



# PRECISION NEUROSURGERY

## CURRICULUM VITAE

### **WARREN WILSON BOLING, JR.**

**Associate Professor, Department of Neurosurgery**

West Virginia University  
Robert C. Byrd Health Sciences Center  
Department of Neurosurgery  
4300 Health Science Center South  
Morgantown, WV 26506-9183  
USA  
Phone: 1 304 293 5041  
Fax: 1 304 293 4819  
Email: wboling@hsc.wvu.edu

### **Education and Training**

University of Melbourne, Austin and Repatriation Medical Centre, Department of Neurosurgery  
clinical and research fellow in epilepsy surgery, July 1999 to July 2000

McGill University, Montreal Neurological Institute, clinical and research fellow in epilepsy and  
functional neurosurgery, July 1997 to July 1999

University of Kentucky Medical Center, neurosurgical residency, July 1992 to July 1997

University of Kentucky Medical Center, surgical internship, July 1991 to  
July 1992

Texas Tech University Health Science Center, School of Medicine,  
July 1987 – May 1991, Summa cum Laude, MD received May 1991

Baylor College of Dentistry, Dallas, TX., July 1985- February 1986

Austin College, Sherman, TX., September 1981 – May 1985, Bachelor of Arts, concentrating in  
biology, received May 1985

### **Medical License**

Licensed Medical Doctor:

State of West Virginia # 20715, 2002 - present  
State of Pennsylvania # MD420058, 2002 - present  
Québec Canada, # 00432, 2000 – 2002  
Victoria Australia, # MPS319885, 1999 – 2000  
Québec Canada, # R-6648, 1997 – 1999  
State of Vermont, # 042-0009588, 1997 – 1999  
State of Kentucky, #28857, 1992 - 1998

### **CONSULTING:**

Melbourne City  
Box Hill  
Frankston  
Footscray  
Ringwood  
Knox  
Mildura  
Launceston

**TEL:** 03 9821 5718

**FAX:** 03 9821 5386

**PAGER:** 03 9387 1000

**WEB:** [www.precisionneurosurgery.com.au](http://www.precisionneurosurgery.com.au)

**EMAIL:** [info@precisionneurosurgery.com.au](mailto:info@precisionneurosurgery.com.au)

Surgery for Brain Tumours  
Complex Spinal Surgery  
Functional Neurosurgery  
General Neurosurgery  
Peripheral Nerve Surgery  
Vascular and Skull Base

**POSTAL:** Suite 5, 4<sup>th</sup> Floor  
517 St Kilda Road  
Melbourne VICTORIA 3004  
Australia



### **Specialist Board Certification**

American Board of Neurosurgery, Diplomate, May 2003

Fellow Royal College of Surgeons of Canada (Neurosurgery), June 2000

Collège des médecins du Québec Specialty Certification in Neurosurgery, September 2000

### **Academic Appointments**

Director of Gamma Knife Radiosurgery Program, West Virginia University and Robert C. Byrd Health Sciences Center, 2008 - present

Associate Professor, Department of Neurosurgery, West Virginia University and Robert C. Byrd Health Sciences Center, 2004 - present

Director, Imaging and Image Guidance Laboratory, Departments of Neurosurgery and Radiology, Center for Advanced Imaging, 2004 - present

Research Scientist, Center for Advanced Imaging, Department of Radiology, West Virginia University and Robert C. Byrd Health Sciences Center, 2002 - present

Director Section of Surgery for Epilepsy, Department of Neurosurgery, West Virginia University and Robert C. Byrd Health Sciences Center, 2002 - present

Assistant Professor, Department of Neurosurgery, West Virginia University and Robert C. Byrd Health Sciences Center, 2002 - 2004

Assistant Professor, Department of Neurology and Neurosurgery, McGill University and Montreal Neurological Hospital and Institute, Montréal, Québec, 2000 - 2002

### **Hospital Appointments**

West Virginia University Hospitals and Robert C. Byrd Health Sciences Center, February 2002 – present.

Wheeling Hospital, Wheeling, West Virginia, February 2003 to present.

Ohio Valley Medical Center, Wheeling, West Virginia, February 2003 to present.

HealthSouth Mountainview Regional Rehabilitation Hospital, Consulting Staff, Morgantown, West Virginia, June 2003 to present.

Uniontown Hospital, Uniontown, Pennsylvania, 2003 to 2005.



Montreal Neurological Hospital and McGill University Health Centre, November 2000 – February 2002.

