

# **CURRICULUM VITAE**


## **PERSONAL DATA:**

**Robert Timothy Neumann, MD, PhD**

Citizenship: U.S.A.

## **ADDRESS**

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## **BOARD CERTIFICATION AND LICENSURE:**

American Board of Psychiatry and Neurology, Vascular Neurology, 2008  
United Council for Neurologic Subspecialties, Neurological Critical Care, 2007  
American Board of Psychiatry and Neurology, 2003  
State of Colorado Medical License, 2000

## **INSTITUTIONAL BOARD CERTIFICATIONS**

United Council for Neurologic Subspecialties, University of Colorado Hospital, Certification of the Neurological ICU, 2009  
United Council for Neurologic Subspecialties, University of Colorado School of Medicine, Fellowship Program in Neurological Critical Care, 2008

## **EDUCATION:**

1977-1978	Colorado Aero Tech (Trade School) Broomfield CO Federal Aviation Administration Airframe & Powerplant Mechanic's licensee and Federal Communications Commission Restricted Radio and Telephone Operator's Licensee
1979-1985	Metropolitan State University of Denver - BS Denver CO Double major: Psychology & Human Services Minor: Aeronautical Engineering

- 1986 – 1992 Colorado State University – MS, PhD  
Fort Collins CO  
Neurophysiology Tract/Experimental Psychology
- 1993-1997 University of Colorado, School of Medicine – MD

### **POSTDOCTORAL EDUCATION:**

- 2001-2003 Fellowship in Neurological Critical Care, Neurosurgery  
University of Colorado, School of Medicine  
Denver, CO
- 1998-2001 Residency, Neurology  
University of Colorado, School of Medicine  
Denver, CO
- 1997-1998 Internship, Internal Medicine  
University of Colorado, School of Medicine  
Denver, CO

### **ACADEMIC APPOINTMENTS**

- 2011-present Associate Professor  
Department of Neurosurgery  
University of Colorado, School of Medicine
- 2004-2011 Assistant Professor  
Department of Neurosurgery  
University of Colorado, School of Medicine

### **ACADEMIC ADMINSTRATIVE APPOINTMENTS**

- 2009- Animal Brain Monitoring Laboratory, Co-Director  
Department of Neurosurgery  
University of Colorado School of Medicine  
Aurora, CO
- 2009- United Council for Neurologic Subspecialties, Member
- 2009- United Council for Neurological Subspecialties, Member  
Neurocritical Care Society  
Neurocritical Care Subcommittee
- 2008- Neurological Critical Care, Fellowship Director  
Department of Neurosurgery  
University of Colorado School of Medicine  
Aurora, CO

- 2004- Fellowship Committee, Member  
American Academy of Neurological Surgeons  
Rocky Mountain Neurological Society
- 2001-2003 Neurological Critical Care Fellowship rank, Instructor  
Departments of Neurosurgery & Neurology  
University of Colorado School of Medicine  
Denver, CO

### **CLINICAL/HOSPITAL APPOINTMENTS**

- 2012- Stroke Program, Co-Director  
University of Colorado School of Medicine  
Aurora, CO
- 2009- Neurosciences Strategic Planning Committee, Member  
University of Colorado Hospital  
University of Colorado School of Medicine
- 2008- Disaster Preparedness Committee, Member  
University of Colorado Hospital
- 2005- Critical Care QI Committee, Member  
University of Colorado Hospital
- 2004- Stroke Council, Member  
University of Colorado Hospital
- 2004-2007 Anschutz Inpatient Pavilion Planning Committee, Member  
University of Colorado Hospital
- 2003- University of Colorado School of Medicine, Attending Medical Doctor  
Aurora, CO
- 2003- Neurological Critical Care, Medical Director  
Neurological Intensive Care Unit  
University of Colorado School of Medicine  
Aurora, CO
- 2003- Neurocritical Care QI Committee, Chairman  
University of Colorado Hospital
- 2003- Trauma Committee, Member  
University of Colorado Hospital



