

UNIVERSITY OF SOUTH FLORIDA

Division of Allergy and Immunology

Department of Internal Medicine

*Joy McCann Culverhouse Airway Disease Research
Center and The James A. Haley V.A. Medical Center
Tampa, Florida*

**2006-2007
Annual Report**





1	Introduction
2	Dedication
3	Faculty and Staff
7	Distinguished Professor Award
8	Basic Research Projects
14	Clinical Research Projects
16	Pharmaceutical Sponsored Studies
17	Simmons Endowment Award
18	Research Support
19	Publications
27	Abstracts
30	AAAAI News
31	Faculty and Staff Awards
32	World Allergy Organization Press Release
33	2006-2007 Visiting Professor Educational Program



*University of South Florida College of Medicine,
Department of Internal Medicine, Division of Allergy
and Immunology
Annual Report 2006-2007*

Samuel C. Bukantz, M.D., founded the University of South Florida College of Medicine, Department of Internal Medicine, Division of Allergy and Immunology in 1972. Richard F. Lockey, M.D. succeeded Dr. Bukantz in 1983 and is the current Director of the Division. Mrs. Joy McCann Culverhouse endowed the Division in 1997 and The Joy McCann Culverhouse Airway Disease Research Center was dedicated in February 1998. In 1998, Mabel and Ellsworth Simmons endowed the Division with a grant for education and research. The goals of the Division are: first, to provide care to patients with allergic and immunologic diseases at the University of South Florida College of Medicine, Tampa General Hospital, James A. Haley V.A. Medical Center, All Children's Hospital, and H. Lee Moffitt Cancer Center; second, to train students, residents, and fellows in the subspecialty of allergy and immunology; and third, to conduct basic and clinical research in allergy, asthma, and immunology.

Individuals interested in collaborating with members of the Medicine Division may contact Richard F. Lockey, M.D. or any faculty member at (813) 972-7631 (e-mail: rlockey@health.usf.edu). John W. Sleasman, M.D. or any other faculty member in the Pediatric Division may be contacted at 727-553-3533 or Jsleasma@health.usf.edu.

This annual report is dedicated to Jewell and Samuel C. Bukantz, M.D.



Dr. Lockett, when he had brown hair, is presenting Dr. Bukantz the Distinguished Clinician Award at the 1991 annual AAAAI meeting in San Francisco. Dr. Bukantz, now age 96, lives with his wife, Jewell, age 93, at the University Village Nursing Center, 12250 N. 22nd Street, Tampa, FL 33612. He founded the University of South Florida Division of Allergy and Immunology, Department of Internal Medicine, in 1972.

Dr. Lockett encourages all graduates and friends of the Division and Dr. & Mrs. Bukantz to write a note to them and send pictures of themselves and/or their family. Please do it as often as possible. They would truly appreciate it.

*DIVISION OF ALLERGY AND
IMMUNOLOGY
FACULTY AND STAFF*

Core Faculty

Samuel C. Bukantz, M.D., Professor Emeritus of Medicine and Medical Microbiology and Immunology; Director Emeritus

Richard F. Lockey, M.D., University Distinguished Health Professor, Professor of Medicine, Pediatrics, and Public Health; Division Director; Joy McCann Culverhouse Chair of Allergy and Immunology

Roger W. Fox, M.D., Professor of Medicine, Pediatrics and Public Health

Dennis K. Ledford, M.D., Professor of Medicine and Pediatrics

Shyam S. Mohapatra, Ph.D., Professor of Medicine, Molecular Medicine, and Pediatrics; Director of Basic Research, Joy McCann Culverhouse Airway Disease Research Center; Director, University of South Florida Health Signature Program in Allergy, Immunology and Infectious Diseases; Mabel & Ellsworth Simmons Professor of Medicine

Mark C. Glaum, M.D., Ph.D., Assistant Professor of Medicine and Pediatrics

Arun Kumar, Ph.D., Research Instructor, Joy McCann Culverhouse Airway Disease Research Center

Prasanna Kumar Jena, Ph.D., Research Instructor, Joy McCann Culverhouse Airway Disease Research Center

Homero San-Juan-Vergara, MD, PhD, Research Instructor, Joy McCann Culverhouse Airway Disease Research Center

Weidong Zhang, M.D., Ph.D., Research Instructor, Joy McCann Culverhouse Airway Disease Research Center

Joint Faculty

Stuart M. Brooks, M.D., Professor of Public Health and Medicine

Noorbibi Day, Ph.D., Professor of Pediatrics and Medicine

Gary W. Litman, Ph.D., Hines Professor of Pediatrics and Medicine

John W. Sleasman, M.D., Professor of Pediatrics and Medicine; Robert A. Good Professor of Immunology; Chief, Division of Allergy and Immunology, Department of Pediatrics, University of South Florida, All Children's Hospital

Sandra G. Gompf, M.D., Associate Professor of Medicine

Michael Nieder, M.D., Associate Professor of Pediatrics and Medicine; Director, Blood and Marrow Transplant Program, All Children's Hospital

Mitchel J. Seleznick, M.D., Associate Professor of Medicine

Morna Dorsey, M.D., M.M.Sc., Assistant Professor of Pediatrics and Medicine

Robert Nickeson, Jr., M.D., Assistant Professor of Pediatrics and Medicine

Aleksandra Petrovic, M.D., Assistant Professor of Pediatrics and Medicine

Matthew Morrow, M.S., M.T. (ASCP), Director, Flow Cytometry Services, Children's Research Institute

Mandel R. Sher, M.D., Clinical Professor of Pediatrics and Medicine

Nathan Tang, M.D., Clinical Associate Professor of Pediatrics and Medicine

Clinical Faculty

Rama Ganguly, Ph.D., M.P.H., Clinical Professor of Medicine

Robert E. Windom, M.D., Clinical Professor of Medicine

Monroe J. King, D.O., Clinical Associate Professor of Medicine and Pediatrics

G. Edward Stewart II, M.D., Clinical Associate Professor of Medicine

Hugh H. Windom, M.D., Clinical Associate Professor of Medicine

Rosa Codina, Ph.D., Clinical Assistant Professor of Medicine

Mary L. Jelks, M.D., Clinical Assistant Professor of Medicine

Brett E. Stanaland, M.D., Clinical Assistant Professor of Medicine

Glen Whalen, Ph.D., Clinical Assistant Professor of Medicine

Fellows -in-Training

Andrew Bagg, M.D., Chief and 2nd year fellow

Ronald Purcell, M.D., 2nd year fellow

Boyl Shin, D.O., 2nd year fellow

Joshua Phillips, M.D., 1st year fellow

Mathew Varghese, M.D., 1st year fellow

Research Staff Members

Gary Hellermann, Ph.D.

Xiaoyuan (Sonya) Kong, M.D.

Guoqing Liu, M.D.

Jia-Wang Wang, Ph.D.

Weidong Xu, Ph.D.

Students and Visiting Research Scholars

Alison J. Monpetit, M.S., R.N.

Sang-Joon Park, M.D.

Shawna Shirley, B.Sc.

Xiaoqin Wang, B.Sc.

Administrative Assistant to the Division Director

**Michelle Grandstaff-Singleton, LPN, Clinical Research Administrator and
Administrative Assistant to the Division Director**

