

**Curriculum Vitae**  
**Todd Dylan Levine, M.D.**

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**EDUCATION**

1997-1999	<b>Neuromuscular Fellowship</b> Washington University School of Medicine, St. Louis, MO
1998-1999	<b>Administrative Chief Resident</b> , Neurology Department Washington University School of Medicine, St. Louis, MO
1994-1997	<b>Residency in Neurology</b> Washington University School of Medicine, St. Louis, MO
1993-1994	<b>Internship in Internal Medicine</b> Jewish Hospital of St. Louis, MO
1988-1993	M.D. from Duke University School of Medicine, Durham, NC
1984-1988	B.A. in English Haverford College, Haverford, PA

**BOARD CERTIFICATION**

American Board of Psychiatry and Neurology, 1998, 2008  
American Board of Electrodiagnostic Medicine, 2000

**EMPLOYMENT**

Co-Director ALSA Clinic at Phoenix Neurological Associates  
Phoenix, Arizona, 2013-Present

Adjunct Professor of Neurology  
Kansas University, 2013-Present

Clinical Assistant Professor of Neurology,  
University of Arizona, 1999-present

Phoenix Neurological Associates, 1999-present  
Phoenix, Arizona

Director, Department of Neurophysiology  
Banner Good Samaritan Hospital, 1999-present

Director, Samaritan Stroke Center  
Phoenix, Arizona 2005-2009

Director, Samaritan ALS Clinic,  
Phoenix, Arizona 2001-2013

Director, Samaritan Peripheral Neuropathy Center  
Phoenix Arizona 2007-2013

Medical Director, Corinthian Reference Labs,  
Dallas, Texas 2010-Present

Medical Director, Corinthian Infusion Centers  
Dallas, Texas 2001- present

Instructor in Clinical Neuromuscular Diseases, 1998-99  
Washington University in St Louis, MO

Assistant Residency Director, 1998-99  
Washington University in St Louis, MO

Physician in Internal Medicine, 1994-1998  
Jewish Hospital of St. Louis, St. Louis, MO

Emergency Room Physician, 1995-1997  
St. Louis Regional Hospital, St. Louis, MO

Emergency Room Physician, 1993-1995  
John Cochran Veteran's Hospital, St. Louis, MO

## **APPOINTMENTS**

Organizing Committee, 2<sup>nd</sup> International Myositis Meeting, 2017

AAN Subspecialty Quality Advisors Group, 2015-Present

Vice-Chair, Neuromuscular Section of the American Academy of Neurology.  
2015-Present

Arizona State Liason, American Association of Eletrodiagnostic Medicine, 2015-Present

Medical Advisory Board, Myasthenia Foundation of America, 2013- present  
Board Member, Myositis Association, 2011-2015  
Head of Practice Work Group, Neuromuscular Division,  
American Academy of Neurology, 2011- 2013  
Member of Muscle Study Group, 2010-Present  
Member of North Eastern ALS Consortium, 2003-Present  
Member of Western ALS Consortium, 2005- Present  
Member of International Myositis Consortium, 2006-Present  
Medical Executive Committee, Banner Good Samaritan Hospital, 2009- 2011  
Medical Board of Directors, Neuropathy Action Foundation, 2007-Present  
Director Neuroscience Committee Good Samaritan Hospital, 2004- 2007  
Board of Directors- ALSA Arizona Chapter, 2002- present  
Medical Advisory Board – Arizona Chapter of Myasthenia Gravis Foundation,  
1999-2004  
Chairman, Provider Education Committee, American Stroke Association, 2001-2003

### **HONORS AND AWARDS**

Named as Phoenix Top Doctor, Phoenix Magazine, 2000, 2001, 2003, 2005-2015  
Member of Alpha Omega Alpha  
Marquis Foundation Fellowship in Clinical Neuromuscular Diseases, 1997  
Recipient of Irwin Levy Award for Outstanding Teaching Resident in Neurology,  
1997, 1995  
Recipient of National Student Research Forum Award for Molecular Biology, 1992  
Platform Presentation Award, 25th Annual Alpha Omega Alpha Research Symposium,  
Duke University Medical Center, 1992  
Four Schools' Scholar Research Fellowship, Marquis Foundation  
Eugene A. Stead Scholarship, Duke University School of Medicine  
Phi Beta Kappa, Haverford College  
High Honors in Chemistry Department, Haverford College  
Honors in English Department, Haverford College  
Varsity Letter in Tennis, 1985-87, Haverford College

