# **CIRCULUM VITAE The Johns Hopkins University School of Medicine**

	2012
Rafael H. Llinas	

# **DEMOGRAPHIC INFORMATION**

# **Current Appointments:**

Associate Professor of Neurology, Johns Hopkins University School of Medicine.

# **Contact Information:**

Rafael H. Llinas, MD, FAHA, FANA. 122 B Building 4940 Eastern Avenue Department of Neurology Johns Hopkins Bayview Medical Center Office Phone 410-550-1042 Fax 410-550-0539 rllinas@jhmi.edu

#### **EDUCATION AND TRAINING**

B.A in Anthropology	Graduated 1990
Washington University	St. Louis, MO

M.D. Graduated 1994
New York University School of Medicine New York, NY

Intern in Medicine, Graduated 1995
Boston University, Boston City Hospital, Boston, MA

Resident in Neurology. Graduated 1998 Harvard University, Brigham and Women's Hospital Boston, MA

Fellow in Cerebrovascular Disease Graduated 2000 Harvard University, Beth Israel Hospital Boston, MA

#### PROFESSIONAL EXPERIENCE

Associate Professor in Neurology- 2007-present

Johns Hopkins University School of Medicine

Assistant Professor in Neurology- 2002-2007

Johns Hopkins University School of Medicine

Instructor in Neurology 2000-2002

Johns Hopkins University School of Medicine

# **RESEARCH ACTIVITIES**

**PUBLICATIONS** 

<u>Peer-reviewed Original Research Articles:</u> H-index: 9

- 1. Feinman, R; **Llinas, RH**; Abramson C and Forman, R(1990). *Electromyographic Record of Classical Conditioning of Eye Withdrawal in the Crab*. Biological Bulletin 178:187-194.
- 2. Dale Hunter, D; **Llinas, RH**, Ard, M; Merlie, JP; and Sanes, J. (1992) *Expression of S-Laminin in the Developing Rat Central Nervous System*. The Journal of Comparative Neurology; 323:238-251.
- 3. Devinsky, O; Perrine, K; **Llinas, RH**; Luciano, DJ and Dogali (1993) M. *Anterior Temporal Displacement Language Areas in Patients with Early Onset Temporal Lobe Epilepsy*. <u>Annals of Neurology</u>; 34(5):727-732.
- 4. Linfante, I; **Llinas, RH**; Caplan, LR; and Warach, S. (1999). *MRI features of intracerebral hemorrhage within 2 hours from symptom onset*. <u>Stroke</u>; 30:2263-2267.
- 5. **Llinas, RH and** Henderson, G. (1999). *Tremor Presenting as Pseudoventricular Tachycardia*. <u>New England Journal of Medicine</u> Vol 341 No 17 page 1275.
- 6. Murray, BJ; MD, **Llinas, RH**; Caplan, LR; Scammell, T; and Pascual-Leone, A. (2000) *Cerebral Venous Thrombosis Presenting as Acute Migrographia and Hypophonia. Neurology* 54(3):751-753.
- 7. Saposnik, G; Caplan, LR; Gonzalez, L; Baird, AE; Dashe, J; Luraschi1,A; Llinas, RH; Lepera, S; Linfante, L; Chaves, C; Kanis, K; Sica1, RE; and Rey, RC. (2000). *Differences in Stroke Subtypes among Natives and Caucasians in Boston and Buenos Aires*. Stroke; 31:2385-2389.

- 8. Linfante, I; **Llinas, RH**; and Schlaug, G; Chaves, C; Warach, S; Caplan, LR (2001) *Diffusion-Weighted Imaging and National Institutes of Health Stroke Scale in the Acute Phase of Posterior-Circulation Stroke*. <u>Arch Neurol</u>; 58:621-628
- 9. Anschel DJ, Simon DK, **Llinas RH**, Joseph JT. (2002) *Spongiform encephalopathy mimicking corticobasal degeneration*. Mov Disord May;17(3):606-7
- 10. Jaillard A, Hommel M, Baird AE, Linfante I, **Llinas RH**, Caplan LR, Edelman RR, Warach S. (2002) *Significance of early CT signs in acute stroke. A CT scan-diffusion MRI study*. Cerebrovasc Dis;13(1):47-56
- 11. Linfante I, **Llinas RH**, Selim M, Chaves C, Kumar S, Parker RA, Caplan LR, Schlaug G. (2002) Clinical and vascular outcome in internal carotid artery versus middle cerebral artery occlusions after intravenous tissue plasminogen activator. <u>Stroke</u>;33(8):2066-71.
- 12. Restrepo, L; Pradilla, G; **Llinas, RH**, and Beauchamp, NJ (2003) Perfusion- and Diffusion-Weighted MR *Imaging–Guided Therapy of Vertebral Artery Dissection:* Intraarterial Thrombolysis through an Occipital Vertebral Anastomosis <u>AJNR</u> 24: 1823-1826
- 13. Chaves CJ, Staroselskaya I, Linfante I, **Llinas R**, Caplan LR, Warach S. (2003) *Patterns of perfusion-weighted imaging in patients with carotid artery occlusive disease*. <u>Arch Neurol</u>, 60(2):237-42
- 14. Gibbons, C and Llinas, RH. (2003) A Woman With Headache and Dizziness. MedGenMed.13; 5(1): 35.
- 15. Ziai, WC MD; Ardelt, AA; Llinas, RH. (2006) Brainstem stroke following uncomplicated cervical epidural steroid injection. Arch Neurol. 2006;63:1643-1646.
- 16. Gottesman, R; Alt, J; Wityk, RJ and Llinas, RH. (2006) Predicting abnormal coagulation in Ischemic Stroke: A potential use in reducing rt-PA delays. Neurology. 67:1665-1667
- 17. Hillis AE, Kleinman, JT, Newhart M, Heidler-Gary J, Gottesman R, Barker PB, Aldrich E, **Llinas RH**, Wityk R, and Chaudhry P. (2006) *Restoring Cerebral Blood Flow Reveals Neural Regions Critical for Naming* J. Neurosci. 26: 8069-8073
- 18. A. E. Hillis, MD, MA, L. Gold, BA, V. Kannan, BA, L. Cloutman, PhD, J. T. Kleinman, BA, M. Newhart, BA, J. Heidler-Gary, MS, C. Davis, BS, E. Aldrich, MD, PhD, **R. Llinas**, MD and R. F. Gottesman, MD, PhD (2008) *Site of the ischemic penumbra as a predictor of potential for recovery of functions*. Neurology 2008;71:184-189

