# **Curriculum Vitae**

Scott K Sanders, MD, PhD

## OFFICE ADDRESSES

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## FACULTY APPOINTMENT

Clinical Assistant Professor of Neurology, Indiana University School of Medicine

SPECIALTY Neurology Neuro-ophthalmology Vestibular Medicine

FELLOWSHIP Neuro-ophthalmology Department of Ophthalmology Indiana University Medical Center and Midwest Eye Institute Indianapolis, IN July 1999 - June 2000

RESIDENCY Neurology Department of Neurology Indiana University Medical Center Indianapolis, IN July 1996 - June 1999

INTERNSHIP Internal Medicine Department of Medical Education St. Vincent Hospital Indianapolis, IN July 1995 - June 1996

GRADUATE EDUCATION Combined Degree Program Indiana University School of Medicine (M.D.) and Indiana University Graduate School (Ph.D.) Major: Medical Neurobiology Minor: Pharmacology Indianapolis, IN MD degree conferred May 1995 PhD degree conferred April 2001 UNDERGRADUATE EDUCATION Purdue University Schools of Engineering Bachelor of Science in Biomedical Engineering (BSE) West Lafayette, IN August 1985 - May 1989

PROFESSIONAL EXPERIENCE Neuro-ophthalmologist and Vestibular Medicine Specialist BalanceMD Lafayette, IN and Indianapolis, IN February 2007 – Present

Neuro-ophthalmologist JWM Neurology Indianapolis, IN July 2002 – January 2007

Neuro-ophthalmologist Associated Vitreoretinal and Uveitis Consultants Indianapolis, IN July 2000 - June 2002

Neuro-ophthalmology Fellow Indiana University Medical Center Department of Ophthalmology Indianapolis, IN July 1999 - June 2000

Neurology Resident Indiana University Medical Center Department of Neurology Indianapolis, IN July 1996 - June 1999 Chief Neurology Resident January 1999 - June 1999

Medicine Intern St. Vincent Hospital Department of Medical Education Indianapolis, IN July 1995 - June 1996

Emergency Room Extern Henry County Memorial Hospital New Castle, IN November 1993 - May 1995 Chief Extern June 1994 - May 1995

Lab Technician Great Lakes Chemical Corporation West Lafayette, IN May 1988 - June 1989

Cooperative Education Student (Purdue University) NASA - Johnson Space Center Electrical Engineering Radar Lab Houston, TX June 1987 - August 1987

Cooperative Education Student (Purdue University) NASA - Johnson Space Center Training Division Houston, TX August 1986 - December 1986

#### HONORS AND AWARDS

Winner of Neurology Resident Scholarship from the Annual Meeting Scholarship for Residents Program, 1998 Winner of the Ross Paper Presentation for Neurology Residents, 1998 Nominated for Merritt-Putnam Epilepsy Update for Neurology Residents and Fellows, April 1998 Alexander Treolar Ross Award in Neurology, 1995 Distinguished Student, Purdue University, 1985 - 1989 Golden Key National Honor Society, Purdue University, 1988 - 1989 Tau Beta Pi Engineering Honor Society, Purdue University, 1988 - 1989 Cooperative Education Engineering Program, Purdue University, 1986 - 1987

Phi Eta Sigma Freshman Honor Society, Purdue University, 1986 Valedictorian, Lebanon High School, Lebanon, IN, 1985

#### PROFESSIONAL SOCIETIES

American Academy of Balance Medicine, 2004 - 2008 Vestibular Disorders Association, 2003 - present American Medical Association, 2002 - present Indianapolis Medical Society, 2002 - present Indiana State Medical Association, 2002 - present North American Neuro-ophthalmology Society, 2001 - present Indiana Academy of Ophthalmology, 2000 - present American Academy of Neurology, 1997 - present Society for Neuroscience (national and local), 1990 -1995

#### PUBLICATIONS

Sanders SK and Shekhar A, Blockade of GABAA receptors in the region of the anterior basolateral amygdala of rats elicits increases in heart rate and blood pressure, Brain Research, 567 (1): 101-110, 1991

Sanders SK and Shekhar A, Anxiolytic effects of chlordiazepoxide blocked by injection of GABAA and benzodiazepine receptor antagonists in the region of the anterior basolateral amygdala of rats, Biological Psychiatry, 37 (7): 473-476, 1995

Sanders SK, Morzorati SL, Shekhar A, Priming of experimental anxiety by repeated subthreshold GABA blockade in the rat amygdala, Brain Research, 699: 250-259, 1995

