

# Stanford

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## David B. Lewis

Professor of Pediatrics (Immunology)

Pediatrics - Immunology and Allergy

 NIH Biosketch available Online

 Curriculum Vitae available Online

### CLINICAL OFFICES

- **Pediatric Allergy and Immunology Clinic**

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### ACADEMIC CONTACT INFORMATION

- **Alternate Contact**

Elena Infeld - Executive Assistant

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**Tel** 650-498-6073

### Bio

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### CLINICAL FOCUS

- Primary Immunodeficiency
- Pediatrics

### ACADEMIC APPOINTMENTS

- Professor - University Medical Line, Pediatrics - Immunology and Allergy
- Member, Maternal & Child Health Research Institute (MCHRI)
- 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://dbewislab.stanford.edu>

## Research & Scholarship

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### 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 immunosseous 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.

## Teaching

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### COURSES

#### 2020-21

- Immunology in Health and Disease: IMMUNOL 205 (Win)

#### 2019-20

- Immunology in Health and Disease: IMMUNOL 205 (Win)

#### 2018-19

- Immunology in Health and Disease: IMMUNOL 205 (Win)

### STANFORD ADVISEES

#### Postdoctoral Faculty Sponsor

Chih Hsin Hsu, Sara Patrizi, Jordan Spatz

### 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

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### PUBLICATIONS

- **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
- **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 Jirovecii 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 SMARCA1 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 Jirovecii 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., Contrepolis, 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., Contrepolis, K., Callahan, B., Ngo, 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., Quaintance, 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)
  - **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  
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  
2013; 14 (11): 1166-1172

- **Newborn screening for severe combined immunodeficiency and T-cell lymphopenia in California: Results of the first 2 years** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY*  
Kwan, A., Church, J. A., Cowan, M. J., Agarwal, R., Kapoor, N., Kohn, D. B., Lewis, D. B., McGhee, S. A., Moore, T. B., Stiehm, E. R., Porteus, M., Aznar, C. P., Currier, et al  
2013; 132 (1): 140-U245
- **Retinoic Acid Hypersensitivity Promotes Peripheral Tolerance in Recent Thymic Emigrants** *JOURNAL OF IMMUNOLOGY*  
Bhaumik, S., Giffon, T., Bolinger, D., Kirkman, R., Lewis, D. B., Weaver, C. T., Randolph, D. A.  
2013; 190 (6): 2603-2613
- **Human Neonatal Naive CD4(+) T Cells Have Enhanced Activation-Dependent Signaling Regulated by the MicroRNA miR-181a** *JOURNAL OF IMMUNOLOGY*  
Palin, A. C., Ramachandran, V., Acharya, S., Lewis, D. B.  
2013; 190 (6): 2682-2691
- **Human CD8(+) Regulatory T Cells Inhibit GVHD and Preserve General Immunity in Humanized Mice** *SCIENCE TRANSLATIONAL MEDICINE*  
Zheng, J., Liu, Y., Liu, Y., Liu, M., Xiang, Z., Lam, K., Lewis, D. B., Lau, Y., Tu, W.  
2013; 5 (168)
- **ICOS-ICOSL regulates the generation and function of CD4(+) Treg in a CTLA-4 dependent manner** *European Congress of Immunology*  
Zheng, J., Chan, P. L., Liu, Y., Qin, G., Xiang, Z., Lam, K. T., Lewis, D. B., Lau, Y. L., Tu, W.  
WILEY-BLACKWELL.2012: 409-410
- **Dental Abnormalities in Schimke Immuno-osseous Dysplasia** *JOURNAL OF DENTAL RESEARCH*  
Morimoto, M., Kerouredan, O., Gendronneau, M., Shuen, C., Baradaran-Heravi, A., Asakura, Y., Basiratnia, M., Bogdanovic, R., Bonneau, D., Buck, A., Charrow, J., Cochat, P., DeHaai, et al  
2012; 91 (7): S29-S37
- **Dental abnormalities in Schimke immuno-osseous dysplasia.** *Journal of dental research*  
Morimoto, M., K erour edan, O., Gendronneau, M., Shuen, C., Baradaran-Heravi, A., Asakura, Y., Basiratnia, M., Bogdanovic, R., Bonneau, D., Buck, A., Charrow, J., Cochat, P., DeHaai, et al  
2012; 91 (7): 29S-37S
- **Genotype, phenotype, and outcomes of nine patients with T-B plus NK plus SCID** *PEDIATRIC TRANSPLANTATION*  
Yu, G. P., Nadeau, K. C., Berk, D. R., de Saint Basile, G., Lambert, N., Knapnougel, P., Roberts, J., Kavanau, K., Dunn, E., Stiehm, E. R., Lewis, D. B., Umetsu, D. T., Puck, et al  
2011; 15 (7): 733-741
- **Protein tyrosine kinase 7: a novel surface marker for human recent thymic emigrants with potential clinical utility** *JOURNAL OF PERINATOLOGY*  
Lewis, D. B., Haines, C., Ross, D.  
2011; 31: S72-S81
- **Generation of human Th1-like regulatory CD4(+) T cells by an intrinsic IFN-gamma- and T-bet-dependent pathway** *EUROPEAN JOURNAL OF IMMUNOLOGY*  
Zheng, J., Liu, Y., Qin, G., Lam, K., Guan, J., Xiang, Z., Lewis, D. B., Lau, Y., Tu, W.  
2011; 41 (1): 128-139
- **Toxicopathology of the Developing Immune System: Investigative and Development Strategies** *TOXICOLOGIC PATHOLOGY*  
Weinstock, D., Lewis, D. B., Parker, G. A., Beyer, J., Collinge, M., Brown, T. P., Dybdal, N.  
2010; 38 (7): 1111-1117
- **Genetic analyses and outcomes of hematopoietic cell transplantation in 10 patients with T-B plus NK plus SCID**  
Grace, P., Nadeau, K., Berk, D., de Saint Basile, G., Lambert, N., Knapnougel, P., Roberts, J., Steihm, E., Lewis, D., Umetsu, D., Puck, L., Cowan, M.  
WILEY-BLACKWELL.2010: 478-79
- **Mechanisms for decreased CD40-ligand (CD154) expression by human neonatal CD4 T cells**  
JULLIEN, P., Cron, R. Q., Dabbagh, K., Tran, P., Brown, R., Stepick-Biek, P., Lewis, D. B.  
FEDERATION AMER SOC EXP BIOL.2000: A929-A929
- **Abstract Submission**  
Acharya, S., Petersen, K. D., Golubkov, V., Kwong, M., Adams, C. M., Jackson, P. K., Lewis, D. B.

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AMER ASSOC CANCER RESEARCH.2015

- **Acute Subclinical Maternal Inflammation in Late Pregnancy**  
Ozen, M., Zhao, H., Winn, V. D., Lewis, D. B., Kalish, F., Palmer, T. D., Wong, R. J., Stevenson, D. K.  
SAGE PUBLICATIONS INC.2015: 89A-90A
- **Protein tyrosine kinase 7 promotes PI3K/AKT signaling and survival in primary and neoplastic CD4+T-lineage cells.**  
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