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CURRENT POSITION:

Associate Professor of Neurological Surgery
Director, Cerebrovascular and Skull Base Surgery
University Hospitals Case Medical Center

EDUCATION & TRAINING:

Education

1988-1993 Wright State University

Postgraduate Training

1993-1997 Case Western Reserve University

PROFESSIONAL EXPERIENCE:

Academic

1997-1998 Case Western Reserve University Intern, General Surgery
Resident – Neurosurgery

1998-2004 Barrow Neurological Institute Fellow
2004-2005 Spinal Surgery

2005-2006 Barrow Neurological Institute – Assistant Professor of Clinical Neurosurgery University
of Arizona School of Medicine
Attending Neurosurgeon (Board Eligible)
University Hospitals Case Medical Center

2008-
Present Associate Professor of Neurological Surgery
Director, Cerebrovascular and Skull Base Surgery

BOARD CERTIFICATION:

July, 2008 American Board of Neurological Surgery

HOSPITAL AFFILIATIONS:

University Hospitals Case Medical Center
St. John West Shore Hospital

Parma Community Hospitals

HONORS AND AWARDS:

1. *NASS Basic Science Award, 2003.* (Bambakidis NC, Miller RH. "Transplantation of oligodendrocyte precursors and sonic hedgehog results in improved function and white matter sparing in the spinal cords of adult rats after contusion.")
2. *Ohio State Neurosurgical Association 2004.* Basic Science Research Award

PROFESSIONAL SOCIETIES:

American Association of Neurological Surgeons (AANS)
Congress of Neurological Surgeons (CNS)
North American Skull Base Society (NASBS)
North American Spine Society (NASS)
Council of State Neurosurgical Societies (CSNS)
Medicolegal Committee (Secretary)
Southwest Quadrant (Secretary)
Reference Committee (April, 2008)

EDITORIAL BOARDS:

Editor in Chief – University Hospitals Case Medical Center - Present
Reviewer – *Frontiers in Bioscience*
Practical reviews in *Neurosurgery*
Neurosurgical Review
Acta Neurochirurgica
Journal of Neurosurgery
Skull Base: *An Interdisciplinary Approach* (Member of Editorial Board)

BIBLIOGRAPHY:

Books

1. *Surgery of the Cerebellopontine Angle.* Bambakidis NC, Megerian CA, Spetzler RF (eds.) (in press, Decker - 2008)

Book Chapters & Review Articles

1. Bambakidis NC, Selman WR. Subarachnoid hemorrhage. In Suarez JL (ed.): *Critical Care Neurology and Neurosurgery.* New Jersey, Humana Press. 2002
2. Bambakidis NC, Dickman CA. Transthoracic thoracic discectomy. In AANS *Surgical Atlas.* (2005, in press)
3. Bambakidis NC, Megerian CA. Historical Perspectives. In Bambakidis NC, Megerian CA, Spetzler RF (ed): *Surgery of the Cerebellopontine Angle.* Ontario, Decker. In press - 2008
4. Bambakidis NC, Safavi-Abbasi S, Spetzler RF. Combined surgical approaches. In Bambakidis NC, Megerian CA, Spetzler RF (ed): *Surgery of the Cerebellopontine Angle.* Ontario, Decker. In press - 2008
5. Semaan M, Bambakidis NC, and Megerian CA. Temporal bone lesions. In Bambakidis NC, Megerian CA, Spetzler RF (ed): *Surgery of the Cerebellopontine Angle.* Ontario, Decker. In press – 2008
6. Bambakidis NC, Selman WR. Subarachnoid hemorrhage. In Suarez JL (2nd ed): *Critical Care Neurology and Neurosurgery.* New Jersey, Humana Press. In press – 2008

7. Bambakidis NC, Wilson J, Yin H, Selman WR. Intraoperative Cerebral Protection. In Youmans (3rd ed): Neurosurgery. In press – 2009

