



David B. Lewis

Naddisy Foundation Professor of Pediatric Food Allergy, Immunology, and Asthma

Pediatrics - Immunology

 NIH Biosketch available Online

CLINICAL OFFICE (PRIMARY)

- **Pediatric Allergy and Immunology Clinic**

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ACADEMIC CONTACT INFORMATION

- **Alternate Contact**

Elena Infeld - Executive Assistant

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Bio

CLINICAL FOCUS

- Primary Immunodeficiency
- Pediatrics

ACADEMIC APPOINTMENTS

- Professor - University Medical Line, Pediatrics - Immunology
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Medicine Children's Health Center for IBD and Celiac Disease
- Member, Stanford Cancer Institute

ADMINISTRATIVE APPOINTMENTS

- Acting Associate Professor, Stanford University, Department of Pediatrics, (1997-1997)
- Associate Professor, Stanford University, Department of Pediatrics, (1997-2005)
- Director of the Jeffrey Modell Primary Immunodeficiency Center at Stanford, Supported by the Jeffrey Modell Foundation and the Lucile Packard Fund of Children's Health, (2002- present)
- Professor, Stanford University, Department of Pediatrics, (2005- present)
- Chief, Stanford Department of Pediatrics, Division of Immunology and Allergy, (2008- present)

HONORS AND AWARDS

- Henry J. Kaiser Award for Excellence in Preclinical Teaching (Immunology), Kaiser Foundation (2001)
- Henry J. Kaiser Award for Excellence in Preclinical Teaching (Immunology), Kaiser Foundation (2005)

PROFESSIONAL EDUCATION

- Fellowship: Seattle Children's Hospital Pediatric Infectious Diseases Fellowship (1987) WA
- Residency: UCSF Pediatric Residency (1984) CA
- Internship: Seattle Children's Hospital Pediatric Residency (1982) WA

- Medical Education: University of California at San Francisco School of Medicine (1981) CA
- Board Certification: Pediatrics, American Board of Pediatrics (1986)
- M.D., Univ.Calif at San Francisco , Medicine (1981)
- B.S., Yale University , Biology (1976)

LINKS

- Lewis Lab Website: <http://dbLewislab.stanford.edu>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

A long-standing interest is to understand the cellular and molecular basis for this vulnerability of the human neonate to infection with intracellular pathogens that require T helper 1 (Th1) cells [CD4 T cell producing interferon-gamma (IFN-gamma)] for effective immune control. We have previously shown that CD4 T cells of the newborn have a unique limitation in the ability to produce certain effector molecules, such as CD40-ligand (CD154) and IFN-gamma compared to these cells in adults due to both reduced gene transcriptional and impaired signals that lead to gene transcription. Recently, we have shown that these limitations apply to physiological T-cell activation, e.g., using allogeneic dendritic cells. Defining the molecular mechanisms for decreased IFN-gamma production by neonatal CD4 T cells is a current focus.

We have also found that recent thymic emigrants, which predominate in the newborn and young infant, are less able to differentiate into T helper 1 cells, which produce IFN-gamma. These studies required the development of a novel marker for recent thymic emigrants (RTEs) of the CD4 T-cell lineage in humans. Using a combination of approaches, we have identified protein tyrosine kinase 7 (PTK7) as such a marker. In progress are studies to define the role of PTK7, an orphan member (no known ligand) of the receptor tyrosine kinase family, in T-cell development and immunity, and to determine how this marker can be used to follow the output of recent thymic emigrants in health and disease. We are also interested in determining the molecular mechanisms for the reduced RTE function and to what extent these mechanisms are shared by neonatal CD4 T cells and CD4+CD8-CD3+ thymocytes, the immediate precursors of antigenically naive CD4 T cells.