### **PROFESSIONAL SOCIETY MEMBERSHIPS**

President, Arizona Neurological Society, 2007-2009  
Treasurer, Arizona Neurological Society, 2009-2011  
Fellow of the American Association of Electrodiagnostic Medicine  
Member of American Academy of Neurologists  
Vice President of Davison Council, Duke Medical School Student Government

### **PUBLICATIONS**

**Levine, TD, Saperstein, DS.** Routine use of punch biopsy to diagnose small fiber neuropathy in fibromyalgia patients. Clin Rheumatol 2015. Mar 34(3) 413-7

**Levine, TD, Saperstein D.** Laboratory evaluation of peripheral neuropathy. *Neurol Clin* 2013 May; (31) 2: 363-376

Oddis, CV, Reed, A, Aggarwal R, et al. Rituximab in the treatment of refractory adult and juvenile dermatomyositis and adult polymyositis: a randomized, placebo phase trial. *Arthritis Rheum.* 2013 Feb; (65) 2 314-324.

Saperstein, D, **Levine, TD**, Levine, M and Hank, N. Usefulness of skin biopsies in the evaluation of patients with suspected small fiber neuropathy. *Int J Neurosci.* 2013 Jan; 123 (1) 38-41.

**Levine, TD.** Treating refractory dermatomyositis and polymyositis with ACTH gel: A Case Series. *Drug Development Design and Therapeutics.* 2012;6: 133-139.

Shefner, J, Cedarbaum, JM, Cudkowicz, ME, et al. Safety, tolerability and pharmacokinetics of a skeletal muscle activator in amyotrophic lateral sclerosis. *Amyotroph Lateral Scler* 2012 Sept; 13 (5): 430-8.

**Levine, TD, Saperstein, D, Bowser, R, Cox, P, and Hank, N.** A pilot trial of pioglitazone and Tretinoin in ALS. *Neurology Research International.* Vol 2012(12): 582075

Clarke, K and **Levine, T.** Clinical recognition and management of amyotrophic lateral sclerosis. *J Neurosci Nurs.* 2011. Aug (4). 205-214.

**Levine, TD, Bowser, R, Hank, N, and Saperstein, D.** A pilot trial of memantine and riluzole in ALS: correlation to CSF biomarkers. *Amyotrophic Lateral Sclerosis* 2010 11(5); 494-6.

Saperstein, D and **Levine, T.** Diagnosing small fiber neuropathy through the use of a skin biopsy. *Practical Neurology.* October, 2009: 36-41

Gordon, PH, Cheung YK, Levin, B et al. A novel efficient randomized selection trial comparing combinations of drug therapy for ALS. *Amyotrophic lateral Sclerosis* 2008;9(4): 212-22

Dunckley T, Heuntelman MJ, Craig DW et al. Whole genome analysis of sporadic ALS. *New England Journal of Medicine*, 2007: 357 (8) 775-788.

**Levine T, Pestronk A, Florence J, Al-Lozi M, Lopate G, Miller T, Ramneantu I, Waheed W, Stambuk M, Stone MJ, Choksi, R.** Peripheral neuropathies in waldenström's macroglobulinemia. *J Neurol Neurosurg Psychiatry* 2006; 77:224-228.

Lopate G, Pestronk A, Al-Lozi, M et al. Peripheral neuropathy in an outpatient cohort of patients with Sjogrens syndrome. *Muscle Nerve* 2006: 33(5): 672-76.

**Levine, T.** Rituximab in the treatment of refractory dermatomyositis. *Arthritis and Rheumatism* Vol 52, No 2 Feb 2005, 601-607.

Pestronk, A, Florence J, **Levine T**, Al-Lozi, M, Loapte, G, Miller T, Ramneantu, I, Waheed, W, Stambuk, M Sensory exam with a quantitative tuning fork: rapid, sensitive and predictive of SNAP amplitude. *Neurology*. 2004 Feb 10;62(3):461-4.

