

Matthew R. Sanborn
Curriculum Vitae
Neurosurgery Medical Expert
support@medsurityexperts.com

Education 2001 Sc.B with honors Brown University
 2006 MD cum laude Georgetown University School of Medicine

Employment 2001-2002 Research Associate with Sention Inc., developing and testing pharmaceutical approaches to enhance learning and memory
 2009-2011 Neurocritical Care Covering Physician, Hospital of the University of Pennsylvania
 2013-2014 Locums Tenens covering Neurosurgeon at Flagstaff Medical Center, Flagstaff, AZ
 2014-present Attending Neurosurgeon, Maine Medical Center

Postgraduate Training and Fellowship Appointments:

7/06 -6/07 Intern in General Surgery, Hospital of the University of Pennsylvania
10/11-3/12 Infolded fellowship in Endovascular Neurosurgery, Hospital of the University of Pennsylvania
7/07 – 7/13 Resident in Neurosurgery, University of Pennsylvania
7/13 – 7/14 Endovascular Fellowship, Barrow Neurological Institute

Licensure American Board of Neurological Surgery (ABNS) certified, 2018
 Maine

Awards, Honors and Membership in Honorary Societies

2006 Alpha Omega Alpha
2006 Department of Neurosurgery Award, Georgetown University
2006 Department of Neuroscience Award, Georgetown University
2011 Best Oral Research Presentation – Pennsylvania Neurosurgical Society, Hershey, PA
2012 Best Poster Presentation – Pennsylvania Neurosurgical Society, Hershey, PA

Memberships in Professional and Scientific Societies

2005- Wilderness Medicine Society
2007- AANS Member
2007 CNS Member
2008 International Society for Mountain Medicine

Grant Funding:

2010 Wilderness Medicine Society Hultgren Grant
2010 American Alpine Club Research Grant
2010 NIH T32 Training Grant

Bibliography:

Original Papers:

Burwell, R.D., Bucci D.J., Sanborn M.R. and Jutras M. *Perirhinal and Postrhinal Contributions to Remote Memory for Context*. The Journal of Neuroscience. Dec 2004; 24:11023-11028.

Sanborn MR, Danish SF, Ranalli NJ, Grady MS, Baltuch GH. *Thalamic Deep Brain Stimulation for Midbrain Tremor Secondary to Idiopathic Cystic Degeneration of the Brainstem*. Stereotact Funct Neurosurg 2009;87:128-133

Sanborn MR, DiLuna M, Whitmore RG, Storm P. *Fluoroscopically-Guided Transoral Closed Reduction and Halo Vest Immobilization for an Atypical C1 Fracture*. J Neurosurgery: Pediatrics 2011; 7:380-382.

Sanborn MR, Pramick M, Brooks J, Welch WC. *Glioblastoma Multiforme in the Adult Conus Medullaris*. J Clin Neurosci 2011 Jun; 18(6):842-3.

Sanborn MR, Balzer J, Gerszten PC, Karausky P, Cheng BC, Welch WC. *Safety and Efficacy of a Novel Ultrasonic Osteotome Device in an Ovine Model*. J Clin Neurosci 2011; 18(11): 1528-1533

Hardesty D, Sanborn MR, Parker W, Storm P. *Perioperative Seizure Incidence and Risk Factors In 223 Pediatric Brain Tumor Patients Without Prior Seizures*. J Neurosurg Pediatr 2011 Jun; 7(6):609-15

Whitmore RG, Williams BJ, Lega BC, Sanborn MR, Marcotte P. *Thoracic Intradural Disc Herniation: Case Report and Review of the Literature*. J Clin Neurosci 2011 Dec; 18(12):1730-2.

Whitmore RG, Tykocinski ES, Sanborn MR, Welch WC. *Bioresorbable Anterior Cervical Plate Device for Multi-Level Degenerative Disc Disease: Case Report with 8 Year Follow Up*. J Clin Neurosci 2011 Dec; 18(12) 1736-8.

Whitmore RG, Thawani J, Grady MS, Levine J, Stein S, Sanborn MR. *Aggressive Treatment of Traumatic Brain Injury is Cost-Effective*. J Neurosurgery 2012 May; 116(5):1106-13.