Abstracts

1. *and posterior fossae.* (AANS, Chicago, April 2008)
2. Bambakidis NC, et al. *Myxopapillary ependymomas of the filum: A single center retrospective review.* (AANS, Chicago, April 2008)
3. Bambakidis NC, et al. *Changing surgical strategies in the management of petroclival meningiomas.* (American Neurotology Society, Florida, April Bambakidis NC, Miller RH. *Sonic Hedgehog and Stem Cell Proliferation After Adult Rodent Spinal Cord Injury.* (AANS, San Diego, May 2003)
4. Bambakidis NC, Megerian CA, Ratcheson RA. *Differential Grading of Endolymphatic Sac Tumor Extension by Virtue of von Hippel-Lindau Disease Status.* (North American Skull Base Society, Memphis, February 2003)
5. Bambakidis NC, Miller RH. *Transplantation of Oligodendrocyte Precursors and Sonic Hedgehog Results in Improved Function and White Matter Sparing in the Spinal Cords of Adult Rats After Contusion.* (NASS, San Diego, October 2003)
6. Bambakidis NC, Cohen AR. *Atypical teratoid/rhabdoid tumors of the central nervous system: Clinical, radiographic, and pathologic features.* (AANS/CNS Joint Section of Pediatric Neurosurgery, New York, December 2001)
7. Bambakidis NC, Feiz-Erfan I, Horn EM, Gonzalez F, Sonntag VKH, Baek S, Yuksel Z, Crawford NR. *Biomechanical Comparison of Isolated Occipitoatlantal Posterior Fixation Techniques* (Cervical Spine Research Society – Abstract and Poster presentation, San Diego, December 2005)
8. Bambakidis NC, Feiz-Erfan I, Horn EM, Gonzalez F, Sonntag VKH, Baek S, Yuksel Z, Crawford NR. *Biomechanical Comparison of Isolated Occipitoatlantal Posterior Fixation Techniques* (AANS/CNS Section of Spine and Peripheral Nerve– Abstract and Poster presentation, Florida, March 2006)
9. Horn, E.M., I. Feiz-Erfan, N.C. Bambakidis, S.M. Papadopoulos, V.K.H. Sonntag and N. Theodore. *Treatment of thoracolumbar burst fractures: Operative and non-operative approaches.* *American Association of Neurological Surgeons* (AANS, April, 2006)
10. Bambakidis NC, U. Kumar Kakarla MD; Pankaj A. Gore MD; Fernando Gonzalez MD; Louis J. Kim MD; Peter Nakaji MD; Randall W. Porter MD; C. Phillip Daspit MD, Robert F. Spetzler MD. *Alternative surgical approaches in the treatment of petroclival meningiomas.* (NASBS, Phoenix, February 2006)
11. Bambakidis NC. *Treatment options for Meningiomas.* (BNI Symposium, Phoenix, March 2006)
12. Bambakidis NC. *Molecular Genetics and Benign Brain Tumors* (BNI Symposium, Phoenix, March 2006)

13. Bambakidis NC. *A quantitative analysis of working areas and areas of approach to the posterior fossa and petroclival region via the retrosigmoid approach.* (NASBS, Chicago, May 2007)
14. Bambakidis NC. *A quantitative anatomic and morphometric evaluation of the craniocervical junction with specific regard to the vertebral artery and atlas.* (NASBS, Chicago, May 2007)
15. Bambakidis NC. *Quantitative analysis of exposure of staged orbitozygomatic and retrosigmoid craniotomies for lesions of the petrous apex and clivus with supratentorial and infratentorial extension.* (NASBS, Chicago, May 2007)
16. Bambakidis NC. *Intramedullary spinal cord ependymomas: The BNI experience.* (CNS, San Diego, September 2007)
17. Bambakidis NC, et al. *Endogenous stem cell proliferation is induced by intravenous hedgehog agonist administration following contusion injury in the adult rat spinal cord.* (Cervical Spine Research Society, San Francisco, Dec 2007)
18. Bambakidis NC, et al. *Quantitative comparison of Kawase's approach versus retrosigmoid approach: Implications for tumors involving both middle*

Other Publications

1. Bambakidis NC (guest editor). *Neural Regeneration.* Barrow Quarterly 23:1;2007
2. Horn EM, Preul MC, Sonntag VKH, Bambakidis NC. *Multimodality treatment of spinal cord injury: Endogenous stem cells and other magic bullets.* Barrow Quarterly 23:1;2007.
3. Maughan P, Chang SW, Bambakidis NC. *Management of a cervical spine infection: Case report.* Barrow Quarterly 23:1;2007