Sanders SK and Shekhar A, Regulation of anxiety by GABAA receptors in the basolateral and central nuclei of the rat amygdala, Pharmacology, Biochemistry & Behavior, 52 (4): 701-706, 1995

Shekhar A, Sajdyk TS, Keim SR, Yoder KK, Sanders SK, Role of the basolateral amygdala in Panic Disorder, Annals of the New York Academy of Sciences, 877: 747-750, 1999

Sanders S, Kawasaki A, Purvin VA, Patterns of Extraocular Muscle Weakness in Vasculopathic Pupil-Sparing, Incomplete Third Nerve Palsy, Journal of Neuro-Ophthalmology, 21 (4): 256-259, 2001

Sanders SK, Kawasaki A, Purvin VA, Long-term Prognosis in Patients with Vasculopathic Sixth Nerve Palsy, American Journal of Ophthalmology, 134 (1): 81-84, 2002

#### ABSTRACTS

Sanders SK and Shekhar A, GABA blockade in the region of the anterior basolateral amygdala elicits a defense reaction, Society for Neuroscience Abstracts, 16: 736, 1990

Sanders SK and Shekhar A, GABA blockade in the region of the anterior basolateral amygdala (BLA) elicits "anxiety" in the absence of cardiovascular stimulation, Society for Neuroscience Abstracts, 17: 665, 1991

Sanders SK and Shekhar A, Repeated injection of the GABAA antagonist BMI into the anterior basolateral amygdala (BLA) "kindles" experimental anxiety in rats, Society for Neuroscience Abstracts, 18: 873, 1992

Sanders SK, Keim SR, Simon JR, Shekhar A, Inhibition of GABA synthesis in the region of the anterior basolateral amygdala elicits increases in heart rate, blood pressure and experimental anxiety in rats, Society for Neuroscience Abstracts, 19: 373, 1993

Sanders SK, Kawasaki A, Purvin VA, Long term prognosis in patients with vasculopathic abducens nerve palsy, North American Neuro-ophthalmology Society, 25: 78, 1999

Sanders SK, Kawasaki A, Purvin VA, Partial pupil-sparing vasculopathic third nerve palsy: pattern of extraocular muscle involvement, North American Neuro-ophthalmology Society, 26: 62, 2000

#### LECTURES

Neuro-ophthalmology. Audience: Optometrists; Location: Eiteljorg Museum, Indianapolis, IN; Date: June 2001

Optic Neuritis. Audience: Optometrists; Location: C-Ray's Restaurant, W. Lafayette, IN; Date: January 28, 2002

Neuro-ophthalmology 101. Audience: Medicine Interns and Residents; Location: St. Vincent Hospital, Indianapolis, IN; Date: January 30, 2002

Optic Neuritis and Non-arteritic Ischemic Optic Neuropathy. Audience: Medicine Interns and Residents; Location: St. Vincent Hospital, Indianapolis, IN; Date: August 6, 2002

Ross Syndrome. Audience: Neurologists; Neurology Grand Rounds; Location: Community Hospital North, Indianapolis, IN; Date: August 20, 2002

Neuro-ophthalmology. Audience: Optometrists; Location: Pankratz Eye Institute, Columbus, IN; Date: September 10, 2002

Neuro-ophthalmology. Audience: Physicians, Physician Assistants, Nurses; Location: Montage, Indianapolis, IN; Date: March 1, 2003

Diplopia. Audience: Medicine Interns and Residents; Location: St. Vincent Hospital, Indianapolis, IN; Date: May 8, 2003

Corticosteroids and Other Immunosuppressive Therapies in Neuroophthalmology. Audience: Optometrists; Location: Ritz Charles, Carmel, IN; Date: June 8, 2003

When to Refer to a Neuro-ophthalmologist. Audience: Physicians, Physician Assistants; Location: Primo South, Indianapolis, IN; Date: March 6, 2004

Stop the Spinning!! Effective Treatments for Dizziness. Neuroscience Symposium presented by Indiana Neuroscience Institute. Audience: Physicians, Nurses; Location: Holiday Inn North, Indianapolis, IN; Date: May 21, 2004

Electroneurodiagnostics in Neuro-ophthalmology. Audience: Indiana Society of Electroneurodiagnostic Technicians & Technologists (ISETT). Location: Ritz Charles, Carmel, IN; Date: June 18, 2004