**Administrative Personnel James A. Haley V.A. Medical
Center**

Peggy Hales, Program Assistant

Becci Carter, Administrative Secretary

Geeta Gehi, Administrative Secretary

**Administrative Personnel-USF Joy McCann Culverhouse
Airway Disease Research Laboratory**

Stephanie Medley, Administrative Secretary

**Administrative Secretary- Signature Research Program in
Allergy and Immunology and Infectious Diseases**

Nicole Crawford, Administrative Secretary

Clinical Research Unit Personnel

Michelle Grandstaff-Singleton, LPN, Clinical Research Administrator

Brooke Fimbel, B.A., Lead Clinical Research Coordinator

Michelle Hernandez, B.A., Clinical Research Coordinator

Shirley McCullough, B.S., Clinical Research Coordinator

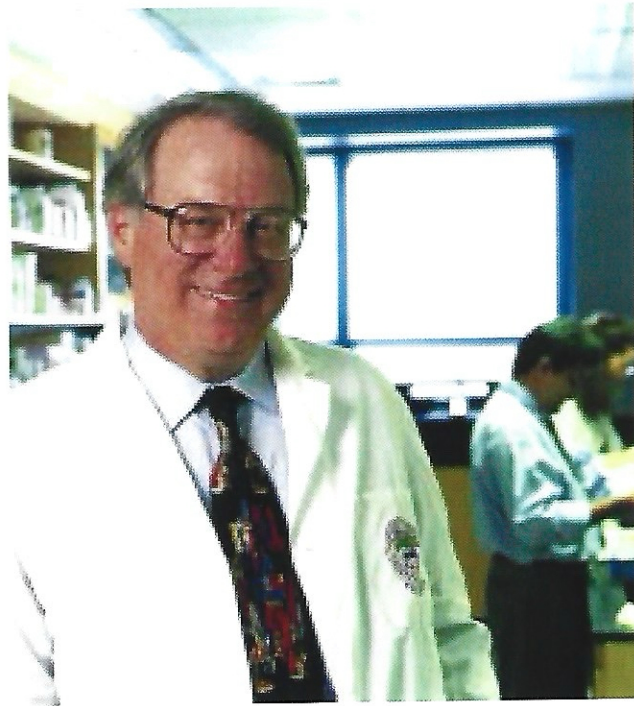
Administrative Personnel- All Children's Hospital

Amy Kramer, Training Program Assistant

Recommended by his peers, **Richard Lockey, MD**, was selected for the charter group of **Distinguished University Health Professors**. Recognized for his substantial achievements in research, teaching and clinical care.



photo credit: Joseph Gamble



Richard Lockey is professor of Medicine, Pediatrics and Public Health, and director of the Division of Allergy and Clinical Immunology in the College of Medicine and holds the Joy McCann Culverhouse Chair in Allergy and Immunology. He has developed an Allergy and Immunology Division internationally known for its education, research and service. Lockey is a past-president and fellow of the American Academy of Allergy, Asthma and Immunology and a fellow of the American College of Physicians and American College of Chest Physicians. He is currently president-elect of the World Allergy Organization.

BASIC RESEARCH PROJECTS

Basic research at the Joy McCann Culverhouse Airway Disease Research Center is focused on understanding the causes of asthma. Mice and rats are used as model systems to study allergic and nonallergic asthma and the effects of viral respiratory tract infections on the development and severity of asthma. Current projects include:

1. The ANP-NPRA Signaling Pathway is Involved in Asthma

Many studies have described the action of atrial natriuretic peptide, ANP, in cardiovascular disease, but its role in asthma pathology is poorly understood. Research is being performed to study ANP's effect on lung inflammation and cytokine profile in a mouse model of allergic asthma by comparing ANP receptor-deficient (NPRA KO) C57BL/6 mice to wild types (WT). Mice were sensitized and challenged with ovalbumin and airway hyperresponsiveness (Penh) was measured by whole-body plethysmography. Bronchoalveolar lavage (BAL) differential cell counts; lung histopathology and cytokine levels were also determined. Splenocyte cultures were prepared and assayed for cytokines. One group of NPRA KO mice was given an NPRA expression plasmid intranasally to reverse the NPRA deficiency. The results of these studies show that OVA-allergic NPRA KO mice exhibit fewer eosinophils in BAL and reduced IL-4 and IL-10 in splenocyte cultures than WT. Lung sections from KO mice show less damage to mucosal epithelium and fewer infiltrating cells. Over expression of NPRA in NPRA KO mice increases the number of neutrophils and monocytes in BAL and produces higher levels of the T helper cell type 2 (Th2) cytokines, IL-5, IL-13 and TNF- α than in vector controls. These studies demonstrate that ANP signaling plays an important role in asthma as evidenced by reduction in lung inflammation in mice lacking the ANP receptor, and that restoration of NPRA reverses this effect. To further examine the role of the ANP-NPRA pathway in allergic asthma, NPRA expression was silenced in allergic mice by small interfering RNA directed against the NPRA message (siNPRA). Splenocytes from siNPRA-treated mice showed reduced expression of IL-4, IL-10 and IFN- γ as well as decreased allergen-induced inflammatory lung damage and eosinophil infiltration compared to controls. These results suggest that ANP signaling via NPRA is involved in airway inflammation and that siNPRA silencing of NPRA expression may provide an effective treatment for allergies and asthma.

2. ANP has an Immunomodulatory Role in Asthma

Atrial natriuretic peptide signaling through its receptor NPRA has been reported to modulate the immune responses of dendritic cells (DCs), but the mechanism remains poorly understood. Since toll-like receptor-2 (TLR-2) is important in shaping the innate immune response, the effect of ANP signaling on TLR-2 was assessed in DCs. The results showed that exposing DCs to ANP up regulated TLR-2 expression and down

regulated the adapter protein MyD88 (myeloid differentiation gene 88). Inhibition of ANP signaling by treatment of pANP-transfected DCs with the NPRA blocker isatin caused an increase in IL-10 production. Also, reduction in TLR-2 expression by RNA interference (siTLR-2) in pANP-transfected DCs up regulated IL-10, suggesting that TLR-2 is involved in NPRA signaling. Co-localization studies indicate that NPRA and TLR-2 are expressed together on the surface of HEK293 cells. These results indicate that ANP regulation of innate immunity in human DCs may involve TLR-2 signaling. ANP appears to modulate the maturation and cytokine phenotype of DCs by altering IL-10 production, but how it does this is unclear. One possible pathway involves the suppressor of cytokine signaling-3, SOCS3, which inhibits the activity of DCs. The action of SOCS3 on ANP-activated DCs was studied by demethylation of the SOCS3 promoter. The results show that ANP down regulated SOCS3 expression compared to control, and that 5'-aza-2'dC demethylation caused SOCS3 up regulation and enhances maturation of human DCs. Also, treatment of pANP-transfected DCs with siRNA to SOCS3 up regulated IL-10 and IFN- γ . These results indicate that ANP-mediated maturation of DCs involves demethylation of the SOCS3 promoter.

3. Atrial Natriuretic Peptide (ANP) is Involved in the Genesis of Asthma

Mast cells are key initiators of allergic T helper cell type 2 (Th2) inflammation through release of various mediators, leukotrienes and cytokines. Atrial natriuretic peptide (ANP) has been implicated as a trigger of IgE-independent degranulation of mast cells, and based on previous observations that human mast cells express a functional ANP receptor (NPRA), we hypothesized that ANP promotes the Th2 phenotype by altering specific mast cell gene expression. To test this hypothesis, the human mast cell line HMC-1 was exposed to ANP or a scrambled peptide control. RNA was extracted and gene expression was analyzed using a microarray. Verification of four up-regulated and two down-regulated genes was performed by quantitative real-time reverse transcription polymerase chain reaction. ANP treatment of HMC-1 cells resulted in up-regulation of 26 genes and down-regulation of 17, compared to the scrambled peptide-treated cells. Real time PCR confirmed that ANP significantly down-regulated IL-12 receptor β 2 expression and up regulated STAT6 expression. These observations suggest that ANP can act on mast cells in an IgE-independent manner to promote a Th2-like environment. It was further hypothesized that ANP contained within mast cells serves as a mediator of Th2 immune responses following IgE-mediated challenge. To test this, the human mast cell line, LAD2, was studied. In LAD2 cells, IgE cross-linking induced release of ANP at 30 minutes, with maximal release at 2 hours. These results show that human mast cells store and release ANP following IgE-mediated and non-immunologic challenge and that ANP may be an important mast cell mediator of allergic inflammation.

4. Association Between ANP Gene Polymorphism and Asthma Phenotype. (In collaboration with Dr. John Lima, Neumors Children's Clinic, Jacksonville)

Atrial natriuretic peptide (ANP) plays an important role in the lung and in augmenting allergic inflammation in asthma. The gene encoding ANP, *NPPA*, is located on chromosome 1p36, a region that has been linked to asthma. In this study, the associations

were determined between asthma and 4 common single nucleotide polymorphisms on the *NPPA* gene: C/G (rs13305986) in the promoter; G/A (rs5063) in Exon 1 resulting in *NPPAMet32*→Val substitution; T/C (rs5065) in Exon 3 resulting in an Arg152→Ter substitution; and T/C in the 3'UT region (rs5067). A case/control design was used in a study of White participants. The screening cohort consisted of 336 asthmatic cases who participated in a large clinical trial and 154 non-asthmatic controls. The replicate cohort consisted of 172 asthmatic cases from a second clinical trial and 115 healthy controls. Demographic characteristics were well matched for cases and controls in the screening cohort. Adjusted (age, gender, body mass index) odds ratios were calculated by chi square and logistic regression; p value of 0.0167 defined the threshold of significance. The results show that the C allele of rs5067 is associated with asthma in the screening and replicate cohorts: adjusted odd ratios (95% confidence intervals) 0.5 (0.29-0.84; p=0.009) and 0.24 (0.11-0.53; p<0.0001), respectively. Also, the C allele of rs5065 is associated with asthma in the screening cohort but not in the replicate. The population attributable risk for asthma in carriers of the C allele for rs5067 is 23.3%. In conclusion, for rs5067, the risks of asthma in carriers of the C allele in the screening and replicate cohorts are reduced by 50% and 76%, respectively. Thus, *NPPA* appears to be an important susceptibility gene for asthma.