- 19. L. Christine Turtzo, Jonathan Kleinman, and **Rafael H. Llinas**. *Capgras syndrome and unilateral special neglect in non-convulsive status epilepticus* Behavioural Neurology Nov 19 (2008) 1-4
- 20. Turtzo, LC, Gottesman R, **Llinas RH** *Diffusion weighted imaging showing "pearls" predict large vessel disease as stroke etiology*. Cerebrovasc Dis 2009;28:49-54
- 21. Ostrow L, **Llinas RH**. *The Eastchester Clapping Sign (ECS): A Novel Test of Parietal Neglect*. Annals of Neurology 2009 Mar 20; 66(1):114-117.
- 22. Yolanda Chik, Robert Hoesch, Christos Lazaridis, Carla Weisman, and **Rafael Llinas** *Postpartum Cerebral Angiopathy in Association with Subarachnoid Hemorrhage*. Nature Reviews Neurology 2009 Sep. 5(9):512-6,
- 23. E. Clarke Haley Jr MD\*; John L.P. Thompson PhD; James C. Grotta MD; Patrick D. Lyden MD; Thomas G. Hemmen MD; Devin L. Brown MD, MS; Christopher Fanale MD; Richard Libman MD; Thomas G. Kwiatkowski MD; **Rafael H. Llinas MD**; Steven R. Levine MD; Karen C. Johnston MD, MSc; Richard Buchsbaum; Gilberto Levy MD, MS; Bruce Levin PhD; for the Tenecteplase in Stroke Investigators. *Phase IIB/III Trial of Tenecteplase in Acute Ischemic Stroke. Results of a Prematurely Terminated Randomized Clinical Trial.* Stroke. 2010; 41:707
- 24. Levy, M. **Llinas RH** Deferiprone Reduces Hemosiderin Deposition in the Brain of a Patient with Superficial Siderosis. <u>AJNR Am J Neuroradiol</u>. 2011 Jan;32(1):E1-2. Epub 2010 Nov 4
- 25. Ziai WC, Schlattman D, **Llinas R**, Venkatesha S, Truesdale M, Schevchenko A, Kaplan PW. *Emergent EEG in the Emergency Department in Patients with Altered Mental States*. <u>Clin Neurophysiol.</u> 2011 Oct 4.
- 26. . Meschia JF, Nalls M, Matarin M, Brott TG, Brown RD Jr, Hardy J, Kissela B, Rich SS, Singleton A, Hernandez D, Ferrucci L, Pearce K, Keller M, Worrall BB; Siblings With Ischemic Stroke Study Investigators. *Siblings with Ischemic Stroke Study: results of a genome-wide scan for stroke loci*. Stroke. 2011 Oct;42(10):2726-32.
- 27. Michael Levy, MD, PhD; **Rafael Llinas, MD.** *Pilot Safety Trial of Deferiprone in 10 Subjects with Superficial Siderosis* <u>Stroke</u>. 2012 Jan;43(1):120-4.

# <u>Invited Reviews</u>

- 1. **Llinas R**, Barbut D, and Caplan L.(2000) Neurologic Complications of Cardiac Surgery. <u>Prog Cardiovasc Dis</u> Sep-Oct; 43(2): 101-12.
- 2. **Llinas R** and Caplan L.(2001) Evidence Based Treatment of Ischemic Stroke. <u>Neurology</u> Clinics Feb. (19): 79-105.

- 3. **Llinas RH** (2001) 'Summary of: Factors Predicting Ischemic Events in Carotid Dissection' Journal Watch Neurology. Nov 21.2001
- 4. **Llinas RH** (2002) "Stroke Therapy by Marc Fisher" Book Review. <u>Annals of Neurology</u>. vol 51; issue 5. pg.664.
- 5. **Llinas RH**, (2003) Aldrich E, Wityk R. Update on Stroke Prevention and Treatment. Johns Hopkins <u>Advanced Studies in Medicine</u>.3 (2): 93-101.
- 6. **Llinas R** (2004) Anticoagulation with Atrial Fibrillation, Primary and Secondary Stroke Prevention. Continuing Professional Education. <a href="http://www.ncpaahec.org/cpeponline.html">http://www.ncpaahec.org/cpeponline.html</a>
- 7. **Llinas RH** (2005) 'Summary of:Thrombolysis for Central Retinal Artery Occlusion.' <u>Journal Watch Neurology</u> Apr 7. 2005
- 8.**Llinas RH** (2006) 'Summary of: Predictors of Good Outcome After rt-PA for Ischemic Stroke. <u>Journal Watch Neurology</u> Feb 9. 2006
- 9. **Llinas RH** (2006). Could discontinuation of aspirin therapy be a trigger for stroke? <u>Nature Clinical Practice Neurology</u> (2006) 2, 300-301
- 10. **Llinas RH** (2006) Acute Ischemic Stroke Treatment. <u>US Neurological Diseases</u>. 2006 Pages 35-7.
- 11. Levy, M; Turtzo, LC; **Llinas, RH** (2007) .Superficial siderosis: case report and review of the literature <u>Nature Clinical Practice Neurology</u> (2007) 3, 54-58
- 12. Blakely, J and **Llinas RH** (2007) Update on intravenous and Intra-arterial Thrombolysis Acute Stroke. In JR Carhuapoma. <u>Journal of Neurological Sciences</u>. Volume 261, Issues 1-2, 15 October 2007, Pages 55-62
- 13. Cronin C, Weisman CJ and **Llinas RH** Stroke treatment: Beyond the three-hour window and in the pregnant patient. <u>Ann N Y Acad Sci.</u> 2008 Oct;1142:159-78.
- 14. Llinas RH. Ischemic stroke and ICU care. Semin Neurol. 2008 Nov;28(5):645-56
- 15. Radvani M and **Llinas R**. *indications for stenting of arterial stenosis*. <u>Updates in Interventional Radiology</u>, 2012

#### Book Chapters, Monographs

1. Llinas R. (2004) Selected topics in neurology. In R. Miller, MD, S.Sisson, and B.Ashar. (Ed) <u>The Johns Hopkins Internal Medical Board Review</u>. Elsevier publishing, 481-486.

