Stanford

Michelle Huffaker, MD

Clinical Assistant Professor, Medicine - Pulmonary, Allergy & Critical Care Medicine

CLINICAL OFFICE (PRIMARY)

- **Atherton Allergy, Asthma, and Immunodeficiency Clinic**

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Bio

BIO

Dr. Michelle Huffaker is a board-certified, fellowship-trained allergist and immunologist with Stanford Health Care. She is a clinical assistant professor in the Department of Medicine, Division of Pulmonary, Allergy, and Critical Care Medicine at Stanford University School of Medicine.

Dr. Huffaker specializes in diagnosing and treating allergies and health conditions that affect the immune system. She is particularly interested in asthma, food allergies, and allergic rhinitis.

Dr. Huffaker's research is focused on treatments that achieve long-lasting remission for allergic and immunologic diseases, such as food allergies and allergic rhinitis. Dr. Huffaker is the director of clinical and translational medicine for the allergy portfolio of the Immune Tolerance Network (ITN), a clinical research consortium funded by the National Institute of Allergy and Infectious Diseases (NIAID). The ITN focuses on achieving immune tolerance in conditions where the body attacks healthy cells (immune-mediated diseases). Dr. Huffaker leads the development, conduct, and analysis of ITN clinical trials.

Dr. Huffaker has published her research in peer-reviewed journals, such as Allergy, The Journal of Allergy and Clinical Immunology, and World Allergy Organization Journal. She has presented to her peers at international, national, and regional meetings, including those of the European Academy of Allergy and Clinical Immunology (EAACI), the American Academy of Allergy, Asthma, and Immunology (AAAAI), and the American College of Allergy, Asthma, and Immunology (ACAAI).

Dr. Huffaker is a fellow of AAAAI and a member of AAAAI, EAACI, and the Western Society of Allergy, Asthma, and Immunology.

CLINICAL FOCUS

- Allergy and Immunology

ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Medicine - Pulmonary, Allergy & Critical Care Medicine
- Member, Maternal & Child Health Research Institute (MCHRI)

HONORS AND AWARDS

- John E. Thayer Award, Harvard Medical School
- Resident and Fellow Recognition Award, Harvard Medical School
- Top Tier Reviewer, The Journal of Allergy and Clinical Immunology: In Practice Editorial Board

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Vice President and Program Chair, Allergy, Asthma, and Immunology Foundation of Northern California (2026 - present)
- Editorial Board Member, Journal of Allergy and Clinical Immunology: In Practice (2026 - present)
- Board Member, Allergy, Asthma, and Immunology Foundation of Northern California (2023 - present)
- Fellow, American Academy of Allergy, Asthma, and Immunology (AAAAI) (2023 - present)
- Member, European Academy of Allergy and Clinical Immunology (2022 - present)
- Member, Western Society of Allergy, Asthma, and Immunology (2018 - present)
- Member, American College of Allergy, Asthma, and Immunology (2015 - present)
- Member, American Academy of Allergy, Asthma, and Immunology (AAAAI) (2015 - present)

PROFESSIONAL EDUCATION

- Board Certification: Allergy and Immunology, American Board of Allergy and Immunology (2017)
- Board Certification: Internal Medicine, American Board of Internal Medicine (2014)
- Fellowship: Stanford University Allergy and Immunology Fellowship (2017) CA
- Residency: Brigham and Women's Hospital Internal Medicine Residency (2014) MA
- Medical Education: Harvard Medical School (2011) MA

LINKS

- Immune Tolerance Network: https://www.immunetolerance.org/

Research & Scholarship

CLINICAL TRIALS

- Efficacy of Tezepelumab in Peanut Oral Immunotherapy, Recruiting
- Follow up of LEAP Participants and Their Families, Not Recruiting
- Grass Pollen Immunotherapy Plus Dupilumab for Tolerance Induction, Not Recruiting
- Peanut Oral Immunotherapy in Children, Not Recruiting