### **Honors and Awards**

Light the Way Award, West Virginia Chapter of Epilepsy Foundation of America (2007)  
H. L. Tueber Prize, Montreal Neurological Institute (1998)  
Jeanne Timmins Costello Fellowship, Montreal Neurological Institute (1997)  
Summa Cum Laude Graduate and Deans Award for Scholastic Excellence Texas Tech School of Medicine (Class of 1991)  
Outstanding Student Department of Internal Medicine, Texas Tech University Health Science Center (1990-91)  
Outstanding Student of Medical Microbiology (1989)  
Outstanding Medical Physiology Student (1989)  
Excellence in Pharmacology Award for Outstanding Pharmacology Student (1989)  
Alpha Omega Alpha Medical Honor Society (elected 1988)  
McGraw-Hill Student Award (1988)  
Southern Medical Association Medical Student Scholarship Award (1988)

### **Professional Memberships**

American Society for Stereotactic and Functional Neurosurgery, January 2003 - present  
World Society for Stereotactic and Functional Neurosurgery, January 2003 - present  
International League Against Epilepsy, March 2002 - present  
American Epilepsy Society, March 2002 – present  
Fellow of The Royal College of Physicians and Surgeons of Canada, September 2000 - present  
Alpha Omega Alpha Medical Honor Society, July 1988 – present  
West Virginia Neurosurgical Society, February 2002 – present  
Monongalia County Medical Society, February 2002 – present  
Ohio County Medical Society, April 2003 – present  
The Congress of Neurological Surgeons, 1991 – present  
American Association of Neurological Surgeons, 1995 – present

### **Peer Review Commitments**

Regular ad hoc reviewer for the following journals:  
Clinical Neurology and Neurosurgery  
Computerized Medical Imaging and Graphics

### **Grants and Research Funding**

Phase III CASTBI Trial. Double-blind, placebo controlled study to determine if there is significant difference in outcome in patients with severe head injury who have received Cyclosporin A compared to placebo. Co-investigator, 2008

Phase II Study of a Drug [DCVax®-Brain] to Treat Newly Diagnosed GBM Brain Cancer, West Virginia Hospitals site co-investigator, 2008



“A Multi-Center Study to Evaluate MiLIF Versus Open Posterior Unilateral Lumbar Interbody Fusion (TLIF).” Prospective randomized trial funded by Endius, Inc. Principal Investigator, Direct cost estimate 25,000\$ / year, 2006 to present

“A Comparison of METRx Lumbar Endoscopic Disc Surgery and Standard Microdiscectomy.” Prospective randomized trial funded by Medtronic Sofamore Danek. Principal Investigator, \$8,000, 2006 to present

Agency for International Development, American Schools and Hospitals Abroad, 200,000\$ Direct cost, CURE International, Inc, Intractable Temporal Lobe Epilepsy, Treatment in East Africa and Other Underserved Regions, Principal Investigator, June 2005 - present

Imaging and Image Guidance Laboratory, Director, Industry sponsor: BrainLAB AG, 35,000\$ / year direct costs, 2004 – present

Randomized Evaluation of Convection Enhanced Delivery of IL13-PE38QQR Compared to GLIADEL Wafers with Survival Endpoint in Glioblastoma Multiforme at First Recurrence (PRECISE Trial). Principal Investigator of WVU Hospitals site for this International, Multisite, Phase III Clinical Trial. Direct cost estimate 112,000\$ / year, 2004 – 2006.

Research Development Grant (2002), School of Medicine, West Virginia University, Title: Functional Topography of the Mid-Postcentral Gyrus. Chief Investigator: W Boling

### **Committee Responsibilities**

#### **Departmental**

Promotion and Tenure Committee 2006 - present

#### **School of Medicine and Health Science Center**

Radioactive Drug Research Committee, West Virginia University, School of Medicine, 2009 - present

Sensory Neural Science Center, Faculty Search Committee, 2009

West Virginia University Hospitals, imaging suite planning/acquisition committee, 2008

Committee - Expert MD Champions for the EPIC project 2006 - 2007

Editor, “WVU, Neuroscience Newsletter”, biannual journal. Nationally distributed publication - Planning & Marketing, West Virginia University Health Sciences Center. 2004 – present

Advisory Committee, International Health Program 2004 - present

Member, Functional Imaging Advisory Committee, West Virginia University Health Science Center, 2003 - present

Co-Director, Epilepsy Surgery Case Conference, CME credit approved weekly conference, 2002 - present

WVU Institutional Review Board, member May 2005 – Dec 2006



Member, Research Development and Bridge Grant Review Committee, University of West Virginia Medical Center 2006-07 academic year, 2005-06 academic year, 2004-05 academic year, 2003-04 academic year,

Member, Search Committee for Integrated Neuroscience Center, Imaging Research Scientist, Center for Advanced Imaging, 2003-2004

WVU Ruby Hospital Operating Room Expansion – Design Committee, 2003 and 2004

Member, Transfusion Committee, WVU Hospitals, 2003 to 2006

Member, Care Management Steering Committee, West Virginia University, Ruby Hospital, 2003

Consultant, Radioactive Drug Research Committee, West Virginia University Health Sciences Center, 2003

Advances in Imaging Symposium, University of West Virginia Medical Center, March 2003, Symposium Organizer

Member, McGill University Faculty of Medicine Appointment and Promotion Committee, 2001-2002

### **Regional, National, and International**

Executive Director, International Consortium for the Treatment of Epilepsy in Severely Underserved Settings (ICTEUS). A nonprofit organization dedicated to bringing advanced epilepsy evaluation and treatment to severely underserved regions worldwide.