We have also found that limitations in T-cell immunogenicity to viruses and viral vaccines extend beyond the neonatal period to childhood. These studies highlight a need to develop more potent vaccines to overcome developmental and other factors, such as genetic inheritance, in mounting adaptive immunity. With this as an ultimate goal, we have previously examined the ability of a novel adjuvant, cationic liposome DNA complexes (CLDC)(Juvaris Biotherapeutics), to induce durable CD4 and CD8 T-cell immunity and humoral immunity to influenza A. The molecular and cellular components of the innate immune system that are required for immunogenicity are of particular interest. We are currently embarking on studies of vaccine immunity using novel influenza A virus antigens produced by our collaborators at SutroVax. We are also beginning studies to determine if universal anti-influenza A viral protection can be achieved using catalytically inactive Cas proteins combined with appropriate guide RNAs. This work is being carried out in collaboration with Stanley Qi's laboratory at Stanford.

As part of an on-going collaboration with Dr. Neal Boerkoel, University of British Columbia, we are defining the mechanism of T-cell lymphopenia in genetic deficiency of SMARCAL1, a protein that plays a novel role in relieving stalled DNA replication forks. Patients with SMARCAL1 deficiency (Schimke immuno-osseous dysplasia) suffer from not only T-cell immunodeficiency but also progressive renal dysfunction due to collapsing variant focal glomerulosclerosis, short stature due to growth plate abnormalities, and vascular disease, with an increased risk of TIAs and strokes. How a block in DNA repair selective influences these disease programs is unclear and is a major current focus of research. This research is being supported in part by funds from the Kruzn' for a Kure Foundation, a philanthropic foundation that was started by parents of two children with SIOD.

CLINICAL TRIALS

- Pediatric Pulmonary Hypertension Network (PPHNet) Informatics Registry, Recruiting

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Katherine Konvinse, Matthew MacDougall, Arianna Peters, Amritha Yellamilli

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Allergy/Immunology (Fellowship Program)
- Immunology (Phd Program)
- Infectious Diseases (Fellowship Program)
- Neonatal-Perinatal Medicine (Fellowship Program)
- Pediatric Hem/Onc (Fellowship Program)

Publications

PUBLICATIONS

- **Genetic testing guides therapy in children with refractory cytopenias.** *Haematologica*
Gernez, Y., Sathi, B., Rao, L., Hernandez, J. D., Glader, B., Cepika, A., Hoyte, E. G., Mouradian, K., Singh, D., Bacchetta, R., Chien, M., Lewis, D. B., Weinacht, et al
2026
- **Abnormal immunoglobulin expression and B-cell follicle organization in inborn errors of immunity/primary immunodeficiency.** *Virchows Archiv : an international journal of pathology*
Naor, S., Schiby, G., Adam, E., Somech, R., Molchanov, Y., Barshack, I., Lewis, D. B., Marks, L., Gratzinger, D.
2025
- **IL12RB1 deficiency appearing in North America: expanding the clinical phenotypes.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*
Wang, C., Marciano, B. E., Harris, A. J., Johnston, A. M., Apaydin Arikan, E., Bayer, D. K., Solomon, B. D., Price, N. B., Platt, C. D., Modi, A. J., Shaker, M. S., Seroogy, C. M., Johnson, et al
2025
- **A Patient With NEMO Deficiency, Disseminated M. szulgai, and Post-HSCT Inflammatory Disease.** *Pediatric transplantation*
Rosenthal, A., Goyal, A., Chen, S. F., Lewis, D. B., Shah, A.
2025; 29 (1): e70020
- **A multidisciplinary approach to unraveling genetic forms of immune dysregulation in children with refractory multilineage cytopenia**
Gernez, Y., Sathi, B., Camacho, J., Rao, L., Glader, B., Singh, D., Hoyte, E., Lewis, D., Roncarolo, M., Chien, M., Bacchetta, R., Weinacht, K.
MOSBY-ELSEVIER.2024: AB186
- **$\gamma\delta$ T cell antigen receptor polyspecificity enables T cell responses to a broad range of immune challenges.** *Proceedings of the National Academy of Sciences of the United States of America*
Guo, J., Chowdhury, R. R., Mallajosyula, V., Xie, J., Dubey, M., Liu, Y., Li, J., Wei, Y. L., Palanski, B. A., Wang, C., Qiu, L., Ohanyan, M., Kask, et al
2024; 121 (4): e2315592121
- **Pirtobrutinib in Relapsed/Refractory (R/R) Mantle Cell Lymphoma (MCL) Patients with Prior cBTKi: Safety and Efficacy Including High-Risk Subgroup Analyses from the Phase 1/2 BRUIN Study**
Cohen, J. B., Shah, N. N., Jurczak, W., Zinzani, P., Cheah, C. Y., Eyre, T. A., Ujjani, C. S., Koh, Y., Kim, W., Nasta, S. D., Flinn, I. W., Tessoulin, B., Ma, et al
AMER SOC HEMATOLOGY.2023