## **HONORS AND AWARDS:**

- President's Award, Partnership in Leadership, University of Colorado Hospital, 2013
- President's Award, Rock Solid Economics, University of Colorado Hospital, 2011
- Strathmore's Who's Who, 2011
- Best Doctors In America Award, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017
- Top Physician's Award, Consumer Research Council of America, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017
- Peak Performers Award, Hospital-Based Physician, Rocky Mountain Hospital Medical Symposium, 2009, 2010
- Academy of Medical Educators Award, 2009
- Department of Health and Human Services, Organ Donation Medal of Honor, 2008
- Partners in Care Award, University of Colorado Hospital, 2006, 2007
- American Academy of Neurology, Education and Graduate Subcommittee, Residency Scholarship Award, 2001
- Golden Apple Resident's Training Award, University of Colorado Hospital, 1998, 1999
- Adler's Scholar Award, 1997
- C. Walter Metz Award for Excellence in Anesthesiology, 1996
- Honors in Internal Medicine, Computer Science, Psychiatry, Anesthesiology, Orthopedic Surgery, Urology, Neurology, Family Medicine, 1993-1996
- Richard M. Suinn, Graduate Student of the Year Award, 1992
- Golden Key National Honor Society, 1988
- Colorado Graduate Fellowship Award, 1986, 1987
- Magna Cum Laude, 1984
- Psi-Chi National Honors Society, Vice President and Treasurer, 1979-1984
- KBTv Channel 9 "Nine Who Cares" Honorable Mention" Award, 1982
- Vice President's List, 1979-1982
- Who's Who is American College Students Award, 1982
- Colorado Scholars Fall Tuition Scholarship Awards, 1980-1982
- Adams County Association for Retarded Children, *Citizens Advocate of the Year Award*, *Outstanding Volunteer Award*, *Dedicated Volunteer Award*, 1979-1981

## **MEMBERSHIP IN PROFESSIONAL SOCIETIES**

American Medical Association  
American Academy of Neurology (AAN)  
American Association of Neurological Surgeons (AANS)  
Neurocritical Care Society (NCS)  
Society of Critical Care Medicine (SCCM)

## **INVITED LECTURES AND EXTRAMURAL PRESENTATIONS**

2004-present **Resuscitation of the Traumatically Injured Brain**  
General Surgery Grand Rounds  
University of Colorado School of Medicine

- 2004-Present **Stabilization of the Emergent Neurological Patient: Transport Management Strategies for Referring Caregivers**  
Presentation given at numerous outreach venues
- 2007 **The Supra-Orbital Minimally Invasive Skull Base Approach**  
First Annual Department of Neurosurgery Skull Base Dissection Course  
University of Colorado Health Sciences Center
- 2006 **Resuscitation of the Traumatically Injured Brain**  
Anesthesia Grand Rounds  
University of Colorado School of Medicine
- 2006 **Cerebral Perfusion States of Patients on Cardiopulmonary Bypass**  
Presented to the University of Colorado Cardiothoracic Surgical Team
- 2005 **Management of Intra and Extracranial Complications in the NICU Patient**  
Neurosurgery Grand Rounds  
University of Colorado School of Medicine
- 2005 **Critical Care Neuropathy and Myopathy**  
Presented to the University of Colorado Surgical ICU Team
- 2004 **Myocardial Infarction: Epidemiology, Pathophysiology, Pathology, Diagnosis, and Treatment**  
Neurosurgery Grand Rounds  
University of Colorado School of Medicine
- 2004 **Deep Venous Thrombosis: History, Epidemiology, Pathophysiology, Pathology, Diagnosis, and Treatment**  
Neurosurgery Grand Rounds  
University of Colorado School of Medicine
- 2004 **Pulmonary Embolism: History, Epidemiology, Pathophysiology, Pathology, Diagnosis, and Treatment**  
Neurosurgery Grand Rounds  
University of Colorado School of Medicine