Co-Director, Pakistan Epilepsy Project. A collaboration between West Virginia University, ICTEUS, University of Alberta, and Aga Khan University Hospital Karachi to develop a comprehensive epilepsy evaluation and treatment program in Pakistan.

Chair, Advisory Committee, Epilepsy Foundation of America – West Virginia Chapter

Director East African Epilepsy Program, CURE Children’s Hospital of Uganda Center for Pediatric Neurosurgery Mbale, Uganda.

Co-Director of the Intracerebral Anticonvulsant Project. Collaboration between West Virginia University Departments of Neurology and Neurosurgery, University of Kentucky Departments of Neurosurgery and Anatomy Neurobiology, and BrainLAB AG (Munich, Germany).

### **Publications**

Boling W, Palade A, Wabulya A, Longoni N, Warf B, Nestor S, Alpitsis R, Bittar R, Howard C, Andermann F. Surgery for Pharmacoresistant Epilepsy in the Developing World: A Pilot Study. *Epilepsia* 2009 June; 50:1256 – 1261



Boling W, Melissa Lancaster M, Kraszpulski M, Palade P, Marano G, Puce A. FDG-PET Imaging Diagnosis Of Mesial Temporal Lobe Epilepsy. *Neurosurgery* 2008 Dec; 63:1130-1138

Boling W, Aghakhani Y, Andermann F, Sziklas V, Olivier A. Surgical Treatment of Independent Bitemporal Lobe Epilepsy Defined by Invasive Recordings. *Journal of Neurology, Neurosurgery, Psychiatry* 2008 Dec

Boling W, Lowitzsch S, Sano K. Professor Uchimura, Ammon's Horn Sclerosis, and the German Influence on Japanese Neuroscience. *Journal of the History of the Neurosciences* (in press)

Parsons M, Moran M, Boling W. Advances in Neurosurgical Applications of Functional Magnetic Resonance Imaging. In: Yuanzhu Liáng (editor), *Research Topics on Brain Mapping*. Nova Publishers, pp. 153-173, 2008

Boling W. Selective Amygdalohippocampectomy. In: Baltuch G and Villemure J-G (editors), *Operative Techniques in Epilepsy Surgery*. Thieme Medical Publishers, New York, 2009

Weimer T, Boling W, Pryputniewicz D, Palade A. Temporal Lobectomy for Refractory Status Epilepticus in a Case of Limbic Encephalitis. *Journal of Neurosurgery* 2008 Oct; 109:742-745

Boling W, Parsons M, Kraszpulski M, Cantreli C, Puce A. The Whole Hand Sensorimotor Area: Cortical Stimulation Localization and Correlation with Functional Imaging. *Journal of Neurosurgery* 2008 Mar; 108:491-500

Velan S, Lemieux S, Raylman R, Boling W, Hobbs G, Spencer R, Sridhar R, Kuppusamy P, Thomas A. Detection of Cerebral Metabolites by Single-Voxel Based PRESS and COSY Techniques at 3T. *Journal Of Magnetic Resonance Imaging* 2007 Aug; 26:405-409

Karlsson B, Boling W. Management of brain metastases by using repeat Gamma Knife surgery. *Pan Arab Journal of Neurosurgery* 2007 Oct; 11

Boling W, Longoni N, Palade A, Moran M, Brick J. Surgery For Temporal Lobe Epilepsy. *West Virginia State Medical Journal* 2007 Nov/Dec; 102:18-21

Boling W, Olivier A. Localization of hand sensory function to the pli de passage of Broca. *Journal of Neurosurgery* 2004 Aug; 101:278-283

Fedi M, Reutens DC, Andermann F, Okazawa H, Boling W, White C, Dubeau F, Nakai A, Gross DW, Andermann E, Diksic M. alpha-[11C]-Methyl-L-tryptophan PET identifies the epileptogenic tuber and correlates with interictal spike frequency. *Epilepsy Research* 2003 Jan; 52:203-13

Abosch A, Bernasconi N, Boling W, Jones-Gotman M, Dubeau F, Andermann F, Olivier A: Factors predictive of sub-optimal control following selective amygdalo-hippocampectomy. *Journal of Neurosurgery* 2002 Nov; 97:1142-1151



Boling W, Reutens D, Olivier A. Functional topography of the low post-central area. *Journal of Neurosurgery* 2002 Aug; 97:388-395

Boling W, Fabinyi G, Olivier A: Historical contributions to the modern understanding of function in the central area. *Neurosurgery* 2002 June; 50:1296-11309

Fedi M, Reutens D, Okazawa H, Andermann F, Dubeau F, Boling W, White C, Nakai A, Gross D, Andermann E, Diksic M: The localizing value of a-[11C]-methyl - L- tryptophan PET in patients with intractable partial epilepsy. *Neurology* 2001 Sep; 57:1629-1636

Boling W, Reutens D, Andermann F, Dubeau F, Caporicci L, Olivier A:  
Surgery for temporal lobe epilepsy in older patients. *Journal of Neurosurgery* 2001 Aug; 95:242-248