Publications

PUBLICATIONS

- **Additional Food and Aeroallergen Polysensitization Was Not Associated with Peanut Oral Immunotherapy Outcomes in the IMPACT Population.** *The journal of allergy and clinical immunology. In practice*
  Olayiwola, O., Mudd, L., Dunaway, L., Laidlaw, T. M., Jones, S. M., Fulkerson, P. C., Huffaker, M. F.
  2026

- **Epitope-Specific IgE Profiles are Predictive of Desensitization and Remission in the IMPACT Trial.** *The Journal of allergy and clinical immunology*
  Wang, J., Khoshbakht, S., Lee, K. W., Jones, S. M., Huffaker, M. F., Plaut, M., Wheatley, L. M., Baloh, C. H., Suárez-Fariñas, M., Sampson, H. A.
  2026
- **When Should Milk Be Introduced? A Question Still Worth Pouring Over.** *The journal of allergy and clinical immunology. In practice*
  Huffaker, M. F.
  2026; 14 (7): 1636-1637
- **Multivariate Modeling Demonstrates the Interplay of Environmental Peanut Exposure, Eczema, and Early Peanut Introduction on the Development of Peanut Sensitization and Allergy in the Younger Siblings of LEAP Participants**
  Huffaker, M., Du Toit, G., Bahnson, H., Togias, A., Lack, G.
  MOSBY-ELSEVIER.2026
- **Epitope-Specific Antibody Trajectories and Early Peanut OIT Outcomes in Toddlers**
  Khoshbakht, S., Lee, A., Lee, W., Jones, S., Kim, E., Nadeau, K., Nowak-Wegrzyn, A., Wood, R., Scurlock, A., Chinthrajah, R., Pesek, R., Sindher, S., Kulis, et al
  MOSBY-ELSEVIER.2026
- **Machine Learning Models Using Epitope-Specific Antibodies Predict Desensitization and Remission in Early Peanut Oral Immunotherapy**
  Lee, K., Wang, J., Khoshbakht, S., Lee, A., Jones, S., Kim, E., Nadeau, K., Nowak-Wegrzyn, A., Wood, R., Scurlock, A., Chinthrajah, R., Pesek, R., Sindher, et al
  MOSBY-ELSEVIER.2026
- **Comorbid Food and Aeroallergen Sensitization Does Not Affect Peanut Oral Immunotherapy Outcomes in Young Children**
  Olayiwola, O., Mudd, L., Dunaway, L., Laidlaw, T., Jones, S., Fulkerson, P., Sanda, S., Huffaker, M.
  MOSBY-ELSEVIER.2026
- **Novel Weekly Combined Symptom Medication Score to Assess Seasonal Allergic Rhinitis Burden and Efficacy of Immunotherapy**
  Huffaker, M., Eifan, A., Scadding, G., Graham, A., Mudd, L., Ozanne, M., Dunaway, L., Fedina, O., Baloh, C., Togias, A., Durham, S.
  MOSBY-ELSEVIER.2026
- **Durable Clinical Efficacy of Grass Pollen Sublingual Tablet Immunotherapy in Combination with Dupilumab in Adults with Seasonal Allergic Rhinitis**
  Eifan, A., Huffaker, M., Paniagua, M., Scadding, G., Fedina, O., Graham, A., Johnson, M., Dunaway, L., Baloh, C., Shamji, M., Andersen, P., Woehlk, C., Radwan, et al
  MOSBY-ELSEVIER.2026
- **Dosing Reactions and Missed Doses Affect Peanut Oral Immunotherapy Outcomes.** *The journal of allergy and clinical immunology. In practice*
  Olayiwola, O., Mudd, L., Dunaway, L., Laidlaw, T. M., Jones, S. M., Fulkerson, P. C., Sanda, S., Huffaker, M. F.
  2025
- **Multiomics approach to evaluating personalized biomarkers of allergen immunotherapy.** *The Journal of allergy and clinical immunology*
  Shamji, M. H., Fulton, W. T., Animashaun, I., Palmer, E., Baerenfaller, K., Sokolowska, M., Barber, D., Huffaker, M., Baloh, C., Pfaar, O., Ollert, M., Klimek, L., Rabin, et al
  2025; 156 (3): 523-534
- **Evaluation of Intestinal Permeability Using Serum Biomarkers in Learning Early About Peanut Allergy Trial** *ALLERGY*
  Aktas, O., Mateja, A., Li, M., Chatman, L., Grieco, M. C., Baloh, C. H., Huffaker, M., Wheatley, L. M., du Toit, G., Lack, G., Brittain, E., Frischmeyer-Guerrerio, P. A.
  2025; 80 (8): 2286-2296
- **Kinetics of early peanut allergy development and resolution in the EAT, LEAP, and PAS cohorts.** *The Journal of allergy and clinical immunology*
  Foong, R., Bahnson, H. T., Du Toit, G., Huffaker, M., Sampson, H. A., Suarez-Farinas, M., Logan, K., Perkin, M., van Ree, R., Santos, A. F., Lack, G.
  2025
- **Sticking With It: The Continued Benefits of 2 Years of Peanut Epicutaneous Immunotherapy in Young Children** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY-IN PRACTICE*
  Huffaker, M. F.
  2025; 13 (5): 1188-1189

