

Arthur J. Ulm III, M.D.
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7092

Title: Novel treatment of Cerebral Vasospasm: Verapamil prolonged infusion

Objectives: - improve knowledge on vasospasm treatment
- improve knowledge on endovascular therapy

Medical License State of Florida ME83724
State of Tennessee 40632
State of Georgia 057696

Education

Neurosurgical residency University of Florida, Shands Hospital,
July 2000-June 2005

Surgical internship University of Florida, Shands Hospital,
July, 1999-June, 2000

Medical University of Alabama School of Medicine (UASOM), M.D.,
August 1994-June 1999

Undergrad Auburn University, B.S. Zoology,
August 1990- May 1994

Fellowship Training *Cerebrovascular and Endovascular Neurosurgery*
Vanderbilt University Medical Center
Jan. 2006 - Dec. 2007

Microsurgical Anatomy University of Florida, Albert L. Rhoton
July 2002-June 2003

Neurosurgical Employment

Lecturer University of Florida Department of Neurosurgery, Gainesville, FL.
July 2005- December 2005

Instructor Vanderbilt University Department of Neurosurgery, Nashville, TN.
January 2006- January 2007

Assistant Professor Mercer University School of Medicine, Georgia Neurosurgical
Institute, Macon, GA. July 2006- present

Honors and Awards

1. **Purifoy** memorial scholarship, UASOM, 1994
2. **Drennen** memorial scholarship, UASOM, 1994
3. State of Alabama Merit Scholarship, four year recipient UASOM, 1994
4. Magna Cum Laude, Auburn University, 1994
5. Phi Kappa Phi, Auburn University, 1994
6. First place, UASOM Medical Student Research Day, 1997
7. Association of Pathology Chairs National Honor Society, 1997
8. **Saul R. Korey** Award, American Academy of Neurology, 1998
9. Finalist, National Student Research Forum, 1998
10. Family practice clerkship award, UASOM, 1999
11. Surgical clerkship award, UASOM, 1999
12. **Alpha Omega Alpha**, honor society, 1999
13. Academic excellence award, University of Alabama School of Medicine (UASOM), 1999
13. Academic Excellence award, University of Alabama School of Medicine (UASOM)
14. First place presentation, Neurosurgery 2003 symposium, University of Florida, 2003
- Research experience** *Microsurgical Neuroanatomy* July 2002-June 2003
- Research Fellowship** *Howard Hughes* Medical Student, July 1996- June 1997
- Research Fellowship** National Institute of Health (NIH), June 1995- August 1995

Funded Grants

1. **Immune deviation between isomers of myelin basic protein accounts for differences in their encephalitogenic potential.** *Howard Hughes* medical student research fellowship (mentor Dr. John N. Whitaker M.D.) July 1996- June 1997
 2. **Polyclonal murine antibody response to myelin basic protein.** NIH summer research fellowship (mentor Dr. John N. Whitaker M.D.) June & July 1995
 3. **Activation of NF-KB in human cerebral aneurysmal smooth muscle cells.** Dr. Ulm & Dr. Wang. \$20,000, MedCen Grant at Central Georgia Health Systems (grant pending -2007)
 4. **Patient-Specific Risk Assessment for Cerebral Aneurysm Rupture and Re-growth.** Dr. Ulm & Dr. Hyun, \$20,000, MedCen Grant at Central Georgia Health Systems (grant pending -2007)
- American Board of Neurological Surgery** written exam : **96th** percentile/pass (2003)

Medical licensing exams

USMLE part III: pass

USMLE part II: pass

USMLE part I: pass

Professional society membership

Congress of Neurological Surgery- fellow member

American Association of Neurological Surgery- fellow member

Georgia Neurosurgical Society

Published Journal Articles 1. Intraoperative dynamic angiography to detect resolution of Bow Hunter's syndrome: technical case report. Velat GJ, Reavey-Cantwell JF, Ulm AJ, Lewis SB. *Surg Neurol.* 2006 Oct;66(4):420-3. 2. Two-Piece Orbitozygomatic Craniotomy: Quantitative and Qualitative Considerations. Tanriover N, Ulm AJ, Rhoton AL, Kawashima M,

