for six years before being recruited by Children's Hospital of Pittsburgh as Chief of the Division of Pediatric Pulmonology. In 2006, he was the first professor to occupy the Neils K. Jerne Endowed Chair in Immunology at the University of Pittsburgh.

Dr. Kolls is an elected member of the American Society of Clinical Investigation and the American Association of Physicians. He completed a residency in Medicine/Pediatrics and a research fellowship at LSU Health Sciences Center New Orleans and with Dr. Bruce Beutler at UT Southwestern Medical Center in Dallas, TX before joining the LSUHSC faculty in 1991.

Dr. Kolls has authored 200 publications including papers in refereed journals, book chapters, abstracts, and reviews. He has been awarded or collaborated on NIH grants valued at more than \$15 million. Dr. Kolls brought \$1,749,184 in grant funding with a total of 5 grants transferred. He has also been awarded another R01 and 3 NIH stimulus supplements totaling \$1,800,107 since arriving at LSU. Dr. Kolls has taught throughout his career and mentored more than a dozen students, fellows and post-doctoral fellows.

### Recruitment

One of Dr. Kolls initial acts as Chair was to increase the critical mass of researchers in genetics. Dr. Kolls immediately recruited two Assistant Professors of Research: Drs. Mingquan Zheng and Derek Pociask, both from the University of Pittsburgh. Recruitment activity remained a high priority as the department interviewed 11 individuals from universities and industry such as Brown University, Roswell Park Cancer Institute, St. Jude Children's Research Hospital, NIH, and Wyeth Research. At the close of the fiscal year, 3 letters of offer were issued, one additional letter of offer in negotiation and one candidate scheduled for a 2<sup>nd</sup> visit. Recruitment will continue into fiscal year 2010 with the focus on appointing an outstanding candidate to the Charles Berlin, Ph.D. Chair in the area of genetics and hearing.

### Research

Fiscal year 2009 also saw the growth of research funding. The Department of Genetics faculty were awarded 11 NIH grants totaling \$5,030,231 including 4 ARRA student supplement awards. Department members were quite productive, contributing a total of 36 published papers, 32 invited presentations and 20 platform and poster presentations at national and international meetings. In addition they are members of numerous Health Sciences Center, School and Departmental committees as well as society committees and NIH review groups.

### Teaching

In fiscal year 2009, our faculty taught in 17 courses within the Schools of Medicine, Graduate Studies and Allied Health. At present our departmental teaching efforts provide 15 hours for the medical students, 367 hours for graduate students and 12 hours for allied health students. The Genetics Graduate Program accepted one new student, Nikki Nguyen for a total student enrollment of 12 students. The department was also excited to matriculate Drs. Srirangan Sampath and Alpa Sidhu with their PhD in Human Genetics in the Spring 2009 commencement.

In addition to the new faculty members, the Department enrolled one new Graduate Student Nikki Nguyen. Heather Shields, also joined the Genetics Department Administrative Staff as Department Coordinator.

### Summer Research Program

The summer research program accepted 61 students (17 high school, 19 undergrad and 25 medical students). The program exposes students to cutting edge research and provides an introduction to graduate school as well as preparing them for careers in basic and translational research. Students learn about the scientific process, learn how to design experiments and to analyze and interpret data; furthermore, they gain valuable hands on bench experience. Some students entering the summer program this year were funded through the NIH ARRA stimulus supplements. As a recipient of stimulus funding, each student must provide a report on their experience and how they will utilize the knowledge they gained into their future education and career plans.

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. 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 genetics research. Special seminars cover the responsible conduct of research and presentation skills. The third part of the program is a presentation by the students at the Summer Research Poster Session or Medical Student Symposium. Students are taught how to put a poster together and how to effectively present their data. At the end of the summer, the students present their research results at a poster session that is attended by students from other labs, the mentors, and the other members of the New Orleans medical and scientific community. This year the poster session took place on August 3, 2009. Awards were given to the top posters in each category: High School, Undergraduate and Medical School students. The senior medical students were required to give oral presentations. There were 5 winners for the oral presentations and 6 poster winners.

This program has succeeded in providing over 200 students with a meaningful research experience. Because of this program, some of Louisiana's best and brightest undergraduates, who attend school elsewhere, have been introduced to the opportunities available in their home state. After completing their internship, many participating students present their data at regional/national research conferences, or have their research published in scientific journals.

## **Plans for the Coming Year**

Recruitment will remain a top priority in fiscal year 2010. We closed fiscal year 2009 with three letters of offer issued, of which two have since been accepted. We will welcome Drs. Judy Crabtree and Udai Pandey to the Department as Assistant Professors on the tenure track. The Department will assist these faculty with transitioning to independent research programs with a goal of establishing state of the art programs in molecular genetics of neurodegenerative diseases (Pandey) and genetics of fibroid tumor development (Dr. Crabtree).

We will continue to recruit in the area of transgenics, bioinformatics, and human genetics. Recruitment will focus on identifying an outstanding candidate for the Charles C. Berlin, Ph.D. Chair which is an endowed chair in genetic hearing loss. The Department will also begin a capital campaign to fund an endowed research program in Downs' Syndrome.

Our education and mentoring opportunities will be expanded in fiscal year 2010. The influx of additional faculty and the diverse research areas being offered will provide a fertile training program to undergraduate, graduate students and post-doctoral fellows interested in genetics. To that end we will continue to actively recruit the highest caliber graduate students possible both in the Ph.D and M.D/PhD programs. We have well established structured mentoring programs for graduate students, post-docs, and junior faculty. The Department is firmly committed to career development at all levels. Fiscal year 2010 will introduce the expansion of the summer research program with the acceptance of Patrick F. Taylor high school students and TOPS undergraduate and medical students through an education grant awarded by the Patrick F. Taylor Foundation. Lastly, we are currently conducting a curriculum review of our graduate courses as well as the medical school curriculum to ensure the genetics curriculum is vibrant and state of the art.

The Department of Genetics is guaranteed to see exciting and lasting changes as a result of the efforts planned for fiscal year 2010.