- 2. Weisman, CJ; **Llinas, RH.**(2005) Cerebrovascular Disease in Women. In P. Kaplan.(Ed) Neurologic Disease in Women . 2<sup>nd</sup> Edition. Demos Publishing, 247-264
- 3. **Llinas, RH** (2006). Primary and Secondary Prevention of Ischemic Stroke. In R. Wityk and **RH Llinas** (Eds) <u>Stroke</u>. American College of Physicians Publishing
- 4. **Llinas RH** (2006). Pragmatic Approach to the Stroke Patient. In R. Wityk and **RH Llinas** (Eds) <u>Stroke</u>. American College of Physicians Publishing
- 5. **Llinas RH** (2006). Transient Ischemic Attacks. <u>In</u> R. Johnson, J. Griffin, and J. McArthur (Eds). <u>Current Therapy in Neurologic Disease</u> 7<sup>th</sup> edition. Mosby publishing, 209-212.
- 6. **Llinas RH,** Johnson, C (2006). Principles of Cerebrovascular Disease. In R. Barker; J; Burton; P. Zieve.(Eds) <u>Principles of Ambulatory Medicine</u> 7<sup>th</sup> Edition. Lippincott and Williams publishing.
- 7. **Llinas RH**; Johnson, C (2006). Evaluation of the Patient with Neurologic Symptoms. In R. Barker; J. Burton; P. Zieve.(Eds) <u>Principles of Ambulatory Medicine</u> 7<sup>th</sup> Edition. Lippincott and Williams publishing.
- 9. Llinas RH. (2007) Selected Topics in Neurology. In R. Miller, MD, S.Sisson, and B.Ashar. (Eds) The Johns Hopkins Internal Medical Board Review 2nd Edition. Elsevier publishing,
- 10. Llinas RH. and Wityk R (2007) Stroke and Seizure evaluation. In R. Miller, MD, S.Sisson, and B.Ashar. (Eds) <u>The Johns Hopkins Internal Medical Board Review</u>. 2nd Edition. Elsevier publishing,
- 11. **Llinas R** (2007) Initial Assessment of Patients with Stroke like Symptoms. In M.Selim and M.Torbey. <u>The Stroke Book.</u> Cambridge University Press
- 12. **Llinas R** (2008) Neurology Section signs/symptoms. In Scott Kahan, Rendonda Miller, Ellen Smith (Eds) <u>In a Page-Signs and Symptoms</u>. Lippincott Williams & Wilkins Press
- 13. Raznik B **Llinas R** (2008) Neurological Examination for the Interventionalist. In M.Mauro, K. Murphy, K Thompson A Venbrux and C. Zollikoffer(Eds) <u>Image Guided Intervention:</u> <u>Expert Radiological Series.</u> Saunders Publishing

- 14. **Llinas R** (2008) Neurology Section signs/symptoms. In Scott Kahan, Bimal Ashar, (Eds) <u>In a Page-Medicine</u>. Lippincott Williams & Wilkins Press
- 16. Llinas RH. (2010) Selected Topics in Neurology. In R. Miller, MD, S.Sisson, and B.Ashar. (Eds) The Johns Hopkins Internal Medical Board Review 3nd Edition. Elsevier publishing
- 17. Llinas RH. and Wityk R (2010) Stroke and Seizure evaluation. In R. Miller, MD, S.Sisson, and B.Ashar. (Eds) <u>The Johns Hopkins Internal Medical Board Review</u>. 3nd Edition. Elsevier publishing,
- 18. **Llinas RH** (2010) Stroke Section. In S. Durso, L Bowker (Eds) <u>Oxford American</u> <u>Handbook of Geriatric Medicine</u>. 1<sup>st</sup> edition. Oxford University Press

# Edited Books:

- 1. Appel, L; **Llinas, RH**, and Margolis, SM (2002). Hypertension and Stroke. <u>The Johns Hopkins White Pages</u> Medledders Associates and Duckwall Productions (60 pages)
- 2. Appel, L; **Llinas, RH**, and Margolis, SM (2003). Hypertension and Stroke. <u>The Johns Hopkins White Pages</u>. Medledders Associates and Duckwall Productions (60 pages)
- 3. Appel, L; **Llinas, RH**,. and Margolis, SM (2004). Hypertension and Stroke. <u>The Johns Hopkins White Pages</u>. Medledders Associates and Duckwall Productions (60 pages)
- 4. Margolis, S and **Llinas, RH** (2005). Hypertension and Stroke. The Johns Hopkins White <u>Pages.</u> Medledders Associates and Duckwall Productions (60 pages)
- 5. Margolis, S and **Llinas, RH** (2006). Hypertension and Stroke. <u>The Johns Hopkins White Pages.</u> Medledders Associates and Duckwall Productions (60 pages)
- 6. Wityk RJ and **Llinas RH** (2007) <u>Stroke</u>. American College of Physicians Publishing (400 pages)
- 7. Margolis, S and Llinas, RH (2007). Hypertension and Stroke. The Johns Hopkins White Pages. Medledders Associates and Duckwall Productions (60 pages)
- 8. Margolis, S and **Llinas, RH** (2008). Hypertension and Stroke. The Johns Hopkins White Pages. Medledders Associates and Duckwall Productions (60 pages)
- 9. Margolis, S and **Llinas, RH** (2009). Hypertension and Stroke. The Johns Hopkins White Pages. Medledders Associates and Duckwall Productions (60 pages)

- 10. Margolis, S and **Llinas, RH** (2010). Hypertension and Stroke. The Johns Hopkins White Pages. Medledders Associates and Duckwall Productions (60 pages)
- 11. Margolis, S and **Llinas, RH** (2011). Hypertension and Stroke. The Johns Hopkins White Pages. Medledders Associates and Duckwall Productions (60 pages)
- 12. 11. Margolis, S and Llinas, RH (2012). Hypertension and Stroke. The Johns Hopkins White Pages. Medledders Associates and Duckwall Productions (60 pages)