Respiratory Syncytial Virus Infection Program.

Prevention of Respiratory Syncytial Virus (RSV) Infection

Respiratory syncytial virus (RSV) is the primary cause of severe bronchiolitis in infants and predisposes them to asthma in later life. RSV is also a serious threat to the elderly and individuals undergoing treatments that compromise the immune system. There is no available vaccine for RSV immunization and antiviral treatments are only partially effective against RSV infections. One promising new approach to specifically inhibit viral gene expression is the use of RNA interference. Small interfering RNAs (siRNA) are designed that target viral mRNAs for destruction by the cell's antiviral machinery. In this study, a plasmid expressing siRNA was constructed that blocked the expression of the nonstructural protein 1 (NS1) of RSV, a protein necessary for viral replication. Human alveolar epithelial cells (A549) were transfected with either siRSV-NS1 or an unrelated siRNA as control and infected 24 hours later with rG RSV (recombinant RSV containing the gene encoding, enhanced green fluorescence protein). The number of cells infected with rG RSV was counted by fluorescence microscopy or flow cytometry and viral protein expression in cultured cells was measured by Western blotting. The expression of NS1 was undetectable after siRSV-NS1 treatment and the percentage of RSV-infected epithelial cells was significantly decreased. SiRSV-NS1 also reduced the rgRSV virus titer as determined by plaque assay compared to control. Viability assays of A549 cells revealed no cytotoxicity from siRSV-NS1 relative to controls. These results demonstrate that siRSV-NS1 is capable of significantly decreasing RSV replication in human epithelial cells and may provide potential prophylaxis and therapy for RSV infection in humans. While RNA interference has the potential to become the RSV

treatment of choice in the future, extensive human clinical trials still need to be performed to prove its safety and effectiveness. A currently available drug regimen is being studied as a promising available treatment to reduce severe asthma exacerbations caused by RSV infection.

Studies are in progress to investigate the efficacy of a corticosteroid (fluticasone propionate) plus long-acting beta agonist (salmeterol) for RSV infection in a mouse model of asthma. Allergen-sensitized mice were pretreated with fluticasone, salmeterol or the two together. Results showed a greater reduction in RSV-induced inflammation with the combination treatment. Experiments are being repeated with cultured human bronchial epithelial cells infected with RSV. These studies demonstrate the efficacy of fluticasone plus salmeterol therapy in reducing RSV infectivity and suggest that the drug combination may be useful in preventing RSV bronchiolitis and asthma exacerbation.



Nano-Partical Specimens

Photo credit: Stephanie Medley



Weidong Zhang, MD, PhD
Photo Credit: Stephanie Medley



Arun Kumar, PhD
Photo Credit: Stephanie Medley



Xiaogin Wang, M.D.
Photo Credit: Stephanie Medley



Shawna Shirley, MS.
Photo Credit: Stephanie Medley

CLINICAL RESEARCH PROJECTS

1. Pollen and Mold Counts and Immunochemical Quantification of Outdoor Allergens

Particles, other than pollen, which transport aeroallergens, have been described. The Division, which houses the Pollen and Mold Counting Station for Tampa, has two collectors adapted to collect both pollen and pollen aeroallergens. The collectors are located on the roof of the James A. Haley V.A. Medical Center Research Building. Pollen counts are performed twice weekly, disseminated to local media once weekly, and to the Internet twice weekly. Dr. Mary Jelks reads and interprets the slides.

2. Efficacy of Using Oxymetazoline Hydrochloride Combined with Nasal Glucocorticosteroid to Treat Perennial Allergic and Nonallergic Rhinitis in Subjects with Persistent Nasal Congestion.

This study hypothesizes that treatment with oxymetazoline, in addition to a nasal glucocorticosteroid for fourteen days, will decrease the nasal congestion persisting in subjects with allergic or nonallergic rhinitis despite maximum recommended dosages of a nasal glucocorticosteroid. It is also hypothesized that nasal glucocorticosteroid therapy will prevent the development of rhinitis medicamentosa secondary to therapy with oxymetazoline. The primary endpoint will be the change in Average Daily Nasal Congestion Scores from baseline to the end of treatment with oxymetazoline. The secondary endpoint will compare quality of life scores at the baseline visit to visits on day 7, day 14, and day 28. Since the study began, 33 subjects have been screened and 20 subjects have been randomized. Subject recruitment is still in progress.

3. Does Addition of a Topical Antibiotic to Treat Chronic Rhinosinusitis Improve Efficacy?

Chronic rhinosinusitis is a pervasive and costly disease. Estimates reveal that the costs of treating over 20 million Americans suffering from this diagnosis exceeds \$4.3 billion per year. Primary therapy consists of oral antibiotics and nasal steroid sprays with some studies advocating nasal irrigation. Intravenous antibiotics and surgery were used for severe or recalcitrant cases. Several studies have investigated the use of topical antibiotics in rhinosinusitis, but no prospective, blinded, controlled study has been done. The purpose of this prospective, randomized, double blinded, placebo controlled clinical study is to establish whether the addition of a topical antibiotic to a conventional regimen of oral antibiotics and topical nasal steroids results in a significant improvement in radiographic findings and quality of life when compared to oral antibiotics, nasal steroids, and saline placebo irrigation.

4. Role of the Natriuretic Peptide Cascade in the Genesis and Control of Asthma

The purpose of this research study is to determine indicators in the blood that may reveal a trend towards asthma and provide information on the risk of later development of allergy and asthma. Brain natriuretic peptide (BNP) and atrial natriuretic peptide (ANP) in the blood are being studied. ANP plays a role in how the lungs work and in development of the immune system and in the immune system's response to microbes and allergens. The amount of IgE in the blood will be measured, and the DNA sequence will be analyzed for specific changes that may influence a person's susceptibility to asthma.

Two groups of children/adolescents will be studied: an experimental group consisting of persons who have a physician diagnosis of allergic disease and a control group with no diagnosis of allergic disease.

5. Predicting the Diagnosis of Asthma Based on History

Despite the development of effective medications for treatment, asthma remains a significant contributor of morbidity, mortality, and financial hardship to patients with the disease. There is no single diagnostic test or symptom that defines asthma. Asthma is a syndrome consisting of a constellation of symptoms that include: wheeze, cough, shortness of breath, and chest tightness. The diagnosis of asthma takes into account history, physical examination findings, and objective measures of pulmonary function and markers of inflammation. The goal in this study is to evaluate a simplified set of questions that can be easily implemented into clinical practice that will predict the presence or absence of asthma. The primary objective is to evaluate the predictive value of a questionnaire designed to diagnose asthma in adults.

6. Repeated nasal challenge in skin-prick puncture negative, intradermal positive dust mite allergic rhinitis patients

Currently, allergists across the country are using intradermal skin testing in the diagnosis of allergic diseases. There are no studies proving the clinical utility of intradermal testing. The goal of this study is to provide clinical evidence for this testing. Patients with rhinitis symptoms who are intradermal skin test positive to dust mites will be enrolled. A nasal challenge will be performed with a dust extract nasal spray or placebo for 2 weeks. Subjects will keep symptom scores during the challenge. They will undergo several tests before and after the challenge to show sensitivity to dust mites. A control group will also be used. This study will be a prospective, randomized, double blind, placebo controlled trial.

7. Systemic reactions to percutaneous and intradermal skin tests

A study is being publishing on systemic reactions (SRs) to percutaneous (P) and intradermal (ID) skin tests (ST). The purpose is to determine over 12 months, 2/1/06-1/31/07, the rate of SRs to both P and ID ST, the symptoms reported, and the response to immediate treatment with epinephrine IM. SRs occurred in 3.5% of patients skin tested and readily responded to early intervention with epinephrine. This early administration of epinephrine appears to prevent more serious and late phase reactions. These data were presented at the 2007 World Allergy Congress in Bangkok, Thailand.

