

# Dr. Zachary Marshall

Dr. Zachary Marshall was born in Plano and attended high school locally at Liberty Christian School. He graduated from Rice University and the University of Texas Medical School at Houston, completed his Internal Medicine residency at Baylor College of Medicine, and is a board-certified internist. He completed his clinical postdoctoral fellowship in Allergy and Immunology at Baylor College of Medicine in Houston, TX. Dr Marshall treats both children and adults. His clinical interests include fungal allergy and airway mycosis, environmental allergies, drug allergies, food allergies, rhinosinusitis, asthma, chronic cough, hives, eczema, and immune disorders. Dr Marshall also has a special interest in the medical humanities and has written on the importance of the doctor-patient relationship. "In this electronic age of increasingly depersonalized care, we must not forget that health and healing occur only at the level of the individual patient, and only with collaboration. Our efforts are best invested in the lives of people, and there is no greater progress than to improve the life of another."

---

Work                      Texas Regional Asthma and Allergy Center, September 2018-Present

Education                Baylor College of Medicine  
Allergy & Immunology Fellowship, July 2016-June 2018 (Graduated June 2018)  
Houston, TX

Baylor College of Medicine  
Internal Medicine Residency 2013-2016 (Graduated June 2016)  
Houston, TX

University of Texas Medical School at Houston  
Doctor of Medicine, May 2013  
Houston, TX  
Elective: Medical Humanities Certificate Program, 2009-2013

Rice University  
B.S., Biochemistry & Cell Biology, May 2009  
Houston, TX

Certification            USMLE Step 1 Examination, June 2011  
USMLE Step 2 Examination, September 2012  
USMLE Step 3 Examination, August 2014  
ABIM Board Certified in Internal Medicine, August 2016

## Presentations

### Lectures and Grand Rounds

"From Atopy to Anaphylaxis." Noon Conference Lecture Series, BCM Internal Medicine Residency. Presented at CHI St Luke's Hospital on June 15, 2018 and Ben Taub Hospital on June 19, 2018.

“ELISpot Predicts Drug Sensitivity in an *In Vivo* Model.” Allergy Fellow-In-Training Program Speaker, presented at the 2018 Texas Allergy, Asthma and Immunology Society (TAAIS) Annual Meeting in Lost Pines, TX.

“Inpatient Aspirin Desensitization in Cardiovascular Disease.” Presented at the Greater Houston Allergy, Asthma and Immunology Society meeting on November 29, 2017.

“Chronic Rhinosinusitis.” Noon Conference Lecture Series, BCM Internal Medicine Residency. Presented at DeBakey VA Medical Center on June 13, 2017, and Baylor St. Luke’s Medical Center on June 20, 2017.

“When Everything Congo Wrong” (Schistosomiasis). Case Introduction and Epilogue, BCM Department of Medicine Grand Rounds, May 21, 2015.

“Adenovirus in the Immunocompromised Patient.” Methodist Citywide Hematology Grand Rounds, January 28, 2015.

#### Poster Presentations

Motazed, Tina, Zachary Marshall, and Sana Hasan. “A case of recurrent protamine hypersensitivity.” Poster presented at the 2018 CIS Annual Meeting in Toronto, Canada.

Marshall, Zachary W., Evan Li, and David B. Corry. “Association of aspirin-exacerbated respiratory disease with airway mycosis.” Poster presented at the 2018 AAAAI Annual Meeting in Orlando, FL.

Wang, Helen T., Zachary W. Marshall, Serge DeGolovine, and David B. Engler. “Acquired angioedema secondary to myeloma with exacerbations due to fresh frozen plasma.” Poster presented at the 2018 AAAAI Annual Meeting in Orlando, FL.

Marshall, Zachary W., Nefertari McClarity, Raymond Tucker, An Nguyen, and David B. Engler. “Low vitamin D and skin prick size are associated with anaphylaxis in accelerated immunotherapy.” Poster presented at the 2017 ACAAI Annual Scientific Meeting in Boston, MA.

Wang, Helen T., Zachary W. Marshall, and David B. Engler. “Nebulized terbutaline for uterine cramping in rush immunotherapy.” Poster presented at the 2017 ACAAI Annual Scientific Meeting in Boston, MA.

Marshall, Zachary, and Joud Hajjar. “Lymphocytic hypereosinophilic syndrome in a child presenting with severe respiratory distress and multiorgan disease.” Poster presented at the 2017 AAAAI Annual Meeting, Atlanta, GA, and abstract published in *Journal of Allergy and Clinical Immunology* 2017;139(2) Supplement: AB164.