# **Published Abstracts**

- 1. Chaves, C; Staroselskaya, I; **Llinas, RH;** Linfante, I; Caplan, LR andWarach, S. (2000) Perfusion-Weighted Imaging in Patients with Carotid Artery Occlusive Disease. <u>Neurology</u> 54; 7:A217
- 2. Saposnik, G; Voetsch, B; Chaves, C; **Llinas, RH**; Estol, C and Caplan LR.(2000) Comparison between length of and duration of anterior and posterior circulation transient ischemic attacks. <u>Stroke</u> abstracts P178.
- 3. **Llinas RH**; Schlaug, G; Chaves, C; Staroselskaya, I; Warach, S; Louis LR. Caplan, and Linfante, I .(2000) *Diffusion-weighted Magnetic Resonance Imaging in Posterior Circulation Stroke*. Stroke: P152.
- 4. **Llinas**, **RH**; Linfante, I; Chaves, C; Staroselskaya, I; Silver, B; Warach, S; Caplan, LR; and Schlaug, G (2000) Evolution of Diffusion-Perfusion Mismatch Pattern in Acute Stroke. Neurology. 54:A95-96
- 5. Choi, G; **Llinas, RH**; Linfante, I; Caplan, LR; and Schlaug, G. (2001) Acute Diffusion-perfusion Mismatch Pattern Predict Chronic Lesion. Neurology. April. A252. PO4.018.
- 6. Linfante, I; **Llinas, RH**; Chaves, C; Caplan, LR; and Schlaug, G. (2001) Reperfusion rates and Clinical Outcome of MCA versus ICA Occlusion: MR/CT before and after t-PA within three hours after Symptom Onset. Neurology A435. P06.096.
- 7.Alsop, DC; Wedmid, P; Sevcik, P; Choi, C; Linfante, I; Selim, M; **Llinas, RH**; Horkan, C; Schlaug, G(2002) Quantitative Mean Transit Time for Tissue Assessment in Acute Stroke. <u>Beth Israel Deaconess Medical American</u>. <u>Stroke Association and Affiliate Posters</u> (ASA 1-ASA 7) and Ongoing Clinical Trials Posters
- 8) Schlaug, G; **Llinas**, **RH**; Linfante, I; Starolselskaja, I; Caplan, LR; Edelman, RR.(2002) Characterizing Brain Tissue at Risk for Infarction Stroke P165

- 9) Oh, S; Ziai, WC; **Llinas RH**; Razumovsky, A; and Wityk, RJ (2003) Quantitation *of Contrast TCD in Patients with and without Atrial Septal Aneurysm*. <u>American Stroke Association</u> International Stroke Meeting .
- 10) Khouri, Z; Maygers, J: **Llinas RH** (2006) Computerized Order Sets Increase Compliance with Joint Commission Standards. <u>American Stroke Association International Stroke Meeting</u>. NSP8 Kissimee, Florida.
- 11) Turtzo, C, Gottesman R and **Llinas RH** (2007). A pearl in every cowslips ear. How MRI can predict stroke etiology. <u>ASA/AHA abstracts</u>
- 12) Castle J, Llinas RH and Wityk R.(2007) CNS vasculitis a 20 years Johns Hopkins Experience. ASA/AHA abstracts
- 13) Ostrow L and Llinas RH Eastchester Clap Sign. ANA abstracts 2008
- 14) Shaker M Eid; Skon M Nazarian; Devon Dobrosielski; Scott M Carey; Joel M Palachuvattil; Romergryko G Geocadin; **Rafael Llinas**; Kerry J Stewart; Nisha Chandra-Strobos. A Paradigm Redefined: Time Course of Neurological Recovery Following Hypothermia Therapy Post Non-Traumatic Out-of-Hospital Cardiac Arrest. Circulation. 2010;122:A106
- 15) Chik, Y, Gottesman, R, Zeiler, S; Rosenberg J, and Llinas RH Clot Or Not: Using The Sigmoid Plate Sign On Head CT to Differentiate Transverse Sinus Thrombosis from a Congenitally Atretic Cerebral Transverse Sinus Conference: International Stroke Conference STROKE Volume: 42 Issue: 3 Pages: E285-E285 Published: MAR 2011

# **Current Funding**

Deferriprox in Treatment in Superficial Siderosis Levy/Levy/Llinas PI 8/08-9/10 ApoPharma Unrestricted grant \$10,000 No salary support all funds to research organization.

Differential Gene Expression Profiling in the Blood of Patients with MS and MS Mimics – Migraine. Diogenix Pharma. Calabrese/Llinas PI 5/09-5-10 Total direct cost 18,000

# Completed

	<u>Effort</u>	Total award
NIH/NIHLB 2R44HL070455 Krausman (PI) 10/01/07 – 2/28/09 Apnea Detection System for NICU Monitoring	5% effort	\$186,554
NIH/R01 NS037666-04A1. (PI: Haley) 10/05-10/08;	10% effort	\$61,040.

TNK acute thrombolysis trial

My role: PI

NIH/R01NS038529-03. (PI: Benevente) 1/7/03 to 2008; 10% effort. \$117,200;

Secondary Prevention of Small Subcortical Strokes (SPS3)

NIH/RO1 NS 038384-05S1 – (PI Hobson II) 2/06-2/07, 3% effort \$16,548

Carotid Revascularization Endarterectomy vs. Stenting Trial

(CREST)My role: Investigator

NIH R01 NS 39987 (PI Meschia) 5/00 to 6/02

Siblings with Ischemic Stroke Study (SWISS). 1% effort. \$17,224 (PI)

NIH/NINDS R01 NS42607-01A2. (PI: Wityk) 2% effort \$316,046

6/1/03-5/30/08; Induced Hypertension for Acute Ischemic

Stroke; Total direct cost: My role: Investigator

NIH RO1 NS36643-01A1. PI: Chimowitz 5/00 to 5/03 5% effort \$14,992(PI)

Warfarin-Aspirin Symptomatic Intracranial Disease Study.

(WASID)

NIH R01 NS34447 PI Toole 5/00 to 6/03 15% effort \$267,168

(PI)Vitamin Intervention for Stroke Prevention (VISP)

#### **EDUCATIONAL ACTIVITIES**

# **TEACHING:**

# **Classroom Instruction**

Lecturer, Neurology Resident Noon Lecture Series (2001 to pres)

<u>Annual lectures:</u> CT scan Interpretation, MRI physics and Interpretation, Acute Stroke and use of rt-PA, Interpretation of conventional angiography, Basilar Occlusion syndrome, Carotid disease, Evaluation and treatment of Migraine

Lecturer, Stroke fellow Conference 2010-11

Annual lectures: Thalamic vascular anatomy. Cadasil. RCVS

Lecturer, Johns Hopkins Bayview Medical Resident Noon Lecture Series (2006-10)

Annual lecture: Primary and Secondary stroke prevention

Lecturer, Neuroscience course NYU School of Medicine

<u>Annual lecture</u>: Coma and altered States of Consciousness (2004 to pres) Annual lecture: Stroke and Cerebrovascular Disease. (2009 to pres)

Lecturer, JHSOM Physical Diagnosis Course. 1<sup>st</sup> and 2nd year (2006-10) Annual lecture: The Neurological Exam.

