

EDUCATION:

UNDERGRADUATE:

Franklin and Marshall College, Lancaster, Pennsylvania
B.A., Chemistry; Minor, Studio Art; 1987

MEDICAL SCHOOL:

George Washington University, School of Medicine, Washington, D.C.
M.D. 1991

TRAINING:

RESIDENCY, NEUROLOGY:

University of California, Irvine Medical Center; Orange, California, and
V.A. Medical Center, Long Beach, California.; June, 1991 - June, 1995

FELLOWSHIP #1:

Spinal Cord Injury Service, V.A. Medical Center, Long Beach, California;
July, 1995 - June, 1996. Preceptor : Michael Vulpe, M.D. , Retired.
Experience included consultation on spinal cord injured patients and
performance of EMG and nerve conduction studies for all Neurology patients.

FELLOWSHIP #2:

Neurological Rehabilitation
UCLA Medical Center, Dept. of Neurological Services, Los Angeles;
July, 1996 – June, 1998. Preceptor: Bruce Dobkin, M.D.

PRACTICE:

King-Drew Medical Center, Assistant Professor, July,1998- November, 1999.
Private practice Neurology, Southern California:
The Parkinson's and Movement Disorders Institute, Orange County, CA. July, 1998- present.
Pavilion Neurology Medical Group, Orange, CA. 2001- present.

LICENSURE:

Diplomate of the National Board of Medical Examiners -- 1992.
Board Certified: American Board of Psychiatry and Neurology – 1998.
California License: # G076833 ; DEA: # BP3828300

APPOINTMENTS:

Assistant Professor, Department of Neurosciences, Charles Drew University, King/Drew Medical Center,
Los Angeles, California, July 1998- November 5, 1999.

Clinical Instructor, Department of Neurology, University of California, Los Angeles, July, 1996- June
1998.

Literature Reviewer, Evidence Based Practice Center, RAND Agency, Santa Monica, California; 1997.
Involved in publication of AHCPR-funded project on review of neurogenic bladder management in spinal
cord injury.

MEMBERSHIPS:

American Academy of Neurology

Parkinson Study Group, Treating

Investigator

BOOKS/CHAPTERS: Pathak M, Truong D: Anatomical Correlation of Common Patterns of Spasticity. In: Brashear A, Elovic E, (eds.). *Spasticity: Diagnosis and Management*. New York, New York, Demos Medical Publishing, 2011.

Truong D, Pathak M, Frei K: *Living Well with Dystonia*. New York, New York. Demos Medical Publishing, 2010.

Pathak MS, Brashear A: Spasticity. In: Truong D, Dressler D, Hallett M, (eds.). *Manual of Botulinum Toxin Therapy*. Cambridge, U.K., Cambridge University Press, 2009.

Pathak MS: Multiple Sclerosis and other Demyelinating Diseases of the Central Nervous System. In: *Textbook of Clinical Neurology*. Ho Chi Minh City, Nha Xuat Ban Y Hoc, 2004.

Pathak M, Frei K, Truong D: *The Spasmodic Torticollis Handbook: A Guide to Rehabilitation and Treatment*. New York, New York, Demos Medical Publishing, 2003.

Vickrey BG, Shekelle P, Morton S, Clark K, Pathak M, Kamberg C. *Prevention and Management of Urinary Tract Infections in Paralyzed Persons*. Evidence Report/Technology Assessment No. 6. AHCPR Publication No. 99-E008. Rockville, MD: Agency for Health Care Policy and Research, 1999.

PAPERS:

Pathak MS, Nguyen HT, Graham HK, Moore AP. Management of spasticity in adults: practical application of botulinum toxin. *Eur J Neurol*. 2006 Feb;13 Suppl 1: 42-50.

Frei KP, Pathak M, Jenkins S, Truong DD. Natural history of posttraumatic cervical dystonia. *Mov Disord*. 2004 Dec;19(12):1492-8.

Segal JL, Pathak MS. Optimal drug therapy and therapeutic drug monitoring after spinal cord injury: a population-specific approach. *Am J Ther*. 2001 Nov-Dec;8(6):451-63.

Segal JL, Hayes KC, Brunnemann SR, Hsieh JTC, Potter PJ, Pathak MS, Tierney DS, Mason D. Absorption characteristics of sustained release 4-aminopyridine (Famipridine SR) in patients with chronic spinal cord injury. *J Clinical Pharmacology* 2000;40:402-409.