- **Single-cell Transcriptomics Reveal Different Maturation Stages and Sublineages Commitment of Human Thymic Invariant Natural Killer T cells.** *Journal of leukocyte biology*
Maas-Bauer, K., Köhler, N., Stell, A. V., Zwick, M., Acharya, S., Rensing-Ehl, A., König, C., Kroll, J., Baker, J., Koßmann, S., Pradier, A., Wang, S., Docquier, et al
2023
- **POST-TRANSPLANT LYMPHOPROLIFERATIVE DISEASE IN A PATIENT WITH SCHIMKE IMMUNO-OSSEOUS DYSPLASIA**
Rao, R., Grimm, P., Lewis, D., Spunt, S., Marks, L.
WILEY.2023: S75-S76
- **Case report: Refractory Evans syndrome in two patients with spondyloenchondrodysplasia with immune dysregulation treated successfully with JAK1/JAK2 inhibition.** *Frontiers in immunology*
Gernez, Y., Narula, M., Cepika, A., Valdes Camacho, J., Hoyte, E. G., Mouradian, K., Glader, B., Singh, D., Sathi, B., Rao, L., Tolin, A. L., Weinberg, K. I., Lewis, et al
2023; 14: 1328005
- **Sequential Stem Cell-Kidney Transplantation in Schimke Immuno-osseous Dysplasia.** *The New England journal of medicine*
Bertaina, A., Grimm, P. C., Weinberg, K., Parkman, R., Kristovich, K. M., Barbarito, G., Lippner, E., Dhamdhare, G., Ramachandran, V., Spatz, J. M., Fathallah-Shaykh, S., Atkinson, T. P., Al-Uzri, et al
2022; 386 (24): 2295-2302
- **Broad-spectrum CRISPR-mediated inhibition of SARS-CoV-2 variants and endemic coronaviruses in vitro.** *Nature communications*
Zeng, L., Liu, Y., Nguyenla, X. H., Abbott, T. R., Han, M., Zhu, Y., Chemparathy, A., Lin, X., Chen, X., Wang, H., Rane, D. A., Spatz, J. M., Jain, et al
2022; 13 (1): 2766
- **Sequential hematopoietic stem cell transplantation (HSCT) followed by kidney transplant-3 children who received ABT-cell/CD19 B-cell depleted HSCT followed by kidney transplant from same parental donor are rejection free and immunosuppression free with donor specific tolerance > 1year post kidney transplant**
Grimm, P., Lewis, D. B., Al-Uzri, A., Fathallah-Shaykh, S., Shah, A., Agarwal, R., Weinberg, K. I., Gallo, A., Concepcion, W., Bertaina, A.
