

Roopa Bhat, MD. PhD

Curriculum vitae

EDUCATION/TRAINING

- 2006- 2009 Translational Fellowship in Multiple Sclerosis (MS)/Neuroimmunology Research, Dept of Neurology, Stanford University, CA
- 2003- 2006 Neurology Residency, Stanford Hospital and Clinics, Stanford, CA
- 2002- 2003 Internal Medicine Internship, Providence Portland Medical Center, Portland, OR
- 2002 M.D. Medicine, Chicago Medical School, North Chicago, IL.
- 2001 Ph.D. Biochemistry & Molecular Biology, Rosalind Franklin Univ of Health Sciences, IL
- 1993 B.S. Genetics and Biochemistry, Texas A & M University, TX. *Magna cum laude*

WORK EXPERIENCE

- 2016-present Neurologist, Bellevue Neurology, WA
- 2013-present Neurologist, Puget Sound Neurology, WA, with
- 2016-present Partners in MS designation by the National Multiple Sclerosis Society (NMSS), USA
- 2011-2013 Neurologist, Kaiser Permanente, CA
- 2010-2011 Neurologist, Stanford University, CA
- 2009-2010 Neuroimmunology Research Associate, Stanford University, CA

LICENSURE AND BOARD CERTIFICATION

- 2003-present Medical License, California
- 2013-present Medical License, Washington
- 2011-present Board Certified by the American Board of Psychiatry and Neurology

RESEARCH GRANTS AND SCHOLARSHIPS

- 2007-2009 National Multiple Sclerosis Society Clinical Scientist Training Program Grant.
Title: "The role of GABA in Multiple Sclerosis and experimental autoimmune encephalomyelitis (EAE)"
- 1993-2002 M.D.-Ph.D. Program Fellowship and Award, Chicago Medical School-Rosalind Franklin University. Project: "Structure-function studies of the nerve growth factor molecule"
- 1992 Undergraduate Research Fellowship Award, Department of Pathology, University of Texas-Southwestern Medical Center at Dallas.
Project title: "Design of soluble and membrane-attached CD4 molecules"
- 1992 & 1993 Academic Incentive Award, University Honors Program, Texas A & M Univ.

CURRENT RESEARCH STUDIES

- ESTEEM by Biogen: Dimethyl fumarate (DMF, Tecfidera) Observational Study
- FORWARD by Allergan: Topiramate vs Botox Phase 4 Study, Currently Enrolling

LECTURES AND TEACHING EXPERIENCE

- 2015 Multiple sclerosis invited lecture, Autoimmune Assoc'n-NMSS Joint Conference, WA
- 2015 Grand Rounds lecture: Vasculitis syndromes, Franciscan Health System, Tacoma, WA
- 2013-2014 CME/CNE lectures in Neurology, School of Nursing, Pacific Lutheran University; Washington Association of Physicians from India, WA
- 2014 Neurology Attending, AT Still University School of Osteopathic Medicine, AZ
- 2010-2011 Neurology Attending at Neurology Resident Clinics, Stanford Hospital and Clinics, CA
- 2007-2009 Medical Student Core Neuropathology Section, Human Health and Disease course, Stanford Medical School, CA
- 2005-2008 Grand Rounds lecture series, Stanford University Dept of Neurology: topics including Carcinomatous meningitis, Myositis, Inflammatory myopathies and neuropathies.
- 2005-2006 Neurology Clerkship Teaching Award, for excellence in neurology resident teaching of medical students, Stanford Medical School, CA.

SELECTED HONORS

- 2016 Partners in MS designation by the National Multiple Sclerosis Society, USA
- 2014 Expert panel appearance, MS Summit, the National Multiple Sclerosis Society, Seattle, WA
- 2007, 2008 & 2009 Biogen-Idec Travel Award for platform presentations, Federation of Clinical Immunology Societies Annual Conference.
- 2007 Teva-Neuroscience Travel Award, Neuroradiological advances in Multiple Sclerosis, University of South Florida Conference in Colorado.
- 2002 Certificate of Merit, Poster Competition, American College of Physicians Meeting, Eugene, OR.