- Yoshioka N, Lewis S. One-piece vs. *Neurosurgery*. 2006 Apr;58(4 Suppl 2):ONS-229-37
3. Surgical approaches to the atrium of the lateral ventricle: microsurgical anatomy. Kawashima M, Li X, Rhoton AL Jr, Ulm AJ, Oka H, Fujii K. *Surg Neurol*. 2006 May;65(5):436-45.
 4. Radiosurgery in the treatment of malignant gliomas: the University of Florida experience. Ulm AJ, Friedman WA, Bradshaw P, Foote KD, Bova FJ. *Neurosurgery*. 2005 Sep;57(3):512-7
 5. Microsurgical anatomy of the dural arteries. Martins C, Yasuda A, Campero A, Ulm AJ, Tanriover N, Rhoton A Jr.. *Neurosurgery*. 2005 Apr;56(2 Suppl):211-51.
 6. Microsurgical anatomy of cerebral revascularization. Part I: Anterior circulation. Kawashima M, Rhoton AL Jr, Tanriover N, Ulm AJ, Yasuda A, Fujii K. *J Neurosurg*. 2005 Jan; 102(1): 116-131.
 7. Microsurgical anatomy of cerebral revascularization. Part II: Posterior circulation. Kawashima M, Rhoton AL Jr, Tanriover N, Ulm AJ, Yasuda A, Fujii K. *J Neurosurg*. 2005 Jan; 102(1): 132-147.
 8. Linear Accelerator Radiosurgery in the Treatment of Brain Metastasis. Ulm AJ, Friedman WA, Bova FJ, Bradshaw P, Amdur RJ, Mendenhall NM. *Neurosurgery*. 2004 Nov; 55(5):1076-1085
 9. Comparison of the transvermian and telovelar approaches to the fourth ventricle. Tanriover N, Ulm AJ, Rhoton AL Jr, Yasuda A. *J Neurosurg*. 2004 Sep;101(3):484-98.
 10. Microsurgical approaches to the perimesencephalic cisterns and related segments of the posterior cerebral artery: comparison using a novel application of image guidance. Ulm AJ, Tanriover N, Kawashima M, Campero A, Bova FJ, Rhoton AL Jr. *Neurosurgery*. 2004 Jun;54(6):1313-27.
 11. Microsurgical anatomy of the insula and the sylvian fissure. Tanriover N, Rhoton AL Jr, Kawashima M, Ulm AJ, Yasuda A. *J Neurosurg*. 2004 May;100(5):891-922.
 12. Pituicytoma: report of two cases and clue regarding histogenesis. Ulm AJ, Yachnis AT, Brat DJ, Rhoton AL Jr. *Neurosurgery*. 2004 Mar;54(3):753-7.
 13. Comparison of the far lateral and extreme lateral variants of the atlanto-occipital transarticular approach to anterior extradural lesions of the

craniovertebral junction. Kawashima M, Tanriover N, Rhoton AL Jr, Ulm AJ, Matsushima T. *Neurosurgery*. 2003 Sep;53(3):662-74.

14. Microsurgical anatomy of the early branches of the middle cerebral artery: morphometric analysis and classification with angiographic correlation. Tanriover N, Kawashima M, Rhoton AL Jr, Ulm AJ, Mericle RA. *J Neurosurg*. 2003 Jun;98(6):1277-90.

15. Stereotactic biopsy aided by a computer graphics workstation: experience with 200 consecutive cases. Ulm AJ, Bova FJ, Friedman WA. *Surg Neurol*. 2001 Dec;56(6):366-71.

On going projects/ future potential journal publications

1. Transcavernous vs Transpetrous approach to the upper clivus
2. Microsurgical anatomy of MCA aneurysms: a new classification
3. Anterior Lateral approach to upper cervical spine
4. Comparison of surgical approaches to the third ventricle
5. Quantification of the transcallosal transchoroidal approach to the third ventricle
6. Prospective intention to treat analysis: clip versus coil of intracerebral aneurysms
7. Case report: traumatic vertebral arterial-venous fistula complicating gunshot wound to neck presenting with quadraparesis due to vascular steal
8. Case report: Arterial-venous fistula supplied by bilateral ethmoidal branches of ophthalmic artery treated with onyx embolization
9. Retrospective review of factors important in outcome for surgically clipped versus coiled intracerebral aneurysms
10. **Prevalence and Significance of early branch aneurysms.** AJ Ulm, G Fauthery, N Tanriover, AL Rhoton, R Mericle, S Lewis (to be submitted)
11. **Novel use of Onyx embolic agent in the treatment of symptomatic fusiform aneurysms.** AJ. Ulm , RM. Mericle, CGallati, and Eskioglu. (to be published)

