

CURRICULUM VITAE

Edward Hiltner Bertram, III

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Brief Biography

My first epilepsy mentor, Fritz Dreifuss, always taught that with epilepsy we treat the whole patient not just the seizures. That philosophy has been a guiding principle for me. The importance of this issue has been reemphasized by my attendance as an ILAE representative at the Epilepsy Awareness Day meetings, an information fair for people with epilepsy that attracted over 5000 participants in 2019. They come looking for solutions to their many epilepsy related problems. Our talks at the ILAE booth with many of these patients emphasized that we need to do a better job in educating patients, families and physicians about the medical and non-medical issues arising from epilepsy.

My academic activities are documented in my bibliography below. I developed the epilepsy monitoring unit and the epilepsy surgery program at my institution and trained a number of epilepsy clinicians many of whom are at academic institutions. In addition I have held a number of positions (listed below) dealing with professional education and meeting organization that are very relevant for the educational and professional development program of the League. While on the AES Education Council, I helped develop the basic epileptology course (Epilepsy 101) that has now become a regular feature of the annual meeting. In addition we created a short epilepsy program that could be taken to community medical groups to introduce them to epilepsy concepts for primary care. Finally I established a regular educational newsletter (Epilepsy Update) to provide case-based information focused on a very basic topic (e.g. diagnosis, pregnancy) to general neurologists and physicians. This publication was based on a similar newsletter that I developed for SEIN in the Netherlands to educate the general medical population about key epilepsy issues. Most importantly, through these committee and council positions I learned how other successful professional organizations serve their members and the public. Many of these lessons can be adapted for the League. One example is the well-received Talking Shop sessions that I organized for the International Congress in Bangkok. These sessions provided groups with a common interest a place where they can share ideas and decide on new directions. The great need for more open and participatory congresses is why I pushed for congress reform which resulted in the creation of the Congress Review Task Force.

I have worked with the League since 2005 and started with the Executive Committee in 2007. I have served in a variety of capacities (see below), but the most important for my understanding of the League and its members were Information Officer and Editor for *Epigraph*. These positions helped me understand the operation of the League, its relation to the chapters and the issues faced by our colleagues and patients around the world. These positions have also taught

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me about the importance of getting the epilepsy message out to the rest of the world. My current service as Secretary General has made me even more involved with League operations and more directly with chapters. These experiences have emphasized that the League's main mission must be the support of its members through education and advocacy to improve epilepsy training, research and care.

My international orientation began during childhood when my family lived in Germany and Nepal for several years each. Later I spent a year at my grandfather's childhood home in Germany to work on the family farm. More recently I worked as the Research Director at SEIN in the Netherlands for several years. These travels taught me that each country has its unique approach to solving problems and had the additional benefit of my becoming fluent in German and Dutch.

Education and Training

Bachelor of Arts with Honors, University of North Carolina, 1975

Doctor of Medicine, University of North Carolina, 1980

Neurology Residency, University of Virginia, 1985

EEG and epilepsy, University of Virginia, 1988

Professional Appointments

Neurology faculty, University of Virginia since 1988 (Professor since 2004)

Founder, University of Virginia EEG Intensive Monitoring Laboratory 1990

First Director, University of Virginia Epilepsy Surgery Program, 1991

Director of Research, Stichting Epilepsie Instellingen Nederland (SEIN) (Epilepsy Institute of the Netherlands), Heemstede, 2002-2005

Professional Certification:

EEG, American Board of Clinical Neurophysiology (formerly ABQEEG), 1986

Neurology, American Board of Psychiatry and Neurology, 1990

Clinical Neurophysiology, American Board of Psychiatry and Neurology, 1992, recertified 2002;

Epilepsy, American Board of Psychiatry and Neurology, 2013.