Olivier A, Boling W: Diagnostic operative techniques in the treatment of epilepsy: Stereotactic intracranial recording. In: *Operative Neurosurgical Techniques Indications, Methods, and Results*. Editors: Schmidek H, Sweet W. W. B. Saunders, Philadelphia, 2000

Olivier A, Boling W: Surgery for Parietal and Occipital Epilepsy. In: *Neocortical Epilepsies*. Editors: Williamson P, Siegel AM, Roberts DW, Thandi VM, Gazzaniga MS. Lippincott Williams & Wilkins, Philadelphia, 2000

Gross D, Merlet I, Boling W, Gotman J: Relationship between the epileptic focus and hand area in central epilepsy. Combining dipole models and anatomical landmarks. *Journal of Neurosurgery* 2000 May; 92:785-792

Olivier A, Boling W: Transcortical selective amygdalohippocampectomy in temporal lobe epilepsy. *The Canadian Journal of Neurological Sciences* 2000 May; 27 Suppl 1:S68-76

Boling W, Reutens D, Bittar R, Olivier A: Hand motor function is localized to Broca's pli de passage moyen. *Journal of Neurosurgery* 1999 Dec; 91:903-910

Boling W, Olivier A, Civit T: The French contribution to the discovery of the central area. *Neurochirurgie* 1999 Sep; 45:208-213

Olivier A, Boling W, Andermann F, Dubeau F: Surgical treatment of cortical dysplasias and migration disorders. In: *Abnormal Cortical Development and Epilepsy*. Editors: Spreafico R, et al. John Libby and Co., London, 1999

Olivier A, Cyr M, Comeau R, Peters T, Boling W, Klein D, Reutens D: Image guided surgery of epilepsy and intrinsic brain tumors. In: *Advanced Neurosurgical Navigation*. Editors: Eben Alexander III, Robert J Maciunas. Thieme Medical Publishers, New York, 1999; 39:469-482

Boling W, Olivier A: The current state of epilepsy surgery. *Current Opinion in Neurology* 1998 April; 11:155-161



Bruce AJ, Boling W, Kindy MS, Peschon J, Kraemer PJ, Carpenter MK, Holtsberg FW, Mattson MP: Altered neuronal and microglial responses to excitotoxic and ischemic brain injury in mice lacking TNF receptors.

Nat Med 1996 Jul; 2:788-94

Lu WY, Rhoney DH, Boling W, Johnson JD, Smith TC: A review of stress ulcer prophylaxis in the neurosurgical intensive care unit. Neurosurgery 1997 Aug; 41:416-426

### **Published Abstracts**

Syed N. Ahmed, Carly J. Mann, F. Siddiqui, M. Sheerani, N. A. Syed, A.

Enam, W. Boling and T. Snyder. Experiences from an International Tele-Epilepsy Collaboration. Epilepsia 49 (s7) 2008

Boling W, Palade A, Brick J, Warf B, Longoni N, Mujuru P, Fisher M, Nestor S, Wabulya A, Andermann F, Byrne R, Gross D, Fabinyi G, Bittar R. A Model for Evaluation and Surgical Treatment of Medically Intractable Epilepsy in Severely Underserved Settings. Epilepsia 2007

Warren Boling, Melissa Lancaster, Michal Kraszpuski, Adriana Palade, Gary Marano, Aina Puce. Mesial Temporal Lobe Epilepsy Diagnosis Utilizing FDG-PET Imaging. Acta Neurochirurgica (in press)

Nicoletta Longoni, Warren W. Boling, Adriana Palade, Angel Wabulya, Frederick Andermann, Priscah Mujuru, Warf Benjamin, Donald Gross, Richard Bittar, Gavin Fabinyi, Richard Byrne. Medically Intractable Temporal Lobe Epilepsy in Children; Results from the First Year of a Comprehensive Epilepsy Program in East Africa. Epilepsia 47 (s4), 378-395.

Warren W. Boling. Image Guided Keyhole Approach in Surgery for Temporal Lobe Epilepsy. Epilepsia 47 (s4), 378-395.

Paula Pergami, Christian A. Keller, Adriana E. Palade, John F. Brick, Warren Boling, Alexander Torres-Trejo, Daunice Lohr. Surgery for Intractable Epilepsy: Does the Amygdala Play a Role in Post-Operative Weight Gain? Epilepsia 47 (s4), 378-395.

Alejandro Torres-Trejo, Adriana Palade, Warren Boling, John F. Brick. Incidence of Recurrent Seizures after Decreasing the Dose or Discontinuation of Antiepileptic Drugs (AED) in Patients Who Underwent Successful Surgery for Intractable Epilepsy from Cortical Dysplasia. Epilepsia 47 (s4), 378-395.