Lecture JHSOM Neuroscience course

Annual lecture: Stroke and Cerebrovascular Disease. (2009-11)

Annual lecture: Regional-Functional Anatomy: Brainstem & Cranial Nerves (2011)

Lecture series. Imaging of psychiatric disorders for psychiatrists (2010-11)

# Clinical Instruction

Instructor / Preceptor, Medical Student. Physical Diagnosis course. Johns Hopkins Medical School (2003-05)

Instructor, Neurology Section of Medical Intern Physical Diagnosis course.

Johns Hopkins Bayview 3-hours week for 10 weeks (2004 to pres)

Instructor /Preceptor 'Pain section' of Clinical Neuroscience Course Johns Hopkins Medical School (2004 to 2007)

"Chairman's rounds" Johns Hopkins Bayview Medical Center Monthly Chairman's Rounds (2005 to pres)

Neurocritical Care Staff University of Houston

# Sabin College Core Faculty

College Advisor. Johns Hopkins SOM year 1-4<sup>th</sup> year (2005 to 2008) Johns Hopkins Neurology Academic advisor

Hans Adrian Puttgen, M.D. Neuro-critical care attending	2004-present
James Castle, M.D. Neurology resident. Stroke Fellow Stanford University	2004-2006
Robin Wilson, M.D. PhD- Neurology Attending Sinai hospital	2004-2006
Constance Chen, M.D	2002-2004

Jason Rosenberg,M.D 2005 to present

Attending Physician Johns Hopkins

Robert Hoesch, M.D, PhD 2005 to present

Neuro-critical care fellow

Steven Zeiler 2006- to present

Stroke fellow

Melissa Motta 2007 to present

Neurology resident

John Probosco 2008 to present

Neurology resident

#### **MENTORING**

Christopher Gibbons (2000-2003) Authored case presentation in MEDGEN website

Jaishari Blakely (2003-2005) Authored two chapters on thrombolysis

L. Christina Turtzo (2004-2007) Authored invited review for Nature Clinical Practice

Michael Levy (2005-2008) Authored invited review for Nature Clinical Practice

Carolyn Cronin (2005-2008) Published Review in Year in Neurology 2008

Robert Hoersh (2005-2008) Published Paper

Lyle Ostrow (2006-2009) Published paper

Yolanda Chik (2007-2010) Published paper

Melissa Motta 2009 to 2011) Mentor for R25 grant Elizabeth Marsh 2009-2012 Mentor for R25 grant

#### **EDITORIAL ACTIVITIES**

Reviewer for Journal Watch Neurology 2002-present

Reviewer for Journal Medicine. 2003-present

Reviewer for Annals of Neurology 2003-present

Editor Johns Hopkins White pages, Hypertension and Stroke editions 2002 to present

Reviewer for *The Neurologist* 2006- present

Reviewer for Aging Clinical and Experimental Research 2006- present

Reviewer for Journal of Cerebral Blood Flow and Metabolism 2007 to present

Reviewer for Journal Stroke 2007 to present

Reviewer for Lancet Neurology 2008 to present

Reviewer Hospitalist Medicine 2009

Reviewer Critical Care Medicine 2010-2011

#### **CLINICAL ACTIVITIES**

#### SPECIALTY CERIFICATION and LICENSURE

Diplomate of National Board of Medical Examiners (1994), #40034316

American Board of Psychiatry and Neurology Certification (1999) #47094

State of Maryland Board of Quality Assurance. (2000) #D0056263

American Board of Psychiatry and Neurology

-Vascular Neurology Subspecialty Certification (2006) #156308

American Board of Psychiatry and Neurology Maintenance of Certification (2009)

#### SERVICE RESPONSIBILITIES

#### Current:

Attending Neurologist, Clinical Stroke Service. Johns Hopkins Hospital 2-4 weeks per year.

Attending Neurologist, Inpatient service. Johns Hopkins Bayview. 4 months a year

Inpatient Cerebrovascular Consultation Johns Hopkins Bayview.

Cerebrovascular outpatient clinic (Two half-days per week)

Resident clinic outpatient attending (Half day per month)

Neurosonology Attending TCD/Carotid Doppler. JHBMC (2000-2007.)

### Previous:

Co-Director Neuro-Critical Care Unit. Neurology and Neurosurgery, JHBMC. (2000-2002)

#### **ORGANIZATIONAL ACTIVITIES**

#### **Administrative Duties**

Joint Practice Improvement Committee Neuroscience (2002-present)

Associate Residency Director (2003-present)

Graduate Education Committee (2003-present)

JCAHO Stroke Designation Committee (2005-present)

Promotions Committee Neurology/Neurosurgery (2005-2010)

Joint Practice Improvement Committee Neurosciences (2005-present)

Director Johns Hopkins Bayview Intermediate Care Unit (2004-present)

Johns Hopkins Bayview. Neurology Medical Director (2005-present)

Johns Hopkins Bayview Organ Donation council Chairman 2005-9

AHA International Stroke Conference Abstract Grading Subcommittee. (2008-present)

Johns Hopkins Bayview Chairman Clinical Practice Committee (2009- present)

Vice Chair Department of Neurology Clinical Services and Quality (2010- present) Johns Hopkins Hopkins Hopkins Bayview Medical Center

# PROFESSIONAL SOCIETIES AND LEADERSHIP

American Academy of Neurology. (1999-present)

Council member for American Heart Association-Stroke Division. (2000-present)

Physician leader Maryland Transplant Consortium for JHBMC (2001-present)

Fellow of The American Heart Association.(2004-present)

Maryland Stroke Association. (2005-present)

AHA Operation Stroke Executive Committee Maryland (2003-05)

AHA Executive Committee Maryland Stroke Alliance (2006-present)

Fellow of the American Neurological Association. (2007- present)

Fellow (overseas) Royal Society of Medicine (2008-pres)