Education and Congress Development

Continuing Medical Education Committee, American Epilepsy Society (AES), 1997-2000

Task Force for Meeting Reorganization, AES, 1998-2000

Council on Education, AES, 2000-2010

Chair, Committee for Enduring Materials Education, AES, 2000-2004

Chair, CME Committee, AES, 2004-2006

Co-Chair, Mid-Year Meeting Planning Committee, AES, 2005-2006

Chair, Education Development Committee, AES, 2007-2010

Science Committee, American Academy of Neurology, 2011-2017

Chair, Neuroscience is Essential Task Force, American Academy of Neurology, 2015-

Congress Reorganization Task Force/Council, ILAE 2018-

Co-organizer, International Congress Talking Shops, 2019

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Awards

Alpha Omega Alpha Medical Honor Society, 1979
Robert S. Morison Fellowship, Grass Foundation, 1986-1988
ILAE/IBE Ambassador for Epilepsy Award, 2015
Best Doctors in America, listed continuously since 2005 (listing reviewed every 2 years)

Service to the ILAE

Secretary, Commission on Neurobiology of Epilepsy 2005-2009
Associate Editor, *Epilepsia*, 2006-2017
Interim co-Editor in Chief, *Epilepsia*, 2015
Information Officer, 2007-
Editor, *Epigraph*, 2007-
Member, Executive Committee, 2007-2011
Chair, ILAE Task Force on Reports and Position Statements. 2011-2013
Member, ILAE Publications Task Force, 2014-
Member, ILAE Communications Task Force, 2014-
Member, joint ILAE/AES Translational Research Task Force, 2014-
Secretary General 2017-

Courses and symposia

Organizing Committee, Workshop on the Neurobiology of Epilepsy, France, 2005
Co-organizer, Genetics and Epilepsy Symposium, ILAE Congress, Singapore, 2007
Co-organizer, Basic Science of Epilepsy for Clinicians, ILAE Congress, Singapore, 2007
Faculty, Advanced International Course: Bridging Basic with Clinical Epileptology
San Servolo, Venice, 2008, 2011, 2014
Co-organizer and co-chair, NINDS Conferences for models to identify improved epilepsy
therapies, 2001, 2002, 2010

Additional Service

Task Force for Animal Models and Antiepileptic Drug Development, 2001-03
Budget Committee, AES, 2007-2009
Vision 20/20 Committee 2009- 2013 (International committee to increase the priority of epilepsy
and epilepsy related research)
NIH/NINDS Grant Reviewer 1998 to present

Editorial Activities:

Field Editor, *Epilepsy Currents*, 2002-2004
Editorial Board, *Epilepsy Research*, 2005-2008
Associate Editor, *Epilepsia*, 2006-2017
Editor, *Epigraph*, 2007-
Interim co-Editor in Chief, *Epilepsia*, 2015
Editorial Board, *Neurobiology of Disease*, 2015-

Bibliography (selected from over 225 articles, abstracts and invited chapters):

Peer-reviewed Articles

Clinical

Leppik, I.E., Dreifuss, F.E., Pledger, G.W., Graves, N.M., Santilli, N., Drury, I, Tsay, J.Y., Jacobs, M.P., Bertram, E. et al., Felbamate for partial seizures: results of a controlled clinical trial. *Neurology* 1991; 41:1785-1789.

Laws, E.R., Jr., Bertram, E.H., III. Epilepsy surgery in children and adolescents. *Neurosurg Focus* 1996; 1(5):1-3.

Quigg, M.S., Bertram, E.H., Jackson, T., and Laws, E.R. Evidence for bilateral atrophy in unilateral mesial temporal lobe epilepsy. *Epilepsia*, 1997; 38:588-595

Quigg, M., Bertram, E. and Jackson, T. Longitudinal distribution of hippocampal atrophy in mesial temporal lobe epilepsy. *Epilepsy Research*, 27:101-110, 1997

Quigg, M., Straume, M., Menaker, M., and Bertram, E.H., Temporal Distribution of Partial Seizures: Comparison of an Animal Model with Human Partial Epilepsy. *Annals of Neurol.*, 43: 748-755, 1998.