Boling W, Palade A, Kraszpuski M, Marano G. The Relationship of Metabolism and Epileptic Focus in Temporal Lobe Epilepsy. Epilepsia 46 (8), 2005 p. 236

Boling W, Palade A, Kraszpuski M, Marano G. The Role of FDG-PET in the Localization of Temporal Lobe Epilepsy. Epilepsia 46 (suppl 6), 2005 p. 165

Boling W, Olivier A: Image Guided Keyhole Craniotomy for Selective Amygdalo-hippocampectomy. Epilepsia 45 (suppl 7), 2004 p. 333



Boling W, Palade A, Brick J: Surgical Approach in Patients with Mesial Temporal Sclerosis and Neocortical Scarring. *Epilepsia* 44 (suppl 9), 2003, p. 148

Palade A, Brick J, Boling W: Interictal Abnormalities in Temporal Lobe Epilepsy. *Epilepsia* 44 (suppl 9), 2003, p. 50

### **Presentations, Symposia, and Invited Speaker**

Gamma Knife Radiosurgery for Trigeminal Neuralgia: A Comparison of Dose Protocols. Warren Boling, John C Frich, André Kalend, and Bengt Karlsson. CNS Neurosurgical Presentation, Section on Pain, Congress of Neurological Surgeons Annual Meeting, October 26, 2009

Invited Speaker. "Diagnosis and Treatment of Medically Intractable Epilepsy: Modern Approaches and Future Directions". Emerging Technology and Techniques in Neurosurgery. Caesar's Palace, Las Vegas, Nevada. November 8, 2008

Invited Guest. "Doctors On Call" on WSWP-TV, WNPB-TV, and WPBY-TV. Topic: Epilepsy. August 21, 2008

Invited Speaker. "Surgery for Medically Intractable Epilepsy". Aga Khan Hospital, Karachi, Pakistan, July 7, 2008

Invited Speaker. "Advanced Technologies in Neurological Surgery". St. Joseph's Hospital, Parkersburg, West Virginia, June 12, 2008

Invited Speaker. Brain LAB Residency Leadership Symposium. "Image Guided Surgery for Brain Tumor and Epilepsy" and "Perfusion and Diffusion Imaging in Neurosurgery". BrainLAB AG, Munich Germany, March 10, 2008

Surgical Treatment of Epilepsy in the Developing World. Pennsylvania State University, Center for Neural Engineering, February 13, 2008.

Correlating fMRI and Neuronavigation: Demonstration of a "Whole Hand" Area in Central Cortex. M.W. Parsons, W. Boling, M. Lancaster & M. Kraszpulski. Thirty-Sixth Annual Meeting International Neuropsychological Society February 6-9, 2008. Waikoloa, Hawaii, USA

A Model for Evaluation and Surgical Treatment of Medically Intractable Epilepsy in Severely Underserved Settings. Boling W, Palade A, Brick J, Warf B, Longoni N, Mujuru P, Fisher M, Nestor S, Wabulya A, Andermann F, Byrne R, Gross D, Fabinyi G, Bittar R. Platform Highlights presentation at the 61st Annual Meeting of the American Epilepsy Society, Philadelphia, December 3, 2007.

Invited Guest. "Doctors On Call" on WSWP-TV, WNPB-TV, and WPBY-TV. Topic: Epilepsy. November 1, 2007



Boling W. CNS University, Surgery For Extra-Temporal Lobe Epilepsy, <http://univ.cns.org/>

Boling W. Surgery for Temporal Lobe Epilepsy. Visiting Professor, University of Brescia, Spedali Civili, Brescia, Italy, September 4, 2007.

Boling W, Lancaster M, Kraszpulski M, Palade A, Marano G, Puce A. Mesial Temporal Lobe Epilepsy Diagnosis Utilizing FDG-PET Imaging. European Congress of Neurosurgery, Glasgow, UK, September 6, 2007

Boling W, Parsons M, Kraszpulski M, Cantrell C, Puce A. Surgery for tumor in the primary sensorimotor area. Elucidation of the whole hand sensory and whole hand motor areas. 2007 AANS/CNS Joint Section on Tumors, Washington DC, April 13, 2007

Boling W, Kraszpulski M, Palade A, Hobbs G, Marano G, and Puce A. FDG-PET is an Effective Imaging Tool in the Diagnosis of Mesial Temporal Lobe Epilepsy, Neuorsurgical Society of the Virginias, The Homestead, January 20, 2007

Boling W, Longoni N. Medically Intractable Temporal Lobe Epilepsy, Treatment in a Severely Underdeveloped African Region. Second Annual Butler Epilepsy Lecture. University of Alberta Hospital, Edmonton, Alberta, Canada, October 6, 2006

NPH seminar, Invited Speaker, Fairmont, West Virginia, September 21, 2006

Invited Guest. "HealthLine" on WAJR Radio. Topic: Spine Surgery. Morgantown, WV, June 22, 2006

Boling W, Longoni N. Intractable Temporal Lobe Epilepsy, Treatment in an Underserved Region. World Health Organization, Kampala, Uganda, March 15, 2006

Boling W, Longoni N. Surgery For Epilepsy. Butabika Psychiatric Hospital, Kampala, Uganda, March 15, 2006

Boling W, Longoni N. Surgery for Epilepsy. CURE Children's Hospital of Uganda, Mbale, Uganda, March 13, 2006

Boling W, Longoni N. Intractable Temporal Lobe Epilepsy, Treatment in an Underserved Region. United States Agency for International Development (USAID). Kampala, Uganda, March 3, 2006