#### **ADVISORY COMMITTEES and REVIEW GROUPS:**

NIH-DSMB member for Fast-Mag study. PI Jeffery Savor. 2004-present

American Heart Association Regional Grant Review Committee 2008-11

NIH-Safety Monitor Occult Small Vessel Cerebrovascular Disease 2009-present in High Risk Families study. PI Paul Nyquist

Co-director NIH study section Brain-CL2 2012

NIH-ANIE study section 2012

#### **RECOGNITION:**

Johns Hopkins Department of Neurology Frank R. Ford Award for 'Outstanding Teacher in Neurology' award (2002)

American Academy of Neurology 'National Teacher Recognition' Award (2004)

Johns Hopkins Bayview 'Service Excellence' Quarterly Award (2004)

Nominated and Elected Fellow of American Heart Association (FAHA) (2004)

Society of Interventional Radiology 'Distinguished Faculty Speaker' Award. (2005)

Johns Hopkins School of Medicine 'Service Excellence' Annual Award (2005)

Johns Hopkins Osler Service 'Excellence in Teaching' Award (2005)

Johns Hopkins Department of Neurology Frank R. Ford Award for 'Outstanding Teacher in Neurology' award (2005)

Health and Human Services Medal of Honor for Excellence in Organ Donation (2006)

Nominated and Elected Fellow of American Neurological Association (FANA) (2007)

Order of Meritorious Citizen. Alcaldia de Bucaramanga (2009) Colombia South America

Academic Recognition Award. Universidad Industrial de Santander. (2009)\Colombia South America

Johns Hopkins Bayview Leadership Award (2009)

Master Clinician Dinner- invited by Neurology Residents class of 2010

Inducted into Miller-Coulson Academy of Clinical Excellence at Johns Hopkins (2010)

# **CME Courses Organized**

Course Director (2006) <u>Development and Maintenance of Stroke Centers.</u> Johns Hopkins Hospital CME Course. Asthma and Allergy Center. Baltimore MD

Course Director (2007 Primary Stroke Centers. St. Mary Hospital. Leonardtown, MD

#### **LECTURES**

Local talks 50 talks since 2001

Carotid disease. Comprehensive Vascular Center Johns Hopkins Bayview- Baltimore, Maryland. (2000)

Diagnosis and Treatment of Migraine. Grand Rounds Department of Internal Medicine Laurel General Hospital. Laurel, Maryland. (2001)

Diagnosis and Treatment of Migraine. Grand Rounds Department of Internal Medicine Sinai Hospital. Baltimore, Maryland (2001)

Migraine in pregnancy. Grand Rounds OB/GYN department. Johns Hopkins Medical Center. Baltimore Maryland. (2002)

MRI and stroke evaluation Good Samaritan Hospital resident lecture series. Baltimore. Maryland (2002)

West Nile Encephalitis. Grand Rounds. Department of Internal Medicine. Johns Hopkins Bayview. Baltimore, Maryland 2002

*Topics in Cerebrovascular Disease*. Grand Rounds Department of Neurology. Walter Reed Hospital. Washington D.C (2002)

Stroke evaluation and treatment. Grand Rounds Department of Internal Medicine. Maryland General Hospital Baltimore, Maryland (2002)

Emergency stroke evaluation for Emergency Medical Technicians. Lecture Anne Arundel, Maryland. (2003)

MRI appearance of CNS hemorrhage. Grand Rounds. Johns Hopkins Department of Neurology, Baltimore, Maryland. (2003)

MRI and stroke evaluation. Lecture. Good Samaritan Hospital resident lecture series. Baltimore. MD (2003)

Stroke Evaluation and Treatment. Grand Rounds Department of Internal Medicine. St. Agnes Hospital. Baltimore, Maryland 2003.

Primary and Secondary Prevention of Ischemic stroke. Grand Rounds Department of Internal Medicine. Johns Hopkins Bayview Medical Center. Baltimore, MD (2003).

*Ischemic stroke. Nursing Issues.* Nursing and Medical Issues Course. Department of Neuroscience Nursing. Johns Hopkins Bayview Medical Center. Baltimore, MD (2003)

Ischemic and Hemorrhagic stroke. Neuro-intensive care nursing issues. Nursing and Medical Issues Course. Department of Neuroscience Nursing. Johns Hopkins Bayview Medical Center. Baltimore, MD (2003)

*Coma and brain stem strokes*. Morbidity and Mortality Conference. Upper Chesapeake Hospital. Baltimore, Maryland. (2003)

Cincinnati Stroke Scale for Emergency Medical Technicians. Lecture Anne Arundel, Maryland. (2003)

*Ischemic and Hemorrhagic stroke*. Nursing issues. Johns Hopkins Hospital. Baltimore, MD (2004)

Stroke and you. Lecture Community talks, Community & Good Neighbors, Inc. Highlandtown. MD (2004)

51 year old with stroke and seizures. Clinical Pathologic Correlation. Department of Neurology. Johns Hopkins Medical Center. Baltimore, MD. (2004)

CNS Vasculitis. Grand Rounds Department of Rheumatology. Johns Hopkins Bayview Medical Center. Baltimore, MD. (2004).

Administration of rt-PA for Acute Stroke. Lecture AHA sponsored dinner series. Baltimore Maryland (2004)

Stroke and Parkinson's disease. Lecture. Howard Community College. Baltimore MD (2004)

Stroke prevention and diet. Dietary consultation rounds. Johns Hopkins Bayview Medical Center. Baltimore. Maryland. (2004)

Management of Stroke and Intracranial Hemorrhage. Medical Resident Rounds Johns Hopkins Bayview Internal Medicine. (2004)

CT and MRI and Stroke Evaluation. Johns Hopkins Rehabilitation Education Series. Baltimore, Maryland.(2004)

*Thalamic Pain Syndrome*. Blaustein lecture series Johns Hopkins Medical Center. Baltimore, Maryland (2004)

Stroke therapeutics and treatment. Johns Hopkins Neuroscience Nursing series. Johns Hopkins Medical Center. Baltimore, Maryland (2004)

Neurology for the Primary Care Physician. *Primary and Secondary Prevention of Ischemic Stroke*. (2005) St. Joseph's Hospital. Baltimore Maryland, Lecturer

Migraine and Chronic Headache Syndromes. Lecture. Undergraduate Psychology and Neuroscience Course. Johns Hopkins University Baltimore MD (2005)