PHARMACEUTICAL SPONSORED STUDIES

Studies funded by pharmaceutical companies are conducted at the Division's Clinical Research Unit (CRU). Funds from these studies support the Division's research and clinical training program. Ten studies were completed in 2006, seven in 2007 and thirteen additional studies will continue into 2008. To date, the CRU has agreements for eleven new studies in 2008. The Clinical Research Unit is a member of the American Lung Association's Asthma Clinical Research Center network, one of 20 centers throughout the United States. The American Lung Association Clinical Research Center completed two studies in 2007, and one study is in progress. The American Lung Association has eight potential protocols pending approval.

Basic and Clinical Research Support

Endowments

Joy McCann Culverhouse Endowment

Mabel and Ellsworth Simmons Endowment



Nanobiotechnologist Shyam Mohapatra, PhD, appointed to Simmons Endowed Professorship in Allergy and Immunology

- USF researcher uses emerging technology to advance understanding of allergic diseases -

Tampa, FL (Dec. 12, 2006) - Shyam Mohapatra, PhD, a USF Health molecular biologist with more than 20 years experience in biotechnology and drug discovery, has been appointed to the Mabel and Ellsworth Simmons Endowed Professorship in Allergy and Immunology. His appointment was announced at the recent dedication of a USF park to honor Tampa civic leader Ellsworth Simmons.

Simmons was one of six community leaders who flew to Tallahassee in 1965 ask legislators to pass bills to create and fund a medical center, launching the USF Colleges of Medicine and Nursing. Mabel and Ellsworth Simmons directed a bequest for the endowed professorship in allergy and immunology.

In addition to holding the Simmons professorship, Dr. Mohapatra directs Basic Research for the Division of Allergy and Immunology and the Joy McCann Culverhouse Airway Disease Center at the USF College of Medicine and James A. Haley Veterans' Hospital. He is also director (basic science) of the USF Health Signature Research Program in Allergy, Immunology and Infectious Disease. He has adjunct appointments in pediatrics and molecular medicine at USF and in thoracic oncology at Moffitt Cancer Center.

Dr. Mohapatra is editor-in-chief of the online journal *Genetic Vaccines & Therapy* and serves as a peer review panelist for several major national and international grant agencies, including the National Institutes of Health. Co-founder and a member of the scientific advisory board of TransGenex Nanobiotech Inc. in Tampa, he recently received the 2006 Technology Professional Leader of the Year Award from the Tampa Bay Technology Forum.

"Dr. Mohapatra brought his invaluable skills and knowledge in molecular biology to the Division in 1996 to enhance what we've done and to complement the Division's clinical research program," said Richard Lockey, MD, director of the Division of Allergy and Immunology and a good friend of Mabel Simmons. Dr. Lockey spoke at the dedication ceremony for the newly named Simmons Park, located on Magnolia between Hope Lodge and the College of Fine Arts.

"The combination is ideal, translating basic science into clinical research to better understand allergic and immunological mechanisms and to treat allergic diseases. Such research will hopefully result in treatments to resolve these diseases or put them into remission for prolonged periods," Dr. Lockey said. "The implications for the millions who suffer from asthma and allergies are tremendous."

Dr. Mohapatra has expertise in the emerging field of nanotechnology, which involves the manipulation of exceptionally small things, approximately at the atomic level. Nanobiotechnology research is expected to lead to innovative diagnostic and therapeutic approaches for respiratory diseases, cancer and other illnesses. "It has the potential to deliver drugs or genes to specific tissues and even cells, avoiding unwanted effects on non-targeted cells," Dr. Mohapatra said.

Extramural Funding

American Lung Association of Florida
- Career Development Award
- Asthma Clinical Research Center Award

American Heart Association of Florida

Florida Biomedical Research

Genetics Institute Inc, Andover, MA

GlaxoSmithKline Medical Research Grants

Merck Medical School Grants, Merck Inc, PA

National Institute of Health, National Heart, Lung, and Blood Institute

Paterson Foundation

Veteran Affairs Merit Review Award

Pharmaceutical Sponsors

Abbott Laboratories
Almirall Pharmaceuticals
AstraZeneca Pharmaceuticals
Genentech Inc.
Hoffman LaRoche Pharmaceuticals
Merck and Co., Inc.
Pharming Inc.
Sanofi-Aventis Pharmaceuticals
Sepracor Inc.
Wyeth Pharmaceuticals

Alcon Laboratories
Altana/Byk Gulden
Dyax Corporation
GlaxoSmithKline
IVAX Corporation
Novartis Pharmaceuticals
Primary Immune
Schering-Plough Corporation
Skye Pharma

Biotechnology Company

A USF associated “spin-out” biotech company was formed under the direction of Shyam Mohapatra, Ph.D., 2004 - present.

On-Line Journal

Shyam Mohapatra, Ph.D., Gary Hellerman Ph.D., and staff established an on-line journal, *Genetic Vaccines and Therapy* in 2004 - present.

PUBLICATIONS

Books or Monographs published or in press: 2007

Lockey RF, Ledford D, eds. *Allergens and Allergen Immunotherapy for Allergic Diseases*. 4th ed. New York, NY: Informa Healthcare. In preparation for 2008.

Book Chapters published or in press: 2005 – 2007

Bukantz SC, Bagg AS, Lockey RF: Adverse Effects and Fatalities Associated with Subcutaneous Allergen Immunotherapy. In: *Allergens and Allergen Immunotherapy*, 4th ed. Lockey RF, Ledford DK (eds). Informa Healthcare, New York, NY, in preparation.

Codina R, Ramey J, Lockey RF. Allergen Immunotherapy. In: Lieberman PL, Blaiss MS, eds. *Atlas of Allergic Diseases*. 2nd ed. Philadelphia, PA: Current Medicine Inc; 2005:163-169.

Fox RW, Lockey RF. Allergen Immunotherapy. In: Lieberman P, Anderson JA, eds. *Allergic Diseases -- Diagnosis and Treatment*. 3rd ed. Totowa, NJ: Humana Press; 2007:429-444.

Fox RW. Allergic Diseases of the Skin-Urticaria. In: Lieberman PL and Blais MS, eds. *Atlas of Allergic Diseases*. 2nd ed. Philadelphia, PA: Current Medicine Inc; 2005:73-83.

Larche M., Mohapatra SS, Ferreira F. Novel Approaches for Immunotherapy for Inhalant Allergens. In: *Allergens and Allergen Immunotherapy for Allergic Diseases*. 3rd ed. New York, NY: Informa Healthcare, Inc. In press.

Ledford DK. Rhinitis. In: Lieberman P, Anderson JA, eds. *Allergic Diseases -- Diagnosis and Treatment*. 3rd ed. Totowa, NJ: Humana Press; 2007: 143-166.

Ledford DK. Rhinitis. In: Mahmoudi M, ed. *Allergy*. New York, NY: McGraw Hill; 2006.

Ledford DK. Allergic Rhinitis. In: Lieberman P, Anderson J, eds. *Allergy and Asthma*. 3rd ed. Totowa, NJ: Humana Press. In press.

Lockey RF, Slater JE, Esch RE. Preparation and Standardization of Allergen Extracts. In: *Middleton's Allergy: Principles & Practice*. 7th ed. Philadelphia, PA: Mosby; in press.

Nelson RP, Lockey RF. Insect Allergy. In: Lieberman PL, Blaiss MS, eds. *Atlas of Allergic Diseases*, 2nd ed. Philadelphia, PA: Current Medicine Inc; 2005:220-226.

Internet Publications 2006-2007

Cole SL, Lockey RF. Trouble in your own back yard: case report and review of imported fire ant hypersensitivity. A case study and review based on *Allergy Clin Immunol Int: J World Allergy Org*. September/October 2006;18(5). Interactive presentation developed by Lanier BQ, editor-at-large, Web Editorial Board. Available at: http://www.worldallergy.org/interactive_case_reviews/cole_lockey/ Accessed January 7, 2008.

Cole SL, Lockey RF. Indoor aeroallergens. [eMedicine web site]. Article last updated: Jun 1, 2007. Available at: <http://www.emedicine.com/med/topic3741.htm> Accessed January 7, 2008.