## Faculty

### Full-time:

Jay K. Kolls, M.D.	Professor and Chair
Edward Grabczyk, Ph.D.	Associate Professor
Paula Gregory, Ph.D.	Associate Professor
Wanguo Liu, Ph.D.	Associate Professor
Diptasri Mandal, Ph.D.	Associate Professor
Andrew Hollenbach, Ph.D.	Assistant Professor
Tomoo Iwakuma, Ph.D.	Assistant Professor
Derek Pociask, Ph.D.	Assistant Professor - Research
Mingquan Zheng, M.D.	Assistant Professor - Research
Doan Nguyen, Ph.D.	Instructor
Fern Tsien, Ph.D.	Instructor

### Conjoint:

Michael Lan, Ph.D.	Professor
Donald Mercante, Ph.D.	Professor
Augusto Ochoa, M.D.	Professor
Alistair Ramsay, Ph.D.	Professor
W. Douglas Scheer, Ph.D.	Professor
Yan Cui, Ph.D.	Associate Professor
Guoshun Wang, D.V.M., Ph.D.	Associate Professor
Oliver Wessely, Ph.D.	Assistant Professor

### Adjunct:

Prescott Deininger, Ph.D.	Professor (Tulane)
John Doucet, Ph.D.	Associate Professor (Nichols State Univ)
Shulin Li, Ph.D.	Professor (LSU-BR)
Tarun Mandal, Ph.D.	Professor (Xavier)
William Richardson, Ph.D.	Assistant Professor (Ochsner)
Karen Weissbecker, Ph.D.	Assistant Professor (Tulane)

### Emeritus Faculty:

Bronya J.B. Keats, PhD	Professor
Mary Z. Pelias, PhD, JD	Professor

## Staff

### Administrative:

Stephanie Laurent  
Karen Cappiello  
Heather Shields  
Sandra Lee

Business Manager  
Assistant Business Manager  
Department Coordinator  
Administrative Assistant

### Research:

Amit Adhikari, Ph.D.  
Neeraj Agarwal, Ph.D.  
Jasminkumar Bavarva, Ph.D.  
Kong Chen, Ph.D.  
Mimi Sammarco, Ph.D.  
Srirangan Sampath, Ph.D.  
Yuki Tochigi, Ph.D.

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

Angela Flynn  
Pete Finelli  
Jill Hutchinson  
Patrick Miller  
Candice Pereira  
Alana Whitehead

Research Associate  
Research Associate  
Research Associate  
Research Associate  
Research Associate  
Research Associate

### Graduate Students:

Ayan Banerjee  
Kevin Dietz  
Alain D'Souza  
Heena Mehta  
Sammata Raju  
Alpa Sidhu

Ryan Bonvillain  
Scott Ditch  
Elisa Ledet  
Nikki Nguyen  
David Ricks  
Diana Stoute

## Teaching Activities

### Fall 2008

- AuD-Genetics (SPTHAUD 7225) Drs. Tsien & Mandal
- Genetic Epidemiology & Population Genetics (GENET 236) Dr. Mandal
- Cytogenetics (GENET 292) Dr. Tsien
- Molecular Genetic Mechanisms (INTER 122) Drs. Hollenbach, Tsien, Grabczyk, Iwakuma, Gregory
- Human Prenatal Development (ANAT 101) Dr. Gregory
- Cell Biology and Microanatomy (ANAT 192) Dr. Gregory
- Seminar in Human Genetics (Genet 299) Dr. Hollenbach

### Spring 2009

- Genetics Across the Lifespan (NURS3451) Dr. Gregory
- Human Molecular Genetics (Genet 231) Drs. Gregory & Tsien
- Proposal Writing (Genet 247) Dr. Gregory
- Control of Gene Expression (Inter 123) Drs. Hollenbach, Tsien, Iwakuma, Mandal, Grabczyk, Gregory
- Practical Bioinformatics (Genet 256) Dr. Grabczyk
- Epigenetics (Genet 234) Dr. Tsien
- Systems Course (Inter 132) Dr. Gregory
- Genetics for Physical Therapists Dr. Gregory

### Summer 2009

- Responsible Conduct in Research (Inter 260) Dr. Gregory
- Introduction to Research & Resources (Inter 101) Dr. Gregory

## Mentoring

### **Dr. Kolls:**

Dissertation Advisor  
Thesis Advisor  
Rotation Advisor  
Postdoctoral Advisor

D. Ricks  
N. Nguyen  
Y. Cai  
K. Chen

### **Dr. Grabczyk:**

Dissertation Advisor  
Postdoctoral Advisor  
Summer Research Mentor

A. Banerjee, S. Ditch  
M. Sammarco  
J. Wang

### **Dr. Gregory:**

Dissertation Committee Member

Thesis Committee Member  
Postdoctoral Committee Member  
Clinical Research Scholar Committee Member

Fellows Committee Member

H. Mehta, R.  
Bonvillain, S. Ditch,  
A. Banerjee  
D. Stoute  
M. Sammarco  
E. Richter, R. Lin, L.  
Moreno  
T. Rehman

### **Dr. Hollenbach:**

Dissertation Advisor

Dissertation Committee Member

A. Sidhu, K. Dietz,  
A. Iyengar  
M. Abdraboh, A.  
Washington,  
R. Bonvillain, P.  
Sarvaiya, S. Aras

### **Dr. Iwakuma:**

Postdoctoral Advisor

Summer Research Mentor

Y. Tochigi,  
A. Adhikari,  
N. Agarwal  
C. Chen

### **Dr. Liu:**

Dissertation Committee Member

Summer Research Mentor  
Mentor to Jr. Faculty from Tulane COBRE

S. Sampath, Z.  
Wang  
J. Wu, T. Wang  
N. Makridakis

**Dr. Mandal:**

Dissertation Advisor  
Dissertation Committee Member

E. Ledet  
S. Sampath, A.  
Sidhu, R. Bonvillain

**Dr. Nguyen**

LVC SLIDR Mentor

Summer Research Mentor

M. Darbar, C.  
Winters, X. Xiao  
A. Das, T. Nguyen

**Dr. Tsien:**

Dissertation Committee Member

Summer Research Mentor

A. Sidhu, R.  
Bonvillain  
C. Wright, B.  
Bateman,  
M. Abughazleh

**Dr. Zheng:**

Thesis Co-Advisor

N. Nguyen

## **Presentations**

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

#### **Dr. Kolls:**

- “Th17 Cytokines and Mucosal Immunity”, LaJolla Allergy Institute
- “Th17 Cytokines and Mucosal Immunity”, MD Anderson Cancer Center
- Medicine Grand Rounds, Vanderbilt University
- Pediatric Grand Rounds, U. of Massachusetts,
- Th17 Cytokines and Mucosal Immunity, Meakins Christie Labs, Montreal, CA

#### **Dr. Gregory:**

- “Research Ethics”, Dental School Residents’ Research Day
- Lab tour & demonstration, Tulane Medical School, Dept of Pharmacology –Destrehan High School
- Cancer Genetics, St. Mary’s Dominican High School
- Cancer Genetics, Mandeville High School
- Cancer Genetics, West Jefferson High School
- Cancer Genetics, Ben Franklin High School
- Cancer Genetics, ASHG Annual meeting High School Day

