

Stanford



Joseph Hernandez

Clinical Assistant Professor, Pediatrics - Immunology and Allergy

CLINICAL OFFICES

- **Medicine Specialties Clinic**

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- **Stanford Allergy and Immunology**

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Bio

BIO

I have a research background in basic immunology/biochemistry and animal/cellular models of allergic disease. Since 2016, I have been a full time clinical faculty member caring for patients with a variety of allergic diseases and immune deficiency. I have been involved as a participating clinician and investigator with the PANS clinic at LPOCH.

CLINICAL FOCUS

- Allergy and Immunology
- Food allergy, allergic rhinitis, asthma, immune deficiency

ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Pediatrics - Immunology and Allergy

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, American Academy of Allergy, Asthma, and Immunology (2010 - present)

PROFESSIONAL EDUCATION

- Fellowship: Stanford University Allergy and Immunology Fellowship (2013) CA
- Residency: University of California San Francisco (2010) CA
- Internship: University of California San Francisco (2007) CA
- Medical Education: UCLA David Geffen School Of Medicine Registrar (2007) CA
- Board Certification: Allergy and Immunology, American Board of Allergy and Immunology (2013)
- Board Certification: Pediatrics, American Board of Pediatrics (2010)

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Immunology (Phd Program)

Publications

PUBLICATIONS

- **A great disturbance in the force: IL-2 receptor defects disrupt immune homeostasis.** *Current opinion in pediatrics*
Hernandez, J. D., Hsieh, E. W.
2022
- **Partial RAG deficiency in humans induces dysregulated peripheral lymphocyte development and humoral tolerance defect with accumulation of T-bet+ B cells.** *Nature immunology*
Csomos, K., Ujhazi, B., Blazso, P., Herrera, J. L., Tipton, C. M., Kawai, T., Gordon, S., Ellison, M., Wu, K., Stowell, M., Haynes, L., Cruz, R., Zakota, et al
2022
- **Partial RAG Deficiency Favors Expansion of T-bet high CD21 low B Cells with Unique Repertoire and Transcriptome**
Csomos, K., Ujhazi, B., Blazso, P., Gordon, S., Tipton, C. M., Scharer, C., Dasso, J., Sargur, R., Ward, B., Hernandez, J. D., Butte, M., Notarangelo, L., Cancro, et al
SPRINGER/PLENUM PUBLISHERS.2022: S56
- **Clean up by aisle 2: roles for IL-2 receptors in host defense and tolerance.** *Current opinion in immunology*
Hsieh, E. W., Hernandez, J. D.
2021; 72: 298-308
- **Are we diagnosing too late? RAG deficiency in young adults with end organ damage**
Saco, T., Geier, C., Buchbinder, D., Hernandez, J., Sharapova, S., Cochino, A., Milota, T., Latysheva, E., Westerman-Clark, E., Fadugba, O., Morris, E., Albert, M., Dimitrova, et al
MOSBY-ELSEVIER.2021: AB69
- **Novel nonsense IKBKG Mutation in an Infant Presenting with Pneumocystis Jiroveci Pneumonia and Disseminated Mycobacterium Szulgai Infection**
Lo, R., Rosenthal, A., Shah, A., Chen, S., Eguiguren, L., Siddiqi, A., Hernandez, J., Lewis, D.
SPRINGER/PLENUM PUBLISHERS.2020: S119–S120
- **Outcomes and Treatment Strategies for Autoimmunity and Hyperinflammation in Patients with RAG Deficiency** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY-IN PRACTICE*
Farmer, J. R., Foldvari, Z., Ujhazi, B., De Ravin, S., Chen, K., Bleesing, J. H., Schuetz, C., Al-Herz, W., Abraham, R. S., Joshi, A. Y., Costa-Carvalho, B. T., Buchbinder, D., Booth, et al
2019; 7 (6): 1970-+
- **Outcomes and treatment strategies for autoimmunity and hyperinflammation in patients with RAG deficiency.** *The journal of allergy and clinical immunology. In practice*
Farmer, J. R., Foldvari, Z., Ujhazi, B., De Ravin, S. S., Chen, K., Bleesing, J. J., Schuetz, C., Al-Herz, W., Abraham, R. S., Joshi, A. Y., Costa-Carvalho, B. T., Buchbinder, D., Booth, et al
2019

