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EDUCATION

1995-2000 Medical School: Johns Hopkins School of Medicine Baltimore, MD
Doctor of Medicine, May 2000

1991-1995 Undergraduate: Johns Hopkins University Baltimore, MD
Bachelor of Science, Biomedical Engineering
Bachelor of Science, Materials Science and Engineering
Graduated with University and Departmental Honors

1987-1991 High School: Harrisburg High School Harrisburg, PA
Valedictorian

PROFESSIONAL EXPERIENCE

2010-Present Baltimore Neurosurgery and Spine Center
Baltimore, MD

2007-2010 Greater Baltimore Neurosurgical Associates
Greater Baltimore Medical Center
Department of Neurosurgery
Baltimore, MD

CLINICAL TRAINING

2006-2007 Johns Hopkins University School of Medicine
Chief Resident, Department of Neurosurgery

2001-2006 Johns Hopkins University School of Medicine
Assistant Resident, Department of Neurosurgery

2000-2001 Johns Hopkins University School of Medicine
Intern, Department of General Surgery

CERTIFICATION AND LICENSURE

2007 Board Eligible, American Board of Neurological Surgeons
2007 State of Maryland Medical License
2003 American Board of Neurological Surgery Primary Examination

HONORS AND AWARDS

American Parkinson's Disease Association Post-doctoral fellowship (2004-2005)
Harvey Cushing Medical Student Hunterian Research Award (1999)
NIH Supplemental Opportunities Research Grant (1998-99)
National Society of Professional Engineers Scholarship (1991-95)
Omicron Delta Kappa Leadership Honor Society (Inducted in 1995)
Tau Beta Pi Engineering Honor Society (Inducted in 1994)
Golden Key Honor Society (Inducted in 1994)
National Achievement Scholarship (1991-92)

CLINICAL STUDIES

A Prospective Randomized Multi-center Investigation of the Mobi-C Artificial Cervical Disc Replacement, Investigator, 2007

A Prospective Randomized Multi-center Investigation of the Paradigm-Coflex Spinal Stabilization without Fusion, Investigator, 2007

RESEARCH EXPERIENCE

July 2004 – May 2006 Research Fellow – Preceptor: Fred Lenz, MD
Johns Hopkins School of Medicine, Dept of Neurosurgery
American Parkinson's Disease Association Fellowship
Motor learning studies on patients with movement disorders

June 1998 - June 1999 Research Fellow - Preceptor: Henry Brem, MD
Johns Hopkins School of Medicine, Dept of Neurosurgery
National Institutes of Health Grant
Assisted in the development of intracranial animal models for the local delivery of chemotherapeutic agents for brain tumors

June 1996 - Aug 1996 Research Assistant - Preceptor: Cameron Huckell, MD
Johns Hopkins School of Medicine, Dept of Orthopedic Surgery
Assisted in a clinical project comparing the outcomes of patients treated for pseudarthrosis by two different techniques.

- Oct 1994 - Aug 1995 Research Assistant - Preceptor: Edmund Chao, PhD
Johns Hopkins School of Medicine, Department of Orthopedics and Biomechanics
Conducted material testing of defected canine tibiae.
- June 1994 - Aug 1994 Research Assistant - Preceptor: Stephen Oppenheimer, MD
Johns Hopkins School of Medicine, Dept of Neurology
Assisted in mapping areas of the thalamus using data from a retrospective study of sixty patients.
- June 1992 - Aug 1992 Research Assistant - Preceptor: Norman Sheppard, PhD
Johns Hopkins University, Dept of Biomedical Engineering
Assisted in the development of an experimental glucose sensor for diabetics.

PUBLICATIONS

WS Anderson, HC Lawson, AJ Belzberg, FA Lenz. Selective denervation of the levator scapulae muscle: an amendment to the Bertrand procedure for the treatment of spasmodic torticollis. *J Neurosurgery*. Apr:108:757-63. 2008

HC Lawson, P Sampath, E Bohan, MC Park, N Hussain, AOIivi, J Weingart, L Kleinberg, H Brem. Interstitial chemotherapy for malignant gliomas, the Johns Hopkins Experience. *J Neuro-oncology*. 83: 61-70, 2007.

WS Anderson, S Ohara, HC Lawson, R-D. Treede, FA Lenz. Plasticity of pain-related neuronal activity in the human thalamus. *ProgBr Res* 157:353-354, 2006.

S Ohara, WS Anderson, HC Lawson, HT Lee, FA Lenz. Endogenous and exogenous modulators of potentials evoked by a painful cutaneous laser (LEPs). *Acta Neurochiroe*. 99:1-3, 2006.

CA Bagley, S Ohara, HC Lawson, FA Lenz. Psychophysics of CNS pain-related activity: binary and analog channels and memory encoding. *The Neuroscientist* 12:29-42, 2006.

N Weiss, HC Lawson, S Anderson, SA Treede, JD Greenspan, FA Lenz. Neuronal activity recorded along the human forebrain 'pain pathway'. *Thalamus and related systems*. 3:71-86, 2005.