Boling W, Palade A, Mujuru P, Longoni N, Warf B. Medically Intractable Temporal Lobe Epilepsy, Treatment in an Underserved Region. Neurosurgical Society of the Virginias, Greenbriar, January 21, 2006

Invited Guest. "Doctors On Call" on WSWP-TV, WNPB-TV, and WPBY-TV. Topic: Epilepsy. November 10, 2005

Invited Guest. "HealthLine" on WAJR Radio. Topic: Epilepsy. Morgantown, WV, September 22, 2005



Invited Speaker. Makerere University Mulago Hospital. Surgery for Epilepsy in Uganda and East Africa, July 12, 2005

Invited Speaker. Neuroscience Grand Rounds, Allegheny General Hospital, Pittsburgh, PA. Image Guided Surgery for Epilepsy, April 27, 2005

Invited Speaker. Eastern Panhandle Medical Society. Image Guided Surgery for Epilepsy, Shepherdstown, WV, April 13, 2005

Boling W, Parsons M, Puce A, Haut M, Shaikh K, Lemieux S, Rosen C, Bloomfield S, Collins J, Bailes J: A Clinical fMRI Program For Brain Mapping and Image Guidance. The Neurosurgical Society of The Virginias, White Sulphur Springs, WV, January 22, 2005

Invited Speaker. Association of periOperative Registered Nurses, Clinical (Inpatient and Ambulatory) Conference and RNFA Forum, "Imaging and Image Guidance in Neurosurgery", Las Vegas, NV, October 17, 2004

Invited Speaker. Clinical Tropical Medicine and Parasitology Course International Health Program, Robert C. Byrd Health Sciences Center, West Virginia University, "Comprehensive Epilepsy Program and Surgery for Epilepsy in Uganda and East Africa", July 30, 2004

Invited Speaker. University of Kentucky. "Intracerebral Anticonvulsant Delivery." University of Kentucky Neuroscience Group, Lexington, KY, July 23, 2004

Invited Speaker. Brain LAB Residency Leadership Symposium. "Image Guided Surgery for Brain Tumor and Epilepsy" and "The Future of Imaging in Image Guided Surgery". BrainLAB AG, Munich Germany, April 4 - 9, 2004

Advanced Imaging and Image Guided Surgery for Epilepsy. Contemporary Management of Intractable Epilepsies International Symposium, WVU School of Medicine, Morgantown, WV, October 25, 2003

Agha Khani Y, Andermann F, Dubeau F, Sziklas V, Jonesgotman M, Olivier A, Boling W: Surgical Treatment of Independent Bitemporal Lobe Epilepsy Defined by Invasive Recordings. Congress of Neurological Surgeons, Denver, October 21, 2003

Invited Speaker. Med School 101 Lecture Series. West Virginia University School of Medicine.

"Advanced Treatment of Intractable Epilepsies at West Virginia University Medical Center Comprehensive Epilepsy Program", 3rd Annual Robert Nugent Lecture, West Virginia University Medical Center, May 10, 2003

Visiting Professor. University of Kentucky, Department of Neurosurgery, April 3-4, 2003



“Image Guided Surgery in Epilepsy” Center for Epilepsy Inaugural Symposium, Belo Horizonte, Brazil, March 15, 2003

“Strategies for Surgery in Functional Areas” Center for Epilepsy Inaugural Symposium, Belo Horizonte, Brazil, March 14, 2003

Grand Rounds. “Image Guided Surgery for Epilepsy”; Charleston Area Medical Center, Charleston, West Virginia, March 12, 2003

Invited Speaker. Charleston Neurological Association, Charleston, West Virginia, March 11, 2003

“3D Cortical Surface Navigation in Neurosurgery” Boling W; Advances in Imaging Symposium, University of West Virginia Medical Center, March 8, 2003

“Functional Anatomy of the Middle and Lower Postcentral Area” Boling W; Neurosurgical Society of the Virginias, Hot Springs, Virginia, January 24, 2003

Invited Speaker. “Image Guided Surgery for Epilepsy”. Reynolds Memorial Hospital, Glen Dale, West Virginia, May 7, 2002

Invited Speaker. “Image Guided Surgery for Epilepsy”. Charleston Area Medical Center, Charleston, West Virginia, May 15, 2002

“Functional Anatomy in the Pre and Post Central Gyri” BolingW, Olivier A; Rasmussen Symposium, Montreal Neurological Institute, December 2001

“How I Do It: Vagal Nerve Stimulation” Boling W, Sadikot A, Gross D; 12th World Congress of Neurosurgery, Sydney, September 2001

“Depth Electrodes and Biopsies, Experience with a Compact Frameless Apparatus” Boling W, Hynes B, Soualmi L, Abosch A, Olivier A; 12th World Congress of Neurosurgery, Sydney, September 2001

"Surgery of Parieto-Occipital Area" Boling W; McGill 2000 - 100 years of Neurosurgery, Montreal Neurological Institute, May 2000

Invited Speaker. "Transcortical Selective Amygdalohippocampectomy in Temporal Lobe Epilepsy"; Academic Hospital Maastricht (azM), The Netherlands, July 1999