Sanborn MR, Nasrallah I, Stanton D, Hurst R, Pukenas B. *Acquired Arteriovenous Fistula Associated with Traumatic Oroantral Fistula: Endovascular Treatment*. Head and Neck 2012 Jan 31.

Sanborn MR, Danish SF, Rosenfeld MR, O'Rourke D, Lee JYK. *Treatment of Steroid Refractory, Gamma Knife Related Radiation Necrosis with Bevacizumab Case Report and Review of the Literature*. Clinical Neurology and Neurosurgery 2011 Nov; 113(9):798-802.

Sanborn MR, Thawani JP, Whitmore RG, Shmulevich M, Hardy B, Benedetto C, Malhotra NR, Marcotte P, Welch WC, Dante S, Stein SC. *Cost-Effectiveness of Confirmatory Techniques for the Placement of Lumbar Pedicle Screws*. Neurosurgical Focus 2012; 33(1): E12.

Sanborn MR, Thom S, Bohman LE, Stein SC, Levine J, Milovanova T, Maloney-Wilensky E, Frangos S, Kumar M. *Temporal Dynamics of Microparticle Elevation Following Subarachnoid Hemorrhage*. Journal of Neurosurgery 2012; 117(3): 579-586

Lang SS, Bauman JA, Aversano MW, Sanborn MR, Vossough A, Heuer GG, Storm PB. *Hyponatremia Following Endoscopic Third Ventriculostomy: A report of Five Cases and Analysis of Risk Factors*. J Neurosurg Pediatr 2012; 10(1): 39-43

Sanborn MR, Kramarz MJ, Storm PB, Adappa ND, Palmer JN, Lee JYK. *Endoscopic, Endonasal, Transclival Resection of a Pontine Cavernoma*. Neurosurgery 2012; 71(Supp 1): E198-E203.

Bohman LE, Pisapia JM, Sanborn MR, Frangos S, Lin E, Kumar M, Park S, Kofke WA, Steifel MF, LeRoux PD, Levine JM. *Response of brain oxygen to therapy correlates with long-term outcome after subarachnoid hemorrhage*. Neurocrit Care 2013. Dec; 19(3):320-8.

Malhotra NR, Kosty J, Sanborn MR, Bekisz JM, Mooncai TW, Meustein TM, Ou J, Zhu A, Bernstein A, Stein SC. *Optimal Approach to Circumferential Decompression and Reconstruction for Thoracic Spine Metastatic Disease*. Annals of Surgical Oncology. 2014.

Sanborn MR, Crowley RW, Uschold T, Park MS, Albuquerque FC, McDougall CG. *Spinal Dural Arteriovenous Fistulas: How, When and Why*. Neurosurgery 2014; 61;6-11.

Sanborn MR, Park MS, McDougall CG, Albuquerque FC. *Endovascular Approaches to Pial Arteriovenous Malformations*. Neurosurgery Clinics of North America 2014. July; 25(3); 529-537

Park MS, Albuquerque FC, Nanaszko M, Sanborn MR, Moon K, Ablal AA, McDougall CG. *Critical Assessment of Complications Associated with Use of the Pipeline Embolization Device*. J Neurointervent Surg 2014; June

Smith, MJ, Sanborn MR, Lewis DJ, Faught RWF, Vakhshori V, Stein SC. *Elderly Patients with Intracranial Aneurysms Have a Higher Quality of Life After Coil Embolization: A Decision Analysis*. J Neurointerventional Surgery 2014; Oct

Park, M.S., Nanaszko, M., Sanborn, M.R., Moon, K., Albuquerque, F.C., McDougall, C.G. Re-Treatment Rates After Pipeline Embolization Device Alone versus Pipeline and Coil Embolization of Cerebral Aneurysms: A Single Center Experience. *Journal of Neurosurgery* 2016. July;125(1); 137-144.

Kumar N.G., Ladner, T.R., Kahn, I.S., Zuckerman, S.L., Baker, C.B., Skaletsky, M., Cushing D., Sanborn, M.R., Mocco, J., Ecker, R.D. Parent Vessel Occlusion for Treatment of Cerebral Aneurysms: Is There Still an Indication? A Series of 17 Patients. *Journal of the Neurological Sciences* 2017. January; 372; 250-255.