Cole SL. Review of the book *Allergy: An Atlas of Investigation and Management*. [World Allergy Organization Web site]. January 2006. Available at: http://www.worldallergy.org/book_reviews/bookreview_january06.php Accessed January 7, 2008.

Cole SL. Review of the book *The Year in Allergy*. 3rd ed. [World Allergy Organization Web site]. June 2007. Available at: http://www.worldallergy.org/book_reviews/bookreview_0607b.php Accessed January 7, 2008.

DeMarco PJ, Lockey RF. The approach to recurrent upper respiratory infections. A case study and review based on *Allergy Clin Immunol Int: J World Allergy Org*. March/April 2006;18(2). Interactive presentation developed by Lanier BQ, editor-at-large, Web Editorial Board. Available at: http://www.worldallergy.org/interactive_case_reviews/demarco_lockey/ Accessed January 7, 2008.

Kearney DM, Lockey RF. A patient with yellow nails. A case study and review based on *Allergy Clin Immunol Int: J World Allergy Org*. March/April 2006;18(2). Interactive presentation developed by Lanier BQ, editor-at-large, Web Editorial Board. Available at: http://www.worldallergy.org/interactive_case_reviews/kearney_lockey/ Accessed January 7, 2008.

Ledford DK. Vasculitis update.[World Allergy Organization Web site]. 2006.

Lockey RF, ed. Allergic Diseases section. [YourDoctor.com. Web site]. 2000.

Lockey RF, Kaplan A, eds. Global Allergy Information Network. [World Allergy Organization Web site]. 2000-2004. Available at: www.worldallergy.org

Lockey RF, ed. manuscripts by medical professionals in allergy/immunology. 2000-2007. [eMedicine from WebMD Web site]. Available at: www.eMedicine.com Accessed January 7, 2008.

Lockey RF, editor-in-chief World Allergy Organization Web site. 2004-present. Available at: http://www.worldallergy.org/wao_societies/committeesandcouncils.php#waf Accessed January 7, 2008.

Lockey RF, ed. Book reviews: Health Sciences/Clinical Medicine. Allergy/Clinical Immunology. 2006-present. Doody Enterprises Inc. Available at http://www.doodyenterprises.com/ERGChairs/lic_erglist.htm Accessed January 7, 2008.

Lockey RF. Mechanisms of anaphylaxis. Program presented at World Allergy Forum: Vienna (World Allergy Organization); June 2006;Vienna, Austria. Available at: http://www.worldallergy.org/educational_programs/world_allergy_forum/vienna2006/lockey.php Accessed January 7, 2008.

Phillips JF. Book review: Doan T, Melvoid R, Viselli S, Waltenbaugh C. *Lippincott's Illustrated Reviews: Immunology*, reviewed for www.worldallergy.org on August 6, 2007.

Phillips JF. Book review: Lieberman P, Anderson A. *Allergic Diseases: Diagnosis and Treatment*, reviewed for www.worldallergy.org on November 23, 2007

Ramey JT, Lockey RF. Periorbital swelling. A case study and review based on *Allergy Clin Immunol Int: J World Allergy Org*. January 2006;18(1). Interactive presentation developed by Lanier BQ, editor-at-large, Web Editorial Board. Available at: http://www.worldallergy.org/interactive_case_reviews/ramey_lockey/ Accessed January 7, 2008.

Reichmuth D, Lockey RF, eds. Treatment Strategies in Allergy and Asthma, 2nd ed. [original program written for handheld devices such as PDAs]. Reines L, publisher. New York, NY. Publication date: 2006. Available at: <http://www.pocketmedicine.com/pdaorder/-/532782497228/item?oec-catalog-item-id=1236> Accessed January 7, 2008.

Vu AT, Lockey RF. Exercise-induced anaphylaxis. A case study and review based on *Allergy Clin Immunol Int: J World Allergy Org.* May/June 2006;18(3). Interactive presentation developed by Lanier BQ, editor-at-large, Web Editorial Board. Available at: http://www.worldallergy.org/interactive_case_reviews/lockey_vu/ Accessed January 7, 2008.

Manuscripts published or in press: 2006 – 2007

Bielory L, Blaiss M, Fineman SM, Ledford DK, Lieberman P, Simons FE, Skoner DP, Storms WW. Concerns about intranasal corticosteroids for over-the-counter use: position statement of the Joint Task Force for the American Academy of Allergy, Asthma and Immunology and the American College of Allergy, Asthma and Immunology. *Ann Allergy Asthma Immunol.* 2006;96(4):514-525.

Bousquet J, van Cauwenberge P, Aït Khaled N, Bachert C, Baena-Cagnani CE, Bouchard J, Bunnag C, Canonica GW, Carlsen KH, Chen YZ, Cruz AA, Custovic A, Demoly P, Dubakiene R, Durham S, Fokkens W, Howarth P, Kemp J, Kowalski ML, Kvedariene V, Lipworth B, Lockey RF, et al. Pharmacologic and anti-IgE treatment of allergic rhinitis ARIA update (in collaboration with GA2LEN). *Allergy.* 2006;61(9):1086-1096.

Boyapalle S, Miller WA, Bonning, BC. *In vitro* transcripts of *Rhopalosiphum padi virus* synthesized from a full-length cDNA clone are infectious. Submitted to *Virology*.

Canonica GW, Baena-Cagnani C, Bousquet J, Lockey RF, Malling HJ, Passalacqua G, Potter P, Valovirta E, Vieths S. Methodological aspects and outcomes for specific allergen immunotherapy clinical trials – a World Allergy Organization (WAO) document. *Allergy Clin Immunol Int: J World Allergy Org.* In press.

Canonica GW, Baena-Cagnani C, Bousquet J, Bousquet PJ, Lockey RF, Malling HJ, Passalacqua G, Potter P, Valovirta E. Recommendations for standardization of clinical trials with Allergen Specific Immunotherapy for respiratory allergy (EAACI COMM5) – A statement of a World Allergy Organization (WAO) taskforce. *Allergy Clin Immunol Int: J World Allergy Org.* In press.

Chacko T, Lockey R. Persistent Eosinophilia (clinical case report). *Allergy Clin Immunol Int: J World Allergy Org.* 2007.

Codina R, Lockey RF. Indoor allergen assessments – A call for universal standards. *J Allergy Clin Immunol.* 2007;119(2):518.

Codina R, Fox RW, Lockey RF, et al. Typical levels of airborne fungal spores in houses without obvious moisture problems during a rainy season in Florida. *J Investig Allergol Clin Immunol*. In press.

Cole SL, Lockey RF. Trouble in your own back yard – imported fire ant hypersensitivity (Clinical Case Report). *Allergy Clin Immunol Int: J World Allergy Org*. 2006;18(5):207-210.

Cole SL, Ledford DK, Lockey RF, Daas A, Kooper J. Primary gastrointestinal lymphangiectasia presenting as a combined immunodeficiency. *Ann Allergy Asthma Immunol*.(in press).2007;98(5):490-492

Cole SL. Global trends in asthma management. *Allergy Immunol Rep*. 2007.

DeMarco PJ, Lockey RF. Common variable immunodeficiency (Clinical Case Report). *Allergy Clin Immunol Int: J World Allergy Org*. 2006;18(2):80-81.

Ghansah T, Paraiso KH, Highfill S, Despons C, May S, McIntosh JK, Wang JW, Ninos J, Brayer J, Cheng F, Sotomayor E, Kerr WG. Expansion of myeloid suppressor cells in SHIP-deficient mice represses allogeneic T cell responses. *J Immunol*. 2004;173(12):7324-7330.

Glaum MC, Apter A, Levinson AI. Asymptomatic longstanding panhypogammaglobulinemia with impaired antibody responses. Accepted. *Annals of Asthma, Allergy and Immunology*

Glaum MC, Nimal S, Lockey R, Mohapatra S. Atrial natriuretic peptide activates human mast cells via an IgE-independent mechanism. *Clin Immunol*. 2006;119(suppl):S53.

Glaum MC, Nimal S, Jena PK, Kong, X, Liu G, Xu W, Zhang W, Lockey RF, Mohapatra SS. Signaling through atrial natriuretic peptide receptor promotes Th2 priming in human mast cells. Submitted.

Hua Y, Wang JW, et al. MicroRNA expression profiling in human ovarian cancer: *miR-214* induces cell survival and cisplatin resistance by targeting PTEN. Submitted. *Cancer Res*.