"Language PET and Tumors in the Eloquent Areas" Boling W, Olivier A, Milner B, Klein D; Fellows Day, Montreal Neurological Institute, May 1999

"Discovery of the Central Area" Boling W; Fellows Day, Montreal Neurological Institute, May 1998

"Functional Topography of the Central Area" Boling W; Fellows Day, Montreal Neurological Institute, May 1998



“Hand Motor Function is Localized to Broca’s Pli de Passage Moyen”

Boling W, Reutens D, Bittar R, Olivier A; Canadian Congress of Neurological Sciences annual meeting, June 1998

“A Comparison of Radiosurgery With Conventional Treatment for Brain Metastases” Boling W, Hodes J, Patel P, et al; Kentucky Medical Association annual meeting, Neurosurgery Section, September 1995

"Gamma Knife Radiosurgery for Cerebral Metastases" Boling W, Hodes JE, Patchell RA, et al; Leksell Society 6th International Meeting, Kyoto Japan, May 1994

#### Poster Presentations

Warren Boling, Adriana Palade, John Brick. Selective amygdalohippocampectomy: a study of indications and contraindications. International League Against Epilepsy, Budapest, June 2009

Experiences From An International Tele-Epilepsy Collaboration/S. N. Ahmed, C. J. Mann, F. Siddiqui, M. Sheerani, N. A. Syed, A. Enam, W. Boling, T. Snyder, American Epilepsy Society, Seattle; December 2008

Warren Boling, Derek Courtney, Bengt Karlsson. Treatment of Medically Intractable Trigeminal Neuralgia, Outcome from Gamma Knife Radiosurgery. 12th Congress of the European Federation of Neurological Societies EFNS, Madrid, Spain; August 2008.

Nicoletta Longoni, Warren Boling, Adriana Palade, Angel Wabulya, Frederick Andermann, Priscah Mujuru, Warf Benjamin, Donald Gross, Richard Bittar, Gavin Fabinyi, Richard Byrne. Medically Intractable Temporal Lobe Epilepsy in Children; Results from the First Year of a Comprehensive Epilepsy Program in East Africa. American Epilepsy Society Meeting, San Diego; December 2006.

Warren Boling. Image Guided Keyhole Approach in Surgery for Temporal Lobe Epilepsy. American Epilepsy Society Meeting, San Diego; December 2006.

Paula Pergami, Christian A. Keller, Adriana E. Palade, John F. Brick, Warren Boling, Alexander Torres-Trejo, Daunice Lohr. Surgery for Intractable Epilepsy: Does the Amygdala Play a Role in Post-Operative Weight Gain? American Epilepsy Society Meeting, San Diego; December 2006.

Alejandro Torres-Trejo, Adriana Palade, Warren Boling, John F. Brick. Incidence of Recurrent Seizures after Decreasing the Dose or Discontinuation of Antiepileptic Drugs (AED) in Patients Who Underwent Successful Surgery for Intractable Epilepsy from Cortical Dysplasia. American Epilepsy Society Meeting, San Diego; December 2006.

Warren W. Boling, Ben Warf, Adriana Palade, Priscah Mujuru, Frederick Andermann, Angel Wabulya, Nicoletta Longoni, Richard G. Bittar, Gavin Fabinyi, Richard W. Byrne, Donald Gross, Melanie Fisher, Scott Nestor, John Brick. Pharmacoresistant Temporal Lobe Epilepsy in Children, Treatment in a Severely Underdeveloped African Region. Congress of Neurological Surgeons Annual Meeting, Chicago; October, 2006



Cantrell C, Kraszpulski M, Parsons M, Boling W. Hand Motor And Sensory Function: A Comparison Of Cortical Stimulation And Functional MRI. Van Liere Research Convocation, Morgantown, WV April, 2006

Boling W, Palade A, Kraszpulski M, Marano G. The Role of FDG-PET in the Localization of Temporal Lobe Epilepsy. International League Against Epilepsy, Paris; August 2005

Granchi P, Puce A, Boling W. Variation in locus of activation to somatosensory stimulation of single digits. Human Brain Mapping. Toronto; June 2005

Boling W, Olivier A: Image Guided Keyhole Craniotomy for Selective Amygdalo-hippocampectomy. American Epilepsy Society, New Orleans; December 7, 2004

Boling W, Palade A, Brick J: Surgical Approach in Patients with Mesial Temporal Sclerosis and Neocortical Scarring. Congress of Neurological Surgeons, San Francisco; October, 2004

Boling W, Palade A, Brick J: Surgical Approach in Patients with Mesial Temporal Sclerosis and Neocortical Scarring. American Epilepsy Society, Boston; December 9, 2003

Boling W, Olivier A: Functional and Topographic Relationships in the Mid and Inferior Postcentral Gyrus, The American Society for Stereotactic and Functional Neurosurgery, New York; May 17, 2003

Agha Khani Y, Andermann F, Dubeau F, Sziklas V, Jonesgotman M, Olivier A, Boling W: Surgical Treatment of Independent Bitemporal Lobe Epilepsy Defined by Invasive Recordings. American Epilepsy Society, Seattle; December 12, 2002