- **Peanut-specific fi c IgG subclasses as biomarkers of peanut allergy in LEAP study participants** *WORLD ALLERGY ORGANIZATION JOURNAL*
  Baloh, C. H., Lim, N., Huffaker, M., Patel, P., Tversky, J., Du Toit, G., Lack, G., Laidlaw, T. M., MacGlashan, D. W.
  2024; 17 (8): 100940

- **Follow-up to Adolescence after Early Peanut Introduction for Allergy Prevention** *NEJM EVIDENCE*
  Du Toit, G., Huffaker, M. F., Radulovic, S., Feeney, M., Fisher, H. R., Byron, M., Dunaway, L., Calatroni, A., Johnson, M., Foong, R., Marques-Mejias, A., Bartha, I., Basting, et al
  2024; 3 (6): EVIDoa2300311

- **The kinetics of early peanut allergy development and resolution in the EAT, LEAP, and PAS cohorts**
  Foong , R., Bahnson, H., Du Toit , H., Huffaker , M., Sampson , H., Suarez-Farinas , M., Logan , K., Perkin , M., Van Ree , R., Santos , A., Lack , G.
  Journal of Allergy and Clinical Immunology.
  2024

- **Developing a Prediction Model for Determination of Peanut Allergy Status in the Learning Early About Peanut Allergy (LEAP) Studies** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY-IN PRACTICE*
  Sever, M. L., Calatroni, A., Roberts, G., du Toit, G., Bahnson, H. T., Radulovic, S., Larson, D., Byron, M., Santos, A. F., Huffaker, M. F., Wheatley, L. M., Lack, G.
  2023; 11 (7): 2217-+

- **Epidermal differentiation complex genetic variation in atopic dermatitis and peanut allergy** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY*
  Huffaker, M. F., Kanchan, K., Bahnson, H. T., Ruczinski, I., Shankar, G., Leung, D. Y. M., Baloh, C., Du Toit, G., Lack, G., Nepom, G. T., Mathias, R. A.
  2023; 151 (4): 1137-+

- **Incorporating genetics in identifying peanut allergy risk and tailoring allergen immunotherapy: A perspective on the genetic findings from the LEAP trial.** *The Journal of allergy and clinical immunology*
  Huffaker, M. F., Kanchan, K., Bahnson, H. T., Baloh, C., Lack, G., Nepom, G. T., Mathias, R. A.
  2023; 151 (4): 841-847

- **HLA-associated outcomes in peanut oral immunotherapy trials identify mechanistic and clinical determinants of therapeutic success.** *Frontiers in immunology*
  Kanchan, K., Shankar, G., Huffaker, M. F., Bahnson, H. T., Chinthrajah, R. S., Sanda, S., Manohar, M., Ling, H., Paschall, J. E., Toit, G. D., Ruczinski, I., Togias, A., Lack, et al
  2022; 13: 941839