WILEY.2022
- **Immunogenicity of a Third COVID-19 mRNA Vaccine Dose in PID Patients with Functional B-cell Defects.** *The journal of allergy and clinical immunology. In practice*
Gernez, Y., Murugesan, K., Cortales, C. R., Banaei, N., Hoyte, L., Pinsky, B. A., Lewis, D. B., Pham, M.
2022
- **Increased double-negative alpha beta plus T cells reveal adult-onset autoimmune lymphoproliferative syndrome in a patient with IgG4-related disease** *HAEMATOLOGICA*
Brar, N., Spinner, M. A., Baker, M. C., Advani, R. H., Natkunam, Y., Lewis, D. B., Silva, O.
2022; 107 (1): 347-350
- **Immunogenicity and Tolerability of COVID-19 mRNA Vaccines in PID patients with functional B-cell defects.** *The Journal of allergy and clinical immunology*
Pham, M. N., Murugesan, K., Banaei, N., Pinsky, B. A., Tang, M., Hoyte, E., Lewis, D. B., Gernez, Y.
1800
- **Functional Immune Tolerance Induced By Sequential Hematopoietic Stem Cell-Solid Organ Transplantation**
Bertaina, A., Barbarito, G., Ramachandran, V. V., Kristovich, K., Lippner, E., Fathallah-Shaykh, S., Al-Uzri, A., Shah, A. J., Aubert, G., Slepicka, P., Oppizzi, L., Agarwal, R., Roncarolo, et al
AMER SOC HEMATOLOGY.2021: 1818-+
- **A case of Spondyloenchondrodysplasia with immune dysregulation presenting as Systemic Lupus Erythematosus**
Camacho, J., Singh, D., Bacchetta, R., Weinberg, K., Cepika, A., Narula, M., Lewis, D. B., Gernez, Y., Weinacht, K.
SPRINGER/PLENUM PUBLISHERS.2021: S18-S19
- **Single-Cell Analysis of the Neonatal Immune System Across the Gestational Age Continuum.** *Frontiers in immunology*
Peterson, L. S., Hedou, J., Ganio, E. A., Stelzer, I. A., Feyaerts, D., Harbert, E., Adusumelli, Y., Ando, K., Tsai, E. S., Tsai, A. S., Han, X., Ringle, M., Houghteling, et al
2021; 12: 714090
- **Increased double-negative $\alpha\beta^+$ T-cells reveal adult-onset autoimmune lymphoproliferative syndrome in a patient with IgG4-related disease.** *Haematologica*

