

Mark C. Glaum, MD, PhD

Associate Professor of Medicine and Pediatrics
University of South Florida College of Medicine

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Professional Education:

Fordham University (Psychology), B.A., 8/1987 – 5/1991
Hahnemann University (Physiology), M.S., 8/1991 – 8/1993
Hahnemann University, M.D., 8/1993 – 5/1999
Hahnemann University (Immunology), Ph.D., 6/1995 – 5/2001

Postgraduate Training:

Intern in Medicine, Hahnemann University Hospital, Philadelphia, 6/1999 – 6/2000
Resident in Medicine, Hahnemann University Hospital, Philadelphia, 7/2000 – 6/2002
Fellow in Allergy and Clinical Immunology, Hospital of the University of
Pennsylvania, Philadelphia, 7/2002 – 6/2004

Certification:

U.S.M.L.E. Step 1 - 6/1995
U.S.M.L.E. Step 2 - 8/1998
U.S.M.L.E. Step 3 - 6/2001
American Board of Internal Medicine Diplomate - 8/2002
American Board of Allergy and Immunology Diplomate – 1/2006

Licensure:

Florida, # ME 89482

Faculty Appointment:

Associate Professor of Medicine and Pediatrics
University of South Florida
College of Medicine
Tampa, Florida

8/10 – Present

Assistant Professor of Medicine and Pediatrics
University of South Florida
College of Medicine
Tampa, Florida
7/04 – 7/10

Teaching Accomplishments:

Recurrent Lectures and Courses:

Director for 2nd year medical student lecture series on “Obstructive Lung Diseases” (2012-present)

Quarterly lecturer for 3rd year medical student clerkship in Family Medicine (2012-2013)

Biannual lecturer for weekly joint Adult/Pediatric A&I Division Teleconference Series for fellows, residents and medical students (2004-present)

Biannual lecturer for Tampa General Hospital Internal Medicine Noon Conference for residents and medical students (2004-present)

Biannual lecturer for James H. Haley VA Hospital Internal Medicine Noon Conference for residents and medical students (2004-present)

Lecturer for USF Internal Medicine Grand Rounds for faculty, residents and medical students (7/2004, 4/2007, 4/2009, 11/2010, 8/2012)

Lecturer for Orlando Regional Medical Center Internal Medicine Grand Rounds for residents and medical students (8/2005, 4/2007, 10/2009)

Lecturer for Sarasota Memorial Hospital Internal Medicine Grand Rounds (5/2006, 12/2007, 5/2010)

Faculty Moderator for Basic Immunology Textbook Review, a weekly fellow’s conference that reviews basic immunology textbooks for A&I board exam (2004-present)

Co-mentor in USF College of Medicine “Learning Community Mentorship Program” for medical students (2004-2006)

Annual Lecturer for Course BMS 6300 for 2nd year Medical Students: Overview on Allergic Diseases (11/2005 - 2011)

Preceptor, Pre-Medical Summer Enrichment Program, Area Health Education Center Program, University of South Florida College of Medicine, 2005

Course Director for annual division symposium: *Update in Allergy and Immunology*, that reviews the most current developments in A&I for fellows, residents, medical students and practicing physicians for CME (2006-present)

Graduate thesis committee member for Doctoral Candidate Shawna Shirley in Department of Molecular Medicine (2006 – 2008)

Lecturer for Graduate Student Course GMS 6101 Molecular and Cellular Immunology: Hypersensitivity I-II, Immunodeficiency I-II (2007- 2012)

Co-course Director for Signature Interdisciplinary Program in Allergy, Immunology and Infectious Disease (SIPAID) conference *Advances in Immune Regulation 2007*, Embassy Suites Hotel, Tampa, FL (5/2007)

Innovations:

Authored the only awarded proposal in the U.S. for a pilot study to improve graduate medical education in Allergy and Immunology from the Residency Review Committee of the ACGME. With successful completion and implementation of this project, the accreditation cycle of USF A&I fellowship program will be extended from 5 years to 10 years. (5/2009)

Grants:

AAAAI ARTrust Mini Grant. Molecular Quantification of Tree Pollen by qPCR" (\$12,000). Awarded February 25, 2013 at the annual meeting of the AAAAI in San Antonio TX.

