

## CURRICULUM VITAE

### **RICHARD ANGUS LOCHHEAD, MD**

#### **BIOGRAPHICAL INFORMATION**

**Current Work**

Address: NeuroScience Associates  
6140 W. Curtisian Ave, Ste. 400, Boise ID 83704

**Prior Work**

Address: Barrow Neurological Institute St. Joseph's Hospital  
350 West Thomas Road Phoenix, Arizona 85013

**Personal:**

Married with four children  
Enjoys running, basketball, snow skiing, classical music

#### **EDUCATION**

**Barrow Neurological Institute / St. Joseph's Hospital**

Division of Neurosurgery, Phoenix, Arizona  
Resident in Neurological Surgery, July 2007 – 2013 (anticipated)  
*Fellowship in Complex Spinal Surgery*, January 2010 – March 2010  
Director: Nicholas Theodore MD

**International Neuroscience Institute**

Department of Neurosurgery, Hannover, Germany  
*Fellowship in Skull Base Surgery*, July 2011 - March 2012  
Director: Madjid Samii MD, PhD

**Good Samaritan Regional Medical Center**

Phoenix, Arizona  
Internship in General Surgery, July 2006 – June 2007

**Columbia University, College of Physicians and Surgeons**

New York City, New York  
Doctor of Medicine, May 2006

**Brigham Young University**

Provo, Utah  
Bachelor of Science in Neuroscience, May 2001

**Davis High School**  
Kaysville, Utah  
Graduated May 1995

## **HONORS AND AWARDS**

**Gold Humanism in Medicine Honor Society**, Columbia University (2006)

**AMA Foundation Seed Grant**, Columbia University (2005)

**American Brain Tumor Association Fellowship**, Columbia University (2004)

**NIH Student Research Fellowship**, Columbia University (2002)

**Stanley Scholar Research Fellowship**, Columbia University (2001)

**Academic Scholarship**, Brigham Young University (1998-2001)

**Top Scholar Athlete Award**, Davis High School (1995)

**Eagle Scout Award**, Boy Scouts of America (1991)

## **CERTIFICATIONS**

**USMLE Step 1:** May 2003

**USMLE Step 2:** December 2004

**USMLE Step 2 Clinical Skills Exam:** December 2004

**USMLE Step 3:** July 2007

**ACGME Neurosurgical Written Boards:** March 2011

## **PROFESSIONAL ORGANIZATIONS**

**Neurosurgical Review:** Reviewer 2011-Current

**American Association of Neurological Surgeons:** Resident Member 2007-Current

**Congress of Neurological Surgeons:** Resident Member 2007 - Current

## **OTHER EMPLOYMENT**

**Brain Tumor Research Fellow**, June 2004 – August 2005  
Glioma model and treatment, Columbia University, New York

**Research Scholar**, June 2001- August 2003  
MRI analysis for depression, Columbia University, New York

**Chemistry Teacher Assistant**, January 1998 – May 2001  
Department of Chemistry, Brigham Young University, Utah

**Research Associate**, June 1997 – December 1997  
Department of Chemistry, Brigham Young University, Utah

## **VOLUNTEER SERVICE**

**Representative for The Church of Jesus Christ of Latter-day Saints**  
Albuquerque, New Mexico, November 1995-November 1997

**Scout Leader with Boy Scouts of America**,  
Phoenix, Arizona, 2006 – Current

## **BOOK CHAPTERS**

Lochhead, RA, Sonntag, VKH. “Lumbar Stenosis.” Encyclopedia of Neurological Science  
2nd ed, Aminoff & Daroff. Elsevier. Pending publication

Lochhead, RA, Sonntag, VKH. “Lumbar Laminectomy.” Encyclopedia of Neurological Science  
2nd ed, Aminoff & Daroff. Elsevier. Pending publication

Lochhead, RA, Rekate, HL, Bristol, R. “Slit Ventricle Syndrome.” Encyclopedia of  
Neurological Science 2nd ed, Aminoff & Daroff. Elsevier. Pending publication

Lochhead, RA, Bristol, R. “Shunts, Neurosurgical” Encyclopedia of Neurological Science  
2nd ed, Aminoff & Daroff. Elsevier. Pending publication

Lochhead, RA, Bristol, R. “Spasticity.” Encyclopedia of Neurological Science 2nd ed, Aminoff  
& Daroff. Elsevier. Pending publication

Lochhead, RA, Uschold, T, & Theodore, NT. “Thoracic Transpedicular Corpectomy.” Essential  
Techniques in Operative Neurosurgery, edited by Jandiel, McCormick, & Black. Elsevier, 2010.