Jena PK, Kumar A, Chen D, Wang X, Xu W, Lockey RF, Mohapatra SS. Molecular mechanism of anti-inflammatory and anticancerous effect for a pro-ANP peptide KP₇₃₋₁₀₂. Manuscript in preparation.

Kearney DM, Lockey RF. Yellow nail syndrome (Clinical Case Report). *Allergy Clin Immunol Int: J World Allergy Org*. 2006;8(4):165-167.

Kearney DM, Lockey RF. Osteoporosis and asthma. *Ann Allergy Asthma Immunol*. 2006; 96:769-774.

King MJ, Lockey RF. How best to diagnose and control asthma in the elderly. *J Respir Dis.* 2006;27(6):238-247.

King MJ, Tamulis T, Lockey RF. Prick puncture skin tests and serum specific immunoglobulin E as predictors of nasal challenge response to *Dermataphagoides Pteronyssinus* in older adults. *Ann Allergy.* In press.

Kong X, Wang X, Xu W, Behera S, Hellermann G, Kumar A, Lockey RF, Mohapatra S, Mohapatra SS. Natriuretic peptide receptor a as a novel anticancer target. *Cancer Res.* January 2008;68:249-256.

Kong X, Hellerman GR, Zhang W, Jena P, Kumar M, Behera A, Behera S, Lockey R, Mohapatra SS. Chitosan IFN-gamma nanogene (CIN) therapy for lung disease: modulation of T cell and dendritic cell immune responses. *Allergy Asthma Clin Immunol.* In press.

Kong X, Xu W, Wang X, Hellermann G, Singham R, Shirley S, Jena P, Zhang W, Mohapatra S, Lockey RF, Gower W, Mohapatra SS. A critical role for the atrial natriuretic peptide pathway in allergic disease. *J Allergy Clin Immunol.* Submitted Nov. 2007.

Kong X, Zhang W, Lockey RF, Auais A, Piedimonte G, Mohapatra SS. Respiratory syncytial virus infection in Fischer 344 rats is attenuated by short interfering RNA against the RSV-NS1 gene. *Genet Vaccines Ther.* February 2007;5:4.

Kumar A, Pandey R, Brantley, B. Tetraethylorthosilicate film modified with protein to fabricate cholesterol biosensor. *Talanta.* May 2006;69(3):700-705.

Kumar A, Sahoo B, Montpetit A, Behera S, Lockey RF, Mohapatra, SS. Development of hyaluronic acid-Fe₂O₃ hybrid magnetic nanoparticles for targeted delivery of peptides. *Nanomedicine.* June 2007;3:132-137.

Kumar A, Aravamudhan S, Gordic M, Bhansali S, Mohapatra SS. Ultrasensitive detection of cortisol with enzyme fragment complementation technology using functionalized nanowire. *Biosens Bioelectron.* April 2007;22:2138-2144.

Kumar A, Fal-Miyar V, García JA, Cerdeira A, Mohapatra S, Srikanth H, Kurlyandskaya GV. Magnetoimpedance biosensor for Fe₃O₄ nanoparticles intracellular uptake evaluation. *Appl Phys Lett.* 2007; 91: 143902.

Kumar A, Jena PK, Behera S, Lockey RF, Mohapatra SS. Efficient DNA and peptide delivery by functionalized chitosan-coded single-wall carbon nanotubes. *J Biomed Nanotechnol.* December 2005;1:392-396(5).

Kumar A, Aravamudhan S, Gordic M, Bhansali S, Mohapatra SS. Ultrasensitive detection of cortisol with enzyme fragment complementation technology using functionalized nanowire. *Biosens Bioelectron.* April 2007;22:2138-2144.

Lee D, Zhang, W, Shirley SA, Kong, X, Hellermann GR, Lockey RF, Mohapatra SS. Thiolated chitosan/DNA nanocomplexes exhibit enhanced and sustained gene delivery. *Pharm Res.* January 2007;24:157-67.

Lee D, Mohapatra SS. Gene transfer by polymeric nanoparticles. *Methods Mol Biol.* In press.

Lee DW, Shirley S, Lockey RF, Mohapatra SS. Thiolated chitosan nanoparticles enhance anti-inflammatory effects of intranasally delivered theophylline. *Respir Res.* August 2006;7:112.

Lee D, Lockey R, Mohapatra S. Folate receptor-mediated cancer cell specific gene delivery using folic acid-conjugated oligochitosans. *J Nanosci Nanotechnol.* 2006;6:2860-2866.

Lieberman P, Fineman S, Bielory L, Ledford DK, Skoner D, Storms W. AAAAI/ACAAI conjoint position statement on over the counter status of nasal fluticasone. *J Allergy Clin Immunol.* In press.

Lima JJ, Mohapatra SS, Feng H, Lockey RF, Jena PK, Castro M, Irvin C, Johnson, JA, Wang J, Sylvester JE. A polymorphism in the NPRA gene associates with asthma (CEA-2007-0459). *Clin Exp Allergy.* In Press.

Lieberman PL, Kaliner M, Lockey RF, Simons E. Anaphylaxis and the American Academy of Allergy, Asthma, and Immunology. *J Allergy Clin Immunol.* 2006;117:478-482.

Lockey RF. Obituary: Andor Szentivanyi, MD, 1924-2005. *Academy News.* American Academy of Allergy, Asthma and Immunology. February 2006;12(2):19.

Lockey RF. Robert A. Good, M.D, Ph.D, DSc: The complete physician. *Immunologic Research* 2007; 38(1-3): 356. Cruse JM, Lewis RE (eds). Day-Good NK, Pickett D (guest eds). Humana Press, Inc.

Lockey RF. Dr. Gail Shapiro. *EAACI Newsletter.* European Academy of Allergology and Clinical Immunology. 2006;10:15.

Lockey RF. Welcome the new president of the AAAAI. *EAACI Newsletter.* European Academy of Allergology and Clinical Immunology. 2006;9:7.

Lockey RF. EAACI News – XXV EAACI annual conference visits Vienna. *Academy News.* American Academy of Allergy, Asthma and Immunology. 2006;12(5):16.

Lockey RF. Rhinitis medicamentosa and the stuffy nose. *J Allergy Clin Immunol.* 2006; 118(5):1017-1018.

- Lockey RF, Murphy K, Noonan M, Corren J, Leflein J, Lutsky B, Skoner D. Safety and tolerability of mometasone furoate in children with mild to moderate asthma. *Pediatr Pulmonol*. Submitted.
- O'Byrne PM, Pedersen S, Busse WW, et al. Lockey RF [contributor]. Effects of early intervention with inhaled budesonide on lung function in newly diagnosed asthma. *Chest*. 2006;129:1405-1406.
- Olsen, E, Yang M, Mohapatra, SS. Molecular biology of grass pollen allergens: Pollen Biotechnology: Gene expression and allergen characterization, Chapman and Hall, New York, pp.113-124, 1996.
- Passalacqua G, Bousquet PJ, Carlsen KH, Kemp J, Lockey RF, Niggemann B, Pawankar R, Price D, Bousquet J. ARIA update: I-- systematic review of complementary and alternative medicine for rhinitis and asthma. *J Allergy Clin Immunol*. 2006;117:1054-1062.
- Phillips JF, Yates AB, deShazo RD. Approach to Patients with Suspected Hypersensitivity to Local Anesthetics. *American Journal of the Medical Sciences*. 2007;334(3):190-196.
- Pierce C, Lockey RF. US focuses on anaphylaxis. *EAACI Newsletter*. European Academy of Allergology and Clinical Immunology. 2005;7:15.
- Ramey J, Lockey RF. Preseptal cellulitis secondary to a dental abscess. *Allergy Clin Immunol Int: J World Allergy Org*. January 2006;18:20-21.
- Ramey JT, Lockey RF. Allergic and nonallergic reactions to nitroglycerin. *Allergy Asthma Proc*. 2006;27(3):273-280.
- Ramey JT, Bailen E, Lockey RF. Rhinitis medicamentosa. *J Investig Allergol Clin Immunol*. 2006;16(3):148-155.
- Ruckmani K, Sivakumar M, Ganeshkumar PA. Methotrexate loaded solid lipid nanoparticles (SLN) for effective treatment of carcinoma. *J Nanosci Nanotechnol*. 2006;6: 2991-2995.
- Ruckmani K, Sivakumar M, Kumar S Satheesh. Nanoparticulate drug delivery system of cytarabine hydrochloride (CTH) for improved treatment of lymphoma. *J Biomed Nanotechnol*. April 2007;3:90-96(97).
- Saleem S, Muneera MS, Thusleem OA, Tahir M, Kondaguli AV, Ruckmani K. Development and validation of a selective online dissolution method for rosiglitazone maleate. *J Chromatogr Sci*. July 2007;45:311-314.