- Brar, N., Spinner, M. A., Baker, M. C., Advani, R. H., Natkunam, Y., Lewis, D. B., Silva, O.
2021
- **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
 - **A beta T-Cell/CD19 B-Cell Depleted Haploidentical Stem Cell Transplantation: A New Platform for Curing Rare and Monogenic Disorders**
Bertaina, A., Bacchetta, R., Lewis, D. B., Grimm, P. C., Shah, A. J., Agarwal, R., Concepcion, W., Czechowicz, A., Bhatia, N., Lahiri, P., Weinberg, K. I., Parkman, R., Porteus, et al
ELSEVIER SCIENCE INC.2020: S288
 - **Disseminated Pneumocystis jirovecii Infection with Osteomyelitis in a Patient with CTLA-4 Haploinsufficiency.** *Journal of clinical immunology*
Siddiqi, A. E., Liu, A. Y., Charville, G. W., Kunder, C. A., Uzel, G. n., Sadighi Akha, A. A., Oak, J. n., Martin, B. n., Sacha, J. n., Lewis, D. B., Gernez, Y. n.
2020
 - **Development of CRISPR as an Antiviral Strategy to Combat SARS-CoV-2 and Influenza.** *Cell*
Abbott, T. R., Dhamdhare, G. n., Liu, Y. n., Lin, X. n., Goudy, L. n., Zeng, L. n., Chemparathy, A. n., Chmura, S. n., Heaton, N. S., Debs, R. n., Pande, T. n., Endy, D. n., La Russa, et al
2020
 - **COVID-19 and cardiovascular disease: from basic mechanisms to clinical perspectives.** *Nature reviews. Cardiology*
Nishiga, M. n., Wang, D. W., Han, Y. n., Lewis, D. B., Wu, J. C.
2020
 - **Severe autoinflammation in four patients with C-terminal variants in CDC42 successfully treated with IL-1beta inhibition.** *The Journal of allergy and clinical immunology*
Gernez, Y., de Jesus, A. A., Alsaleem, H., Macaubas, C., Roy, A., Lovell, D., Jagadeesh, K. A., Alehashemi, S., Erdman, L., Grimley, M., Talarico, S., Bacchetta, R., Lewis, et al
2019
 - **The Clinical Spectrum of Hypomorphic IL2RG Severe Combined Immunodeficiency (SCID)**
Lippner, E., Lewis, D. B.
MOSBY-ELSEVIER.2019: AB119
 - **Telomeres in Schimke Immuno-Osseous Dysplasia: Comparing Telomere Length in Individuals with Homozygous and Heterozygous SMARCAL1 Mutations**
Lippner, E. A., Aubert, G., Ramachandran, V., Lewis, D. B.
SPRINGER/PLENUM PUBLISHERS.2019: S70–S71
 - **Novel CDC42 Mutation Causes Severe Autoinflammatory Syndrome Responsive to IL-1 Inhibition**
Gernez, Y., Kirbey, M., Balagas, J. M., Macaubas, C. I., Canna, S., Lewis, D. B., Mellins, E., Bacchetta, R., Weinacht, K. G.
SPRINGER/PLENUM PUBLISHERS.2019: S69
 - **A Case of Disseminated Pneumocystis Jiroveci in a Non-Human Immunodeficiency Virus Infected Patient**
Siddiqi, A. E., Sacha, J., Saenz, R., Liu, A., Kunder, C., Uzel, G., Martin, B., Lewis, D. B., Gernez-Goldhammer, Y.
SPRINGER/PLENUM PUBLISHERS.2019: S73–S74
 - **Multomics modeling of the immunome, transcriptome, microbiome, proteome and metabolome adaptations during human pregnancy.** *Bioinformatics (Oxford, England)*
Ghaemi, M. S., DiGiulio, D. B., Contrepois, K., Callahan, B., Ngo, T. T., Lee-McMullen, B., Lehallier, B., Robaczewska, A., McIlwain, D., Rosenberg-Hasson, Y., Wong, R. J., Quaintance, C., Culos, et al
2019; 35 (1): 95–103
 - **Multomics modeling of the immunome, transcriptome, microbiome, proteome and metabolome adaptations during human pregnancy** *BIOINFORMATICS*
Ghaemi, M., DiGiulio, D. B., Contrepois, K., Callahan, B., Ngo, T. T. M., Lee-McMullen, B., Lehallier, B., Robaczewska, A., McIlwain, D., Rosenberg-Hasson, Y., Wong, R. J., Quaintance, C., Culos, et al
2019; 35 (1): 95–103