All Children's Hospital Pediatric Clinical Research Center Pilot Grant Award (\$20,000) "Identification of inflammatory gene expression profiles in nasal polyp tissue from children with cystic fibrosis." All Children's Hospital/University of South Florida, 6/2005

Signature Interdisciplinary Program in Allergy, Immunology and Infectious Disease Synergy Pilot Award (\$20,000) "The role of atrial natriuretic peptide (ANP) in the activation of human mast cells." Signature Program In Allergy, Immunology, and Infectious Diseases, University of South Florida, 3/2007

Service:

University:

Department of Medicine Faculty Council Representative 2004-2008

College of Medicine Faculty Council Committee on Committees member 2005-2008

Executive Board Member, Signature Program In Allergy, Immunology and Infectious Diseases (2006 – 2011)

Co-director, Signature Program in Allergy, Immunology and Infectious Diseases (SPAID) Journal Club (2006 – 2008)

College of Medicine Faculty Council Nominating Committee member (2007-2008)

Division:

Chair of Fellow Recruitment Committee, Division of Allergy and Immunology (2004 - present)

Treasurer, USF Allergy and Immunology Alumni Association (2005- present)

Director of ACGME-awarded pilot project to improve graduate medical education in Allergy and Immunology (2008 – 2012)

Organizations:

Executive Board Member, Hillsborough County Medical Association, (2010-2011)

Fellow of the Academy of Allergy, Asthma and Immunology (2008 – present)

Committee Member, American Lung Association Professional Education & Research Committee (PERC) and Research Subcommittee (2007 – present)

Member, The Robert A. Good Immunology Society (RAGIS) (2005 – present)

Member, American Academy of Allergy, Asthma and Immunology (2004-present)

Member, World Allergy Organization (2004 - present)

Member, Federation of Clinical Immunology Societies (FOCIS) (2004-present)

Member, Hillsborough County Medical Society (2004 - present)

Member, Florida Allergy Asthma and Immunology Society (2004 - present)

Reviewer, Journal of Allergy and Clinical Immunology (2004 – present)

Member, Florida Medical Association (2004 – 2010)

Board Member, Asthma and Allergy Foundation of America, Tampa (2004-2007)

Bibliography I:

Original Publications:

Glaum, M.C.: Interleukin 5 is Expressed at a Transcriptional Level in Human Lung Following IgE-Dependent Challenge.

A thesis presented for Master of Science Degree, Hahnemann University Library; 1993.

Glaum, M.C., Jaffe, J.S., Gillespie, D.H., Raible, D.G., Post, T.J., Wang, Y., Dimitry, E., Schulman, E.S.: IgE-Dependent Expression of Interleukin-5 mRNA and Protein in Human Lung: Modulation by Dexamethasone. *Clin Immunol Immunopathol* 75: No. 2, 171-178, 1995.

Jaffe J.S., **Glaum, M.C.**, Raible, D.G., Post, T.J., Dimitry, E., Govindarao, D., Wang, Y., Schulman, E.S.: Human Lung Mast Cell IL-5 Gene and Protein Expression: Temporal Analysis of Upregulation following IgE-mediated Activation. *Am J Respir Cell Mol Biol* 13: 665-675, 1995.

Jaffe, J.S., Raible, D.G., Post, T.J., Wang, Y., **Glaum, M.C.**, Butterfield, J.H., Schulman, E.S.: Human Lung Mast Cell Activation Leads to IL-13 mRNA Expression and Protein Release. *Am J Respir Cell Mol Biol* 15: 473-481, 1996.