Transient Ischemic Attacks Internal Medicine Grand Rounds St. Joseph's Hospital. Baltimore Maryland, (2005)

*Pre-hospital Care of Acute Stroke.* Maryland State Fireman Annual Convention. Ocean City MD (2005)

Primary Stroke Center.(2006) *Diagnosis and Treatment of Adult Stroke*. Leonardtown, MD, Lecturer

Primary Stroke Center.(2006) *Diagnosis and Treatment of Stroke in the Young*. Leonardtown, Lecturer MD,

*Primary and Secondary Prevention of Stroke*. Greater Baltimore Medical Center Department of Medicine. Baltimore MD (2005)

*Pre-hospital Evaluation of Acute Stroke*. Invited Lecture. EMS Care Meetings Lutherville MD (2006)

*Update on Headache* Grand Rounds. Department of Obstetrics and Gynecology. Sinai Hospital. Baltimore MD (2006)

A 56 year-old man with right sided paresthesias. Clinical Pathologic Correlation. Department of Neurology. Johns Hopkins Medical Center. Baltimore, MD. (2006) http://www.neuro.jhmi.edu/conf/CPC/cases/2006\_11\_30.htm

Stroke in Women. Community Education Lecture Series. Johns Hopkins Bayview Community Relations. Baltimore Maryland. (2006)

Upper Chesapeake Health Stroke Symposium. *Current Therapies in Acute Stroke*. (2007) Bel Air, Maryland

Upper Chesapeake Health Stroke Symposium. *rt-PA Administration for Acute Stroke*. (2007) Bel Air, Maryland

Carotid Vascular Disease. Grand Rounds. Department of Internal Medicine. St. Agnes Hospital. Baltimore. Maryland (2007)

*Thrombolysis: History and Debates.* Grand Rounds. Department of Neurology. Johns Hopkins School of Medicine. Baltimore, Maryland (2007)

Diagnosis, and Treatment of Ischemic Stroke in Women Grand Rounds. Department of Obstetrics and Gynecology. Sinai Hospital. Baltimore MD (2007) Stroke publications 2008. ICH papers from AHA from New Orleans (2008) Sinai Hospital. Baltimore, Maryland

Evidence based Stroke Treatment. Medical Grand Rounds. St. Joseph's Hospital. Baltimore MD (2008)

Seziures in the obstetrical patient. OB/GYN Grand Rounds. Sinai Hospital. Baltimore MD (2008)

Primary and Secondary Prevention of Ischemic Stroke. Medical Grand Rounds. Mercy Hospital. Baltimore MD (2008)

Stroke Day at GBMC. *Cerebral Venous Occlusion*. (2009) Greater Baltimore Medical Center. Baltimore Maryland.

Man with sinusitis, elevated ESR and alteration of Mental status. Clinical Pathologic Correlation. Department of Neurology. Johns Hopkins Medical Center. Baltimore, MD. (2009)

*To Close or Not to Close PFO dilemma*. Medical Grand Rounds. Johns Hopkins Bayview Medical Center. Baltimore Maryland (2010).

*The Neurological Exam.* Neurology for the Non-Neurologist Course. CME event. Johns Hopkins Bayview Medical Center Maryland (2011)

# National talks or Local talks with a clear national draw

51 (note several are recurring engagements)

Cerebrovascular Topics at Johns Hopkins: *IV TPA in the Real world* (2001) Johns Hopkins School of Medicine, Lecturer.

Neurology for the Primary Practitioner. *Primary and Secondary Prevention of Stroke*. (2001), Baltimore, Maryland, Lecturer

Johns Hopkins Internal Medicine Board Review Course Lecture- *Spinal cord, nerve and muscle disease* (2002-9) Baltimore Maryland, Lecturer

Cerebrovascular Emergencies at Johns Hopkins *Cerebral Venous Thrombosis*. (2002) Baltimore, Maryland, Lecturer

48<sup>th</sup> annual Philip A. Tumulty Topics in Clinical Medicine at Johns Hopkins. *Primary and secondary prevention of stroke*. (2003) Baltimore Maryland, Lecturer

Pri-Med Harvard/Hopkins Combined Course (2003) *Primary, Secondary Prevention and Treatment of Ischemic Stroke.* Washington, D.C. Lecture

*Indications and pre and post procedure evaluation of carotid stents.* (2003) 1<sup>st</sup> Annual American Society of Interventional and Therapeutic Neuroradiologists. Washington D.C.

Cerebrovascular Disease Code Brain (2003) New horizons in diagnostics and therapeutics in ischemic stroke. Code Brian Baton Rouge, Louisiana. Keynote speaker

Johns Hopkins Internal Medicine Board Review Course *Seizure and Stroke evaluation* (2004-9) Baltimore Maryland, Lecturer

Edmund G. Beacham, Topics in Geriatric Medicine Course *Update on stroke prevention*. (2004). Baltimore, Maryland, Lecturer

INSPIRE Lecture Series Antiplatelet agents and Stroke (2004) Washington D.C. Lecturer

*Clinical Research in Ischemic Stroke.* Lecture 2<sup>nd</sup> Annual American Society of Interventional and Therapeutic Neuroradiologists. Washington D.C. (2004)

Coma and Altered States of Consciousness. Lecture NYU 2<sup>nd</sup> year Neuroscience Course. New York, New York. (2004-10)

11<sup>th</sup> Annual Johns Hopkins Pain Conference. *Migraine-Clinical Algorithm*. (2005) Baltimore, MD, Lecturer.