Boling W, Andermann F, Dubeau F, Olivier A: Surgery for Temporal Lobe Epilepsy in Patients 50 Years of Age and Older. Canadian Congress of Neurological Sciences annual meeting, Montreal; June 1998

Boling W, Markesbery WR, Christakos S, Mattson MP: TNF's Protect Astrocytes Against Metabolic Insults. Society of Neuroscience Meeting, San Diego, CA; November 12, 1995

### **Other Research/Scholarly Activity**

Director of the East African Epilepsy Project. A joint project of CURE Children's Hospital of Uganda Center for Pediatric Neurosurgery (Mbale, Uganda), CURE International (Lemoine, PA), International Consortium for the Treatment of Epilepsy in Underserved Settings (ICTEUS), and West Virginia University's Departments of Neurology and Neurosurgery. This project evaluates and treats children with epilepsy intractable to medication in East Africa. Funding is from CURE International, USAID, and American Schools and Hospitals Abroad (ASHA). This work is done under a research protocol. The aim is to study the feasibility of a surgery for epilepsy program in the developing world.

Director of the Imaging and Image Guidance Laboratory, Center for Advanced Imaging, West Virginia University Health Sciences Center. Funded through a beta test site contractual relationship with BrainLAB AG. The laboratory employs a research assistant and validates beta software and hardware used in neurosurgery and image guidance.



Co-Director of the Intracerebral Anticonvulsant Project. Collaboration between West Virginia University Departments of Neurology and Neurosurgery, University of Kentucky Departments of Neurosurgery and Anatomy Neurobiology, and BrainLAB AG (Munich, Germany). A translational project to develop intracerebral delivery of anticonvulsant medication to treat intractable partial epilepsy.

Health South Rehabilitation Hospital collaboration to investigate the role of formal rehabilitation after surgery for epilepsy.

### **Service**

Director, International Consortium for the Treatment of Epilepsy in Underserved Settings (ICTEUS). NGO organization of epilepsy specialists. Our organization assists and provides expertise to hospitals and medical centers in the developing world to initiate, run, and maintain EEG and epilepsy treatment centers.

Director, CURE Children's Hospital of Uganda, Comprehensive Epilepsy Program. This program evaluates children from the East African region with video EEG and imaging. Data is evaluated within the West Virginia University Epilepsy Program and recommendations made for treatment.

Member, BrainLAB AG (Munich, Germany), Advisory Panel for the development of Image-Guided Functional Neurosurgery, 2003 - present

Neurosurgeon on staff, Wheeling Hospital and Ohio Valley Medical Center, serve all neurosurgical needs for the residents of West Virginia panhandle and Eastern Ohio 4 days per month. February 2003 to present.

Outpatient clinic, Uniontown, PA, serves the outpatient neurosurgical needs for the region of Southcentral Pennsylvania with a monthly clinic. 2003 – present

Uniontown Hospital staff, Uniontown, PA, 2003 - 2005.

### **Teaching**

West Virginia University School of Medicine, Neurobiology Instructor, 2005 to present

Organizer and director, Department of Neurosurgery Journal Club, July 2003 to present

Director, Resident Didactic Course in Neurosurgery, 2 year curriculum for Neurosurgery residents of reading with faculty guidance to encompass the relevant knowledge in neurosurgery and prepare the residents for the neurosurgery board exams, February 2003 to present

Resident teaching via on call duties and daily surgery, outpatient clinics, and ward rounds.

Codirector weekly Epilepsy Surgery Case Conference, a CME and nursing credit conference for the Departments of Neurology, Neurosurgery, Radiology, Behavioral Medicine, Hospital nursing and EEG technology, 2002 to present.



West Virginia University School of Medicine, 1 hour per semester lecture - 2nd year medical students, February 2003 to present.

**Mentoring**

International Health Program, WVU School of Medicine, mentoring of 2 senior medical students (Cara Sedney and Garrett Stover) on medical mission to CURE Children's Hospital of Uganda, April 2007

WVU School of Medicine, Medical Student Shadowing Program (Physical Diagnosis and Clinical Integration I and II), 2002 to present.

WVU School of Medicine, Research Supervisor, Medical Student Summer Research Program: Joseph Adongay (2007), comparison of AFNI and iFMRI (BrainLAB, AG) FMRI analysis applications, "A Comparison of Two FMRI Analysis Techniques".

Carrie Cantrell (2005), correlation of FMRI activation and cortical stimulation. Presented her research, "Hand Motor And Sensory Function: A Comparison Of Cortical Stimulation And Functional MRI" at Van Liere Research Convocation, Morgantown, WV April, 2006

Phil Granchi (2003), FMRI of digit representation. Presented his research, "Variation in locus of activation to somatosensory stimulation of single digits" at Human Brain Mapping in 2005 (Winner Competitive OHBM Travel Award).

WVU School of Medicine. 4<sup>th</sup> year Medical Student Advisor, 2002-2003, 2003-2004, 2005-2006, 2006-2007, 2008-2009