Schulman, E.S., **Glaum, M.C.**, Post, T., Wang, Y., Raible, D.G., Mohanty, J., Butterfield, J.H., Pelleg, A.: ATP Modulates Anti-IgE-Induced Release of Histamine from Human Lung Mast Cells. *Am J Respir Cell Mol Biol* 20: 530-537, 1999.

Raible, D.G., Mohanty, J., Jaffe, J.S., Stella, H.J., Sprenkle, B.E., **Glaum, M.C.**, Schulman, E.S.: Hydrogen Peroxide Release from Human Eosinophils on Fibronectin: Scopoletin Enhances Eosinophil Activation. *Free Radic Biol Med* 28(11): 1652-1660, 2000.

Glaum, M.C., Wang, Y., Raible, D.G., Schulman, E.S.: Degranulation Influences Heparin-Associated Inhibition of RT-PCR in Human Lung Mast Cells. *Clin Exper Allergy* 31: 1631-1635, 2001.

Glaum, M.C.: Expression and Modulation of Asthma-related Cytokines by Human Lung Mast Cells.
A thesis presented for the Doctor of Philosophy degree, MCP/Hahnemann University Library; 2001.

Glaum, M.C., Levinson, A.I. Asymptomatic Long-standing Panhypogammaglobulinemia with Impaired Antibody Responses. *Ann Allergy Immunol* 100: 396-7, 2008.

Glaum, M.C., Narula, S., Song, D., Zheng, Y., Anderson, A.L., Pletcher, C.H., Levinson, A.I. Toll-like Receptor-7 Induced Naïve Human B cell Differentiation and Immunoglobulin Production. *J Allergy Clin Immunol* 123: 224-30, 2009.

Kim D., **Glaum M.**, Lockey R.F. Evaluation of combination long-acting β -2 agonists and inhaled glucocorticosteroids for treatment of asthma. *Expert Opin Drug Metab Toxicol* 5(8): 933-40, 2009.

Varghese, M.M., **Glaum, M.C.**, Lockey, R.F. Drug-Induced Rhinitis. *Clin Exp Allergy*; 40(3):381-4, 2010.

Phillips, J.F., Fox, R.W., Ledford, D.K., **Glaum, M.C.**, Lockey, R.F. Systemic Reactions to Subcutaneous Allergen Immunotherapy and the Response to Epinephrine. *Allergy Asthma Proceedings*; 32(4):288-94, 2011.

Kumar A, **Glaum M**, El-Badri N, Mohapatra S, Haller E, Park S, Patrick L, Nattkemper L, Vo D, Cameron DF. Initial Observations of Cell Mediated Drug Delivery to the Deep Lung. *Cell Transplantation*; 20(5): 609-18, 2011.

Book Chapters:

Mark C. Glaum and Richard F. Lockey. Allergen Specific Immunotherapy and Systemic Reactions. *Anaphylaxis – Principles and Practice*, Nova Science Publishers, 2013

Niketa Dixit, Mark Glaum, Arun Kumar, and Don F. Cameron. Biological Systems for the Delivery of Nanoparticles. *Nanomedicine in Drug Delivery*, CRC Press: Taylor and Francis Group, 2013

Roger W. Fox and Mark C. Glaum. Vocal Cord Dysfunction/Paradoxical Vocal Fold Motion Disorder. *Asthma: Co-morbid, Co-existing Conditions and Differential Diagnosis*. In press 2013

Innovative Products

Patent Application 09A022PR: A Novel Human Mast Cell Line and Uses Thereof: **Glaum, M.**, Liu, G., Mohapatra, S. (3/2009)

Patent Application 1372.628.PR2: Treatment of Nasal Polyps with Antiproliferative Drugs: Blanck, G., **Glaum, M.** (8/2009)

Bibliography II:

Invited research presentations
(since 2004)

Signaling of Human Naïve and Memory B cells via Toll-like Receptor 7 Mediates their Immunoglobulin Production. Meeting of the 12th International Congress of Immunology and 4th Annual Conference of the Federation of Clinical Immunology Societies (FOCIS). Montreal, Canada, 7/2004.