KW Li, C Roonprapunt, HC Lawson, IR Abbott, J Wisoff, F Epstein, GI Jallo. Endoscopic third ventriculostomy for hydrocephalus associated with tectal gliomas. *Neurosurg Focus*. 18; Jun 15, 2005.

S Ohara, N Weiss, S Hua, S Anderson, HC Lawson, JD Greenspan, FA Lenz. Allodynia due to forebrain sensitization demonstrated by thalamic microstimulation. In: *Hyperalgesia: Molecular approaches and clinical treatment*. Eds. K Brune and HO Handwerker. IASP Press: Seattle. 353-371, 2004 (in press).

F Lenz, N Weiss, S Ohara, HC Lawson, JD Greenspan. The role of the thalamus in pain. *Suppl. Clin. Neurophysiol.* 57: 50-61, 2004.

AF Samdani, EB Kuchner, L Rhines, DC Adamson, HC Lawson, B Tyler, H Brem, VL Dawson, TM Dawson. Astroglia induce cytotoxic effects on brain tumors via a nitric oxide-dependent pathway both in vitro and in vivo. *Neurosurgery.* Vol 54, No. 5, May 2004, p. 1231-7.

C Guerin, A Olivi, JD Weingart, HC Lawson, H Brem. Recent advances in brain tumor therapy: local intracerebral drug therapy by polymers. *Investigational New Drugs.* Vol 22, No 1, Jan 2004, p. 27-37.

LD Rhines, P Sampath, F DiMeco, HC Lawson, BM Tyler, J Hanes, A Olivi, H Brem. Local immunotherapy with interleukin-2 delivered from biodegradable polymer microspheres combined with interstitial chemotherapy: a novel treatment for experimental malignant glioma. *Neurosurgery.* Vol 52, No 3, April 2003, p. 872-879.

TS Tierney, RE Clatterbuck, HC Lawson, QA Thai, LD Rhines, RJ Tamargo. Prevention and reversal of experimental posthemorrhagic vasospasm by the periaventricular administration of nitric oxide from a controlled-release polymer. *Neurosurgery.* Vol 49, No. 4, October 2001, p. 945-951.

H Brem and HC Lawson. The development of new brain tumor therapy utilizing local and sustained delivery of chemotherapeutic agents from biodegradable polymers (Editorial). *Cancer* Vol. 86, No. 2, July 15 1999, p. 197-199.

DA Cohen, A Chotivichit, T Fujita, TH Wong, CB Huckell, AN Sieber, JP Kostuik, HC Lawson. A comparison of structural grafts in the repair of lumbar pseudarthrosis: autogenous iliac crest vs. femoral ring allograft. *Spine: State of the Art Reviews.* Vol 13, No. 2, May 1999, p. 359-368.

ABSTRACTS

HC Lawson, S Ohara, JD Greenspan, FA Lenz, Quantitative sensory testing demonstrates distributed pattern of modality representation in parasylvian cortex. American Association of Neurological Surgeons, New Orleans, LA, 2005 (E-poster presentation).

HC Lawson, L. Rhines, M. Wetzel, B.M. Tyler, G. Faircloth, H. Brem. Aplidine and Ecteinascidin-743: Cytotoxicity of two novel anti-tumor agents against primary and metastatic brain tumor lines in vitro. Congress of Neurological Surgeons, Boston MA, October 30 - November 4, 1999 (Oral Poster Presentation)

L Rhines, HC Lawson, A Samdani, F DiMeco, B Tyler, VL Dawson, H. Brem. Stimulation of astroglia with interleukin-4, interleukin-12, and interleukin-13: Effects on co-cultured tumor cells. Congress of Neurological Surgeons, Boston MA, October 30 - November 4, 1999

L Rhines, HC Lawson, T Bunton, P Sampath, B Tyler, J Weingart, H Brem. O6-Benzylguanine causes toxicity when administered in conjunction with biodegradable polymers containing increases BCNU loading doses. Congress of Neurological Surgeons, Boston MA, October 30 - November 4, 1999

L Rhines, VL Perry, HC Lawson, F DiMeco, B Tyler, H Brem. Locally delivered adriamycin and interleukin-2 are synergistic in the treatment of intracranial 9L gliosarcoma. Congress of Neurological Surgeons, Boston MA, October 30 - November 4, 1999

L Rhines, P Sampath, HC Lawson, S Betchen, F DiMeco, B Tyler, H Brem. Interstitial polymeric delivery of interleukin-2 combined with BCNU in the treatment of experimental glioma. Congress of Neurological Surgeons, Boston MA, October 30 - November 4, 1999

F DiMeco, L Rhines, J Hanes, HC Lawson, B Tyler, A Aggarwal, VL Perry, H. Brem, A Olivi. Local delivery of IL-12 by microspheres against experimental brain tumors. Congress of Neurological Surgeons, Boston MA, October 30 - November 4, 1999

A Samdani, L Rhines, DC Adamson, HC Lawson, B Tyler, H Brem, VL Dawson, TM Dawson. Astroglia mediate cytotoxic effects toward brain tumors via a nitric oxide dependent mechanism in vivo. American Association of Neurological Surgeons, New Orleans LA, April 24-29, 1999