- **Anti-cytokine Antibodies Emerge After Viral Infections and Persist in Patients in Partial RAG Deficiency**
Dawson, I., Ujhazi, B., Csomos, K., Abraham, R. S., Sleasman, J., Kuijpers, T., Neven, B., Leiding, J., Mihailova, S., Holland, S. M., Song, C., Goda, V., Krivan, et al
SPRINGER/PLENUM PUBLISHERS.2019: S116–S117
- **Defective B Cell Fitness Impairs Mutation Away from Self and Sustains Red Blood Cell Reactivity in Hypomorphic RAG Deficiency**
Csomos, K., Ujhazi, B., Wu, K., Cruz, R., Stowell, M., Keszei, M., Al-Herz, W., Hernandez, J. D., Savic, S., Sargur, R., Mihailova, S., Sharapova, S. O., Butte, et al
SPRINGER/PLENUM PUBLISHERS.2019: S127
- **Development of multiple features of antigen-induced asthma pathology in a new strain of mast cell deficient BALB/c-KitW-sh/W-sh mice.** *Laboratory investigation; a journal of technical methods and pathology*
Hernandez, J. D., Yu, M. n., Sibilano, R. n., Tsai, M. n., Galli, S. J.
2019
- **Reply.** *The journal of allergy and clinical immunology. In practice*
Postolova, A., Hernandez, J. D.
2018; 6 (6): 2178
- **Allergic Diseases and Immune-Mediated Food Disorders in Pediatric Acute-Onset Neuropsychiatric Syndrome.** *Pediatric allergy, immunology, and pulmonology*
Rosa, J. S., Hernandez, J. D., Sherr, J. A., Smith, B. M., Brown, K. D., Farhadian, B., Mahony, T., McGhee, S. A., Lewis, D. B., Thienemann, M., Frankovich, J. D.
2018; 31 (3): 158-165
- **Allergic Diseases and Immune-Mediated Food Disorders in Pediatric Acute-Onset Neuropsychiatric Syndrome** *PEDIATRIC ALLERGY IMMUNOLOGY AND PULMONOLOGY*
Rosa, J. S., Hernandez, J. D., Sherr, J. A., Smith, B. M., Brown, K. D., Farhadian, B., Mahony, T., McGhee, S. A., Lewis, D. B., Thienemann, M., Frankovich, J. D.
2018; 31 (3): 158–65
- **Anaphylaxis to invasive chlorhexidine administration despite tolerance of topical chlorhexidine use** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY-IN PRACTICE*
Postolova, A., Bradley, J. T., Parris, D., Sherr, J., McGhee, S. A., Hernandez, J. D.
2018; 6 (3): 1067–+
- **Alternations in repertoire of T and B cell subsets in patients with partial recombination activating gene (RAG) deficiency with autoimmunity and history of viral infections**
Csomos, K., Ujhazi, B., Butte, M. J., Hernandez, J., Geha, R., Al-Herz, W., Notarangelo, L. D., Meffre, E., Walter, J. E.
SPRINGER/PLENUM PUBLISHERS.2018: 420–21
- **Naive B cells are prone to develop into polyreactive autoantibody secreting cells from adult RAG2-deficient patient with combined immunodeficiency**
Stowell, M. T., Walter, J. E., Pennix, T. C., Ujhazi, B., Mueller, G., Butte, M., Hoyte, E. G., Hernandez, J. D., Meffre, E. F., Csomos, K.
MOSBY-ELSEVIER.2018: AB22
- **The pathophysiology of anaphylaxis.** *The Journal of allergy and clinical immunology*
Reber, L. L., Hernandez, J. D., Galli, S. J.
2017; 140 (2): 335–48
- **Clinical Management of Pediatric Acute-onset Neuropsychiatric Syndrome (PANS): Part II – Use of Immunomodulatory Therapies** *Journal of Child and Adolescent Psychopharmacology*
Frankovich, J., Swedo, S., Murphy, T., Dale, R. C., Agalliu, D., Williams, K., Daines, M., Hornig, M., Chugani, H., Sanger, T., Muscal, E., Pasternack, M., Cooperstock, et al
2017; 27 (7): 574-593
- **Pediatric Acute-Onset Neuropsychiatric Syndrome Response to Oral Corticosteroid Bursts: An Observational Study of Patients in an Academic Community-Based PANS Clinic.** *Journal of child and adolescent psychopharmacology*
Brown, K. n., Farmer, C. n., Farhadian, B. n., Hernandez, J. n., Thienemann, M. n., Frankovich, J. n.
2017; 27 (7): 629–39
- **A TNFRSF14-Fc epsilon RI-mast cell pathway contributes to development of multiple features of asthma pathology in mice** *NATURE COMMUNICATIONS*
Sibilano, R., Gaudenzio, N., DeGorter, M. K., Reber, L. L., Hernandez, J. D., Starkl, P. M., Zurek, O. W., Tsai, M., Zahner, S., Montgomery, S. B., Roers, A., Kronenberg, M., Yu, et al
2016; 7