Singam R, Jena PK, Behera S, Hellermann GR, Lockey RF, Ledford D, Mohapatra SS. Combined fluticasone propionate and salmeterol reduces RSV infection more effectively than either of them alone in allergen-sensitized mice. *Virology J*. May 2006;3:32.

Ubaidulla U, Reddy MV, Ruckmani K, Ahmad FJ, Khar RK. Therapeutic system of carvedilol: effect of hydrophilic and hydrophobic matrix on in vitro and in vivo characteristics. *AAPS PharmSciTech*. 2007; 7(4): Article 2.

Varghese M, Lieberman P. The effects of repeat omalizumab administration on skin test positivity and the assessment of the safety of administration in patients with positive skin tests to mouse antigen. *Allergy Asthma Proc*. May/June 2007;28:320-323.

Vu AT, Lockey RF. Exercise-induced anaphylaxis. A case study and review. *Allergy Clin Immunol Int – J World Allergy Org*. May/June 2006;18:129-130.

Vu AT, Lockey RF. Benzocaine anaphylaxis. *J Allergy Clin Immunol*. August 2006;118:534-535.

Zekri S, Kumar A, Singh SR, Kumar A. Analysis of mesocavity DNA biochip for respiratory syncytial virus (RSV) diagnosis. *J Biomed Nanotechnology*. June 2007;3:139-147(9).

Zhang W, Lockey RF, Mohapatra SS. Respiratory syncytial virus: immunopathology and control. *Expert Rev Clin Immunol*. 2006;2(1):169-179.

Abstracts presented in 2006 – 2007

Alagarsamy V, Giridar R, Yadav MR, Revathy R, Ruckmani K, De Clercq E. AntiHIV, antibacterial and antifungal activities of some novel 1,4-disubstituted-1, 2, 4-triazolo [4, 3-a] quinazolin-5(4h)-ones. *Indian J Pharm Sci*.2006; 68(4):532-535.

Chacko T, Glaum M, Lockey RF. Asymptomatic healthy adult with persistent Eosinophilia. Abstract presented at: Florida Allergy, Asthma & Immunology Society annual meeting; June 8, 2006; Kissimmee, FL. [1st prize abstract award].

Chacko T, Glaum M, Ledford D, Fox R, Lockey R. Systemic Reactions to Percutaneous and Intradermal Skin Tests. *J Allergy Clin Immunol*. 2007;119:S58.Abstract 225.

Cole SF, Lockey RF. Primary gastrointestinal lymphangiectasia presenting as Cryptococcus meningitis. Abstract presented at: Florida Allergy, Asthma & Immunology Society annual meeting; June 8, 2006; Kissimmee, FL.

Esch RE, Bush RK, Peden D, Lockey RF. Sublingual-oral administration of standardized allergenic extracts/vaccines: safety and dosing studies. Abstract presented at: 62nd annual

American Academy of Allergy, Asthma and Immunology Meeting; March 3-7, 2006; Miami, FL. *J Allergy Clin Immunol*. 2006;117(2):S89.Abstract 348.

Faisal K, Parveen S, Rajendran R, Girija R, Periasamy VS, Kadalmani B, Puratchikody A, Ruckmani K, Pereira BMJ, Akbarsha MA. Male reproductive toxic effect of quassia amara: observations on mouse sperm. *JER*. 2006;10(1):66-69.

Glaum M, Nimal S, Lockey RF, Mohapatra, SS. Atrial natriuretic peptide activates human mast cells via an IgE-independent mechanism. Abstract presented at: FOCUS conference (Federation of Clinical Immunology Societies); June 2, 2006; San Francisco, CA. *J Clin Immunol*. 2006;19:S53.

Jones AR, Beckstead JW, Lockey RF, Mohapatra SS. Cigarette smoke-induced gene expression analysis in normal human bronchial epithelial cells. Abstract presented at: 62nd Annual American Academy of Allergy, Asthma & Immunology meeting; March 3-7, 2006; Miami, FL. *J Allergy Clin Immunol*. 2006;117(2):S26. Abstract 101.

Hanania NA, Holbrook J, Modak S, Reibman J, Wise R, Sharafkhaneh A, King MJ. Characteristics of Older Asthmatics Participating in Asthma Clinical Trials (for the American Lung Association, Asthma Clinical research Centers). Presented at: The American Thoracic Society; May 18-23, 2007; San Francisco.

Lima JJ, Mohapatra SS, Feng H, Lockey RF, Jena PK, Castro M, Irvin C, Johnson JA, Wang J, Sylvester JE. A polymorphism in the NPRA gene associates with asthma (CEA-2007-0459). *Clin Exp Allergy*. In press.

Montpetit AJ. Measurement of exhaled 8-isoprostane: a biomarker in pulmonary disorders. Poster presentation at: Southern Nursing Research Society (SNRS); February 2007; Galveston, TX.

Ramey J, Lockey RF. Preseptal cellulites secondary to a dental abscess. Abstract presented at: Southeastern Allergy Conference; October 2004; Hilton Head, SC. *Allergy Clin Immunol Int: J World Allergy Org*. January 2006:20-21.

Sankar S, Ruckmani K, Saraswathi R, Ramanathan M. Investigation on niosomes with zidovudine as a carrier for treating HIV infection. Poster presentation at: 9th annual meeting of the Canadian Society for Pharmaceutical Sciences; May 24-27, 2006; Ottawa, Ontario, Canada. *J Pharm Pharmaceut Sci*. 2006;9(2).

Shirley S, Kong X, Singham R, Xu W, Wang X, Lockey RF, Mohapatra SS. Modulation of immune response by a novel kaliuretic peptide. Abstract presented at: Academy of Allergy, Asthma and Immunology annual meeting; March 3-7, 2006; Miami, FL.

Shirley S, Kumar A, Jenna P, Behera S, Lockey RF, Mohapatra SS. Multifunctional nanoparticles for specific cell targeting and their commercialization. Abstract presented at: Micro and Nanotechnology Commercialization and Education Foundation

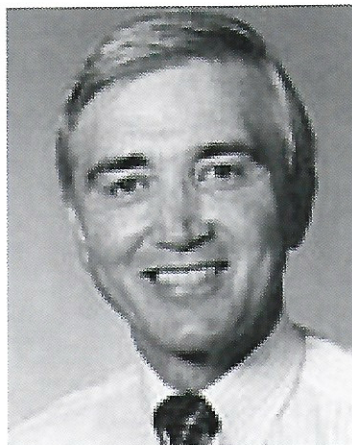
(MANCEF); 11th International Conference of the Commercialization of Micro and Nano Systems; August 27-31, 2006; St. Petersburg, FL.

Varghese M, Lieberman P. A comparison of nasal smear eosinophil count via blow technique vs the nasal scrape method [abstract]. *J Allergy Clin Immunol*. January 2007;119(supplement):S221-S221.

Varghese M, Lieberman P. Factors affecting the use of automatic epinephrine injectors [abstract]. *J Allergy Clin Immunol*. February 2006;117(supplement):S305.

Vu AT, Glaum MC, Naik EG, Grandstaff M, Shah NM, Panagos P, Franck R, Ramey JT, Lockey RF. Impact of an asthma education program on children at an asthma camp [abstract]. *J Allergy Clin Immunol*. 2006;117(2):S55. Abstract 215.