Prasad, A., Worrall, B.B., Bertram, E.H. and Bleck, T.P. Propofol and midazolam in the treatment of refractory status epilepticus. *Epilepsia*, 42:380-386, 2001.

Quigg, M.S., Kiely, J., Shneker, B., Veldhuis, J. and Bertram, E.H. Interictal and postictal alterations in pulsatile secretion of luteinizing hormone in temporal lobe epilepsy in men. *Annals of Neurology*, 51: 559-566, 2002.

Quigg M., Broshek D.K., Heidal-Schiltz S., Maedgen J.W., Bertram E.H. Depression in intractable partial epilepsy varies by laterality of focus and surgery. *Epilepsia*. 44: 419-24, 2003.

Bertram, E.H. Why does surgery fail to cure limbic epilepsy? Seizure functional anatomy may hold the answer. *Epilepsy Research*. 56: 93-99, 2003.

de Haan G.J., Halley D.J., Doelman J.C., Geesink H.H., Augustijn P.B., Jager-Jongkind A.D., Majoie M., Bader A.J., Liefveld-Ten Doeschate L.A., Deelen W.H., Bertram E., Lehesjoki A.E. and Lindhout D. Univerricht-Lundborg disease: underdiagnosed in the Netherlands. *Epilepsia*. 45:1061-3, 2004.

Quigg M, Kiely JM, Johnson ML, Straume M, Bertram EH, Evans WS. Interictal and postictal circadian and ultradian luteinizing hormone secretion in men with temporal lobe epilepsy. *Epilepsia*. 47:1452-1459, 2006.

De Haan G-J, van der Geest P , Doelman G, Bertram E, Edelbroek P. A comparison of midazolam nasal spray and diazepam rectal solution for the residential treatment of seizure exacerbations *Epilepsia*, 51:.478-482. 2010.

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Thom M, Mathern GW, Cross JH, Bertram EH. Mesial temporal lobe epilepsy: How do we improve surgical outcome? *Annals of Neurology* 68: 424-434. 2010.

Translational

Bertram, E., Lothman, E. and Lenn, N. The hippocampus in experimental chronic epilepsy: a morphometric analysis. *Annals of Neurology* 1990; 27:43-48.

Bertram, E. and Lothman, E. NMDA receptor antagonists and limbic status epilepticus: comparison with standard anticonvulsants. *Epilepsy Research* 1990; 5:177-184.

Lothman, E.W., E.H. Bertram, J.W. Bekenstein and J.B. Perlin. Self-sustaining limbic status epilepticus induced by "continuous" hippocampal stimulation: electrographic and behavioral characteristics. *Epilepsy Research* 1989; 3:107-119.

Lothman, E., Bertram, E., Stringer, J. and Kapur, J. Recurrent spontaneous hippocampal seizures in the rat as a chronic sequela to limbic status epilepticus. *Epilepsy Research* 1990; 6:110-118.

Bertram, E.H. and Cornett, J. The evolution of a rat model of chronic limbic epilepsy. *Brain Research* 1994; 661:157-162.

Bertram, E.H. The functional anatomy of spontaneous seizures in a rat model of chronic limbic epilepsy. *Epilepsia*, 1997; 38: 95-105.

Mangan, P.S. and Bertram, E.H., Ontogeny of altered synaptically mediated responses of CA1 pyramidal cells in a model of limbic epilepsy. *Brain Research* 799: 183-196, 1998

Chen, Z.F., Schottler, F., Bertram, E., Gall, C.M., Anzivino, M.J. and Lee, K.S. Distribution and initiation of seizure activity in a rat brain with subcortical band heterotopia. *Epilepsia*, 41:493-501, 2000.

Bertram, E.H., Williamson, J.M., Scott, C., Mangan, P.S. and Zhang, D.X. The midline thalamus: alterations and a potential role in limbic epilepsy. *Epilepsia*, 42: 967-978, 2001.