L Rider, E Giannini, H Brunner, N Ruperto, A Reed, L James-Newton, T Sanghvi, M Cronin, I Garcia-de la Torre, D Isenberg, L Kagen, **T Levine**, I Lundberg, C Oddis, S Rutkove, K Sivakumar, Y Song, I Targoff, J Vencovsky, M Villalba, R Wortmann, S Ytterberg, P Lachenbruch, F Miller, for the International Myositis Assessment and Clinical Studies (IMACS) Group. Preliminary Definitions of Improvement for Adult Myositis. *Arthritis Rheum*. 2003; 48 (suppl.): S307.

Gertz, MA, Anagnostopoulos, A, Anderson, K, Branagan, A, Frankel, S, Giralt, S, **Levine, T**, Munshi, N, Rajkumar, R, and Treon S. Treatment recommendations in waldenstrom's macroglobulinemia. *Seminars in Oncology* Vol 30, No2 April 2003

**Levine, T.** History of Dermatomyositis. *Arch Neurol*. 2003 May;60(5):780-2.

Pestronk, A, Florence, J, Miller,T, Choksi, R, Al-Lozi, M, **Levine, T.** Treatment of IgM-antibody associated neuropathies with rituxamab. *J Neurol Neurosurg Psychiatry*. 2003 Apr;74(4):485-9.

**Levine, TD** and Pestronk A. IgM antibody-related polyneuropathies: B-cell depletion chemotherapy using rituxamab. *Neurology* 1999 52:8; 1701-1705.

**Levine, TD** and Pestronk, A. Methotrexate therapy for polymyositis with cytochrome oxidase negative fibers. *Muscle and Nerve* 21:1724-1728,1998.

Keene, JD, **Levine, TD**, and Gao, FB. US Patent No. 5,525,495, Methods and composition useful in the recognition, binding, and expression of ribonucleic acids involved in cell growth, neoplasia, and immunoregulation.

Gao, FB, Carson, CC, **Levine T**, and Keene, JD. Selection of a subset of mRNA's from combinatorial 3' UTR libraries using neuronal RNA binding protein Hel-N1, *PNAS* 91(23): 11207, 1994.

King, PH, **Levine TD**, Freneau, RT, Keene, JD. Mammalian homologs of *Drosophila* ELAV localized to a neuronal subset can bind in vitro to the 3' UTR of the mRNA encoding the Id transcriptional repressor. *Journal of Neuroscience* 14(11): 1943, 1994.

**Levine, TD**, Gao FB, King, PH, Andrews LG, Keene, JD. Hel-N1: an autoimmune RNA binding protein with specificity for the 3' uridylate rich untranslated regions of growth factor mRNAs. *Moll. and Cell. Biol.* 13 (6): 3494, 1993.

## **PRESENTATIONS**

Course Director, 1<sup>st</sup> International Clinical Neuromuscular Forum  
Caratagena, Columbia 2015

L-Serine As a Treatment for ALS.  
25<sup>th</sup> International Meeting for ALS; Orlando, Florida 2015

Acthar in Dermatomyositis and Polymyositis Treatment Registry: An Interim Analysis  
American Academy of Neurology Washington DC 2015

A Pilot Study of Natalizumab in Inclusion Body Myositis. IMACS Meeting Stockholm,  
Sweden 2015

IVIG Usage in the U.S. for the Treatment of the Inflammatory Myopathies: Interim  
Analysis of the Ig Treatment Outcomes Assessment and Clinical Guidelines Study (the  
“INSIGHTS Study”): IMACS Meeting Stockholm, Sweden 2015

Retrospective review of the safety of Hizentra in neuromuscular patients with renal  
failure. International Clinical Neuromuscular Disease Nice, France 2014

Prospective Study of Cost of Care at Multidisciplinary Clinics Adhering to AAN ALS  
Practice Paramaters. Platform Presentation. American Academy of Neurology.  
Philadelphia, PA 2014

Immunoglobulin treatment outcomes assessment and clinical guidelines study  
(INSIGHTS): preliminary findings on scope of practice in the U.S. Presented at the 7<sup>th</sup>  
International Immunoglobulin Conference, Interlaken, Switzerland, 2014

Characteristics of Patients with Small Fiber Neuropathy Evaluated with Skin Biopsy  
Presented at the American Academy of Neurology. Philadelphia, PA 2014