#### **Dr. Hollenbach:**

- “FOXO1: Identification of Direct Transcriptional Targets”, Summer Seminar Series Louisiana Cancer Research Consortium NCI Research Internship

#### **Dr. Iwakuma:**

- “Lessons from MTBP degradation”, Tulane University, COBRE meeting,.
- “Dissecting the roles of MTBP in osteosarcoma metasis”, LCRC, Grantsmanship meeting,
- “Dissecting the roles of MTBP in osteosarcoma metastasis”, Children’s Hospital in New Orleans
- “The role of p53 ins stress regulation, Symposium of mutation and cellular defense mechanisms”, Fukuoka, Japan
- “Is it critical to target mutant p53 in tumors?”, Ochsner Hospital
- Osteosarcoma cells expressing CD117 and Stro-1 demonstrate properties of cancer stem cells”, Louisiana Cancer Research Consortium Retreat.
- “Implications for targeting oncogenic mutant p53 in cancer”, LSUHSC Gene Therapy Seminar Series
- “Mutant p53 gain of oncogenic function: in vivo evidence, mechanism of action and its clinical implications,” Tulane University Department of Structural & Cellular Biology Seminar Series

**Dr. Liu:**

- “Defective Inhibition of the Wnt Signaling by Nkd1 Proteins Mutated in Colorectal Cancer”, Tulane University
- “DNA Damage-Response Defects Associate with Prostate Cancer Risk”, LCRC
- “The *in vivo* Role of AXIN2 in Colorectal Cancer Tumorigenesis”, LSUHSC Stanley S. Scott Cancer Center

**Dr. Mandal:**

- Research overview presented to the IDP students, LSUHSC graduate studies
- Research overview presented to the MD/PhD applicants, LSUHSC-Department of Genetics
- Prostate cancer in high-risk families, Prostrate Cancer Group members, LCRC, LSUHSC
- Genetic Epidemiology and Public Health, Department of Genetics graduate studies, Tulane University

**Dr. Tsien:**

- “22q11.2 spectrum disorders”, Hayward Genetics Center, Tulane School of Medicine
- “DNA Methylation and Disease”, Hayward Genetics Center, Tulane School of Medicine

**Dr. Zheng:**

- “CD4+ T cell-independent vaccination against opportunistic infections”, The 17th Congress of The International Society for Human and Animal Mycology, ISHAM 2009 in Tokyo.
- Influenza and Its Improved Vaccination Strategy, 2009, School of Medicine, Sun Yat-Sen University, Guangzhou China

**Platform and Poster Presentations at Scientific Meetings****Dr. Kolls:**

- “Th17 Cytokines and Mucosal Immunity”, Th17 Keystone Meeting, Vancouver BC
- “Antimicrobial Peptide GRC”, Ventura, CA
- “Th17 Cytokines and Mucosal Immunity”, American Thoracic Society
- “Th17 Cytokines and Mucosal Immunity”, American Society of Microbiology,
- “Th17 Cytokines and Mucosal Immunity”, Abcam Asthma Symposium, Bruges Belgium

**Dr. Grabczyk:**

- Jeffrey Wang, Mimi C. Sammarco, Ayan Banerjee, Scott Ditch, and Ed Grabczyk  
“Transcription Termination in the Polyadenylation Region of  $\alpha$ -actin and  $\alpha$ -globin is Altered by Flanking Sequences”  
LSU Health Sciences Center, Tulane Health Sciences Center Joint Summer Intern Research Program Poster Session.  
LSUHSC/TUHSC Summer Research Program Poster Competition 2008 Overall Winner

**Dr. Hollenbach:**

- Dietz, K. N., Miller, P. J., and Hollenbach, A. D., “Phosphorylation of Ser205 by Casein kinase II persists on Pax3-FOXO1a, but not Pax3, throughout myogenic differentiation”, Annual Experimental Biology Meeting, New Orleans, LA
- Hollenbach, A. D., Miller, P. J., and Sidhu, A., “Transcriptional regulation of Ceruloplasmin by FOXO1A and IL-6”, Annual Experimental Biology Meeting, New Orleans, LA

**Dr. Iwakuma:**

- Tomoo Iwakuma, Yuki Tochigi, Christine M. Eischen, and Guillermina Lozano. Mtbp haploinsufficiency in mice increases metastasis. AACR Special Conference in Cancer Research- Joint Metastasis Research Society, August 3-7, 2008.
- Neeraj Agarwal, Amit Adhikari, Yuki Tochigi, and Tomoo Iwakuma. March 28, 2009: Louisiana Cancer Research Consortium Retreat. MTBP inhibits cell migratory potential induced by ACTN4.  
Yuki Tochigi, Shuo Cui, Yan Cui, and Tomoo Iwakuma. March 28, 2009: Louisiana Cancer Research Consortium Retreat. The role of MTBP in mitotic progression via modulating spindle checkpoint protein Bub1.
- Ryoko Kibe, Shuzhong Zhang, Luis Marrero, Fern Tsien, Arthur Zieske, Jiaqiang Huang, Scott K. Durum, Tomoo Iwakuma, Yan Cui. March 28, 2009: Louisiana Cancer Research Consortium Retreat. Cross-talk between IL-7R $\alpha$  signaling and the p53 pathway in maintaining genomic stability during T cell development.

**Dr. Liu:**

- P53 Regulation Defects Associate with Prostate Cancer Risk, 2008, Shanghai, China

**Dr. Mandal:**

- National/International meeting presentations. E.M. Ledet, I. Flores, J.E. Bailey-Wilson, D.M. Mandal. Genetic analysis of hereditary Endometriosis families in Puerto Rico. *Genetic Epidemiology*. 2008. 32(7):A112
- D. M. Mandal, E. Ledet, J. E. Bailey-Wilson. Identification of prostate cancer susceptibility locus in high-risk African-American families. *Genetic Epidemiology*. 2008. 32(7):A127
- Local/Regional meeting presentation E.M. Ledet, X. Hu, M. Li, D.M. Mandal. Identification of copy number variation in high-risk African-American men with prostate cancer. LCRC retreat, LSUHSC, March 28, 2009

**Dr. Nguyen:**

- Cartilage-derived retinoic acid sensitive protein expression in aged lacrimal gland. ARVO annual international meeting, Fort Lauderdale, FL May 6, 2009.

**Dr. Pociask:**

- Mini symposium oral presentation. American Thoracic Society. Gamma delta T cells attenuate pulmonary fibrosis through IP-10, May 5, 2009.

**Dr. Tsien:**

- Ryoko Kibe, Shuzhong Zhang, Luis Marrero, Fern Tsien, Arthur Zieske, Jiaqiang Huang, Scott K. Durum, Tomoo Iwakuma, Yan Cui. March 28, 2009: Louisiana Cancer Research Consortium Retreat. Cross-talk between IL-7R signaling and the p53 pathway in maintaining genomic stability during T cell development.