Peer-Reviewed Articles

1. Alvarez JA, Bambakidis NC, Takaoka Y. *Delayed rupture of traumatic intracranial pseudoaneurysm in a child following gunshot wound to the head.* J Craniomaxillofac Tr 1999;5(4):39-44.
2. Sunshine JL, Bambakidis NC, Tarr RW, Lanzieri CF, Zaidat OO, Suarez JI, Landis DMD, Selman WR. *Benefits of perfusion MR imaging relative to diffusion MR imaging in the diagnosis and treatment of hyperacute stroke.* AJNR Am J Neuroradiol 2001;22:915-921.
3. Bambakidis NC, Cohen AR. *Intracranial complications of frontal sinusitis in children: Pott's Puffy tumor revisited.* Pediatr Neurosurg 2001;35:82-89.
4. Bambakidis NC, Sunshine JL, Faulhaber PF, Tarr RW, Selman WR, Ratcheson RA. *Functional evaluation of arteriovenous malformations.* Neurosurg Focus 2001;11(5).
5. Bambakidis NC, Cohen AR. *Atypical teratoid/rhabdoid tumors of the central nervous system: Clinical, radiographic, and pathologic features.* Pediatr Neurosurg 2002;37:64-70.
6. Bambakidis NC, Wang RZ, Franic L, Miller RH. *Sonic Hedgehog-induced neural precursor proliferation after adult rodent spinal cord injury.* J Neurosurg (Spine) 2003;99:70-75.
7. Bambakidis NC, Miller RH. *Transplantation of oligodendrocyte precursors and sonic hedgehog results in improved function and white matter sparing in the spinal cords of adult rats after*

contusion. *Spine J* 2004;4:16-26.

8. Bambakidis NC, Megerian CA, Ratcheson RA. Differential grading of endolymphatic sac tumor extension by virtue of von hippel-lindau disease status. *Otol Neurotol* 2004;25:773-781.
9. Bambakidis NC, Rodrigue T, Megerian CA, Ratcheson RA. Endolymphatic sac tumor metastatic to the spine: A case report. *J Neurosurg* 2005;3(1):68-70
10. Bambakidis NC, Feiz-Erfan I, Klopfenstein JD, Sonntag VKH. Indications for surgical fusion of the cervical and lumbar motion segment. *Spine* 2005;30(16 Suppl):S2-6
11. Feiz-Erfan I, Klopfenstein JD, Bambakidis NC, Sonntag VKH. Surgical management of cervical disc disease: from no fusion to fusion and back again. *Clin Neurosurg* 2005;52:331-7.
12. Bambakidis NC, Gonzalez LF, Amin-Hanjani S, Deshmukh VR, Porter RW, Daspit PC, Spetzler RF. Combined skull base approaches to the posterior fossa. Technical note. *Neurosurg Focus* 2005;19(2)
13. Gonzalez LF, Amin-Hanjani S, Bambakidis NC, Spetzler RF. Skull base approaches to the basilar artery. *Neurosurg Focus* 2005;19(2)
14. Bambakidis NC, Theodore N, Nakaji P, Harvey A, Sonntag VKH, Preul MC, Miller RH. Endogenous stem cell proliferation after central nervous system injury: alternative therapeutic options. *Neurosurg Focus* 2005; 19(3)
15. Horn, EM, Bristol RE, Feiz-Erfan I, Beres EJ, Bambakidis NC, Theodore N. Spinal cord compression from traumatic anterior cervical pseudomeningoceles: Report of three cases. *J Neurosurg Spine* 2006;5:254-8.
16. Bambakidis NC, Gore PN, Eschbacher J, Standerfer RJ, Coons S, Albuquerque F. Intraosseous spinal glomus tumor presenting as a dumbbell lumbar lesion; Case report and review of the literature. *Neurosurgery* 60:E1152-3, 2007
17. Safavi-Abbasi S , Zabramski JM, Deshmukh P, Reis CV, Bambakidis NC, Theodore N, Crawford NR, Spetzler RF, Preul MC. Moving toward the petroclival region: A model for quantitative and anatomic analysis of tumor shift. *J Neurosurg* 107:797-804, 2007
18. Rocha R, Safavi-Abbasi S, Reis C, Theodore N, Bambakidis NC, de Oliveira E, Sonntag VKH, Crawford NR. Working area, safety zones, and angles of attack for posterior C1 lateral mass screw placement: A quantitative anatomic and morphometric evaluation. *J Neurosurg Spine* 6:247-54, 2007
19. Senoglu, M, Safavi-Abbasi S, Theodore N, Bambakidis NC, Crawford NR, Sonntag VKH. The frequency and clinical significance of congenital defects of the posterior and anterior arch of the atlas. *J Neurosurg Spine* 7:399-402, 2007
20. Bambakidis NC, Kakarla UK, Kim LJ, Nakaji P, Porter RW, Daspit CP, Spetzler RF. The evolution of surgical approaches in the treatment of petroclival meningiomas: a single-center retrospective review. *Operative Neurosurgery* 61;202-211, 2007