SCIENTIFIC/ADVISORY POSTS

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| 2014-present | Advisory Bd | Genzyme, Sanofi-Aventis; Teva-Neurosciences |
| 2013 | Advisory Bd | US World Meds |
| 2012-present | Reviewer | Manuscript Publication Peer reviewer, Am. Journal of Neuroradiology |
| 2010-present | Reviewer | Manuscript Publication Peer reviewer, European Journal of Neuroscience, Cambridge, UK; and
Journal of Neuropathology and Experimental Neurology, USA |
| 2008 | Reviewer | Grant application reviewer, National Multiple Sclerosis Society, USA |
| 2005-present | Reviewer | Manuscript Peer reviewer, Journal of Biological Chemistry, USA |

- MEMBERSHIPS American Academy of Neurology
Pierce County Medical Society

SELECTED PUBLICATIONS

- Wang D, **Bhat R**, Sobel RA, Huang W, Wang LX, Olsson T, Steinman L. Uncovering cryptic glycan markers in multiple sclerosis (MS) and experimental autoimmune encephalomyelitis (EAE). Drug Dev Res. 2014 May;75(3):172-88.
- R. Bhat**. Paraneoplastic diseases of the Nervous System. In: Tarascon Clinical Neurology Pocketbook, **G. Steinberg and M. Hayden**. (Editors), Jones and Bartlett Publishing, Burlington, MA. 2012
- Roopa Bhat**, Robert Axtell, Ananya Mitra, Melissa Miranda, Christopher Lock, and Lawrence Steinman. Inhibitory Role for GABA in Autoimmune Inflammation. Proc Natl Acad Sci U S A. 2010 Feb 9;107(6):2580-5.
- Bhat R**, Steinman L. Innate and adaptive autoimmunity directed to the central nervous system. Neuron. 2009 Oct 15;64(1):123-32. Review.
- R. R. Bhat and M. Jain**. Beyond Polymyalgia Rheumatica: ANCA-positive Vasculitis. American College of Physicians Annual Meeting, Eugene, OR, 2002. Poster.
- Steinman L**, Axtell RC, Barbieri D, **Bhat R**, Brownell SE, de Jong BA, Dunn SE, Grant JL, Han MH, Ho PP, Kuipers HF, Kurnellas MP, Ousman SS, Rothbard JB. Piet Mondrian's trees and the evolution in understanding multiple sclerosis, Charcot Prize Lecture 2011. Multiple Sclerosis. 2013 Jan;19(1):5-14.
- S. Dunn, **R. Bhat**, D. Straus, R. Sobel, R. Axtell, A. Johnson, K. Nguyen, L. Mukundan, M. Moshkova, J. Dugas, A. Chawla, and L. Steinman. Peroxisome Proliferator Activated Receptor- δ Limits the Expansion of Pathogenic Th cells During Central Nervous System Autoimmunity. J Exp Med. 2010 Aug 2;207(8):1599-608.
- Axtell RC, de Jong BA, Boniface K, van der Voort LF, **Bhat R**, De Sarno P, Naves R, Han M, Zhong F, Castellanos JG, Mair R, Christakos A, Kolkowitz I, Katz L, Killestein J, Polman CH, de Waal Malefyt R, Steinman L, Raman C. T helper type 1 and 17 cells determine efficacy of interferon-beta in multiple sclerosis and experimental encephalomyelitis. Nature Medicine, 2010 Mar 28.
- M. Platten, S. Youssef, EM. Hur, P. Ho, M. Han, T. Lanz, L. Phillips, M. Goldstein, **R. Bhat**, C. Raine, R. Sobel and L. Steinman. Blocking angiotensin-converting enzyme (ACE) induces potent regulatory T cells and modulates TH1- and TH17-mediated autoimmunity. Proc Natl Acad Sci USA. 2009 Sep 1;106(35):14948-53.
- R. Bhat**, R. Axtell, M. Miranda, C. Lock, L. Steinman. Inhibitory role for γ -amino butyric acid in autoimmune neuroinflammation. Clinical Immunology, 2009, Vol 130, Page S24. Abstract
- R. Bhat**, R. Axtell, C. Lock, L. Steinman. Blocking serotonin reuptake ameliorates autoimmune neuroinflammation. Clinical Immunology, 2008, Volume 127, Page S22. Abstract
- R.R. Bhat and K.E. Neet**. Structure-function studies of the nerve growth factor molecule--interaction of W21 and the C-terminal region. FASEB Journal, 14(8):A1492, 2000. Abstract.