Shekelle PG, Morton SC, Clark KA, Pathak M, Vickrey B. Systematic review of risk factors for urinary tract infection in adults with spinal cord dysfunction. *Journal of Spinal Cord Medicine*. 1999;22(4):258-272.

Pathak M, Kim RC, Pribram H. Spinal cord infarction following vertebral angiography: Clinical and pathological findings. *Journal of Spinal Cord Medicine*. 1999;23(2):92-95.

Segal JL, Pathak M, Hernandez JP, Hember PL, Brunnemann SR, Charter RA. Safety and efficacy of 4-aminopyridine in humans with spinal cord injury: a long-term, controlled trial. *Pharmacotherapy* 1999;19(6):713-723.

MEDICAL ILLUSTRATION:

Brashear A, Elovic E, (eds.). *Spasticity: Diagnosis and Management*. New York, New York, Demos Medical Publishing, 2011.

Truong D, Dressler D, Hallett M, (eds.). *Manual of Botulinum Toxin Therapy*. Cambridge, U.K., Cambridge University Press, 2009.

Pathak M, Frei K, Truong D: *The Spasmodic Torticollis Handbook: A Guide to Rehabilitation and Treatment*. New York, New York, Demos Medical Publishing, 2003.

RESEARCH EXPERIENCE:

Sub-investigator: Prospective, double-blind, placebo-controlled, randomized, multi-center trial with a double-blind parallel-group extension period to investigate the efficacy and safety of different doses of NT 201 in the treatment of cervical dystonia. Protocol No.: MRZ 60201-0408, Sponsor: Merz Pharmaceuticals GmbH 8/2006- 2007.

Independent Rater: A Post-Approval Study of the Guidant Carotid Stent Systems and Embolic Protection Systems (Carotid Rx Acculink/Accunet Post-Approval Trail to Uncover Unanticipated and Rare Events "CAPTURE"). Protocol No. 04-715/Guidant. Sponsor: Guidant. 6/2006- 2007.

Primary Investigator: A Randomized, Double-blind, placebo-controlled, parallel-group clinical trial to examine the efficacy and safety of early pramipexole treatment versus delayed pramipexole treatment in patients with new onset Parkinson's disease. 4/2006 - 2007, Boehringer-Ingelheim Pharmaceuticals, Inc. Protocol # 248.595 Primary investigator.

Independent Rater: A Multicenter, Randomized, Double blind, Placebo Controlled, Five-arm parallel Group Trial to Investigate the Efficacy of Four Different Transdermal Doses of Rotigotine in Subjects with Idiopathic Restless Legs Syndrome. Sponsor: Schwarz-Pharma, Protocol #SP792. 2005-2006.

Independent Rater: A Randomized, Double blind, Placebo-Controlled, Parallel Group Clinical Trial Comparing Fixed Doses of 0.25 mg, 0.50 mg, and 0.75 mg Pramipexole (Mirapex) Administered Orally to Investigate the Safety and Efficacy in Patients with Idiopathic Restless Legs Syndrome for Two Weeks. Sponsor: Boeringer-Ingelheim, Protocol #248.543. 2005-2006.

Sub-investigator: An open-label, multicenter, multinational, follow up study to evaluate the long term safety and maintenance of efficacy of sarizotan in Parkinson patients with L-dopa induced dyskinesia (SPIRID-O). Sponsor: Merck Kga. 1/2003- 2005.

Sub-investigator: Phase II, Multi-Center, Randomized, Double-Blind, Parallel Group, Placebo-Controlled Study to Assess the Efficacy and Safety of a Single Administration, By Subcutaneous Injection, of 3 Doses of Dysport (40 units/ eye, 80 units/eye and 120 units/eye) for the Treatment of Benign Essential Blepharospasm. 1/2003- 2003.

Sub-investigator: A survey to assess the incidence and characteristics of melanoma in Parkinson's Disease Patients. Sponsor: TEVA. 12/2002- 9/2003.

Sub-investigator: A Randomized, Double-Blind, Placebo-Controlled, Dose-Finding Study to Assess the Efficacy and Safety of CEP-1347 in Patients With Early Parkinson's Disease. 10/02- 2003.

Sub-investigator: A multicentre, multinational, randomised, double -blind, placebo-controlled, Parallel -group, dose-finding study to investigate the anti-dyskinetic efficacy and safety of sarizotan in Parkinson patients with L-dopa induced dyskinesia (SPIRID). Sponsor: Merck Kga. 9/2002- 1/2003.