Ig Treatment Outcomes Assessment and Clinical Guidelines Study (INSIGHTS).  
Presented at the American Academy of Neurology. Philadelphia, PA 2014

Laboratory Evaluation of Peripheral Neuropathy. American Academy of Neurology.  
Platform presentation, Philadelphia, PA 2014

Prevalence of Small Fiber Neuropathy in Patients with Fibromyalgia. Presented at the  
American College of Rheumatology, Washington DC, Oct 2012

Incidence of Wearing-off Effect Among Patients Receiving IVIG for CIDP. Presented at  
the PNS/Inflammatory Neuropathy Consortium. Rotterdam, Amsterdam. June 2012

Laboratory Evaluation of Peripheral Neuropathy. Platform presentation at the American Academy of Neurology, New Orleans. 2012

Pilot Trial of Zinc in ALS. Presented at the 21<sup>st</sup> International Motor Neuron Disease Meeting. Sydney, Australia. 2011

Improvement in Small Fiber Neuropathies Following Immunomodulatory Therapy. Presented at the American Academy of Neurology, Honolulu, Hawaii, 2011

Phase II study of Tretinoin and Pioglitazone in ALS. Presented at the 20<sup>th</sup> International Motor Neuron Disease Meeting. Orlando Florida, 2010

Small Fiber Neuropathies in Waldenstrom's Macroglobulinemia. Presented at the International Waldenstrom's Symposium. Venice, Italy. 2010

Nonprescription Medications and Nonconventional Therapies for Neuropathic Pain. Platform presentation at the American Academy of Neuroelectrodiagnostic Medicine, Quebec, 2010

Nonprescription Medications and Nonconventional Therapies for Neuropathic Pain. Platform presentation at the American Academy of Neuroelectrodiagnostic Medicine, San Diego, 2009.

Retrospective Assessment of the Usefulness of Skin Biopsies in the Evaluation and Management of Patients with Suspected Small Fiber Neuropathy. Presented at the American Academy of Neurology, Seattle, WA 2009.

Pilot Trial of Memantine in ALS. Presented at the 18<sup>th</sup> International MND Meeting, Birmingham, UK, 2008

Treatment of IgM Mediated Neuropathies. Presented at the 5<sup>th</sup> International Workshop on Waldenstrom's Macroglobulinemia, Stockholm, 2008

IVIG Treatment Response of Suspected CIDP Patients not Meeting Standard Diagnostic Criteria. Presented at the Inflammatory Neuropathy Consortium, Paris, 2008

Treatment of Painful Peripheral Neuropathies. Platform presentation at the American Academy of Neurology, Chicago, 2008

Management of Small Fiber Neuropathies. Presented at the American Academy of Neuroelectrodiagnostic Medicine, Phoenix 2007

Treatment of Painful peripheral Neuropathies. Platform presentation at the American Academy of Neurology, Boston 2007

Management of Autoimmune Mediated Neuromuscular Diseases. Presented at the American Academy of Neuroelectrodiagnostic Medicine, Washington DC 2006

Treatment of Immune Myopathies. Platform presentation at the 15<sup>th</sup> annual Cleveland Review of Rheumatic Diseases April 2005.

B cell depletion chemotherapy in Neuroimmune diseases. Presented at the Barrow's Neurologic Symposium, March 2005

Peripheral neuropathy in Sjögren's syndrome. Presented at the American Academy of Neurology April 2004

Treatment of IgM Mediated Neuropathies. Presented at the 2<sup>nd</sup> Annual Patient Physician Symposium on Waldenstrom's Macroglobulinemia, Los Angeles 2003

Treatment of Refractory Dermatomyositis with Rituxamab. Presented at the American College of Rheumatology, New Orleans, 2002

Antigenic Targets of Serum IgM in Waldenstrom's Macroglobulinemia and IgM MGUS. Presented at the 2<sup>nd</sup> International Workshop on Waldenstrom's Macroglobulinemia, Athens, Greece 2002.