- **Biomarkers and mechanisms of tolerance induction in food allergic patients drive new therapeutic approaches** *FRONTIERS IN IMMUNOLOGY*
  Baloh, C. H. H., Huffaker, M. F. F., Laidlaw, T.
  2022; 13: 972103

- **Translating lessons learned on the role of HLA in immunological responses in LEAP to peanut OIT Trials: IMPACT and POISED**
  Kanchan, K., Shankar, G., Huffaker, M., Bahnson, H., Chinthrajah, R., Sanda, S., Manohar, M., Du Toit, G., Ruczinski, I., Lack, G., Nadeau, K., Jones, S., Nepom, et al
  MOSBY-ELSEVIER.2022: AB314

- **The Prevention of Milk Allergy and the Risks of Stopping Too Soon** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY-IN PRACTICE*
  Huffaker, M. F.
  2022; 10 (1): 180-181

- **Approaches to Establishing Tolerance in Immune Mediated Diseases** *FRONTIERS IN IMMUNOLOGY*
  Huffaker, M. F., Sanda, S., Chandran, S., Chung, S. A., St Clair, E., Nepom, G. T., Smilek, D. E.
  2021; 12: 744804

- **The efficacy of a novel monitoring device on asthma control in children with asthma** *ANNALS OF ALLERGY ASTHMA & IMMUNOLOGY*
  Behrooz, L., Dilley, M. A., Petty, C. R., Huffaker, M., Sheehan, W. J., Phipatanakul, W.
  2020; 125 (3): 352-354

- **Racial and socioeconomic differences in school peanut-free policies** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY-IN PRACTICE*

Bartnikas, L. M., Huffaker, M. F., Sheehan, W. J., Kanchongkittiphon, W., Petty, C. R., Leibowitz, R., Young, M. C., Phipatanakul, W.
2020; 8 (1): 340-+

- **Case series of sebelipase alfa hypersensitivity reactions and successful sebelipase alfa rapid desensitization.** *JIMD reports*
  Huffaker, M. F., Liu, A. Y., Enns, G. M., Vijay, S., Amor, A. J., Adkinson, N. F.
  2019; 49 (1): 30–36

- **Usability of a Novel Digital Asthma Management Program**
  Harris, B. U., Carchia, M., Huffaker, M. F., Cornfield, D. N.
  MOSBY-ELSEVIER.2019: AB170

- **Case series of sebelipase alfa hypersensitivity reactions and successful sebelipase alfa rapid desensitization**
  Huffaker , M., Liu , A., Enns , G., Vijay, S., Amor , A., Adkinson , N.
  JIMD .
  2019 30-36

- **Passive Nocturnal Physiologic Monitoring Enables Early Detection of Exacerbations in Children with Asthma A Proof-of-Concept Study** *AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE*
  Huffaker, M. F., Carchia, M., Harris, B. U., Kethman, W. C., Murphy, T. E., Sakarovitch, C. C. D., Qin, F., Cornfield, D. N.
  2018; 198 (3): 320–28

- **Passive Nocturnal Physiologic Monitoring Enables Early Detection of Exacerbations in Asthmatic Children: A Proof of Concept Study.** *American journal of respiratory and critical care medicine*
  Huffaker, M. F., Carchia, M., Harris, B. U., Kethman, W. C., Murphy, T. E., Sakarovitch, C. C., Qin, F., Cornfield, D. N.
  2018

- **Four cases of delayed onset systemic reaction to shellfish** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY-IN PRACTICE*
  Huffaker, M., McGhee, S.
  2018; 6 (2): 656–57

- **Impact of school peanut-free policies on epinephrine administration.** *journal of allergy and clinical immunology*
  Bartnikas, L. M., Huffaker, M. F., Sheehan, W. J., Kanchongkittiphon, W., Petty, C. R., Leibowitz, R., Hauptman, M., Young, M. C., Phipatanakul, W.
  2017