**Dr. Zheng:**

- Mingquan Zheng, Jennifer Cusick, McGarry Houghton, Steven D. Shapiro and Jay Kolls. Role of IL-17 Receptor Signaling in Smoke. Presented at the 2009 Keystone Symposia, Th17 Cells in Health and disease, Vancouver, Canada.
- M. Zheng, C. Crowe, J. Bindas, J.K. Kolls. CD4+ T-CELL INDEPENDENT DNA VACCINATION AGAINST INFLUENZA IN MICE. Presented at the 2009 American Thoracic Society International Conference, San Diego, CA.
- Mingquan Zheng and Jay Kolls. The Role of SDF-1/CXCR4 axis in Th17 migration to bone marrow. Presented at the 2009 American Thoracic Society International Conference, San Diego, CA.

## Consulting

### **Dr. Gregory:**

- Louisiana Gene Therapy Research Consortium, Vice President of Educational Outreach
- NSGC On-Line Grant Writing Course for genetic counselors
- NHGRI Grant Writing Course for post docs
- “Topics in Clinical Research” Course, Tulane Medical School
- Genetics for Kids, curriculum development expert
- “Scientific Communications” course for Tulane University

### **Dr. Hollenbach:**

- Allal Ouhtit, MPH, Ph.D., Department of Pathology, “The Isolation of the CD146 receptor ligand.”
- Allal Ouhtit, MPH, Ph.D., Department of Pathology, “Analysis of the CD44-dependent expression of the anti-apoptotic protein surviving.”

### **Dr. Iwakuma:**

- Yan Cui, Gene Therapy, “IL-7 regulates the p53 pathway”
- Tadahide Izumi, Otolaryngology, “Mdm2 dependent ubiquitination of Ape1”
- Mong Hong Lee, MD Anderson Cancer Center, “The role of CSN6 in the p53 activity in vivo.”
- Gilbert Morris: Pathology, Tulane University, “The role of a mutant p53 in lung cancer and asbestos Development.”
- Lingtao Wu: Pathology, University of Southern California, “The role of retinoic acid in the properties of osteosarcoma stem cells.”

### **Dr. Liu:**

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

### **Dr. Nguyen:**

- Allison Quayle, PhD, Microbiology, “Chlamydial growth patterns in human female genital tract.”

### **Dr. Tsien:**

- Bruce Bunnell, PhD, Tulane Regional Primate Center, “Chromosome analysis of multipotent stem cells of Rhesus Macaque”
- 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”
- Wanguo Liu, PhD, LSUHSC, “AXIN2 amplification in colorectal cancer”
- Michael Marble, MD, Children’s Hospital, “Molecular Cytogenetic Studies of Patients with Genetic Diseases”
- Karen Weissbecker, PhD, Hayward Genetics Center, Tulane School of Medicine, Research Methods Course

## Grants

### Dr. Kolls:

#### **A. Funded**

R01-HL061271, Kolls (PI) NIH/NHLBI “Non-CD4 host Defense against P. carinii Pneumonia”	06/01/09-04/30/2014 \$250,000 (current direct cost budget)	1.8 calendar
R01-HL062052, Kolls (PI) NIH/NHLBI “CD8 T-CELLS AND Host Defense against P. carinii Pneumonia”	2/10/2004-8/31/2010 \$219,713 (current direct cost budget)	1.2 calendar
R01-HL079142, Kolls (PI) NIH/NHLBI “IL-23/IL-17 and Lung Host Defense”	12/13/2004 – 11/30/2009 \$231,647 (current direct cost budget)	1.8 calendar
P01-HL076100, Shellito (PI) NIH/NHLBI “Host Defense against HIV-related pulmonary infections”	2/20/2004 – 1/31/2011 \$233,701 (current direct cost budget)	2.4 calendar
P50-HL084932, Kolls (Project Leader, Project 1) NIH/NHLBI “Host Factors in Fungal Allergy and Fibrosis”	9/11/2006-7/31/2011 \$2,032,752 (current direct cost budget)	2.4 calendar
R01-AA016688, Kolls (PI) NIH/NIAAA “Alcohol, ROS, and Macrophage Epigenetics”	9/30/2006-8/31/2011 \$210,000 (current direct cost budget)	1.8 calendar
R01-AI070672, Peebles (PI), Kolls (consultant) NIH/NIAID “The Role of IL-17 in RSV-induced Mucus and Airway Responsiveness”	8/1/2007-7/31/2012 \$29,364 (current direct cost budget)	
R01-HL062052 (ARRA Student Supplement) NIH/NHLBI “CD8 T-CELLS AND Host Defense against P. carinii Pneumonia”	6/1/2009-8/31/2010 \$6,850 (current direct cost budget)	
R01-HL079142 (ARRA Student Supplement) NIH/NHLBI “IL-23/IL-17 and Lung Host Defense”	7/1/2009 – 11/30/2010 \$6,850 (current direct cost budget)	
R01-AA016688 (ARRA Student Supplement) NIH/NIAAA “Alcohol, ROS, and Macrophage Epigenetics”	7/1/2009 - 8/31/2011 \$6,850 (current direct cost budget)	

**B. Submitted**

NIH R01-Renewal 12/01/09-11/30/14	Th-17 Cytokines and Lung Immunity \$1,682,571 direct costs
NIH U01 9/30/09-8/31/14	Respiratory Microbiota, Inflammation and HIV \$3,103,125 direct costs
NIH- ARRA Administrative Supplement 7/01/09-11/30/10	IL-23.IL-17 and Lung Host Defense \$123,367 direct costs

**Dr. Grabczyk:****A. Funded**

R01-R01NS046567, Grabczyk (PI) NIH/NINDS “Mechanisms contributing to frataxin deficiency”	9/1/2005-7/31/2010 \$627,870 (current direct cost budget)	6 calendar
R01-R01NS046567 (Supplement), Grabczyk (PI) NIH/NINDS “Mechanisms contributing to frataxin deficiency”	8/1/2008-7/31/2010 \$7,042 (current direct cost budget)	
R01-R01NS046567 (ARRA Student Supplement) NIH/NINDS “Mechanisms contributing to frataxin deficiency”	7/21/2009-7/31/2010 \$6,850 (current direct cost budget)	

**B. Submitted**

NIH – ARRA Admin Supplement 8/1/2009 – 7/31/2010	“Mechanisms contributing to frataxin deficiency” \$76,743 direct costs
National Ataxia Foundation  10/15/2009 – 10/14/2010	“The contribution of IRP2 to neurodegeneration in FRDA and the potential for therapeutic intervention” \$106,416 direct costs