Uschold, T, Lochhead, RA, & Porter, R. “Costotransversectomy.” Essential Techniques in Operative  
Neurosurgery, edited by Jandiel, McCormick, & Black. Elsevier, 2010.

Uschold, T, Lochhead, RA, Albuquerque, F, & McDougall, C. “Spinal AVM and Dural Fistula Embolization.” *Endovascular Treatment for Neurovascular Disease*. Thieme. Pending publication.

## PEER REVIEWED PUBLICATIONS

2011

Martirosyan, NL, Kalb, S, Calvalcanti, DD, Lochhead, RA, Uschold, TD, Loh, A, & Theodore, N. Comparative analysis of isocentric 3-dimensional c-arm fluoroscopy and biplanar fluoroscopy for anterior screw fixation in odontoid fractures. *J Spinal Disord Tech*. 2011 Dec 5 (Epub ahead of print).

2010

Lochhead, RA, Abla, AA, Mitha, AP, Fusco, D, Almefty, K, Sanai, N, Oppenlander, ME, & Albuquerque, FC. A history of the Barrow Neurological Institute. *World Neurosurgery*. 2010 Jul;74(1):71-80. Abla, AA, Maroon, J, Lochhead, RA, Sonntag, VK, Wilson, DA, & Fields, M. Return to golf after spine surgery. *Journal of Neurosurgery: Spine*. 2011 Jan;14(1):23-30.

2008

Ogden AT, Waziri AE, Lochhead RA, Fusco D, Lopez K, Ellis JA, Kang J, Assanah M, McKhann GM, Sisti MB, McCormick PC, Canoll P, Bruce JN. Identification of A2B5+CD133- tumor-initiating cells in adult human gliomas. *Neurosurgery*. 2008 Feb; 62(2):505-14; discussion 514-5.

2006

Assanah M, Lochhead R, Ogden A, Bruce J, Goldman J, & Canoll P. Glial progenitors in adult white matter are driven to form malignant gliomas by platelet-derived growth factor-expressing retroviruses. *J Neuroscience*. 2006 Jun 21; 26(25):6781-90.

2004

Lochhead, RL, Parsey, RV, Oquendo, MA, & Mann, JJ. Regional brain gray matter differences in bipolar disorder patients as assessed by optimized voxel-based morphometry. *Biological Psychiatry*. 2004 Jun 15; 55(12):1154-62.

## PRESENTATIONS

2011

Lochhead, RA. “Motion preservation in the cervical spine.” Invited Speaker: **The Salzburg Weil**

**Cornell Neurosurgery Spine & Trauma AAF Seminar.** September 2011.

Lochhead, RA. "Pediatric spinal trauma." Invited Speaker: **The Salzburg Weil Cornell Neurosurgery Spine & Trauma AAF Seminar.** September 2011.

Lochhead, RA. "Craniocervical trauma management." Invited Speaker: **The Salzburg Weil Cornell Neurosurgery Spine & Trauma AAF Seminar.** September 2011.

Lochhead, RA. "Depressed skull fractures." Invited Speaker: **SJHMC Trauma Symposium.** February 2011.

#### 2010

Lochhead, RA, Kim, LJ, Peterson, EC, Mariwalla, NR, Albuquerque, F, Nakaji, P, McDougall, CG, & Spetzler, RF. Outcome after surgical and endovascular treatment of intracranial blister aneurysms (Digital Poster Presentation). **CNS annual meeting.** October 2010.

Lochhead, RA, Martirosyan, NL, Cavalcanti, DD, Kalb, S, Loh, AM, & Theodore, N. Comparative analysis of isocentric 3-dimensional c-arm fluoroscopy and biplanar fluoroscopy for anterior screw fixation in odontoid fractures (Digital Poster). **CNS annual meeting.** October 2010.