### **TEACHING AND MENTORING ACTIVITIES**

- 2003-Present Daily Multi-Disciplinary Director's Teaching Rounds  
ICU Fellow  
Neurosurgery & Neurology Residents  
Nursing Leadership  
Pharm-D and Pharmacology Fellows  
Respiratory Therapy Team  
Nutrition Team

Physical and Occupational Therapy Teams  
Social Work Services  
Applicable Consultants

- 2009-2014      Establishment of & attendance to the 24-Hour Neurocritical Care Hotline  
Community-based physician teaching, outreach, consultant and referrals  
(720)848-8088
- 2010-2013      Mentorship with Allen Waziri  
University of Colorado Department of Neurosurgery  
Large Animal Laboratory Program  
Co-Mentoring the Neuro ICU Fellow, Neurosurgery Residents, and Med Students
- 2009-2012      Guest Lecturer  
Gross Neuroanatomy (Brain Cutting) Lab  
University of Colorado School of Medicine
- 2007            Instructor  
First Annual Department of Neurosurgery Skull Base Dissection Course  
University of Colorado School of Medicine  
Course Director: Steven Ojemann
- 2006            Establishment of the University of Colorado Skull Base Microsurgical Laboratory with  
Steven Ojemann, and in conjunction with Albert L. Rhoton, Jr. and the Stryker Leibinger  
Co.
- 1994            Medical Student Tutor  
BBGN 5000  
Principles of Mammalian Physiology  
University of Colorado School of Medicine  
Course Director: Warren Wicklegren
- 1983-1994      Teacher's Assistant  
Rivendell Elementary School  
Director: Roxanne Pinnio
- 1987-1991      Graduate Teaching Assistant  
PY 353  
Psychology of Learning  
Colorado State University Department of Psychology  
Course Director: Ralph Richard
- 1987-1991      Graduate Teaching Assistant  
Physiological Psychology  
PY 454  
Colorado State University Department of Psychology  
Course Director: Tim Bennett

1983 Undergraduate Teaching Assistant  
PY 101  
Metropolitan State University of Denver Department of Psychology  
Course Director: Martin Hoffman

### **Mentees**

2013-2015 David Case, M.D.  
Fellow, Department of Neurology  
University of Colorado School of Medicine

2011-2013 Luis Cava, M.D.  
Fellow, Department of Neurosurgery  
Neurological Critical Care Fellowship Program  
University of Colorado School of Medicine

2009-2010 Tracy Marrs Conner  
3rd year medical student  
University of Colorado School of Medicine

2009-2010 Richard Alex Harbison  
3rd year medical student  
University of Colorado School of Medicine

### **SCIENTIFIC ACTIVITIES**

#### **Research Record:**

2010-2013 MSG-04 Merk Caspofungin<sup>TM</sup> Protocol  
A pilot multicenter randomized, double-blind, placebo controlled trial of Caspofungin<sup>TM</sup>  
empirical therapy for invasive candidiasis in high-risk patients in the critical care setting,  
Protocol #067  
Role: Co-Investigator (PI: Michele Baron)

2009-2013 Comparison of Intracranial Monitoring Devices With Physiologic Variations in a Large  
Animal Model  
University of Colorado Health Sciences Center & the School of Medicine  
IACUC Protocol # 87109 (06) 1E  
Role: Co-Investigator (Co-PI Allen Waziri)

2010-2012 Maintenance of Mild Therapeutic Hypothermia During Routine Transport of Critically Ill  
Patients  
University of Colorado Health Sciences Center  
IRB # 10-0306  
Role: Co-Investigator (Co-PI Todd Larabee)