**Dr. Gregory:****A. Funded**

LESQF(2007-12)-ENH-PKSFI-PRS, Ramsay (Co-I) BOR “Center of Excellence for Vaccine Development”	07/01/2007-06/30/2012 \$5,500,000 direct costs	1.2 calendar
RC/EEP-06(2007-10), Nelson (Co-I) BOR “Clinical and Translational Research Education”	09/01/2007-07/31/2010 \$5,900,000	3.6 calendar

## **B. Submitted**

NIH – Challenge Grant  
9/30/2009 – 9/29/2011 “Rebuilding Science Education in NOLA”  
\$303,441 direct costs

NIH – Challenge Grant  
9/30/2009 – 9/29/2011 “GRITS: Girls Raised in the South do Science”  
\$269,289 direct costs

## **Dr. Hollenbach:**

### **A. Funded:**

P20 RR020152, Deininger (Project Leader) 08/01/2004 – 07/31/2009 6 calendar  
NIH/COBRE \$771,430 (current direct cost budget)  
“Determining the Role of Phosphorylation in the Promotion of the Solid Muscle Tumor Alveolar Rhabdomyosarcoma”

1 R01 CA138656, Hollenbach (PI) 06/01/2009 – 03/31/2014 6 calendar  
NIH/NCI \$1,037,500 (current direct cost budget)  
“Mechanism of regulation for the oncogenic Pax3-FOXO1 in Alveolar Rhabdomyosarcoma”

### **B. Submitted**

American Diabetes Association “Analysis of insulin and FOXO1-dependent altered  
gene expression in metabolic regulation and  
diabetes”  
01/01/2009 – 12/31/2011 \$45,000 direct costs

## **Dr. Iwakuma:**

### **A. Funded**

P20RR020152-02 (Deininger) (Project P.I.) 8/01/2006 – 7/31/2009 6 calendar  
NIH/GM \$602,439 (current direct cost budget)  
“ATP, Dissecting Roles of MTBP in Osteosarcoma Metastasis”

1 R01 CA132603-01 (Morris, Shan, Sullivan) (Co-investigator)  
05/01/2008 – 4/30/2013 0.6 calendar  
NIH/NCI \$ 22,535 (current direct cost budget)  
“Mechanisms of Lung Carcinogenesis Induced by Asbestos and Cigarette Smoke”  
ACS RSG-09-169-01-CSM (Iwakuma) 06/01/2009 – 05/31/2013 4.8 calendar  
American Cancer Society \$720,000 (current direct cost budget)  
“Uncovering the mechanisms of osteosarcoma metastasis suppression by MTBP”

P20 RR020152-02 (Deininger) (Project PI) 07/01/2009 – 6/30/2011 1.2 calendar  
NIH/GM \$100,000 (current direct cost budget)  
“Regulation of the mitotic checkpoint by MTBP”

## **B. Submitted**

NIH R01 grant 1R01CA134523-01A1 07/01/2009- 06/30/2014	“Dissecting the roles of MTBP in osteosarcoma metastasis” \$1,000,000 direct costs
BOR 07/01/2009- 06/30/2012	“The role of a mutant p53 in the properties of osteosarcoma stem cells” \$125,194 direct costs
Hope Street Kids 7/1/2009 – 6/30/2011	“Targeting mutant p53 in osteosarcoma stem cells from mouse models” \$80,000 direct costs
NIH/NCI (Alahari) 07/01/2009 – 06/30/2014	“Understanding the tumor suppressive function of Nischarin in vivo”

## **Dr. Liu:**

### **A. Funded**

R01 CA115555-1, Liu NIH/NCI “DNA Damage-Response Defects in Prostate Cancer Risk”	09/29/2007 – 08/28/2011 \$237,630 annual direct costs	2.4 calendar
CA11555-02S1 (ARRA Student Supplement) NIH/NCI “DNA Damage-Response Defects in Prostate Cancer Risk”	06/01/2009 – 09/30/2010 \$11,700 total direct costs	
5P20RR020152, Deininger (Co-I) NIH/GM “Mentoring a Cancer Genetics Program in Louisiana”	08/01/09 – 07/31/2014 \$7,787 annual direct costs	0.6 calendar
ACS RSG-09-169-01-CSM (Iwakuma) American Cancer Society “Uncovering the mechanisms of osteosarcoma metastasis suppression by MTBP”	06/01/2009 – 05/31/2013 \$720,000 (current direct cost budget)	0.36 calendar

## **B. Submitted**

DoD (Kim) 10/01/2009 – 09/30/2011	“Scavenger receptor class B, type I mediated cholesterol metabolism and prostate cancer” \$110,929 annual direct costs
NIH/NCI (ARRA Admin Supplement) 09/01/2009 – 08/30/2011	“DNA Damage-Response Defects in Prostate Cancer Risk” \$74,033 annual direct costs

**Dr. Mandal:**

**A. Funded Grants**

N01-HG-65404, Mandal (PI) NIH “Determination of Genetic Susceptibility to Lung Cancer in Families from Southern Louisiana”	10/13/97-09/30/11 \$666,605 (current direct cost budget)	3.6 calendar
R01-HD050559, Mandal (PI) NIH “SNP analysis of Endometriosis Candidate Genes”	04/01/06-03/31/11 \$55,189 (current direct cost budget)	1.2 calendar
U01-CA076293, Anderson (PI) NIH “Genetic Epidemiology of Lung Cancer”	09/01/06-08/31/10 \$25,321 (current direct cost budget)	.36 calendar
PFUND-102. Mandal (PI) BoR “Genetic Characterization of Prostate Cancer Risk Locus in African-American Males with Family History”	04/01/08-03/31/09 \$10,000 (current direct cost budget)	
Louisiana Cancer Research Consortium, Mandal (PI) LCRC “Copy number variation in high-risk African-American men with prostate cancer”	09/29/08-08/30/09 \$15,000 (current direct cost budget)	

**B. Submitted**

NIH-Challenge Grant (Smolek) 09/30/2009 – 8/31/2011	“Corneal Screening and Quality of Vision for Children in Keratoconus Families” \$10,441 direct cost	
NIH-NCRR Administrative Supplement (Koochekpour) 04/01/2009 – 3/31/2011	“Genetic Instability of the AR in prostate cancer in African-Americans” \$10,441 direct cost	
NIH/NCI-R01 (Koochekpour) 04/01/2009 – 03/31/2014	“Alterations in AR structure-function in African-American prostate cancer” \$10,441 direct cost	
NIH-R21 (Koochekpour) 04/01/2009 – 03/31/2011	“Significance of a novel germline AR mutation in black men with prostate cancer” \$5,220 direct cost	