Sub-investigator: A Long Term, Multicenter, Open-Label, safety Study with a Flexible Dose Range of KW-6002 as Treatment for Parkinson's Disease in Patients with Motor Response Complications on Levodopa/Carbidopa Therapy. Sponsor: Kyowa. 5/2002- 2003

Sub-investigator: A 12-Week, Double-Blind, Placebo-Controlled, Randomized, Multicenter Study of the Efficacy of 20 and 60 mg/day KW-6002 as Treatment for Parkinson's disease in Patients With Motor Response Complication on Levodopa/Carbidopa Therapy. Sponsor: Kyowa. 1/2002- 5/2002.

Sub-investigator: A multicenter, US and Canada, double- blind, randomized, Placebo Controlled, parallel group study, for the efficacy, tolerability and safety of Rasagiline in Levodopa Treated Parkinson's Disease patients with motor fluctuations (PRESTO). Sponsor: TEVA Pharma/ Parkinson's Study Group.

Sub-investigator: A Phase II Randomized Double-blind Active-Controlled Study to Determine the Optimal Initial Titration Regimen of Ropinirole CR Tablets in Parkinson's Disease Patients not Receiving other Dopaminergic Therapies. 5/2002- 12/2002.

Sub-investigator: A Multicenter, Multinational, Phase III, randomized, Double-Blind, Parallel Group, Placebo Controlled Trial of the Efficacy and Safety of the Rotigotine CDS Patch (2 Target Doses) in Subjects with Advanced Stage, Idiopathic Parkinson's Disease Who Are Not Well Controlled on on Levodopa (Part I), And Open-Label Extension to Assess the Safety of Long-Term Treatment of Rotigotine CDS (Part II). Sponsor: Schwarz Pharma. 5/2002- 2003.

Sub-investigator: A randomized, double -blind, placebo-controlled, parallel-group, multicenter, dose-ranging, efficacy and safety study of three doses of CTCH-346 (0.50mg, 2.5mg and 5.0mg daily) in patients with early Parkinson's disease. Sponsor: Novartis Pharma. 1/2002- 2003.

Sub-investigator: A Multicenter, Multinational, Phase III, Randomized, Double-Blind, Placebo Controlled Trial of the Efficacy and Safety of the Rotigotine CDS patch in Subjects with Early Stage, Idiopathic Parkinson's Disease. Sponsor: Schwarz Pharma. 1/2002- 2003.

Sub-investigator: A multicenter, double- blind, randomized, placebo controlled study of ascending bid doses of Neotrofin (250mg, 500mg, and 1000mg) over 12 weeks with 2 weeks follow up in patients with early stage Parkinson's disease. Sponsor: Neo Therapeutics Pharma. 8/2001- 4/2002.

Sub-investigator: A bi-national, multicenter, Open-Label study to evaluate the safety and tolerability of TV-1203 Dispersible Tablets in Advanced Parkinson's Disease (PD) patients with motor fluctuations treated With Chronic Levodopa/Carbidopa Therapy. Sponsor: Teva Pharma. 12/2002- 2003.

Sub-investigator: A multicenter, randomized, double- blind, double dummy, parallel group study comparing TV-1203/carbidopa dispersible tablets with levodopa/ carbidopa tablets in advanced Parkinson's disease patient with motor fluctuation. Sponsor: TEVA/ Parkinson's Study Group. 12/2000- 12/2002.

Sub-investigator: A Phase III multicenter, double-blind, parallel-group Placebo controlled study of the effect of Riluzole 50 mg BID or 100 mg BID on the progression of Parkinson's disease in patients treated with L-Dopa or Dopamine Agonist. Sponsor: Aventis Pharma. 12/2000- 1/2002.

Sub-investigator: Entacapone to tolcapone switch study: to determine whether tolcapone can improve patients receiving optimal treatment with entacapone. Sponsor: Roche Pharma. 9/2000 - 12/2001.

Sub-investigator: ECLIPSE-Exploring Compliance, Packaging, and Safety A Compliance, Packaging, and Safety Assessment of two Packaging formats and Dosing Regimens of Gabitril in subjects with Partial onset seizures. Sponsor: Abbott Laboratory. 8/2000 - 12/2000.