Marshall, Zachary, and David B. Engler. “Pharmacotherapy for uterine cramping in accelerated immunotherapy.” Poster presented at the 2016 ACAAI Annual Scientific Meeting in San Francisco, CA, and abstract published in *Annals of Allergy, Asthma & Immunology* 2016;117(5) Supplement; S41.

Marshall, Zachary W., Dennis D.H. Wang, Li-Zhen Song, Farrah Kheradmand, and David B. Corry. "Lung autoantibodies and tobacco smoking." Presented at the BCM Annual Department of Medicine Housestaff Research Symposium, April 2015, Houston, TX; and at the Annual Southeast ACP Associates Program Residents' Day, May 2015, Galveston, TX.

Marshall, Zachary, Gregory Constantine, Anisha Gupta, Quillan Huang, Katie Jeans, Jordan Kemere, Min Ji Kim, Megan McCain, Anita Sahu, and David Wong. "Improvement in the monitoring of vancomycin trough concentration: a quality improvement project." Presented at the BCM Annual Quality Improvement and Patient Safety Conference, May 2015, Houston, TX.

#### Didactics and Fellowship Presentations

Senior Fellow for the 2017-2018 BCM Allergy Immunology Hypersensitivity Course and Board Review Course; responsibilities include course organization, introductory lectures, and scheduling outside faculty lectures. Presented in TCH Feigin Center to BCM allergy immunology fellows and available faculty, examples: "Grass Pollen Allergens: Pooideae and Chloridoideae," presented September 14, 2016; "Oral Allergy Syndrome," presented on March 29, 2017; "Allergen Nomenclature," presented August 9, 2017; "Skin Testing," presented August 23, 2017; in addition to scheduled presentations of chapters from *Abbas, Middleton's*, and the 2010 *JACI* Primer on Allergic and Immunologic Diseases.

#### Authorship

##### CME Authorship

Group authorship of CME Questions: "Biologics and biomarkers for asthma, urticaria, and nasal polyposis." *Journal of Allergy and Clinical Immunology*, 2017;139:1422. Aba Al-Kaabi, MD, Maya Gharfeh, MD, MPH, An Nguyen, MD, Zachary W. Marshall, MD, Dipika Patel, MD, Cecilia Poli, MD, and Chih-Yin Yeh, MD, under the direction of Lenora M. Noroski, MD, MPH, and William T. Shearer, MD, PhD.

##### Book Chapter

(Manuscript submitted.) Marshall, Zachary W., Helen T. Wang, and David B. Corry. "Cough and allergic disease." Allergy and Asthma: The Basics to Best Practices. Ed. Massoud Mahmoudi. Tentative publishing late 2018.

#### Research

Allergy Immunology Fellowship Research, July 2016 - June 2018. Ongoing projects included ELISpot as a predictor of drug sensitivity in an *in vivo* murine model; and exhaled breath condensate analysis in airway mycosis.

BCM IM Residency protected research time (4 weeks, June 2014). Western blot examination of human sera for the presence of autoantibodies to lung lysate in ever-smokers. Laboratory of David Corry, MD, and Ferrah Kheradmand, MD, Baylor College of Medicine, Houston, TX.

Rice University Undergraduate Research, Spring 2008. Exploration of the valanimycin biosynthetic pathway. Laboratory of Ronald J. Parry, PhD, Departments of Chemistry and Biochemistry, Rice University, Houston, TX.

Student Multicultural Advanced Research Training (SMART) Internship (10 weeks, May-July 2007). Patch-clamp electrophysiological studies of target ligands on GABA receptors, particularly the neurochemical effects of barbiturate- and benzodiazepine-like GABAR binding. Laboratory of Glenn Dillon, PhD, Department of Pharmacology and Neuroscience, University of North Texas Health Science Center, Fort Worth, TX.

UT-MD Anderson Biomedical Summer Research Internship Program (10 weeks, June-August 2005). Cytokinetic exploration of the effects of resveratrol, a phytoalexin stilbene, on TNF- $\alpha$  and subsequent NF- $\kappa$ B regulation. Laboratory of Bharat B. Aggarwal, PhD, UT MD Anderson Cancer Center, Department of Experimental Therapeutics, Houston, TX.

#### Internal Medicine Residency Morning Report Cases

“Respiratory failure and RSV.” IM Morning Report, Ben Taub Hospital, Dec 23, 2015.