NIH-P20 (Koochekpour) "Exploratory Centers of Excellence"  
04/01/2009 – 03/31/2014 \$10,440 direct cost

NIH-Administrative Supplement "Genetic Epidemiology of Lung Cancer"  
09/01/09-08/31/11 \$117,351 direct cost

**Dr. Nguyen:**

**A. Funded**

2P20RR016456 SUB1433 (Project Leader) 05/01/2006 – 04/30/2010 6 calendar  
NIH \$259,934 direct costs  
"Lacrimal gland bioinformatics: a neural connection of dry eye and aging"

DOD - W81XWH-08-1-0676, Martin (Co-I) 09/02/2008 – 10/01/2011 1.2 calendar  
DoD \$19,261 annual direct costs  
"Bioinformatics and Biotechnology Research Initiatives"

**B. Submitted**

NIH R21 "Genetic Mapping of Periodontal Disease"  
004/01/2010 – 03/31/2012 \$284,706 direct costs

**Dr. Tsien:**

**A. Funded**

P20RR020152-02 (Deininger, Iwakuma) 8/01/2006 – 7/31/2009 1.2 calendar  
NIH/GM \$602,439 (current direct cost budget)  
"ATP, Dissecting Roles of MTBP in Osteosarcoma Metastasis"

D01RH00136/932 (Keats) 08/01/2007 – 07/31/2009 3.6 calendar  
HRSA \$328,704 (current direct cost budget)  
"Center for Acadiana Genetics and Hereditary Health Care"

**B. Submitted**

Patrick F. Taylor Foundation "Medical research opportunities for the Patrick F.  
Taylor Science and Technology Academy and  
Taylor Opportunity Program for Students (TOPS)  
8/1/09-7/31/12 \$378,480 direct costs

**Dr. Zheng:**

**A. Funded**

ALA, Zheng 01/01/2009 – 06/30/2009 0.6 calendar  
American Lung Association \$53,398 direct costs  
"CD4-Independent DNA Vaccinations Against Influenza"

**B. Submitted**

Pennington Biomedical

07/01/2009 – 06/30/2010

“The Role of Vitamin D in Th2 and Th17 Related  
Asthma”

\$35,000 direct costs

DoD

08/03/2009 – 08/02/2012

“Improved vaccination strategy against influenza”

\$450,000 direct costs

## Research Interests

### Research Summary

Jay K. Kolls M.D., Chair (Genetics)

- 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.

Edward Graczyk, PhD, Associate Professor (Genetics)

- 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, PhD, Associate Professor (Genetics)

- 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 D. Hollenbach, PhD, Assistant Professor (Genetics)

- The regulation of transcription factors through phosphorylation

- Biochemical mechanisms of chromosomal translocation gene products in cancer formation

Tomoo Iwakuma, MD, PhD, Assistant Professor (Genetics)

- Protein function in p53 pathway
- Generation and analyses of genetically engineered mice related to tumor development

Wanguo Liu, PhD, Associate Professor (Genetics)

- 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, PhD, Associate Professor (Genetics)

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

Doan Nguyen, PhD, Instructor (Genetics)

- 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

Derek Pociask, PhD, Assistant Professor (Genetics)

- 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 role of IL-12 family members (IL-12 p40 homodimer, IL-23, IL-17) in pulmonary fibrosis

Fern Tsien, PhD, Instructor (Genetics)

- Chromosome instability in cancer and adult stem cells
- 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

Mingquan Zheng, M.D., Assistant Professor (Genetics)

- Investigate 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.

## Other Academic Activities and Achievements

### Dr. Kolls:

- Section Editor, Journal of Immunology
- Consulting Editor, Journal of Clinical Investigation

### Dr. Gregory:

- GENA – the ASHG Genetics Education Partnership Program
- LCME Institutional Setting Committee
- Medical School Curriculum Committee
- LSUHSC Graduate Advisory Committee
- Faculty Forward Panel (AAMC)
- IDP Advising Committee
- IDP Recruitment Committee
- IDP Admissions Committee
- IDP Curriculum Committee
- Tours for High Schools: Dutchtown H.S. and Ben Franklin H.S.
- Forensics after school club organized with Communities In Schools
- Director, LGTRC and LVC Summer Internship Program
- Director, SoM Medical Student Summer Internship Program
- Dean's Strategic Planning Committee on Faculty Development
- SoM Committee on Faculty Development
- SoM Committee on Women's Affairs

### Dr. Hollenbach:

- Co-organizer of the Department of Genetics seminar series
- Director, The Department of Genetics Second Year Qualifying Exam
- Member, The Dean's Strategic Planning Committee on the Improvement of Communications
- 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
- Interviewer, The Graduate School Interdisciplinary Program admissions committee
- Organizer and Developer, The Department of Genetics Emergency Preparedness Guidelines
- Organizer, The Department of Genetics Long-term and Emergency Short-term off-site storage needs
- Volunteer, The American Society of Biochemistry and Molecular Biology (ASBMB) Annual Meeting Undergraduate poster competition judge
- Organizer and Volunteer, The LSUHSC graduate school recruitment booth at the ASBMB Annual Meeting

**Dr. Iwakuma:**

- Research achievement award, LCRC Retreat.

**Dr. Liu:**

- Tissue Utilization Review Committee (TURC) in LCRC.
- Junior faculty mentoring committee in Stanley S. Scott Cancer Center
- Faculty search committee in Department of Genetics
- Thesis committee for PhD student - Srirangan Sampath in Department of Genetics
- Invited as a review committee member for UKF (Unity Through Knowledge Fund) by Ministry of Science and Education, Republic of Croatia
- Developed research collaboration with many faculties inside and outside
- Participated and served as a reviewer for PhD student qualify exam (2008)
- Trained two summer students in 2008 and three more this year
- Invited as a platform speaker at International Wnt signaling meeting in Washington, DC June 2009
- Assisted Cancer Center with evaluating and purchasing the Next Generation Sequencer and will continue to provide expertise in this area.