- 2009-2011     A randomized open label efficacy and safety study of Octaplex TM and fresh frozen plasma in patients under vitamin K therapy with the need for surgical intervention or invasive procedures  
IRB # 08-1254  
Role: Co-Investigator (Co-PI Fareed Azam)
- 2004           Transmid Protocol: Phase III multicenter study of intratumoral/interstitial therapy with Transmid<sup>TM</sup> compared to the best standard of care in patients with progressive and/or recurrent non-resectable Glioblastoma Multiforme.  
University of Colorado Health Sciences Center, Department of Neurosurgery  
Protocol # KSB311R/CIII/001  
Role: Collaborator (PI Kevin Lillehei)
- 2005           NeoPharm Protocol: (PRECISE Study) Phase III randomized evaluation of IL-13-PE38QQR Compared to Gliadel Wafer<sup>TM</sup> with survival endpoint in Glioblastoma Multiforme patients at first recurrence  
University of Colorado Health Sciences Center, Department of Neurosurgery  
Protocol # IL13PE-301  
Role: Collaborator (PI: Kevin Lillehei)
- 1993-1994     Magneto-encephalography Neuromagnetism Laboratory  
University of Colorado and the School of Medicine, Department of Psychiatry  
Role: Departmental Fellow (Director and PI: Martin Reite)
- 1991-1992     Colorado State University, Department of Biochemistry  
Role: Faculty Research Associate (PI: Craig Schenck)
- 1986-1991     Colorado State University  
Department of Biochemistry  
Role: Laboratory Assistant 1A (PI: Craig Schenck)
- 1986-1988     Establishment of the Colorado State University Electroencephalography and Evoked Potentials Laboratory  
In conjunction with Chris Sullivan  
Primary Investigator and Director: Tim Bennett
- 1986           Magneto-encephalography Neuromagnetism Laboratory  
University of Colorado and the School of Medicine, Department of Psychiatry  
MRI/MEG Schizophrenia Project  
Role: Faculty Research Associate (Director and PI: Martin Reite)
- 1985-1986     Primatology Laboratory  
University of Colorado and the School of Medicine, Department of Psychiatry  
Role: Research Assistant (Director and PI: Martin Reite)



## Grant Record

- 2009-2011      Investigator Initiated Trial, Astellas Global Pharma Inc.  
                    “Efficacy of Bolus-Dose Conivaptan to Increase Serum Sodium in Porcine Neurosurgical Model”  
                    Role: Co-PI  
                    Funding: \$78,000 (direct)
- 2004             Integra Neurological Critical Care Fellowship Grant  
                    \$55,000 pledged annually toward University of Colorado Neurological Critical Care Fellowship program.

## BIBLIOGRAPHY

### Journal Articles – Peer Reviewed

1.      Reite M, Teale P, **Neumann R**, Davis K: Localization of a 50 msec Latency Auditory Evoked Field Component. Current Trends in Event Related Potential Research (*EEG Suppl.*40), 1987, Epic VII.
2.      Kirmaier, C, Gaul, D, DeBey, R, Holton, D, Schenck, C: Charge Separation in a Reaction Center Incorporation Bacteriochlorophyll for Photoactive Bacteriopheophytin. *Science* (251): Feb 1991. 922, 927. **Neumann, R**.
3.      Frank, HA, Innes, J, Aldema, M, Neumann, R, Schenck, C: Triplet State EPR of Reaction Center from HisL173 → Leu173 Mutant of Rhodobacter Sphaeroides which Contains a Heterodimer Primary Donor. *Photosynthetic Research* 3: June 1993.
4.      Cumbler, E, Anderson, T, **Neumann, R**, Jones, WJ, Brega, K: Stroke Alert Program Improves Recognition and Evaluation Time of In-Hospital Ischemic Stroke. *J Stroke Cerebrovascular Dis.* 2010 Nov-Dec; 19(6), 494-6, Epub 2010 June 9.
5.      Best, A, Acosta, N, Fraser, J, Borges, M, Brega, K, Anderson, T, **Neumann, R**, Ree, Alexander, Bert, R: Recognizing False Ischemic Penumbra in CT Brain Perfusion Studies, *Radiographics* 32:4 July-August 2012.
6.      Mueller, S, Kiser, T, Anderson, T, **Neumann, R**: Intraventricular Daptomycin and Intravenous Linezolid for the Treatment of External Ventricular Drain Associated Ventriculitis Due to Vancomycin Resistant Enterococcus Faecium. *The Annals of Pharmacotherapy* 46: December 2012.