*Intra-arterial Thrombolysis Outcomes*. Plenary Session. Society of Interventional Radiologists. New Orleans, LA (2005)

*Neurologic Presentation and Etiology of Stroke.* Plenary Session Society of Interventional Radiologists. New Orleans, LA (2005)

Financial Aspects of Forming Stroke Centers. Invited lecture. Active Communications International Comprehensive Stroke Center Meeting. Chicago II.(2005)

Edmund G. Beacham, Topics in Geriatric Medicine Course. *Clinical Pearls in Neurology*. (2006-12). Baltimore, Maryland, Lecturer

Development and Maintenance of Primary Stroke Centers. *Primary and Secondary Prevention of Ischemic Stroke* (2006) Baltimore, Maryland, Lecturer

Get with the Guidelines Role of Leadership. Workshop lecture. American Heart Association lecture series. Montgomery General Hospital, Olney Maryland. (2006)

Financial Aspects of Forming Stroke Centers. Invited lecture. World Research Group. International Comprehensive Stroke Center Meeting. Las Vegas, NV (2006)

Financial Aspects of Forming Stroke Centers. Invited lecture. Active Communications International Comprehensive Stroke Center Meeting. Washington DC.(2006)

Neurology for the Primary Practitioner. *Primary and Secondary Prevention of Stroke*. (2006), Baltimore, Maryland, Lecturer

AAAAI National Symposium Headaches: Sinus or What (2007) San Diego. Speaker/Discussant

Pri-Med Harvard/Hopkins Combined Course (2007) *Rehabilitation of Stroke Patients with Significant Deficits*. Baltimore Maryland. Lecturer

*Thrombolysis, a history and misconceptions*. Department of Neurology. University of Connecticut. Hartford Hospital. Connecticut (2007)

Frontal Lobe Syndromes. Eastchester High School. AP Psychology class. Eastchester High. Pelham, New York (2007)

Edmund G. Beacham, Topics in Geriatric Medicine Course. *Neurological Gait Disorders*. (2008). Baltimore, Maryland, Lecturer

4<sup>th</sup> Annual Uniting to Fight Stroke. *TIA's. When to admit or not.* (2008) Winston-Salem, North Carolina

4<sup>th</sup> Annual Uniting to Fight Stroke. *Certified Primary Stroke Centers. Leaders of the Pack, or Not.* (2008) Winston-Salem, North Carolina

Formation and Maintence of JCAHO Stroke Centers. Invited lecture. Barrow Institute and Active Communications International. Comprehensive Stroke Center Meeting. Phoenix Arizona. (2008)

Johns Hopkins Internal Medicine Board Review Course. Lecture- *Movement Disorders* (2008-9) Baltimore Maryland, Lecturer

Johns Hopkins Neurocritical Care for the Medical and Surgical Intensivist: The Comprehensive Cerebrovascular Center. Lecture-*IV Thrombolysis: A Review of Studies and Indications* (2009-12) Tyson's Corner, Virginia

Philip A. Tumulty Topics in Clinical Medicine at Johns Hopkins. *Diagnosis and Treatment of Cerebral Aneurysm.* (2009) Baltimore Maryland

Stroke: Not a Game of Chance-Health Care Disparities in Stroke Care. (2009) Opening Plenary lecture. Winston-Salem, North Carolina.

Stroke: Not a Game of Chance- *Strokes cause by Chiropractors and Beauticians*. (2009) Winston-Salem, North Carolina.

Stroke: Not a Game of Chance-*Can Hospitals/Doctors be Sued for Not Giving t-PA?* (2009) Closing Plenary. Winston-Salem, North Carolina.

5<sup>th</sup> Annual Uniting to Fight Stroke. *TIA's. When to admit or not.* (2010) Winston-Salem, North Carolina

Johns Hopkins Neurology Outpatient Review Course. *Basics of Neuro – Imaging*. Lecture. Baltimore ,MD (2010)

Pri-Med Harvard/Hopkins Combined Course (2010-11) 5 Neurological Clinical Situations, Lecture, Baltimore MD

Alzheimers and Related Disorders CME course (2011) Vascular Dementia. Lecture, Baltimore Maryland

Philip A. Tumulty Topics in Clinical Medicine at Johns Hopkins. *5 Clinical Pearls in Neurology*. (2011) Baltimore Maryland

# International talks or National talks with a clear international draw. 17 since 2005

Carotid Disease Presentation and Treatment. Lecture HNA Neurology Lecture Series. Panama City, Panama. (2005)

Primary and Secondary Prevention of Stroke. (2006), Neurology Grand Rounds. Al Mishari Hospital Riyadh, Saudi Arabia

Apollo Hospital Stroke Update. *Brain Attack-(Time is Brain) Pre-hospital and in Hospital Treatment of Acute Ischemic Stroke.* (2007) Hyderabad, India

Apollo Hospital Stroke Update. *Stroke Patient at your Clinic Door. Do's and Dont's for General Practitioners.* (2007) Hyderabad, India

Apollo Hospital Stroke Update. *Drug Treatment of Acute Ischemic Stroke: Current evidence and Practice.* (2007) Hyderabad, India

Apollo Hospital Stroke Update Controversies in Acute Stroke Treatment. (2007) Hyderabad, India

Carotid and Cardiac Disease in Acute Cerebrovascular Disease. Invited lecture. Universidad Industrial de Santander. Bucaramanga, Colombia. (2009)

Cerebrovascular Disease Novel Concepts and Controversies. Inaguration Lecture. Congress of Internal Medicine Course. Universidad Industrial de Santander. Bucaramanga, Colombia. (2009)

Coma presenting with Hypercarbia. How Neurologists Think. American Neurological Association (ANA) course. Course Director Martin A. Samuels, Baltimore Maryland. (2009)

Pearls of Wisdom in Cerebrovascular Disease. Neurological Clinical Pearls. American Academy of Neurology (AAN) course. Course Director Steven Reich. Toronto, Canada (2010)

Review of Alzheimer's Disease and other Dementias. ACTUALIZACIÓN EN ORTOPEDIA, NEUROLOGÍA Y NEUROCIRUGÍA. Punta Pacifica Hospital. Panama (2010)

Endovascular treatment of Acute stroke. ACTUALIZACIÓN EN ORTOPEDIA, NEUROLOGÍA Y NEUROCIRUGÍA. Punta Pacifica Hospital. Panama (2010)

Review of Migraine and other headache disorders.. ACTUALIZACIÓN EN ORTOPEDIA, NEUROLOGÍA Y NEUROCIRUGÍA. Punta Pacifica Hospital. Panama (2010)

*Acute Stroke Treatments*. Neurological Symposium. Hospital Santa Fe. Bogota, Colombia. (2010)

*Management of Increased Intracranial Pressure*. Neurological Symposium. Hospital Santa Fe. Bogota, Colombia (2010)

Diagnosis and Treatment of Superficial Siderosis.. Cerebrovascular SIG presentation. American Neurological Association (ANA) course. Course Director Martin A. Samuels, Baltimore Maryland. (2010)

What would Osler think?. How Neurologists Think. American Neurological Association (ANA) course. Course Director Martin A. Samuels, San Francisco CA (2010)