Dennis K. Ledford, M.D., nominated for Secretary-Treasurer (2008-2009) of the American Academy of Allergy, Asthma & Immunology



Dennis K. Ledford, MD is originally from East Tennessee, and he graduated from the Georgia Institute of Technology. During college, he turned from engineering to medicine and enrolled in the University of Tennessee Center for Health Sciences. He completed medical school, an internal medicine residency and chief residency in Memphis. The role model of Dr. Phil Lieberman stimulated a career in allergy/immunology. Dr. Ledford first worked with Drs. Ed Franklin and Gerald Weissmann at New York University, completing a research and clinical rheumatology fellowship before studying allergy/immunology with Drs. Richard Lockey, Roger Fox and Samuel Bukantz at the University of South Florida. He subsequently joined the faculty at USF and ultimately became partner in the private practice with his fellow faculty members. The majority of his time is devoted to seeing patients, but he also is active in medical education, service to the university and research. Community service has included missionary work in Honduras and establishing, with the help of AAFA, a clinic for uninsured people with asthma and allergic disease. This effort received the National Community Service Award of the American College of Chest Physicians. He has served the AAAAI on committees, co-editor of the A/I MKSAP, Region 3 Governor of the RSLAAIS, co-chair of the board review course, AAAAI Board of Directors and chair of the Task Force for the Underserved in Allergy/Immunology. He is a past director of the American Board of Allergy/Immunology, working particularly with maintenance of certification, and is an associate editor of the JACI.

American Academy of Allergy, Asthma and Immunology. "AAAAI Board of Directors Election."
www.aaaai.org/members/bod08_ballot.pdf

Faculty and Staff Awards: 2007

Andrew Bagg, M.D., received a travel grant award to attend the World Allergy Congress meeting, December 2-6, 2007, Bangkok, Thailand where he presented "Systemic reactions to percutaneous and intradermal skin tests".

Roger Fox, M.D., was promoted to Professor of Medicine and Public Health. 2007.

Roger Fox, M.D., was in the Listed in the "America's Top Doctors" Guide (Chosen among 4,000 doctors nationally) 2001-2007

Mark C. Glaum, M.D., Ph.D., received a \$20,000 grant award from The University of South Florida SPAIID Award for his proposal to study "The Role of Atrial Natriuretic Peptide (ANP) in the Activation of Human Mast Cells".

Mark C. Glaum, M.D., Ph.D., was in the Listed in the "America's Top Doctors" Guide (Chosen among 4,000 doctors nationally) 2007.

Arun Kumar, PhD, received a \$25,000 from The University of South Florida SPAIID for the grant proposal titled " Ultra Sensitive Detection of Oxidant Stress Biomarker in Exhaled Breath".

Dennis Ledford, M.D., was in the Listed in the "America's Top Doctors" Guide (Chosen among 4,000 doctors nationally) 2001-2007.

Richard Lockey, M.D., has been named president-elect of the World Allergy Congress for 2010.

Richard Lockey, M.D., was in the Listed in the "America's Top Doctors" Guide (Chosen among 4,000 doctors nationally) 2001-2007.

Richard F. Lockey, M.D., received tenure from The University of South Florida. 2007.

Shyam Mohapatra, PhD., received tenure from The University of South Florida 2007.

Joshua Phillips, M.D., was recognized in Marquis' "Who's Who in America".2006.

Joshua Phillips was recognized in "America's Top Physicians". 2007.

Kandasamy Ruckmani, Ph.D., received The Tamilnadu State Young Women Scientist Award in the Discipline of Medical Sciences and Native Medicine. 2006.

Press Release

Richard F. Lockey, MD, to serve as President-Elect of the World Allergy Organization

MILWAUKEE – Richard F. Lockey, MD, will serve President-Elect of the World Allergy Organization (WAO) for the 2008-2009 term. Elected to the WAO Board as member-at-Large in 1998, Dr. Lockey served on the Executive Committee as Treasurer during the 2006-2007 term. Dr. Lockey will start his term as President of WAO in 2010, succeeding current President Professor G. Walter Canonica.

Dr. Lockey received his medical degree at Temple University School of Medicine, Philadelphia, Pennsylvania. He is currently the Professor of Medicine, Pediatrics and Public Health; Director, Division of Allergy and Immunology; Joy McCann Culverhouse Chair in Allergy and Immunology; and, University Distinguished Health Professor at the University of South Florida, College of Medicine.

In addition to his position as an Executive Officer on the WAO Board of Directors, Dr. Lockey is a member of several professional organizations, including the American Academy of Allergy and Immunology (Fellow and Past-President, 1993-1995), the American College of Physicians (Fellow), the American College of Chest Physicians (Fellow), and the American Medical Association.

About WAO

Founded in 1951, the World Allergy Organization (WAO) is an international umbrella organization consisting of 77 regional and national allergology and clinical immunology societies from around the world. By collaborating with member societies, WAO provides direct educational outreach programs, symposia and lectureships to members in 92 countries.

WAO brings together member allergists and clinical immunologists engaged in research and/or practice throughout the world. The organization provides advice and active support to member societies with the mission of building a global alliance of allergy societies which will advance excellence in clinical care, research, education and training in allergy.

2006-2007 VISITING PROFESSOR EDUCATIONAL PROGRAM

Raif S. Geha, M.D.; James L. Gamble Professor of Pediatrics, Harvard Medical and Chief of Allergy/Immunology, Rheumatology and Dermatology, Division at Children's Boston, Massachusetts; "Mechanisms of Atopic Dermatitis", "Immunodeficiencies Due to Defects in Isotype Switching"; February 9, 2006.

Bryan L. Martin, D.O.; Colonel, Medical Corps, U.S. Army Walter Reed Army Medical Center; "The Beta Adrenergic Controversy in Asthma", "Skin Testing and Allergy Extract Quality Assurance"; April 11, 2006.

Larry Borish, M.D.; Professor of Medicine, University of Virginia Health System, Division of Allergy/Immunology; "Update on Chronic Sinusitis", "Arachidonic Acid Pathway in Allergic Inflammatory Disorders", "The Immunological Basis of Aspirin Intolerance"; May 2, 2006.

Thomas B. Casale, M.D.; Director, Clinical Research Chief, Allergy/Immunology, Creighton University, Omaha, Nebraska; "Omalizumab and Immunotherapy Combined for the Treatment of Allergic Diseases", "New Insights into the Use of IgE Modulating Therapies"; October 10, 2006.

Burton Zweiman, M.D.; University of Pennsylvania School of Medicine, Emeritus Professor of Medicine, Philadelphia, PA; "The Possible Relationship of Chronic Urticaria to Systemic Disease"; January 5, 2007.

Robert Wise, M.D.; Johns Hopkins Asthma & Allergy Center., Division of Pulmonary and Critical Care Medicine, Baltimore, Maryland; "Bronchial -Obstructive Lung Disease" and "Asthma vs. COPD"; January 23, 24, 2007

Steven D. Douglas, M.D.; Section Chief for Immunology, The Children's Hospital of Philadelphia; "Selected Insights into HIV/AIDS: Immunology/Pathogenesis: Gender, Stress-Depression, and Adolescents"; February 20, 2007.

Todor Popov, MD, PhD.; Associate Professor, Clinical Centre of Allergology, Medical University, Sofia, Bulgaria; "Mucoadhesive Approach for Drug Delivery"; February 21, 2007.

Stephen Peters, M.D.; Professor of Medicine and Pediatrics, Associate Director, Center of Human Genomics, Wake Forest University Health Sciences, Winston-Salem, NC; "From Concept to Practice: The Pharmacology of Asthma"; April 10 & 11, 2007.

Jenny Ting, PhD.; University of North Carolina, Alumni Distinguished Professor of Microbiology- Immunology Program Leader Lineberger Comprehensive Cancer Center; "CATERPILLER, Plexin and Semaphorin: New gene families in innate and adaptive immunity"; March 19, 2007.

Juan C. Celedon, MD, Dr.PH.; Associate Professor of Medicine Channing Laboratory & Division of Pulmonary/Critical Care Medicine, Brigham and Women's Hospital, Harvard Medical School Boston, Massachusetts; "Asthma in Hispanics"; July 17, 2007.

Jennifer M. Puck, M.D.; Professor of Immunology, Department of Pediatrics and Institute for Human Genetics, University of California, San Francisco Medical School, San Francisco, California: "Advances in Genetics of Primary Immune Disorders"; October 10, 2007.



*2007 Annual Faculty Retreat
Chinsegut Hill, USF's Conference and Retreat Center
Brooksville, Florida*

From Left to Right: (bottom row) Monroe J. King, D.O., Peggy Hales, Stephanie Medley, Donna Shear, RN, and Thomas Chacko, MD. (Top row left to right): Michelle Singleton, LPN, Shyam Mohapatra, PhD., Richard F. Lockey, M.D, Roger W. Fox, M.D., Hugh Windom, M.D., Prasanna Jena, Ph.D., Arun Kumar, Ph.D., Steven Cole, D.O. and Dennis Ledford, M.D.