- **Durable multitransgene expression in vivo using systemic, nonviral DNA delivery.** *Science advances*
Handumrongkul, C. n., Ye, A. L., Chmura, S. A., Soroceanu, L. n., Mack, M. n., Ice, R. J., Thistle, R. n., Myers, M. n., Ursu, S. J., Liu, Y. n., Kashani-Sabet, M. n., Heath, T. D., Liggitt, et al
2019; 5 (11): eaax0217
- **Paraneoplastic and Therapy-Related Immune Complications in Thymic Malignancies.** *Current treatment options in oncology*
Lippner, E. A., Lewis, D. B., Robinson, W. H., Katsumoto, T. R.
2019; 20 (7): 62
- **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
- **The ratio of circulating regulatory cluster of differentiation 4 T cells to endothelial progenitor cells predicts clinically significant acute rejection after heart transplantation** *JOURNAL OF HEART AND LUNG TRANSPLANTATION*
Choi, D., Chmura, S. A., Ramachandran, V., Dionis-Petersen, K. Y., Kobayashi, Y., Nishi, T., Luikart, H., Dimbil, S., Kobashigawa, J., Khush, K., Lewis, D. B., Fearon, W. F.
2018; 37 (4): 496–502
- **Novel nonsense gain-of-function NFKB2 mutations associated with a combined immunodeficiency phenotype** *BLOOD*
Kuehn, H., Niemela, J. E., Sreedhara, K., Stoddard, J. L., Grossman, J., Wysocki, C. A., de la Morena, M., Garofalo, M., Inlora, J., Snyder, M. P., Lewis, D. B., Stratakis, C. A., Fleisher, et al
2017; 130 (13): 1553–64
- **An immune clock of human pregnancy** *SCIENCE IMMUNOLOGY*
Aghaepour, N., Ganio, E. A., Mcilwain, D., Tsai, A. S., Tingle, M., Van Gassen, S., Gaudilliere, D. K., Baca, Q., McNeil, L., Okada, R., Ghaemi, M. S., Furman, D., Wong, et al
2017; 2 (15)
- **A Case Report of Hypoglycemia and Hypogammaglobulinemia: DAVID syndrome in a patient with a novel NFKB2 mutation.** *journal of clinical endocrinology and metabolism*
Lal, R. A., Bachrach, L. K., Hoffman, A. R., Inlora, J., Rego, S., Snyder, M. P., Lewis, D. B.
2017
- **Angiotensin-Converting Enzyme Inhibition Early After Heart Transplantation.** *Journal of the American College of Cardiology*
Fearon, W. F., Okada, K. n., Kobashigawa, J. A., Kobayashi, Y. n., Luikart, H. n., Sana, S. n., Daun, T. n., Chmura, S. A., Sinha, S. n., Cohen, G. n., Honda, Y. n., Pham, M. n., Lewis, et al
2017; 69 (23): 2832–41
- **An immune clock of human pregnancy.** *Science immunology*
Aghaepour, N. n., Ganio, E. A., Mcilwain, D. n., Tsai, A. S., Tingle, M. n., Van Gassen, S. n., Gaudilliere, D. K., Baca, Q. n., McNeil, L. n., Okada, R. n., Ghaemi, M. S., Furman, D. n., Wong, et al
2017; 2 (15)
- **Mapping the Fetomaternal Peripheral Immune System at Term Pregnancy.** *Journal of immunology*
Fragiadakis, G. K., Baca, Q. J., Gherardini, P. F., Ganio, E. A., Gaudilliere, D. K., Tingle, M., Lancero, H. L., McNeil, L. S., Spitzer, M. H., Wong, R. J., Shaw, G. M., Darmstadt, G. L., Sylvester, et al
2016
- **A cationic liposome-DNA complexes adjuvant (JVRS-100) enhances the immunogenicity and cross-protective efficacy of pre-pandemic influenza A (H5N1) vaccine in ferrets** *VIROLOGY*
Liu, F., Sun, X., Fairman, J., Lewis, D. B., Katz, J. M., Levine, M., Tumpey, T. M., Lu, X.
2016; 492: 197-203