21. Bambakidis NC, Feiz-Erfan I, Horn EM, Gonzalez LF, , Baek S, Yuksel KZ, Brantley AGU, Sonntag VKH, Crawford NR. Biomechanical comparison of occipitoatlantal screw fixation techniques. *J Neurosurg Spine* 8:143-152, 2008
22. Bambakidis NC, Butler J, Horn EM, Preul MC, Theodore N, Spetzler RF, Sonntag VKH. Stem cell biology and its therapeutic application in the setting of spinal cord injury. *Neurosurg Focus* 24;3-4, E20, 2008
23. Safavi-Abbasi S, Di Rocco F, Bambakidis NC, Talley MC, Gharabaghi A, Luedemann W, Samii M, Samii A. Has management of epidermoid tumors of the cerebellopontine angle improved? A surgical synopsis of the past and present. *Skull Base* 18:85-98, 2008
24. Little A, Crawford NR, Deshmukh P, Preul MC, Zabramski JM, Spetzler RF, Bambakidis NC. Quantitative analysis of exposure of staged orbitozygomatic and retrosigmoid craniotomies for lesions of the clivus with supratentorial extension. *Neurosurgery* 62:S318-324, 2008
25. Bambakidis NC, Horn EM, Nakaji P, Theodore N, Bless E, Ma C, Preul MC, Coons SW, Spetzler RF, Sonntag VKH. Endogenous stem cell proliferation is induced by intravenous hedgehog agonist administration after contusion injury in the adult rat spinal cord. *J Neurosurg* (in press - 2008)
26. Safavi-Abbasi S, Bambakidis NC, Zabramski JM, Workman R, Verma K, Senoglu M, Porter R, Spetzler RF. Nonvestibular schwannomas: An evaluation of radiosurgical and microsurgical management. *Neurosurgery* (in press - 2008).
27. Chang SW, Wu A, Gore P, Beres E, Porter RW, Deshmukh P, Preul MC, Spetzler RF, Bambakidis NC. Quantitative comparison of Kawase's approach versus retrosigmoid approach: implications for tumors involving both middle and posterior fossae. *Neurosurgery* (in press - 2008)
28. Dashti SR, Sauvageau E, Spetzler RF, Bambakidis NC. Brain abscess formation at the site of intracerebral hemorrhage secondary to CNS vasculitis: Case report. *Neurosurg Focus* 24 (6):E12, 2008
29. Dashti SR, Baharvahdat H, Spetzler RF, Sauvageau E, Chang S, Stiefel MF, Park MN, Bambakidis NC. Operative intracranial infection following craniotomy. *Neurosurg Focus* 24 (6):E10, 2008
30. Horn EM, Theodore N, Crawford NR, Bambakidis NC, Sonntag VK. Transfacet screw placement for posterior fixation of C-7. *J Neurosurg Spine* 9:200-206, 2008.
31. Beres E, Bambakidis NC, Chang SW, Spetzler RF. Surgical technique and outcomes in the treatment of spinal cord ependymomas. Part I – Intramedullary ependymoma. (in preparation).
32. Bambakidis NC, Beres E, Chang SW, Spetzler RF. Surgical technique and outcomes in the treatment of spinal cord ependymomas. Part II – Myxopapillary ependymoma (in preparation)
33. Bambakidis NC, Weisskopf PA, Spetzler RF, Daspit CP. Changing surgical strategies in the management of petroclival meningiomas. *Otol Neurotol* (submitted)

Other Publications

1. Bambakidis NC (guest editor). Neural Regeneration. Barrow Quarterly 23:1;2007
2. Horn EM, Preul MC, Sonntag VKH, Bambakidis NC. Multimodality treatment of spinal cord injury: Endogenous stem cells and other magic bullets. Barrow Quarterly 23:1;2007.
3. Maughan P, Chang SW, Bambakidis NC. Management of a cervical spine infection: Case report. Barrow Quarterly 23:1;2007

Research Protocols:

“Proliferation of Endogenous Stem Cell Populations in Injured Rodent Spinal Cord Following the Administration of Sonic Hedgehog Agonists” – Principal Investigator

Editorial Experience:

Reviewer

Neurosurgical Review

Acta Neurochirurgica

Journal of Neurosurgery

Skull Base: An Interdisciplinary Approach (*Member of Editorial Board*)

Editor – In - Chief

Neurological Institute Journal. University Hospitals Case Medical Center

Teaching Experience:

Cranial Base Approaches to the Skull Base – NASBS, Phoenix AZ, 2006. Instructor

Intracranial-Extracranial Bypass Course – BNI Symposium, Phoenix AZ, 2006

Skull Base Approaches – Middle and Posterior Fossa – NASBS, Chicago IL, 2007

Jump Start Resident Course – Craniocervical Surgery – Course Director, Phoenix, AZ, 2007

Intracranial-Extracranial Bypass Course – BNI Symposium, Phoenix AZ, 2008