The Role of ANP in Human Mast Cell Activation. Signature Interdisciplinary Program in Allergy, Immunology and Infectious Disease (SIPAIIID) conference *Advances in Immune Regulation 2007*, Embassy Suites Hotel, Tampa, FL 5/4/2007

Identification of a Stable Human Mast Cell Line Derived from Human Cord Blood Stem Cells. Annual Meeting of the Academy of Allergy, Asthma and Immunology, Philadelphia, Pennsylvania, 3/2008

Cytokine mRNA Expression and SV40 Transfection of a New Human Mast Cell Line (USF-MC1). XXI World Allergy Congress, Buenos Aires, Argentina, 12/2009

Poster presentations
(Since 2004)

Signaling of Human B cells via Toll-like Receptors 7 and 8 Modulates Immunoglobulin Production. Conference of the American Academy of Allergy Asthma & Immunology: San Francisco, California, 3/2004

Longstanding Common Variable Immunodeficiency (CVID) Sans Recurrent Sinopulmonary Infection. Conference of the American Academy of Allergy Asthma & Immunology: San Francisco, California, 3/2004.

Signaling of Human Naïve and Memory B cells via Toll-like Receptor 7 Mediates their Immunoglobulin Production.
Meeting of the 12th International Congress of Immunology and 4th Annual Conference of the Federation of Clinical Immunology Societies (FOCIS). Montreal, Canada, 7/2004.

Atrial Natriuretic Peptide Activates Human Mast Cells via an IgE-Independent Mechanism. 6th Annual Conference of the Federation of Clinical Immunology Societies. (FOCIS) San Francisco, California, 6/2006.

Atrial Natriuretic Peptide is Released from Human Mast Cells following IgE-Mediated Activation. Meeting of the American Academy of Allergy, Asthma and Immunology, San Diego, CA, 2/2007.

Mediator Release from a New Human Mast Cell Line (USF-MC1). Meeting of the American Academy of Allergy, Asthma and Immunology, Washington, DC, 3/2009.

Glaum, M.C., Liu, G., Wang, J., Lockey, R.F., Mohapatra, S.S.: Degranulation, Cytokine mRNA Expression and SV40 Transfection of an SCF-independent Human Mast Cell Line (USF-MC1). Meeting of the American Academy of Allergy, Asthma and Immunology, New Orleans, LA, 3/2010.

Published abstracts
(Since 2004)

Glaum, M.C., LaRosa, D.F., Apter, A.J., Levinson, A.I.: Longstanding Common Variable Immunodeficiency (CVID) Sans Recurrent Sinopulmonary Infection. *J Allergy Clin Immunol* 113(2):81, 2004.

Lynn, J., Glaum, M.C., Levinson, A.I.: Signaling of Human B cells via Toll-like Receptors 7 and 8 Modulates Immunoglobulin Production. *J Allergy Clin Immunol* 113(2):114, 2004.

Glaum, M.C., Levinson, A.I.: Signaling of Human Naïve and Memory B cells via Toll-like Receptor 7 Modulates Their Immunoglobulin Production. *Clin Invest Med*, 27 (4): 3066, 2004.

Glaum, M.C., Nimal, S., Lockey, R., Mohapatra, S.: Atrial Natriuretic Peptide Activates Human Mast Cells via an IgE-Independent Mechanism. *Clin Immunol*, 19: S53, 2006.

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. *J Allergy Clin Immunol*. 2006;117(2):S55.

Glaum, M.C., Nimal, S., Lockey, R., Mohapatra, S.: Atrial Natriuretic Peptide is Released from Human Mast Cells following IgE-Mediated Activation. *J Allergy Clin Immunol*, 119: S53, 2007.