**Dr. Mandal:**

- Graduate Student Coordinator, Department of Genetics, LSUHSC
- Chair, Curriculum Committee, LSUHSC graduate studies
- Chair, Graduate Admission Committee, Department of Genetics, LSUHSC
- IDP/MD/PhD Tour Coordinator, Department of Genetics, LSUHSC
- Emergency Policy Guide Committee
- Member, Graduate Advisory Council, LSUHSC
- Member, Council on Professional Conduct, LSUHSC
- Hosting seminar speaker for the Department of Genetics seminar series
- Writing departmental brochure for graduate students
- Update departmental catalogue for graduate studies
- Member, GELCC - Genetic Epidemiology of Lung Cancer Consortium
- Member, Ethical, Legal and Social Issues (ELSI) Committee, International Genetic Epidemiology Society
- Ad hoc member NIH/NIGMS Study Section
- Member, ICPCG - International Consortium of Prostate Cancer Genetics
- Ad hoc member NIH/NCI Small Grants Program Study Section

**Dr. Tsien:**

- Coordinator, Louisiana Gene Therapy Consortium / Louisiana Vaccine Center / Louisiana Cancer Research Consortium Summer Internship Program
- Assistant Education Coordinator, Louisiana Vaccine Center
- Member, Center for Acadiana Genetics and Hereditary Health Care
- Coordinator, LSUHSC Genetics Department Seminar Series
- Member, LSUHSC Stanley S. Scott Cancer Center
- Member, DNA Methylation Society
- Member, American Society of Human Genetics
- Volunteer, Greater New Orleans Science and Engineering Fair, Judge

## 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

### **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
- Information & Education Committee
- American Society for Gene Therapy
- American Association for Cancer Education
- Association of Professors of Medical Genetics

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

- The American Society for Human Genetics
- The American Society for Biochemistry and Molecular Biology

### **Tomoo Iwakuma, Ph.D.**

- AACR
- Japanese Orthopedic Surgery Association
- 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
- Louisiana Vaccine Center

**Mingquan Zheng, PhD.**

- American Thoracic Society
- American Society of Gene Therapy

## Publications

### Dr. Kolls:

1. Myerburg MM, King Jr JD, Oyster NM, Fitch AC, Magill A, Baty CJ, Watkins SC, **Kolls JK**, Pilewski JM, Hallows KR. AMPK Agonists Ameliorate Sodium and Fluid Transport and Inflammation in CF Airway Epithelial Cells. *Am J Respir Cell Mol Biol*. 2009 Jul 17.
2. Khader SA, Gaffen SL, **Kolls JK**. Th17 cells at the crossroads of innate and adaptive immunity against infectious diseases at the mucosa. *Mucosal Immunol*. 2009 Sep;2(5):403-11. Epub 2009 Jul 8.
3. O'Connor W Jr, Kamanaka M, Booth CJ, Town T, Nakae S, Iwakura Y, **Kolls JK**, Flavell RA. A protective function for interleukin 17A in T cell-mediated intestinal inflammation. *Nat Immunol*. 2009 Jun;10(6):603-9.
4. Reay J, Kim SH, Lockhart E, **Kolls J**, Robbins PD. Adenoviral-mediated, intratumor gene transfer of interleukin 23 induces a therapeutic antitumor response. *Cancer Gene Ther*. 2009 Apr 24.
5. Newcomb DC, Zhou W, Moore ML, Goleniewska K, Hershey GK, Kolls JK, Peebles RS Jr. A functional IL-13 receptor is expressed on polarized murine CD4+ Th17 cells and IL-13 signaling attenuates Th17 cytokine production. *J Immunol*. 2009 May 1;182(9):5317-21.
6. Chan YR, Liu JS, Pociask DA, Zheng M, Mietzner TA, Berger T, Mak TW, Clifton MC, Strong RK, Ray P, **Kolls JK**. Lipocalin 2 is required for pulmonary host defense against Klebsiella infection. *J Immunol*. 2009 Apr 15;182(8):4947-56.
7. Gonzalez-García I, Zhao Y, Ju S, Gu Q, Liu L, **Kolls JK**, Lu B. IL-17 signaling-independent central nervous system autoimmunity is negatively regulated by TGF-beta. *J Immunol*. 2009 Mar 1;182(5):2665-71.
8. Aujla SJ, **Kolls JK**. IL-22: a critical mediator in mucosal host defense. *J Mol Med*. 2009 May;87(5):451-4. Epub 2009 Feb 14.
9. Sieve AN, Meeks KD, Bodhankar S, Lee S, **Kolls JK**, Simecka JW, Berg RE. A novel IL-17-dependent mechanism of cross protection: respiratory infection with mycoplasma protects against a secondary listeria infection. *Eur J Immunol*. 2009 Feb;39(2):426-38.
10. Dubin PJ, **Kolls JK**. Th17 cytokines and mucosal immunity. *Immunol Rev*. 2008 Dec;226:160-71. Review.
11. Dubin PJ, **Kolls JK**. Interleukin-17A and interleukin-17F: a tale of two cytokines. *Immunity*. 2009 Jan 16;30(1):9-11.

12. Kreindler JL, Bertrand CA, Lee RJ, Karasic T, Aujla S, Pilewski JM, Frizzell RA, **Kolls JK**. Interleukin-17A induces bicarbonate secretion in normal human bronchial epithelial cells. *Am J Physiol Lung Cell Mol Physiol*. 2009 Feb;296(2):L257-66. Epub 2008 Dec 12
13. Nagata T, McKinley L, Peschon JJ, Alcorn JF, Aujla SJ, **Kolls JK** Requirement of IL-17RA in Con A induced hepatitis and negative regulation of IL-17 production in mouse T cells. *J Immunol*. 2008 Dec 1;181(11):7473-9.
14. **Kolls JK**, McCray PB Jr, Chan YR. Cytokine-mediated regulation of antimicrobial proteins. *Nat Rev Immunol*. 2008 Nov;8(11):829-35.
15. Lu YJ, Gross J, Bogaert D, Finn A, Bagrade L, Zhang Q, **Kolls JK**, Srivastava A, Lundgren A, Forte S, Thompson CM, Harney KF, Anderson PW, Lipsitch M, Malley R. Interleukin-17A mediates acquired immunity to pneumococcal colonization. *PLoS Pathog*. 2008 Sep 19;4(9):e1000159.
16. McKinley L, Alcorn JF, Peterson A, Dupont RB, Kapadia S, Logar A, Henry A, Irvin CG, Piganelli JD, Ray A, **Kolls JK**. TH17 cells mediate steroid-resistant airway inflammation and airway hyperresponsiveness in mice. *J Immunol*. 2008 Sep 15;181(6):4089-97.
17. Zhao XJ, Dong Q, Bindas J, Piganelli JD, Magill A, Reiser J, **Kolls JK**. TRIF and IRF-3 binding to the TNF promoter results in macrophage TNF dysregulation and steatosis induced by chronic ethanol. *J Immunol*. 2008 Sep 1;181(5):3049-56.
18. Rapaka RR, **Kolls JK**. Pathogenesis of allergic bronchopulmonary aspergillosis in cystic fibrosis: current understanding and future directions. *Med Mycol*. 2009;47 Suppl 1:S331-7. Epub 2008 Jul 29. Review.
19. Weiss DJ, **Kolls JK**, Ortiz LA, Panoskaltsis-Mortari A, Prockop DJ. Stem cells and cell therapies in lung biology and lung diseases. *Proc Am Thorac Soc*. 2008 Jul 15;5(5):637-67. Review. No abstract available.