Sub-investigator: A multicenter, US and Canada, double- blind, randomized, Placebo Controlled, parallel group study, for the efficacy, tolerability and safety of Etilevodopa in Levodopa Treated Parkinson's Disease patients with motor fluctuations. Sponsor: TEVA Pharma/ Parkinson's Study Group. 8/2000- 12/2002.

Independent Rater: A Randomized, Multi-Center, Double Blind, Parallel Group Study Comparing Botox® (Botulinum Toxin Type A) and Myobloc© (Botulinum Toxin Type B) in Cervical Dystonia (CD) Subjects Responsive to Botulinum Toxin Type A. The Dystonia Study Group. Supported by Allergan Pharmaceuticals. Protocol # DSG 2000R.01.

Sub-Investigator: A Multi-Center, Double-Blind, Placebo-Controlled, Parallel Group Study of Pulmonary Function Safety of BOTOX (Botulinum Toxin Type A) Purified Neurotoxin Complex for the Treatment of Focal Spasticity Post-Stroke. Sponsor: Allergan Pharmaceuticals; Protocol # 191622-030; 3/2000- 4/2001.

Treating Investigator: A Multicenter, Randomized, Double-Blind, Placebo Controlled, Parallel Group, Dose-Ranging Study to Assess the Efficacy, Safety and Tolerability of Escalating Transdermal Doses of SPM-962 in Subjects with Early Stage of Parkinson's Disease (Patch-I). Sponsor: Schwarz Pharma/Parkinson's Study Group; Protocol # SP506; 9/1999- 2/2001.

Sub-investigator: An Open-Label Safety Study of Neuroblock (Botulinum Toxin Type B) In Patients with Cervical Dystonia. Sponsor: Athena Neurosciences; Protocol #AN072-351; 9/1999- 2000.

Sub-investigator: A 12-Week, Double-Blind, Placebo-Controlled, Randomized, Parallel Group, Multicenter, Exploratory Study of the Safety and Efficacy of KW-6002 as Adjunctive Therapy in Patients with Parkinson's Disease Who Have Motor response Complications on Levodopa/Carbidopa. Sponsor: Kyowa Pharmaceuticals; Protocol # 6002-US-001; 8/1999- 4/2001.

Sub-Investigator: A Phase III multicenter prospective, randomized, double-blind, placebo-controlled study of the efficacy and safety of Dysport for the treatment of cervical dystonia. Sponsor: Ipsen Limited; Protocol #DYSP/045; 4/1999- 6/2000.

Treating Investigator: Parkinson's Research: The Organized Genetics Initiative (PROGENI) Collaborative Study on Genetic Linkage. Sponsor: National Institutes of Health/ Parkinson Study Group; supported by NIH RO1 NS37167-01; 11/1998- 2002.

Treating Investigator: Earlier versus Later Levodopa in Parkinson's Disease (ELLDOPA). Sponsor: National Institutes of Health/ Parkinson's Study Group; Protocol # 017-97; 1998- 2000.

Co-investigator, An Open Label Trial of 4-Aminopyridine in Spinal Cord Injury Patients. Long Beach Research Foundation, V.A. Medical Center, Long Beach; 1996- 2000.

Treating Investigator: Step Training Using Body Weight Supported Treadmill Modulates Neuroplasticity in the Human Spinal Cord. UCLA Medical Center; 1996- 1998.

Co-investigator, Clinical Trial of 4-Aminopyridine in Spinal Cord Injury Patients. V.A. Medical Center, Long Beach, California; 1995-96.

Thermal Rearrangements of Polycyclic Molecules. Organic chemistry research project, Franklin and Marshall College, Lancaster, PA; 1987.

INVITED LECTURES:

4-Aminopyridine Influences Gait Characteristics in Ambulatory Humans with Spinal Cord Injury. Annual meeting of the American Paraplegia Society, Las Vegas, Nevada, September, 1999.

Genitourinary and Sexual Rehabilitation of Spinal Cord Injured Patients. Annual meeting of the National Medical Association, Las Vegas, Nevada, August, 1999.

Rehabilitation of Spinal Cord Injury. Annual meeting of the National Medical Association, Las Vegas,

Nevada, August, 1999.

Metabolic Delirium and Coma. Grand Rounds, Department of Neurosciences, Charles Drew University, M.L. King Medical Center, Los Angeles, CA, May, 1998.

Genitourinary Rehabilitation for the Neurological Patient. Grand Rounds, Department of Neurosciences, Charles Drew University, M.L. King Medical Center, Los Angeles, CA, December, 1998.