*Poster:* Abla, AA, Maroon, J, Lochhead, RA, Sonntag, VK, Wilson, DA, & Fields, M. Return to golf after spine surgery (Digital Poster). **AANS annual meeting.** April 2010

#### 2009

*Poster:* Lochhead, RA, Bristol, RE, Porter, RW, Wilson, DA, Gonzalez, LF, McDougall, CG, & Albuquerque, F. Safety and efficacy of pre-operative embolization in pediatric spinal tumors (Digital Poster). **CNS annual meeting.** October 2009

#### 2007

*Poster:* Assana, M, Lochhead, RA, Ogden, AT, Bruce, JN, Goldman, J, & Cannoll, P. PDGF retroviruses drive adult glial progenitors to form malignant gliomas (Digital Poster). **AANS annual meeting.** April 2007.

#### 2006

*Poster:* Ogden, AT, Lochhead, RA, Waziri, AE, Kang, J, Ellis, J, Fusco, DE, Canoll, PD, & Bruce, J. A2B5+ white matter progenitors, glioma cells of origin (Digital Poster). **CNS annual meeting.** October 2006.

*Poster:* Cronk, KM, Gensert, J, Berkman, E, Ogden, AT, Lochhead, RA, Weinstein, DE, & Bruce, J. DNA modification to up regulate a novel therapeutic target for the treatment of glioblastomas (Digital Poster). **CNS annual meeting.** October 2006.

Assana, M, Lochhead, RA, Ogden, AT, Bruce, J, Goldman, JE, & Canoll, P Glial

progenitors in adult white matter are driven to form malignant gliomas by PDGF expressing retroviruses (Digital Poster). **CNS annual meeting**. October 2006.

Ogden, AT, Weicker, M, Lochhead, RA, Kang, J, Rivera, F, Canoll, P, Weinstein, D, & Bruce, JN. CD81-EphA5 interaction attenuates glioma proliferation in vitro and in vivo (Digital Poster). **AANS annual meeting**. April 2006

#### 2005

Ogden, AT, Weicker, MA, Lochhead, RA, Rivera, FO, Weinstein, DE, & Bruce, JN. CD81-EphA5 interaction induces glioma growth arrest in vivo and in vitro (Digital Poster). **CNS annual meeting**. October 2005.

Lochhead, RA, Ogden, AT, Rivera, FO, Canoll, PD, & Bruce, JN. Bleomycin alone and combined with topotecan are both effective when delivered by convection enhanced delivery in rat model of malignant glioma (Digital Poster). **CNS annual meeting**. October 2005.

Lochhead, RA, Ogden, AT, Rivera, FO, Lopez, KD, Canoll, PD, & Bruce, JN. Combination therapy of bleomycin and topotecan: *in vitro* synergy and prolonged survival with convection enhanced delivery in rat glioma model (Poster Presentation). **Columbia University Health Science Annual Research Forum**. May 2005.

Lochhead, RA, McKhann, GM, Hankinson, TC, Isaacson, SR, Hesdorffer, CS, DeRaffele, G, Sisti, J, Bruce, JN, & Kaufman, HL. Metastatic malignant melanoma treatment with resection or radiosurgery combined with high dose systemic interleukin-2 (Oral Poster). **AANS annual meeting**. April 2005.

#### 2004

Lochhead, RA, McKhann, GM, Hankinson, TC, Isaacson, SR, Hesdorffer, CS, DeRaffele, G, Sisti, J, Bruce, JN, & Kaufman, HL. High dose systemic interleukin-2 for metastatic melanoma in patients with treated brain metastases (Oral Poster). **International Society for Biological Therapy of Cancer, 19<sup>th</sup> Annual Meeting**. Nov 2004.

#### 2003

Lochhead, RA, Parsey, RV, Oquendo, MA, Mann, JJ. MRI analysis of volumetric differences in bipolar disorder using optimized voxel-based morphometry (Oral Poster). **Columbia University Health Science Annual Research Forum**. May 2003.

#### 1999

Lochhead, RA, & Lamb, J. A New Retention Model for Ion Chromatography (Presentation). **BYU Spring Research Conference**. March 13, 1999.