- **Expression of Heme Oxygenase-1 in Immune Cells During Late Gestational Inflammation.**
Ozen, M., Zhao, H., Kalish, F., Yang, Y., Lewis, D. B., Wong, R. J., Stevenson, D. K.
SAGE PUBLICATIONS INC.2016: 338A
- **Longitudinal Kinetics of Cytomegalovirus-Specific T-Cell Immunity and Viral Replication in Infants With Congenital Cytomegalovirus Infection.** *Journal of the Pediatric Infectious Diseases Society*
Chen, S. F., Holmes, T. H., Slifer, T., Ramachandran, V., Mackey, S., Hebson, C., Arvin, A. M., Lewis, D. B., Dekker, C. L.
2016; 5 (1): 14-20
- **EXPRESSION PATTERNS OF HEME OXYGENASE-1 IN IMMUNE CELLS DURING LATE GESTATIONAL INFLAMMATION**
Ozen, M., Zhao, H., Kalish, F., Yang, Y., Lewis, D. B., Wong, R. J., Stevenson, D. K.
LIPPINCOTT WILLIAMS & WILKINS.2016: 281
- **Treatment of CGD-associated Colitis with the IL-23 Blocker Ustekinumab.** *Journal of clinical immunology*
Butte, M. J., Park, K. T., Lewis, D. B.
2016; 36 (7): 619–20
- **Lack of IL7Ra expression in T cells is a hallmark of T-cell immunodeficiency in Schimke immuno-osseous dysplasia (SIOD).** *Clinical immunology*
Sanyal, M., Morimoto, M., Baradaran-Heravi, A., Choi, K., Kambham, N., Jensen, K., Dutt, S., Dionis-Petersen, K. Y., Liu, L. X., Felix, K., Mayfield, C., Dekel, B., Bokenkamp, et al
2015; 161 (2): 355-365
- **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
- **Heightened risk of preterm birth and growth restriction after a first-born son** *ANNALS OF EPIDEMIOLOGY*
Bruckner, T. A., Mayo, J. A., Gould, J. B., Stevenson, D. K., Lewis, D. B., Shaw, G. M., Carmichael, S. L.
2015; 25 (10): 743-747
- **Implementing Mass Cytometry at the Bedside to Study the Immunological Basis of Human Diseases: Distinctive Immune Features in Patients with a History of Term or Preterm Birth** *CYTOMETRY PART A*
Gaudilliere, B., Ganio, E. A., Tingle, M., Lancero, H. L., Fragiadakis, G. K., Baca, Q. J., Aghaeepour, N., Wong, R. J., Quintance, C., El-Sayed, Y. Y., Shaw, G. M., Lewis, D. B., Stevenson, et al
2015; 87A (9): 817-829
- **Heme oxygenase and the immune system in normal and pathological pregnancies.** *Frontiers in pharmacology*
Ozen, M., Zhao, H., Lewis, D. B., Wong, R. J., Stevenson, D. K.
2015; 6: 84-?
- **Bayesian immunological model development from the literature: Example investigation of recent thymic emigrants.** *Journal of immunological methods*
Holmes, T. H., Lewis, D. B.
2014; 414: 32-50
- **Somatic reversion in dedicator of cytokinesis 8 immunodeficiency modulates disease phenotype.** *journal of allergy and clinical immunology*
Jing, H., Zhang, Q., Zhang, Y., Hill, B. J., Dove, C. G., Gelfand, E. W., Atkinson, T. P., Uzel, G., Matthews, H. F., Mustillo, P. J., Lewis, D. B., Kavadas, F. D., Hanson, et al
2014; 133 (6): 1667-1675
- **Somatic Reversion in Dock8 Immunodeficiency Modulates Disease Phenotype**
Jing, H., Zhang, Q., Zhang, Y., Hill, B. J., Dove, C., Gelfand, E. W., Atkinson, T., Uzel, G., Matthews, H. F., Mustillo, P. J., Lewis, D. B., Kavadas, F. D., Hanson, et al
SPRINGER/PLENUM PUBLISHERS.2014: 361
- **ICOS Regulates the Generation and Function of Human CD4(+) Treg in a CTLA-4 Dependent Manner** *PLOS ONE*
Zheng, J., Chan, P., Liu, Y., Qin, G., Xiang, Z., Lam, K., Lewis, D. B., Lau, Y., Tu, W.
2013; 8 (12)

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2013; 14 (11): 1166-1172
- **Defective sphingosine 1-phosphate receptor 1 (S1P1) phosphorylation exacerbates TH17-mediated autoimmune neuroinflammation.** *Nature immunology*
Garris, C. S., Wu, L., Acharya, S., Arac, A., Blaho, V. A., Huang, Y., Moon, B. S., Axtell, R. C., Ho, P. P., Steinberg, G. K., Lewis, D. B., Sobel, R. A., Han, et al
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