Nimal, S., Glaum, M.C., Jena, P.K., Lockey, R., Mohapatra, S.: Atrial Natriuretic Peptide Can Modulate Human Mast Cell Gene Expression. *J Allergy Clin Immunol*, 119: S55, 2007.

Chacko, T., Glaum, M.C., Ledford, D., Fox, R., Lockey, R.: Systemic Reactions to Percutaneous (P) and Intradermal (ID) Skin Tests. *J Allergy Clin Immunol*, 119: S58, 2007.

Bagg, A., Chacko, T., Lockey, R., Ledford, D., Fox, R., Glaum, M.: Systemic Reactions to Percutaneous and Intradermal Skin Tests. *J Allergy and Clin Immunol*, 121: S58, 2008.

Glaum, M.C., Liu, G., Lockey, R.F., Mohapatra, S.S.: Identification of a Stable Human Mast Cell Line Derived from Human Cord Blood Stem Cells. *J Allergy Clin Immunol*, 121: S319, 2008.

Glaum, M.C., Liu, G., Lockey, R.F., Mohapatra, S.S.: Mediator Release from a New Human Mast Cell Line (USF-MC1). *J Allergy Clin Immunol*, 123: S197, 2009.

Glaum, M.C., Liu, G., Wang, J., Lockey, R.F., Mohapatra, S.S.: Degranulation, Cytokine mRNA Expression and SV40 Transfection of an SCF-independent Human Mast Cell Line (USF-MC1) *J Allergy Clin Immunol*, 125: Supplement 1, AB178, 2010.

Talreja, N., Haq, M., Glaum, M.C., Ledford, D.K., Lockey, R.F. Effect of meteorological parameters on airborne fungal spore counts: Sixteen Year Study (1995-2010) in Sarasota, Fl. . *Journal of Allergy and Clinical Immunology* Vol. 129, Issue 2, Supplement, Page AB17, 2012

Talreja, N., Culverhouse, S., Glaum, M.C., Ledford, D.K. Diffuse Idiopathic Pulmonary Neuroendocrine Hyperplasia with Corticosteroid Dependent Asthma. *Annals of Allergy, Asthma & Immunology* Vol. 107, Issue 5, Supplement, Pages A44, 2012

Ferguson JE, Fitzhugh DJ, Glaum MC. An Unusual Case of C1q-deficient Urticarial Vasculitis Sensitive to Hydroxychloroquine. *Annals of Allergy*,

Asthma and Immunology. November 2012

Ferguson JE, Glaum MC, Lockey RF. Presumed Type III Hereditary Angioedema Presenting with Recurrent Abdominal Distention After Estrogen Use. *Journal of Allergy and Clinical Immunology*. February 2013.

Other invited presentations:

Food Allergy – Are Vaccines OK, What Can They Eat? Pediatric Allergy and Immunology Symposium: Sarasota Memorial Hospital, Sarasota, Florida, 9/2004

Allergic Triggers and What You Can Do About Them. American Lung Association Asthma U. Bayview Hospital, Saint Petersburg, Florida 10/2004

Perspectives on Gene Therapy in Asthma. American Academy of Allergy, Asthma and Immunology 2005 Annual Meeting. San Antonio, Texas, 3/2005

Environmental Triggers and Allergic Disease: Role of Innate Immunity and Potential Therapies. American Academy of Allergy, Asthma and Immunology 2005 Annual Meeting. San Antonio, Texas, 3/2005

Allergic Asthma Triggers and Environmental Control. American Lung Association Night School for your Health, Tampa General Hospital, Tampa, Florida, 3/2005

Immunotherapy, Insect Allergy and Food Allergy: Human Correlates. 2005 North American Veterinary Dermatology Forum. Sarasota Hyatt Hotel and Convention Center, Sarasota, Florida, 4/2005

Overview of Biologics: Adverse Reactions and Toxicities. Annual Meeting of the Florida Allergy Asthma and Immunology Society. Boca Raton, Florida, 6/2005