### **Journal Articles – Submitted for Publication**

Connor T, Harbison, A, Richardson, M, Kleinschmidt-Demasters, B, **Neumann, R**, Waziri, A. Single – Bolus Dose Conivaptan Increases Sodium and Reduces Intracranial Pressure in a Controlled Porcine Neurosurgical Model, (Submitted to *Neurosurgery*)

White AM, Conner TM, Harbison RA, Richardson MD, Emerson RA, Frey L, **Neumann R**, Waziri A. Stability of Intracortical Electroencephalography in a Porcine Neurosurgery Model. (Submitted to *J Neuroscience Methods*)

### **Journal Articles – In Preparation**

Harbison RA, Conner TM, Richardson MD, Emerson RA, **Neumann R**, Tiel P, Waziri A. A Method for Real-Time Electrophysiological Monitoring and Confirmation of Intraventricular Catheter Placement. (In preparation, *Neurosurgery*)

### **Abstracts, Posters and Presentations**

1. Colorado Agency Analysis – Report on Questionnaire and phone canvassing results presented to National Organizations for Human Service Workers. National Convention, Denver, 1982.
2. Auditory Evoked Field Source Localization in Children. Reite, M, **Neumann, R**, Richardson, D, Teale, P, Scheeder, J. Fifth International Evoked Potentials Symposium. Milan, Italy, September 1984.
3. Localization of a 50msec Latency Auditory Evoked Field Component. Reite, M, Teale, P, **Neumann, R**, Davis, K. Current Trends in Event-Related Potential Research at NIH EPIC VIII Conference proceedings, 1987.
4. Auditory Magnetic Fields in Normal Children. Riete, M, Brazil, L, **Neumann, R**, Teale, P, Sheeder, J, Wang, J. American Electroencephalographic Society Annual Meeting, September 1994.
5. Auditory Evoked Magnetic Fields in Normal 7-9 y/o Children. Riete, M, Brazil, L, **Neumann, R**, Teale, P, Sheeder, J, Adams, M, Wang, J. University of Colorado Hospital, Annual Student Research Symposium, January 1995.
6. Retrospective Review of Primary Tibiotalar Arthrodesis. Brazil, L, **Neumann, R**, Winter, W, Clayton, M. UCD School of Medicine, Department of Orthopedic Surgery, Barnard Lecture Series, 1996.
7. Extra Pontine Myelinolysis: Effect on Visual Acuity in Healthy 23 year old female. **Neumann, R**, Pelak, V, Bennett, J. University of Colorado Hospital. North American Neuropathology Society Annual Meeting, 1999.
8. Quality of Life in Patients with Vascular Malformations of the Central Nervous System. **Neumann, R**, Awad, A. American Stroke Association meeting, 2001.

9. Maintenance of Mild Therapeutic Hypothermia During Routine Transport of Critically ill Patients. Campbell, **J**, **Neumann**, R, Richlik, B, Richlik, A, Anderson, T, Larabee, T, University of Colorado Health Sciences Center Poster Session, 2012.
10. Intraventricular Daptomycin for Vancomycin Resistant Enterococcus Ventriculitis. Mueller, S, Kiser, T, **Neumann** **R**, Society of Critical Care Medicine, 41st Critical Care Congress, 2012.
11. Evaluation of Vancomycin and Cefapime Pharmacokinetics in Critically Ill Neurosurgical Patients. Anliker, L, Kiser, T, Fish, D, Sherman, D, MacLarin R, **Neumann**, **R**, Society of Critical Care Medicine, 41st Critical Care Congress, 2012.
12. A Pharmacokinetic Evaluation of Vancomycin and Cefepime in Critically Ill Neurosurgical Patients. Mueller, S, Kiser, T, **Neumann**, **R**. Society of Critical Care Medicine, 41st Critical Care Congress, 2012.

### **Book Chapters**

**Neumann, R:** Laboratory and Illustration Manuals for Human Evoked Potentials Research, PY 495, Colorado State University, 1991.