“High-output metabolic alkalosis.” IM Morning Report, St Luke’s Hospital, October 15, 2015.

“Pauci-immune RPGN.” IM Morning Report, St Luke’s Hospital, September 21, 2015.

“Cold case: angioedema and abdominal pain.” IM Morning Report, Michael DeBakey VA Medical Center, June 5, 2015.

“Adrenal insufficiency presenting as hypoglycemia.” IM Morning Report, St Luke’s Hospital, May 20, 2015.

“Diarrhea, renal failure, and thrombocytopenia: not TTP/HUS.” IM Morning Report, St Luke’s Hospital, May 8, 2015.

“Kidney failure presenting as nausea in a young woman.” IM Morning Report, Ben Taub Hospital, April 14, 2015.

“Ischemic colitis presenting after a potluck dinner.” IM Morning Report, St Luke’s Hospital, February 24, 2015.

“Multiple myeloma presenting as pneumonia, confusion, and shoulder pain.” IM Morning Report, Ben Taub Hospital, February 2, 2015.

“Adult-onset Still’s disease.” IM Morning Report, Michael DeBakey VA Medical Center, December 29, 2014.

“Aortic dissection presenting as chest pain.” IM Morning Report, Michael DeBakey VA Medical Center, December 15, 2014.

“Urothelial carcinoma presenting as hematuria.” IM Morning Report, Michael DeBakey VA Medical Center, December 8, 2014.

“Schistosomiasis presenting as chronic abdominal pain and hives.” IM Morning report, Michael DeBakey VA Medical Center, October 8, 2014, and again at request, May 27, 2015.

Submission, Texas ACP abstract competition: “A rare case of Moraxella endocarditis,” August 2014.

“Moraxella catarrhalis endocarditis presenting as altered mental status.” IM Intern Morning Report, St Luke’s Hospital, February 3, 2014.  
“PCP pneumonia presenting as shortness of breath.” IM Intern Morning Report, St Luke’s Hospital, October 18, 2013.  
“Diverticulitis presenting as abdominal pain in a young man.” IM Intern Morning Report, St Luke’s Hospital, October 3, 2013.  
“Migration mishaps: dysautonomia and heterotopia.” Pediatric Neurology Morning Report, Memorial Hermann Hospital, July 2012.  
“Neuromyelitis optica: spectrum of disease and management.” Pediatric Neurology Morning Report, Memorial Hermann Hospital, April 2012.

#### Medical School Leadership and Awards

Team Leader, PGY2 Quality Improvement Project, September 2014 - May 2015  
UT Houston AMA/TMA Representative to the Harris County Medical Society, 2010-2012  
McGovern Center Advisory Board Member, 2011-2013  
UT Houston Master Advisory Assistant, 2010-2011  
UT Houston Underclassmen “MS Buddy” Advisor, 2010-2011  
“Big Owl/Little Owl” Rice University Pre-Medical Mentoring Program, 2012  
Harold T. Pruessner Scholarship, 2012

#### Community Service

UTH AMA/TMA volunteer events, including Hard Hats for Little Heads (community education and helmet-fitting at Lockhart Elementary, Woodland Acres Middle School), volunteering at the 2011 Houston TMA TexMed Gala  
UTH Medical School Service Day Volunteering, including service at the Houston AIDS Foundation and the 2010 Houston AIDS Walk  
2012 Family Medicine Student Association Residency Fair Co-Coordinator

#### Medical School Preceptorship

Texas Statewide Family Medicine Preceptorship Program, Summer 2010, 4 weeks, Breckenridge, TX (Stephens County) with Dr. William E. Prater, M.D.

#### Conferences Attended

2018 TAAIS Annual Meeting, Lost Pines, TX, April 2018.  
2018 AAAAI Annual Meeting, Orlando, FL, March 2018.  
2017 ACAAI Annual Scientific Meeting, Boston, MA, October 2017.  
2017 AAAAI Annual Meeting, Atlanta, GA, March 2017.  
2016 ACAAI Annual Scientific Meeting, San Francisco, CA, November 2016.  
19<sup>th</sup> Annual TAAIS Primary Care Residents’ Conference on Allergy, Asthma & Immunology, Lost Pines, TX, April 2015.

#### Membership

Texas Medical Association  
Harris County Medical Society  
American Academy of Allergy, Asthma & Immunology  
American College of Allergy, Asthma & Immunology  
American Medical Association

Interests

I enjoy playing tennis, running, writing, photography, music, gardening (my claim to fame is a 10-foot-tall avocado tree grown from seed), and spending time with family.