Book Chapters

1. Central Nervous System Infections. Rand KH, Ulm AJ, Pincus DW: Layon JA, Gabrielli A, Friedman WA (eds) :Textbook of Neurointensive Care, 1st ed. Philadelphia, 2004.
2. Lumbar Microdisectomy: Midline Open and Far-lateral Techniques. Ulm AJ, Richter EO, Peace DA, Henn JS: Kim DH, Henn JS, Vaccaro AR, Dickman CA (eds): Surgical anatomy and Techniques to the spine, 1st ed. Philadelphia, 2006.
3. Percutaneous and Endoscopic Diskectomy. Richter EO, Ulm AJ, Peace DA, Henn JS
4. Surgical anatomy and Techniques to the spine. Kim DH, Henn JS, Vaccaro AR, Dickman CA (eds), 1st ed. Philadelphia, 2006.
5. Surgical Anatomy of the Temporal Lobe. Roper S, Ulm AJ, Tanriover N, Rhoton A. The American Academy of Neurological Surgeons: Neurosurgical Operative Atlas. Vol. 7 (submitted 2005).

Oral Presentations:

1. Immune deviation between isomers of myelin basic protein accounts for differences in their encephalitogenic potential. A.J.Ulm; L. Cao; D. Sun and J.N. Whitaker., Howard Hughes Medical Institute, Meeting Of The Fellows, 1997, Chevy Chase, MD
2. Immune deviation between isomers of myelin basic protein accounts for differences in their encephalitogenic potential. A.J.Ulm; L. Cao; D. Sun and J.N. Whitaker., National student research forum, 1998, Galveston, TX
3. Immune deviation between isomers of myelin basic protein accounts for differences in their encephalitogenic potential. A.J.Ulm; L. Cao; D. Sun and J.N. Whitaker., Dean's grand rounds, 1998, University of Alabama School of Medicine, Huntsville, AL
4. CRW stereotactic biopsy: The university of Florida experience. Ulm AJ, Friedman WA, Bova FJ., 2001 Neurosurgery Symposium University of Florida
5. Hemifacial spasm: Dr. Rhoton's experience. Ulm AJ, Rhoton AL., 2002 Neurosurgery Symposium University of Florida
6. 3D Microsurgical anatomy of the ventricles and coronal sections of the brain. Congress of Neurological Surgeons (CNS) 2002, national meeting Philadelphia, PA
7. LINAC radiosurgery in the treatment of brain metastasis; Ulm AJ, Freidman WA., 2003 Neurosurgey Symposium, University of Florida
8. 3D Microsurgical anatomy of the ventricles and coronal sections of the brain, Rhoton microsurgical anatomy course, University of Florida, 2003
9. 3D Microsurgical anatomy of the ventricles and Cerebello-pontine angle, American Academy of Neurological Surgery (AANS) 2003 national meeting, San Diego, CA
10. 3D Microsurgical anatomy of approaches to the perimesencephalic cisterns, American Academy of Neurological Surgery (AANS) 2003 national meeting, San Diego, CA
11. 3D Microsurgical anatomy of approaches to the perimesencephalic cisterns, Congress of Neurological Surgery (CNS) 2003 national meeting, Denver, CO
12. LINAC radiosurgery in the treatment of brain metastasis; Ulm AJ, Bova FJ, Bradshaw P, Freidman WA., Congress of Neurological Surgery (CNS) 2003 national meeting, Denver, CO
13. clivus and upper brainstem. July 2005, University of Florida, skull base practical anatomy course, Gainesville, FL
19. Minimally invasive spine surgery, course director, September 2005, Riberao Preto, Brazil
20. Cerebral Aneurysms. Neurology Grand Rounds, Vanderbilt University, May 2006, Nashville TN