Chen, Z.F., Kamiryo, T., Henson, S.L., Yamamoto, H., Bertram, E.H., Schottler, F., Patel, F., Steiner, L., Prasad, D., Kassell, N.F., Shareghis, S., and Lee, K.S. Anticonvulsant Effects of Gamma Surgery in a Rat Model of Chronic Spontaneous Limbic Epilepsy. *Journal of Neurosurgery*, 94: 270-280, 2001.

Prasad, A., Williamson, J.M. and Bertram, E.H. Phenobarbital and MK-801 but not phenytoin improve long term outcome in status epilepticus. *Annals of Neurology*, 51: 175-181, 2002.

Bertram EH, Zhang DX, Williamson JM. Multiple Roles of Midline Dorsal Thalamic Nuclei in Induction and Spread of Limbic Seizures . *Epilepsia*, 49: 256-268, 2008.

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Sloan DM, Zhang DX, Bertram EH. Excitatory Amplification Through Divergent-Convergent Circuits: The Role of the Midline Thalamus in Limbic Seizures *Neurobiology of Disease*. 43:435-445, 2011.

Kendirli TM, Rose DT, Bertram EH. A Model of Post-Traumatic Epilepsy After Penetrating Brain Injuries: Effect of Lesion Size and Metal Fragments. *Epilepsia*. 2014; 55:1969-1977.

Zhang DX and Bertram EH. Suppression of limbic seizures by stimulation of medial dorsal thalamic nucleus: factors for efficacy. *Epilepsia* 56:479-488, 2015.

Book Chapters and Invited Reviews

Bertram, E.H. and Dreifuss, F.E. "What is Epilepsy," "The Classification of Seizures" and "The Causes of Seizures," In: *A Practical Approach to Epilepsy*, M. Dam, ed. Pergamon Press, New York, 1991.

Bertram EH. Monitoring for seizures in rodents. In: *Models of Seizures and Epilepsy*, Chapter 46. A Pitkänen, PA Schwartzkroin and SL Moshé, editors. Elsevier, Amsterdam. pp. 569-582, 2006.

Bertram EH. The relevance of kindling for human epilepsy. *Epilepsia*, 48 (S2):65-74, 2007.

Perez-Velasquez J-L, Bertram EH, Snead OC. Idiopathic generalized epilepsy. In: *Neurobiology of Disease*. S. Gilman, editor. Elsevier, Amsterdam. Chap 28 pp. 287-294. 2006.

Kapur, J. and Bertram, E.H. Drug resistance in epilepsy and status epilepticus. In: *Epilepsy: Mechanisms, Models and Translational Perspectives*, J.M. Rho, R. Sankar and J.E. Cavazos, eds., CRC Press, Boca Raton. pp: 61-82. 2010.

Dudek FE. and Bertram EH. Counterpoint to "what is an epileptic seizure?" by D'ambrosio and Miller. *Epilepsy Currents*. 2010; 10:91-94.

Thom, M and Bertram, E.H. Temporal Lobe Epilepsy: In: *Epilepsy: Basic Principles and Diagnosis, Part I*, edited by Hermann Stefan and William H. Theodore, Volume Editors, Handbook of Clinical Neurology. Elsevier, Amsterdam, 2012.

O'Brien TJ. Ben-Menachem E. Bertram EH 3rd. Collins SD. Kokaia M. Lerche H. Klitgaard H. Staley KJ. Vaudano E. Walker MC. Simonato M. Proposal for a "phase II" multicenter trial model for preclinical new antiepilepsy therapy development. *Epilepsia*. 54 (S4):70-4, 2013.

Bertram EH. Temporal lobe epilepsy. In: *Neurobiology of Disease, 2nd Edition*. Oxford University Press. Pp.289-293, 2016.

Brady RD. Casillas-Espinosa PM. Agoston DV. Bertram EH. Kamnaksh A. Semple BD. Shultz SR. Modelling traumatic brain injury and posttraumatic epilepsy in rodents. *Neurobiology of Disease*. 123:8-19, 2019.