Rehabilitation for Traumatic Brain Injury. Grand Rounds, Department of Neurosciences, Charles Drew University, M.L. King Medical Center, Los Angeles, CA, October, 1998.

Migraines and New Medications. Vietnamese Physician's Association annual meeting, Irvine, CA, September 1998.

Myelopathy: Assessment and Management. Grand Rounds, Department of Neurosciences, Charles Drew University, M.L. King Medical Center, Los Angeles, CA, 1998.

Novel Strategies for Rehabilitation of Spinal Cord Injury. Grand Rounds, Department of Neurology, University of Oklahoma; 1998.

Activity Dependent Plasticity in Human Spinal Cord Produces Functionally Relevant Changes in EMG Output in Spinal Cord Injured Patients. Grand Rounds, Department of Neurology, University of Pennsylvania, 1998

Rehabilitation for Traumatic Brain Injury. Grand Rounds, Department of Neurosciences, Charles Drew University, M. L. King Medical Center, Los Angeles, CA, 1998

Parsimonious Workup of Syncope for the Internist. Department of Internal Medicine, University of California, Irvine; 1996.

Evaluation and Management of Mental Status Changes in Internal Medicine Patients. Department of Internal Medicine, University of California, Irvine; 1995.

PRESENTATIONS:

Neuroplasticity of the Genitourinary System after Spinal Cord Injury, UCLA Neurological Rehabilitation Services conference, 1997

Use of 4-Aminopyridine in Spinal Cord Injury, UCLA Neurological Rehabilitation conference; 1996

Rhett Syndrome, Neurology Grand Rounds, University of California, Irvine; 1995.

Vasculitides Affecting the Central and Peripheral Nervous System, Neurology Grand Rounds, University of California, Irvine; 1995.

Neurological Manifestations of Systemic Lupus Erythmatosis. Neurology case conference, University of California, Irvine; 1995.

Periodic Paralysis. Neurology clinical conference, University of California, Irvine; 1995.

Devic's Disease. Neurology clinical conference, University of California, Irvine; 1994.

Molecular Mechanisms of Peripheral Nerve Damage in Diabetes Mellitus. Pathology teaching conference, University of California, Irvine; 1993.

NMDA Receptor Blockers, New Protective Agents for Central Nervous System Disease.
George Washington University, Dept. of Pharmacology conference, 1991.

Management of Neurogenic Bladder in Infants with Spina Bifida. Children's Hospital, District of Columbia; 1990.

Ethics of Fetal Tissue Research: presentation and debate. George Washington University School of Medicine; 1989.

TEACHING EXPERIENCE:

Symposium Faculty: Recent Advances with 4-Aminopyridine in SCI. Annual meeting of the American Paraplegia Society, Las Vegas, Nevada, September, 1999.

Course Instructor, Neurological History and Physical Exam for Medical Students, University of California, Irvine Medical Center, Irvine, CA. 1994- 1996.

Instructor, Basic Electronics, Neurophysiology, and Electrodiagnostics for Neurology Residents. Lecture series, V.A. Medical Center, Long Beach, California; 1995-1996.

Invited Instructor, Neurology review for the Internal Medicine specialty board exam, University of California, Irvine. 1996.

OTHER WORK EXPERIENCE:

George Washington University School of Medicine

Blood Gas Laboratory Technician, 1988-1990

Phlebotomist, Summer 1988

Abstract Writer for Health Science Journals, 1988-1990

Franklin and Marshall College

Construction Laborer, Summer 1987;

Licensed Hearing Aid Dealer, 1984

**PERSONAL
DATA:**

Male. Married.

Born February 10, 1965.

United States citizen.

Primary language and education: English.

Other languages: Hindi

Interests in Art, modern European and ancient oriental history.

REFERENCES:

Daniel Truong, M.D.
Parkinson's and Movement Disorders Institute
9940 Talbert Avenue, Suite 204
Fountain Valley, CA 92708
Phone (714) 378-5062, Fax (714) 378-5061

Amir Shokrae, M.D.
Pavilion Neurology Medical Group
1140 West La Veta Avenue
Suite 730
Orange, CA 92868
Phone (714) 541-6800, Fax (714) 541-1119

Ravinder Singh, M.D.
9100 Wilshire Boulevard
Suite 850 West
Beverly Hills, CA 90212
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