13. 3D Microsurgical anatomy of the cerebellum and approaches to the fourth ventricle, Congress of Neurological Surgery (CNS) 2003 national meeting, Denver, CO
14. Three dimensional surgical anatomy of the craniovertebral junction: Far lateral approach, Congress of Neurological Surgery (CNS) 2003 national meeting, Denver, CO
15. Three dimensional surgical anatomy of the craniovertebral junction: Far lateral approach, American Academy of Neurological Surgery (AANS) 2004 national meeting, Orlando, FL
16. Stereotactic Radiosurgery in the Treatment of Malignant Gliomas, 2004 Neurosurgery Symposium, University of Florida, Gainesville, FL
17. Quantification of the transcallosal transchoroidal approach to the third ventricle, 2005 Neurosurgery Symposium, University of Florida, Gainesville FL
18. Far lateral approach to lower

21. Cerebral Arteriovenous Malformations: Surgical Indications. Vanderbilt University, May 2006, Nashville TN
22. Cerebral Arteriovenous Malformations: Endovascular Treatment. Vanderbilt University, June 2006, Nashville TN
23. Far lateral approach to lower clivus and upper brainstem. June 2006, University of Florida, skull base practical anatomy course, Gainesville, FL
24. Microsurgical anatomy of the brain: Lecture and dissection course. The Neurosurgical Society of Honduras pre-meeting practical course. Course director. August 2006, San Pedro Sula, Honduras
25. Surgical Approaches to the Pineal Gland. The Neurosurgical Society of Honduras. August 2006, San Pedro Sula, Honduras
26. Minimally Invasive Spine Surgery. San Lucas Hospital. November 2006, Riberao Preto Brazil
27. Factors important in predicting outcome in aneurysm treatment: Algorithm for surgical clipping versus endovascular coiling. Georgia Neurosurgical Society fall meeting, November 2006, Atlanta Ga
28. Use of a Covered Stent to Treat a Traumatic Vertebral Artery Fistula Presenting as Progressive Quadraparesis and a Pulsatile Neck Mass. Georgia Neurosurgical Society fall meeting, November 2006, Atlanta Ga
29. Novel use of Onyx embolic agent in the treatment of symptomatic fusiform aneurysms. AJ. Ulm , RM. Mericle, CGallati, and Eskioglu. Georgia Neurosurgical Society. Sea Island, GA, USA. May 25-27, 2007.
30. Anatomical Variations of the Upper Cervical Vertebral Artery: Implications for Posterior Fossa Surgery. Ulm, A.J. Georgia Neurosurgical Society, Atlanta, GA. November 17, 2007.

Poster Presentations

1. Microsurgical approaches to the perimesencephalic cisterns and related segments of the posterior cerebral artery: comparison using a novel application of image guidance. Ulm AJ, Tanriover N, Kawashima M, Campero A, Bova FJ, Rhoton AL Jr. CNS 2003, Denver, CO
2. Microsurgical anatomy of the insula and the sylvian fissure. Tanriover N, Rhoton AL Jr, Kawashima M, Ulm AJ, Yasuda A. CNS 2003, Denver, CO
3. Microsurgical anatomy of the early branches of the middle cerebral artery: morphometric analysis and classification with angiographic correlation. Tanriover N, Kawashima M, Rhoton AL Jr, Ulm AJ, Mericle RA. AANS 2003, San Diego, CA
4. Linear Accelerator Radiosurgery in the Treatment of Brain Metastasis. Ulm AJ, Friedman WA, Bova FJ, Bradshaw P, Amdur RJ, Mendenhall NM. CNS 2003, Denver, CO CA, USA. October 2007

Medical Missions

1. The Gambia, West Africa. General medicine, 1996

2. Guatemala City, Guatemala. Pediatric neurosurgery, **Interests and Hobbies:**

Medical missions, recreational runner (Honolulu marathon 2002), fishing, church related activities, football, politics, painting, spending time with wife and son.

3. San Pedro Sula, Honduras. Pediatric neurosurgery, 2005

4. San Pedro Sula, Honduras. General and Pediatric neurosurgery, 2006

Governance *Board of Directors* Member, Friends of Barnabas Foundation, April 2006 to present

5. Comparison of the transvermian and telovelar approaches to the fourth ventricle.

Tanriover N, Ulm AJ, Rhoton AL Jr, Yasuda A. CNS 2003, Denver, CO 6.

Computational hemodynamics modeling and simulations in basilar aneurysm with endovascular coil embolization. H Clemons, V Brooks, S Hyun, JS Robinson, J Ulm. Biomedical Engineering Society Annual Fall Meeting. Los Angeles, 2002