Neuro-ophthalmologic Findings in Patients with Non-organic Visual Loss. Audience: Ophthalmologic Technicians; Location: Ritz Charles, Carmel, IN; Date: September 17, 2004

Jeepers, Creepy Peepers!. Audience: Optometrists; Location: Hunter's Pub, Lafayette, IN; Date: February 22, 2005

"Doctor, I am Dizzy": Balance disorders testing. Audience: Physicians, Physician Assistants; Location: Sheraton Indianapolis Hotel and Suites, Indianapolis, IN; Date: March 5, 2005

Pertinent Pupillary Problems. Audience: Ophthalmologic Technicians; Location: Ritz Charles, Carmel, IN; Date: September 16, 2005

Dizziness Differential Diagnostic Dilemmas, Audience: Physicians, Physician Assistants; Location: Montage, Indianapolis, IN; Date: March 4, 2006

Neuro-ophthalmology 101 and 501, Audience: Optometrists; Location: Sheraton Hotel, Indianapolis, IN; Date: March 17, 2007

Doctor, Why Am I Dizzy? Audience: Physicians, Optometrists, Physical and Occupational Therapists, Audiologists; Location: Best Western, Lafayette, IN; Date: May 19, 2007

Vision Restoration Therapy, Audience: Optometrists of Tecumseh Optometric Society; Location: Hunter's Pub, Lafayette, IN; Date: May 21, 2007

Fall Prevention: What we can do to keep our patients from falling. Audience: Physicians, Nurse Practitioner, Physical and Occupational Therapists, Audiologists; Location: Birck Boilermaker Complex, West Lafayette, IN; Date: September 14, 2007

From Optic Neuropathy to Neuroplasticity. Indiana Academy of Ophthalmology Meeting 2007. Audience: Ophthalmologists; Location: Bloomington, IN; Date: September 28, 2007 Neuro-ophthalmology Review. Audience: Neurologists, Ophthalmologists, Optometrists; Location: Best Western, Lafayette, IN; Date: October 9, 2007

Vertigo in the Acute Care Setting. Audience: Internal Medicine and Family Practice Physicians, Physical Therapists; Location: Home Hospital, Lafayette, IN; Date: November 28, 2007

A New Treatment for Neurological Vision Loss. Audience: Ophthalmologists, Occupational Therapists, Patients; Location: Ritz Charles, Carmel, IN; Date: April 29, 2008

Vestibular Update 2008: Recent Developments in the Diagnosis and Treatment of the Dizzy Patient. Audience: Physicians, Nurse Practitioners, Physical and Occupational Therapists, Audiologists; Location: Birck Boilermaker Complex, West Lafayette, IN; Date: September 12, 2008

Answers to your Questions About MS. Audience: MS patients and caregivers; Lafayette MS support group meeting. Location: Rosewalk Village, Lafayette, IN; Date: November 10, 2008

My MS, My Choice. Audience: MS patients and caregivers. Location: Best Western, Lafayette, IN. Date: November 12, 2008

Neuro-plasticity in a New Century. Audience: Occupational Therapists; IOTA Interdisciplinary Vision Conference. Location: Kathryn Weil Center for Education, Lafayette, IN; Date: February 28, 2009

Fatigue and Cognitive Dysfunction in MS. Audience: MS patients and caregivers; Lafayette MS support group meeting. Location: Rosewalk Village, Lafayette, IN; Date: August 5, 2009.

Dizziness and Vertigo. Audience: Physicians of American Health Network; Location: Prestwick Building, Avon, IN. Date: October 20, 2009.

Neuro-ophthalmology Potpourri; Focus on Education Update 2009 (sponsored by Cornea Research Foundation of America and Price Vision Group). Audience: Optometrists. Location: Ritz Charles, Carmel, IN. Date: November 7, 2009.

"Doctor, I'm Dizzy". Audience: Physicians, Nurses, Optometrist, Physical Therapists, Medical Students, Social Worker. Location: Holiday Inn, City Centre, Lafayette, IN; Date: February 24, 2010.

"Doctor, I'm Dizzy". Audience: Physicians Nurses, Physical Therapists, Occupational Therapists. Location: RHI, Indianapolis, IN; Date: May 12, 2010. Management of the "Dizzy" Patient in the 21st Century. Audience: Physical Therapists. Sponsored by Gentiva. Location: Rick's Café and Boatyard, Indianapolis, IN; Date: February 17, 2011.