Abstracts and Presentations:

Sanborn, M.R., Bucci, D.J., and Burwell, R.D. (2001) *Long-term processing of contextual information involves perirhinal and postrhinal cortex*. Society for Neuroscience Abstracts, 27

Burwell, R.D., Sanborn, M.R., and Bucci, D.J. (2001) *Long-term memory of contextual information involves perirhinal and postrhinal cortex*. Seventh Conference on the Neurobiology of Learning & Memory, University of California, Irvine

Sanborn, M.R., Kofke, W.A., Ash B., Widra E. (2009) *A Novel Technology for Assessing Cerebral Blood Flow at Altitude*. Wilderness Medicine Society Conferences, Snowmass, Co.

Sanborn, M.R., Welch, W.C. (2009) *Evaluation of the Misonix Ultrasonic Osteotome in an Ovine Model*. Philadelphia Spine Symposium, University of Pennsylvania, Philadelphia, Pa.

Sanborn, M.R., Welch W.C. (2010) *Human Experience with a Novel Ultrasonic Osteotome for Use In Laminar Bone Removal*. Pennsylvania Neurosurgical Society, Hershey, PA.

Sanborn, M.R., Kim, M., Yow, H., Martin D.M., Meale, P. and Edsell, M. (2011) *Cerebral Hemodynamics at Altitude*. Hypoxia Symposium, Lake Louise, AB.

Sanborn, M.R., Yow, H., Kim, M., Martin D.M., Mitchell, K. and Edsell, M. (2011) *Hyperventilation, Acclimatization and Cerebral Oxygenation at Altitude*. Hypoxia Symposium, Lake Louise, AB.

Sanborn M.R., Kofke W.A., Yow, H, Martin D.M., Grocott M. (2011) *Peripheral Oxygenation Does Not Predict Cerebral Oxygenation After Prolonged Hypoxia*. Association of University Anesthetists, Philadelphia, PA

Sanborn MR. *Hypoxia, Microparticles and Subarachnoid Hemorrhage*. (2011) Invited lecture – Center for Brain Injury and Recovery, University of Pennsylvania.

Sanborn MR. Microparticles in Subarachnoid Hemorrhage. (2011) Invited lecture – Grand Rounds, Department of Neurosurgery, University of Pennsylvania.

Sanborn MR. *Temporal Dynamics of Microparticle Elevation in Subarachnoid Hemorrhage*. (2011) oral presentation. Pennsylvania Neurosurgical Society, Hershey, PA.

Sanborn MR., Thom S, Milavanova, Kumar M. Microparticles in Subarachnoid Hemorrhage (2011). Neurosurgical Forum Presentation. Congress of Neurological Surgeons, Washington, DC.

Thawani J, Sanborn MR, Marcotte PJ, Welch WC, Dante SJ, Stein SC. Cost-Effectiveness of Different Monitoring Techniques for the Placement of Lumbar Pedicle Screws. (2011). Poster Presentation. Congress of Neurological Surgeons, Washington DC.

Sanborn MR, Pisapia J, Carr M, Stein SC, Grady MS, Malhotra NR. Resident Training: The impact of duty hours and the rise of endovascular neurosurgery on resident operative experience. (2012) Poster Presentation. Pennsylvania Neurosurgical Society, Hershey, PA.

Sanborn MR, Smith M, Stein SC. Quality of Life Following Carotid Endarterectomy Versus Carotid Artery Stenting: A Decision Analysis. (2012) Platform Presentation. Pennsylvania Neurosurgical Society, Hershey, PA.

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Sanborn MR, Smith MJ, Hurst R, Badelssari M, Stein SC. Quality of Life Following Carotid Endarterectomy Versus Carotid Artery Stenting: A Decision Analysis. (2013). SNIS International Endovascular Stroke Conference and Joint Cerebrovascular Section Annual Meeting.

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Editorials, Reviews, Chapters:

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Sanborn M., Sims C. Endocrine Monitoring in the Neurosurgical Intensive Care Unit. In Leroux P, Levine J, Kofke WA Monitoring in Neurocritical Care. Lippincott, Williams and Wilkins. Philadelphia. Expected Press 2012.

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Park MS, Sanborn MR, McDougall CG, Albuquerque FC. Embolization of AVMs with Onyx and Combined Treatments. In Sekhar L, Fessler R. (Eds) Atlas of Neurosurgical Techniques, 2nd Edition. New York, NY: Thieme. (In Press)