- **Are There Racial and Socioeconomic Disparities in School Peanut-Free Policies?**
  Bartnikas, L. M., Huffaker, M. F., Sheehan, W. J., Kanchongkittiphon, W., Petty, C. R., Leibowitz, R., Hauptman, M., Gaffin, J. M., Young, M. C., Phipatanakul, W.
  MOSBY-ELSEVIER.2017: AB221

- **School Environmental Intervention to Reduce Particulate Pollutant Exposures for Children with Asthma** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY-IN PRACTICE*
  Jhun, I., Gaffin, J. M., Coull, B. A., Huffaker, M. F., Petty, C. R., Sheehan, W. J., Baxi, S. N., Lai, P. S., Kang, C., Wolfson, J. M., Gold, D. R., Koutrakis, P., Phipatanakul, et al
  2017; 5 (1): 154-+

- **School Air Cleaner Intervention to Improve Indoor Air Quality for Children with Asthma**
  Jhun, I., Gaffin, J. M., Coull, B. A., Huffaker, M. F., Petty, C., Sheehan, W. J., Baxi, S. N., Gold, D. R., Koutrakis, P., Phipatanakul, W.
  MOSBY-ELSEVIER.2016: AB193

- **School Environmental Intervention to Improve Indoor Air Quality for Children with Asthma**
  Jhun , I., Gaffin , J., Coull , B., Huffaker , M., Petty , C., Sheehan , W., Baxi , S., Gold , D., Koutrakis , P., Phipatanakul, W.
  Journal of Allergy and Clinical Immunolog: In Practice.
  2016 154-159

- **Pediatric Asthma Guidelines-Based Care, Omalizumab, and Other Potential Biologic Agents** *IMMUNOLOGY AND ALLERGY CLINICS OF NORTH AMERICA*
  Huffaker, M., Phipatanakul, W.
  2015; 35 (1): 129-+

- **Introducing an environmental assessment and intervention program in inner-city schools** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY*

Huffaker, M., Phipatanakul, W.
2014; 134 (6): 1232-1237

- **Utility of the Asthma Predictive Index in predicting childhood asthma and identifying disease-modifying interventions** *ANNALS OF ALLERGY ASTHMA & IMMUNOLOGY*
  Huffaker, M., Phipatanakul, W.
  2014; 112 (3): 188-190

- **Impact Of School Peanut-Free Guidelines On Epinephrine Administration**
  Bartnikas, L. M., Huffaker, M. F., Sheehan, W. J., Kanchongkittiphon, W., Petty, C., Sheetz, A., Leibowitz, R., Young, M. C., Phipatanakul, W.
  MOSBY-ELSEVIER.2014: AB207

- **Assessing and introducing an environmental intervention program in schools**
  Huffaker , M., Phipatanakul , W.
  Journal of Allergy and Clinical Immunology.
  2014 1232-7

- **A Patient with Syncope** *NEW ENGLAND JOURNAL OF MEDICINE*
  Fox, M. C., Lakdawala, N., Miller, A., Loscalzo, J.
  2013; 369 (10): 966-972

- **Livedo Reticularis: A Side Effect of Interferon Therapy in a Pediatric Patient with Melanoma** *PEDIATRIC DERMATOLOGY*
  Fox, M., Tahan, S., Kim, C. C.
  2012; 29 (3): 333-335

- **MicroRNA miR-125a controls hematopoietic stem cell number** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Guo, S., Lu, J., Schlanger, R., Zhang, H., Wang, J. Y., Fox, M. C., Purton, L. E., Fleming, H. H., Cobb, B., Merkenschlager, M., Golub, T. R., Scadden, D. T.
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- **Pyrin Modulates the Intracellular Distribution of PSTPIP1.** *PloS one*
  Waite, A. L., Schaner, P., Richards, N., Balci-Peynircioglu, B., Masters, S. L., Brydges, S. D., Fox, M., Hong, A., Yilmaz, E., Kastner, D. L., Reinherz, E. L., Gumucio, D. L.
  2009; 4 (7): e6147

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  Waite, A. L., Schaner, P., Hu, C., Richards, N., Balci-Peynircioglu, B., Hong, A., Fox, M., Gumucio, D. L.
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