Treatment of IgM Neuropathies. Presented at the 2<sup>nd</sup> International Workshop on Waldenstrom's Macroglobulinemia, Athens, Greece, 2002

Macrophagic Myofasciitis. Presented at the American Academy of Neurology, April, 2002

Unusual case of acute quadriplegia. Presented at the American Academy of Neurology, April 2002

B-cell depletion chemotherapy in the treatment of dermatomyositis. Presented at the 23<sup>rd</sup> Annual Carrell- Knudsen Symposium, Dallas, Texas, March 2001

Rituxan in the treatment of polyneuropathies. Presented at Grand Rounds at the Mayo Clinic, Scottsdale, AZ, December 2000

## **CLINICAL RESEARCH**

Principal Investigator of Fycompa in Small Fiber Neuropathy, 2015 – present  
Grant support from Eisai \$85,000

Principal Investigator, Study of Firdapse Treatment in Patients with LEMS 2015 - present



Principal Investigator, Study of Acthar in Chronic Inflammatory Demyelinating Neuropathy, 2015 – present

Principal Investigator, Study of subcutaneous immunoglobulin (SCIg) in Myasthenia Gravis, 2015 – present

Principal Investigator, Study of Immune Globulin in Symptomatic patients with Myasthenia Gravis, 2015 – present

Principal Investigator, Study of Immune Globulin (IVIG) in Corticosteroid Dependent patients with Myasthenia Gravis, 2015 – present

Sub-Investigator, Study of Alemtuzumab in Chronic Inflammatory Demyelinating Polyradiculoneuropathy, 2014 – present

Principal Investigator, Study looking at Biomarkers in CSF in ALS 2014 – present

Principal Investigator, Study looking at Biomarkers in Myositis 2014 – present

Principal Investigator of Natalizumab in Inclusion Body Myositis, 2014- present

Principal Investigator, Study of Subcutaneous gammaglobulin in Myasthenia Gravis, 2014-present

Sub-Investigator, Study of Rasagaline in ALS, 2013-present

Principal Investigator, TAME, study of Memantine in ALS, 2013-present  
FDA orphan drug grant; \$1,000,000

Principal Investigator, ADAPT, registry of ACTH gel in patients with dermatomyositis and polymyositis  
Grant support from Questcor pharmaceuticals, 2012-present, \$611,000

Steering Committee, PRISTINE, registry of physician practices in ordering small fiber nerve biopsies, 2011-present.  
Grant support from Corinthian Reference Labs- Budget for 2012-2013, \$750,000

Steering Committee, INSIGHTS- trial of IVIG in Immunologic and Neurologic Diseases, 2011-present  
Grant support from FFF enterprises- Budget for 2012-2014- \$9,700,000

Principal Investigator in Ceftriaxone in patients with ALS, 2009-2012

Clinical Investigator in Lithium in patients with ALS, 2008-2009

Sub-Investigator in Medimmune study in myositis, 2007-2009

Principal Investigator in TGEN-ALS study, 2007-2011

Grant support from TGEN, Budget 2007-2011, \$245,000

Principal Investigator in study of Duloxetine in small fiber neuropathy, 2005-2008

Principal Investigator in SELECTION trial in ALS, 2005-2008

Principal Investigator, Steering Committee member in Rituximab in Myositis, 2004-present

Principal Investigator in study of Memantine in ALS, 2006-2009

Principal Investigator in ASPREAVA study of myasthenia gravis

Clinical Investigator in Avonex in CIDP, 2003 - present

Principal Investigator in a study of Rituxan in Dermatomyositis, 2000 - present

Clinical Investigator in a study of BDNF for ALS, 1999

Principal Investigator in a study of Rituxan in IgM Paraprotein neuropathies, 1998-99

Clinical Investigator in Sanofi study for ALS, 1998-99

Co-Investigator:

Protocol #CN120-011. IV BMS 204352 for stroke

Protocol # IP302-016. Citocoline for stroke.

Protocol #981-124. Atorvastatin for stroke/TIA

Protocol #PRI-TOP-IN-28 Topamax for seizures

Protocol #ELET-071. Eletriptan for migraine

Protocol #LAM40091. Lamictal for seizures

Protocol #S2W40027. Naratriptan for menstrual migraine

Protocol 872CL003. ARTIST MRI for stroke

Protocol 872CL004. ARTIST + for stroke

Protocol CCM9981A04. Comtan for Parkinson's disease