Advances in the Diagnosis and Treatment of Dizziness and Vertigo. Audience: Physicians, Optometrists, Nurse Practitioners. Location: Holiday Inn, City Centre, Lafayette, IN; Date: March 3, 2011.

Vestibular Nystagmus, Audience: Optometrists. Location: Eye Surgeons of Indiana, Indianapolis, IN; Date: August 9, 2011

Advances in the Diagnosis and Treatment of Dizziness and Vertigo. Audience: Physicians, Nurse Practitioners. Location: Marriott North Keystone Crossing, Indianapolis, IN; Date: October 5, 2011.

Neuro-ophthalmology for Medical Students. Audience: 2<sup>nd</sup> year Medical Students. Location: Purdue University, West Lafayette, IN; Date: October 27, 2011.

The Dizzy Patient History & Physical. Audience: Nurse Practitioners – members of the Coalition of Advanced Practice Nurses of Indiana (CAPNI). Location: Hyatt Regency, Indianapolis, IN; Date: March 3, 2012.

Novel Strategies for Preventing Falls. Audience: Physicians and Nurses. Healthy Aging 21<sup>st</sup> Annual Interdisciplinary Converence on Aging: Innovations In the Care of the Elderly. Location: Ritz Charles, Carmel, IN; Date: March 16, 2012.

Neurologic Disorders of Gait and Balance. Audience: Geriatric Physicians. Indiana Geriatrics Society Fall Conference: Updates in Geriatrics... Across the Continuum of Care. Location: Methodist Conference Center, Indianapolis, IN; Date October 5, 2012.

Advances in the Diagnosis and Treatment of Dizziness and Vertigo. Audience: Physicians, Nurse Practitioners. Location: Marriott North Keystone Crossing, Indianapolis, IN; Date: October 10, 2012.

Curing Dizziness. St Vincent Family Medicine Physicians and Residents. Location: Joshua Max Simon Primary Care Center, Indianapolis, IN; Date: November 6, 2012.

Double Vision & Dizziness. Cornea Research Foundation of America and Price Vision Group – Focus on Education 2012. Audience: Optometrists. Location: Ritz Charles, Carmel, IN; Date: November 17, 2012.

Vertigo Case Studies. St Vincent Hospital Grand Rounds. Audience: Physicians and Medicine Residents. Location: St Vincent Hospital, Indianapolis, IN; Date: January 29, 2013.

Differentiating Dizziness Due to Inner Ear vs Brain – When to Worry. Audience: Nurse Practitioners – members of the Coalition of Advanced Practice Nurses of Indiana (CAPNI). Location: Hyatt Regency, Indianapolis, IN; Date: March 2, 2013.

Curing Dizziness. Audience: Residents, Family of Residents and Staff of ManorCare at Summer Trace. Location: Summer Trace, Carmel, IN; Date: April 16, 2013.

Curing Dizziness. Audience: Medicine Residents and Staff Physicians. Location: St Vincent Hospital, Indianapolis, IN; Date: May 14, 2013.

Acute Vestibular Syndromes – Differentiating Peripheral From Central Causes. Audience: Family Physicians – Annual Meeting of the Indiana Academy of Family Physicians (IAFP). Location: JW Marriott, Indianapolis, IN; Date: July 26, 2013.

Curing Dizziness. St Vincent Healthy Aging Seminar. Audience: Public. Location: St Vincent Health Building, Indianapolis, IN; Date: September 7, 2013.

Double Vision and Dizziness: Indiana Academy of Ophthalmology Annual Meeting. Audience: Ophthalmology Technicians. Location: Ritz Charles, Carmel, IN; Date September 20, 2013.

Curing Dizziness in 2013. Audience: Physician Assistants - Annual Meeting of the Indiana Academy of Physician Assistants (IAPA). Location: Crowne Plaza, Indianapolis, IN; Date: October 2, 2013.

I'm So Dizzy I Can't Ride. Audience: Red Hats and Purple Chaps Meeting of Horsewomen – 7<sup>th</sup> Annual Healthy Horse Healthy You Conference. Location: Hendricks Regional Hospital, Danville, IN; Date: November 9, 2013.

Advances in the Diagnosis and Treatment of Dizziness and Vertigo; Neuroscience Clinical Correlation. Audience: Indiana University Medical Students at Purdue University Campus. Location: Purdue University, Lynn Hall, West Lafayette, IN; Date: February 27, 2014.