**Dr. Grabczyk:**

1. Banerjee\*, A., Sammarco\*, M. C., Ditch, S., Wang, J. and **Grabczyk, E.** (2009) A Novel Tandem Reporter Quantifies RNA Polymerase II Termination in Mammalian Cells. *PLoS ONE* (accepted).

**Dr. Hollenbach:**

1. Bakkar, N., Wang, J., Ledner, K. J., Wang, H., Dahlman, J., Carathers, M., Acharyya, S., Rudnicki, M. A., **Hollenbach, A. D.**, and Guttridge, D. C. (2008) "IKK/NF- $\kappa$ B Regulates Skeletal Myogenesis Via a Signaling Switch to Inhibit Differentiation and Promote Mitochondrial Biogenesis" *J. Cell Biol.* 180(4), 787 – 802.
2. Sidhu, A., Miller, P. J., Johanson, K. E., and **Hollenbach, A. D.** (2008) Novel flanking DNA sequences enhance FOXO1a DNA binding affinity but do not alter DNA bending. *Biochemistry* 47:6809-18.
3. Miller, P. J., Dietz, K. N., and **Hollenbach, A. D.** (2008) Identification of serine 205 as a site of phosphorylation on Pax3 in proliferating but not differentiating primary myoblasts. *Protein Sci* 17:1979-86.

**Dr. Iwakuma:**

1. **Iwakuma T\***, Tochigi Y, Van Pelt CS, Caldwell LC, Terzian T, Parant JM, Chau GP, Koch J, Eischen CM, Lozano G.\*. *Mtbp* haploinsufficiency in mice increases tumor metastasis. *Oncogene* 2008, 27(13):1813-1820. \*Co-corresponding authors.
2. Terzian T, Suh Y-A, **Iwakuma T**, Post SM, Neumann M, Lang GA, Van Pelt CS, Lozano G. The inherent instability of mutant p53 is alleviated by *Mdm2* or *p16<sup>INK4a</sup>* loss. *Genes & Development* 2008, 22(10): 1337-1344.
3. Barboza JA, **Iwakuma T**, Terzian T., El-Naggar AK, Lozano G. Mdm2 and Mdm4 loss regulates distinct p53 activities. *Molecular Cancer Res.* 2008, 6(6): 947-954.
4. Busso CS, **Iwakuma T**, Izumi T. Ubiquitination of mammalian AP endonuclease (APE1) regulated by the p53-MDM2 signaling pathway. *Oncogene* 2009, 28(13):1616-1625.
5. Adhikari A, **Iwakuma T\***. Mutant p53 gain of oncogenic function: in vivo evidence, mechanism of action and its clinical implications. *Fukuoka Acta Medica* 2009. In press.

**Dr. Liu:**

1. Pan KF, **Liu W**, Zhang L, You WC, and Lu YY. Mutations in components of the Wnt signaling pathway in gastric cancer. *World J Gastroenterol.* 2008 14(10):1570-74.
2. Wang L, Oberg AL, Asmann YW, Sicotte H, McDonnell SK, Riska SM, **Liu W**, Steer CJ, Subramanian S, Cunningham JM, Cerhan JR, Thibodeau SN. Genome-wide Transcriptional Profiling Reveals MicroRNA-correlated Genes and Biological Processes in Human Lymphoblastoid Cell Lines. *PLoS One* (in press)

**Dr. Mandal:**

1. Liu P, Vikis HG, Wang D, Lu Y, Wang Y, Schwartz AG, Pinney SM, Yang P, de Andrade M, Petersen GM, Wiest JS, Fain PR, Gazdar A, Gaba C, Rothschild H, **Mandal D.M.**, Coons T, Lee J, Kupert E, Seminara D, Minna J, Bailey-Wilson JE, Wu X, Spitz MR, Eisen T, Houlston RS, Amos CI, Anderson MW, You M. Familial aggregation of common sequence variants on 15q24-25.1 in lung cancer. *J Natl Cancer Inst.* 2008. 100:1326-30.
2. M. You, D. Wang, P. Liu, H. Vikis, M. James, Y. Lu, Y. Wang, M. Wang, D. Jia, Y. Liu, L.J. Bierut, P. Yang, Z. Sun, Y. Wu, W. Zheng, X. Shu, J. Long, Y. Gao, Y. Xiang, W. Chow, N. Rothman, S.M. Pinney, G.M. Petersen, M. de Andrade, J.S. Wiest, P.R. Fain, A.G. Schwartz, A. Gazdar, C. Gaba, H. Rothschild, **D. M. Mandal**, J. Lee, E. Kupert, D. Seminara, J. Minna, J.E. Bailey-Wilson, C. I. Amos, and M.W. Anderson. RGS17 is a candidate for the lung cancer susceptibility locus on chromosome 6q23-25. *Clinical Cancer Research.* 2009. 15:2666-74

**Dr. Pociask:**

1. Chan YR, Liu JS, **Pociask D.A.**, Zheng M, Mietzner TA, Berger T, Mak TW, Clifton MC, Strong RK, Ray P, Kolls JK. Lipocalin 2 is required for pulmonary host defense against Klebsiella infection. *J Immunol.* 2009 Apr 15;182(8):4947-56.
2. Tai-Cheng Lai, **Derek A. Pociask**, MaryBeth Ferris, Hong T. Nguyen, Charles A. Miller III, Arnold R. Brody, and Deborah E. Sullivan Small interfering RNAs (siRNAs) targeting TGF- $\beta$ 1 mRNA suppress asbestos-induced expression of TGF- $\beta$ 1 and CTGF in fibroblasts. *Journal of Environmental Pathology, Toxicology and Oncology.* In Press.

**Dr. Nguyen:**

1. Toshida H, **Nguyen D.H.**, Beuerman RW, Murakami A. Mechanism of lacrimation by cyclosporine-A in rabbit. In press, *Invest Ophthalmol Vis Sci.*

**Dr. Tsien:**

1. Izadpanah R, Kaushal D, Kriedt C, **Tsien F.** Patel B, Dufour J, Bunnell BA, Long-term in vitro expansion alters the biology of adult mesenchymal stem cells, *Cancer Research.* Jun 68(11):4229-38 (2008).

**Dr. Zheng:**

1. Chan YR, Liu JS, Pociask DA, **Zheng M.** Mietzner TA, Berger T, Mak TW, Clifton MC, Strong RK, Ray P, Kolls JK. Lipocalin 2 is required for pulmonary host defense against Klebsiella infection. *J. Immunol.* 2009 Apr 15;182(8):4947-56.