- **Novel tools for primary immunodeficiency diagnosis: making a case for deep profiling.** *Current opinion in allergy and clinical immunology*
Hsieh, E. W., Hernandez, J. D.
2016; 16 (6): 549-556
- **Different activation signals induce distinct mast cell degranulation strategies** *JOURNAL OF CLINICAL INVESTIGATION*
Gaudenzio, N., Sibilano, R., Marichal, T., Starkl, P., Reber, L. L., Cenac, N., McNeil, B. D., Dong, X., Hernandez, J. D., Sagi-Eisenberg, R., Hammel, I., Roers, A., Valitutti, et al
2016; 126 (10): 3981-3998
- **Molecular and cellular mechanisms of food allergy and food tolerance.** *journal of allergy and clinical immunology*
Chinthrajah, R. S., Hernandez, J. D., Boyd, S. D., Galli, S. J., Nadeau, K. C.
2016; 137 (4): 984-997
- **Single-cell systems-level analysis of human Toll-like receptor activation defines a chemokine signature in patients with systemic lupus erythematosus** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY*
O'Gorman, W. E., Hsieh, E. W., Savig, E. S., Gherardini, P. F., Hernandez, J. D., Hansmann, L., Balboni, I. M., Utz, P. J., Bendall, S. C., Fantl, W. J., Lewis, D. B., Nolan, G. P., Davis, et al
2015; 136 (5): 1326-1336
- **Multivalent interactions between lectins and supramolecular complexes: Galectin-1 and self-assembled pseudopolyrotaxanes** *CHEMISTRY & BIOLOGY*
Belitsky, J. M., Nelson, A., Hernandez, J. D., Baum, L. G., Stoddart, J. F.
2007; 14 (10): 1140-1151
- **Differential glycosylation of T(H)1, T(H)2 and T-H-17 effector cells selectively regulates susceptibility to cell death** *NATURE IMMUNOLOGY*
Toscano, M. A., Bianco, G. A., Ilarregui, J. M., Croci, D. O., Correale, J., Hernandez, J. D., Zwirner, N. W., Poirier, F., Riley, E. M., Baum, L. G., Rabinovich, G. A.
2007; 8 (8): 825-834
- **T-cell activation results in microheterogeneous changes in glycosylation of CD45** *INTERNATIONAL IMMUNOLOGY*
Hernandez, J. D., Klein, J., Van Dyken, S. J., Marth, J. D., Baum, L. G.
2007; 19 (7): 847-856
- **Galectin-1 binds different CD43 glycoforms to cluster CD43 and regulate T cell death** *JOURNAL OF IMMUNOLOGY*
Hernandez, J. D., Nguyen, J. T., He, J., Wang, W., Ardman, B., Green, J. M., Fukuda, M., Baum, L. G.
2006; 177 (8): 5328-5336
- **CD45 signals outside of lipid rafts to promote ERK activation, synaptic raft clustering, and IL-2 production** *JOURNAL OF IMMUNOLOGY*
Zhang, M., Moran, M., Round, J., Low, T. A., Patel, V. P., Tomassian, T., Hernandez, J. D., Miceli, M. C.
2005; 174 (3): 1479-1490
- **Galectin-1 induces nuclear translocation of endonuclease G in caspase- and cytochrome c-independent T cell death** *CELL DEATH AND DIFFERENTIATION*
Hahn, H. P., Pang, M., He, J., Hernandez, J. D., Yang, R. Y., Li, L. Y., Wang, X., Liu, F. T., Baum, L. G.
2004; 11 (12): 1277-1286
- **Ah, sweet mystery of death! Galectins and control of cell fate** *GLYCOBIOLOGY*
Hernandez, J. D., Baum, L. G.
2002; 12 (10): 127R-136R
- **Structure and organization of the RBMY genes on the human Y chromosome: Transposition and amplification of an ancestral autosomal hnRNP gene** *GENOMICS*
Chai, N. N., Zhou, H. Y., Hernandez, J., Najmabadi, H., Bhasin, S., Yen, P. H.
1998; 49 (2): 283-289