Vestibular Disorders Update - Treatment Based on Diagnosis. Audience: Neurologists - Annual Meeting of the Indiana Neurologic Society (INS). Location: Hilton, Indianapolis, IN; Date: June 24, 2014. BPPV Update. Audience: Family Physicians - Annual Meeting of the Indiana Academy of Family Physicians (IAFP). Location: Westin, Indianapolis, IN; Date: July 25, 2014.

BPPV and Migraine - Diagnosis and Treatment of the Two Most Common Causes of Dizziness. Audience: Physician Assistants - Annual Meeting of the Indiana Academy of Physician Assistants (IAPA). Location: Sheraton, Indianapolis, IN; Date: October 1, 2014.

Advances in the Diagnosis and Treatment of Dizziness and Vertigo; Neuroscience Clinical Correlation. Audience: Indiana University Medical Students at Purdue University Campus. Location: Purdue University, Lyles-Porter Hall, West Lafayette, IN; Date: February 27, 2015.

BPPV and Migraine - Diagnosis and Treatment of the Two Most Common Causes of Dizziness. Audience: Nurse Practitioners – members of the Coalition of Advanced Practice Nurses of Indiana (CAPNI). Location: Indianapolis Marriott North, Indianapolis, IN; Date: April 11, 2015.

Puzzling Pupils & Jumping Eyes; Price Vision Group's Focus on Education. Audience: Optometrists. Location: Ritz Charles, Carmel, IN; Date: October 28, 2015.

Advances in the Diagnosis and Treatment of Dizziness and Vertigo; Neuroscience Clinical Correlation. Audience: Indiana University Medical Students at Purdue University Campus. Location: Purdue University, Lyles-Porter Hall, West Lafayette, IN; Date: March 3, 2016.

Eye Movement Abnormalities - Diplopia & Nystagmus; Price Vision Group's Focus on Education. Audience: Optometrists. Location: Ritz Charles, Carmel, IN; Date: November 12, 2016.

Dizziness; Neurology & Behavioral Science Course Lecture. Audience: Indiana University Medical Students at Purdue University Campus. Location: Purdue University, Lyles-Porter Hall, West Lafayette, IN; Date: April 20, 2017.

Dizziness; Neurology & Behavioral Science Course Lecture. Audience: Indiana University Medical Students at Purdue University Campus. Location: Purdue University, Lyles-Porter Hall, West Lafayette, IN; Date: April 19, 2018.

Update in the Causes and Treatment of Dizziness and Vertigo. Audience: Family Physicians - Annual Meeting of the Indiana Academy of Family Physicians (IAFP). Location: The Alexander Hotel, Indianapolis, IN; Date: July 21, 2018.

## MEDIA APPEARANCES

WIBC Radio, The Sandwiched Generation, now Caregiver Crossing, discussion on Dizziness and Vertigo, July 9, 2013

WBCL Radio, Mid-Morning Show, discussion on Vestibular Disorders, March 19, 2014

WISH-TV, Indy Style Show, discussion on BPPV. April 9, 2014

WISH-TV, Indy Style Show, discussion with Audiologist Michelle Koley on hearing aid technology and the downside of untreated hearing loss. April 30, 2014

WISH-TV, Indy Style Show, discussion with physical therapist Stephanie Ford on vestibular rehabilitation therapy. June 11, 2014

WISH-TV, Indy Style Show, discussion on Migraine-associated Dizziness. July 9, 2014

WISH-TV, Indy Style Show, discussion with the BalanceMD team on the diagnosis and treatment of dizziness, vertigo and imbalance. August 13, 2014 WISH-TV, Indy Style Show, discussion with Audiologist Sandy Bratton on hearing aid technology. September 10, 2014

## PROFESSIONAL CERTIFICATION

American Board of Psychiatry and Neurology 2002 and 2013 (expires 2023) National Board of Physicians and Surgeons (2016 - present, yearly recertification)

National Board of Medical Examiners 1996

# LEADERSHIP

AAN Neurology on the Hill 2006 President, American Academy of Balance Medicine 2006 - 2007 Indiana Academy of Ophthalmology Legislative Committee 2005 JWM Executive Committee 2004 – 2006 Indiana State Medical Association Board of Trustees Alternate 2011-2012 Indiana State Medical Association Board of Trustees 2012-2015 Tippecanoe County Delegate 2012-present

LICENSURE Indiana medical license #01045654 issued August 29, 1996 expires October 31, 2019