Glucocorticoid Resistance. Annual Meeting of the Florida Allergy Asthma and Immunology Society. Boca Raton, Florida, 6/2005

Update in Asthma Treatment Guidelines: What Do They Mean? American College of Physicians, 2005 Florida Chapter Scientific Session, Sarasota, Florida, 9/2005

Allergic Triggers in Asthma and Environmental Controls. Mini Medical School, Tampa General Hospital, Tampa, Florida 5/2006

Food Allergy in Children and Adults, Update in Allergy and Immunology 2006, Marriott Waterside Hotel, Tampa, FL, 9/2006

New Developments in Asthma Management. American Lung Association Pulmonary and Critical Care Symposium, Hilton at Carillon Park, St. Petersburg, FL 5/2007

Asthma Management in the Outpatient Setting: Changes with the New Guidelines. Update in Allergy and Immunology 2007, Renaissance Hotel International Plaza, Tampa, FL 9/2007

New Asthma Guidelines 2008. Florida Thoracic Society Winter Course 2008. Disney Contemporary Resort, Orlando FL 2/2008

Food Allergy: How Do You Interpret Positive RAST Tests? *Update in Allergy and Immunology 2008*, Loews Royal Pacific Resort at Universal Orlando, Orlando, FL 9/2008

Pathogenesis of Anaphylaxis. XXI World Allergy Congress, Buenos Aires, Argentina, 12/2009

Laryngeal Pharyngeal Reflux. XXI World Allergy Congress, Buenos Aires, Argentina, 12/2009

Update in Asthma Treatment, Sarasota Memorial Hospital Department of Internal Medicine Grand Rounds, Sarasota, Florida, 5/2010

Food Allergy: *Update in Allergy and Immunology 2010*, Westin Harbor Side, Tampa, FL 9/2010

Fiberoptic Rhinoscopy: a Valuable Tool in the Evaluation of Upper Airway Diseases: *Update in Allergy and Immunology 2011*, Westin Harbor Side, Tampa, FL 10/2011

Pathogenesis of Eczema. XXII World Allergy Congress, Cancun, Mexico, 12/2011

Rhinolaryngoscopy for the Allergist. XXII World Allergy Congress, Cancun, Mexico, 12/2011

Rhinolaryngoscopy Findings. Annual Meeting of the Florida Allergy Asthma and Immunology Society, Orlando, FL, 7/2013

Invited Journal/Book Reviews:

Editorial Review Group Chair for: Doody's Core Titles in the Health Sciences: <http://www.doody.com> (2010-present)

Guest Editor for World Allergy Association News and Notes Online Monthly Journal Review: <http://www.worldallergy.org> (2/2006 - present)

Review of: *Neonatal Immunity*. World Allergy Organization News (on line) Available: <http://www.worldallergy.org/reviews/bookreviews.shtml> (9/2005)

Review of: *Handbook of Drug Allergy*. Doody's Review Service (on line) Available: <http://www.doody.com> (10/2005)

Review of: *Headache*. World Allergy Organization News (on line)
Available: <http://www.worldallergy.org/reviews/bookreviews.shtml> (10/2005)

Review of *Asthma in the Workplace*. Doody's Review Service (on line)
Available: <http://www.doody.com> (6/2006)

Review of *Mast Cells and Basophils*. Doody's Review Service (on line)
Available: <http://www.doody.com> (3/2006)

Other Honors:

Selected as one of "*Best Doctors in America*" 2007-2013

Platinum Dean's Recognition Award for achievements and leadership in education and research/scholarly activity. University of South Florida, 2010

Stanley E. Bradley Award for Bench Research, Department of Internal Medicine, Hospital of the University of Pennsylvania, 2004

American Academy of Allergy, Asthma and Immunology (AAAAI)
Fellow in Training Travel Scholarship, 2004

AAAAI National Resident Educational Program Mentorship and Travel Grant, 2004