

**MARK J. HORNYAK, MD**

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**EDUCATION**

MD 1996 - 2000  
University of Maryland School of Medicine, Baltimore, Maryland

BS 1992 - 1996  
Loyola College in Maryland, Baltimore, Maryland

**POSTGRADUATE TRAINING**

Intern, General Surgery 2000 - 2001  
New York Medical College, Valhalla, New York

Resident, Neurosurgery 2001 - 2006  
New York Medical College, Valhalla, New York

Fellow, Skull Base Surgery 2006 - 2007  
University of Utah, Salt Lake City, Utah

**RESEARCH EXPERIENCE**

Clinical Trials

Department of Neurosurgery 2013 - 2014  
Detroit Medical Center, Detroit, MI  
• Institutional co-investigator for MISTIE III multi-institutional intracerebral hemorrhage study

Department of Emergency Medicine 2012 - 2014  
Detroit Medical Center, Detroit, Michigan  
• Neurological Surgery support for ARCTIC spinal cord injury study

Department of Emergency Medicine 2010 - 2013  
Detroit Medical Center, Detroit, Michigan  
• Neurological Surgery support for PROTECT traumatic brain injury study

Laboratory Research

Department of Neurosurgery 2006 - 2007  
University of Utah, Salt Lake City, Utah

- Designed and implemented protocol to evaluate novel, resorbable biomaterial for cranial fixation in rabbit model. Re-organized skull base dissection lab, qualitative study skull base approaches, and began skull base and microvascular didactic for resident training

Departments of Neurosurgery and Anatomy and Cell Biology 2004 - 2006  
New York Medical College, Valhalla, New York

- Organized skull base dissection lab, reintroduced dissection into neurosurgical curriculum, and instructed medical students in neuroanatomy and neuroscience

Department of Physiology 2004 - 2006  
New York Medical College, Valhalla, New York

- Basic physiology, pharmacology, and electrical properties of the subthalamic nucleus, and investigation of the role of voltage-gated potassium (Kv3) channels in repetitive firing of the STN using patch-clamp electrophysiological techniques in normal and knock-out mice

Department of Neurosurgery 1998 - 2000  
University of Maryland, Baltimore, Maryland

- Initiated recombinant production of TRAIL for induction of in vitro and in vivo apoptosis in rodent gliomas

US Army Medical Research Institute of Chemical Defense 1994 - 1997  
Pharmacology Division, Applied Pharmacology Branch, Aberdeen, Maryland

- Antibody production and stress gene induction experiments for neurotoxin defense

## **FACULTY APPOINTMENTS**

Adjunct Faculty, Neurosurgery 2014-present  
Columbia University, NY, NY

Assistant Professor, Neurosurgery 2007 –2014  
Director of Neurosurgical Anatomy and Microsurgical Skills Laboratory  
Wayne State University, Detroit, Michigan  
Serving on following committees:  
Clinical Competency Committee  
Resident Education Curriculum Committee

Clinical Instructor, Neurosurgery 2006 - 2007  
University of Utah School of Medicine, Salt Lake City, Utah

Instructor, Neurosurgery 2005 - 2006  
New York Medical College, Valhalla, New York

## **HOSPITAL APPOINTMENTS**

Chief of Neurosurgery 2014-present  
Basset Healthcare Network, Cooperstown, NY

Chief of Neurosurgery 2009 - 2014  
Detroit Receiving Hospital, Detroit, Michigan

Attending Neurological Surgeon 2008 - 2014  
Henry Ford Hospital Macomb, Clinton Township, Michigan

Attending Neurological Surgeon 2007 - 2014  
Detroit Medical Center, Detroit, Michigan

### **ADMINISTRATIVE APPOINTMENTS**

Chief of Neurosurgery 2014-present  
Bassett Healthcare Network, Cooperstown, NY

Chief of Neurosurgery, Detroit Receiving Hospital 2009 - 2014  
Serving on following committees:  
    Medical Staff Operating Committee  
    Leadership Process Improvement Coordinating Committee  
    Clinical Excellence Committee  
    Surgical Care Committee  
    Trauma Systems Committee

Wayne State UPG EMR Committee 2013 - 2014

Surgeon champion for EMR, WSU Physician Group 2012 - 2014

Physician Coordinator for Think First Foundation 2012 - 2014  
Detroit Medical Center Chapter, Detroit, MI

### **MAJOR PROFESSIONAL SOCIETIES**

- American Association of Neurological Surgeons (AANS)
- American Medical Association
- Congress of Neurological Surgeons (CNS)
- Michigan Medical Society
- North American Skull Base Society
- Pituitary Network

### **LICENSURE AND BOARD CERTIFICATION**

Board Certified – Certificate Number 32081 2012  
American Board of Neurological Surgery

Medical Licensure  
State of New York 2014 - present  
State of Michigan 2007 - present  
State of Utah 2006 - 2008

USMLE Step III 2002

## HONORS AND AWARDS

- Barry M. Goldwater Scholarship, Loyola College
- Carrel Biology Medal (highest biology department GPA), Loyola College
- Beta Beta Beta Biology Honor Society, Loyola College
- Alpha Kappa Delta Sociology Honor Society, Loyola College
- Freeman Scholarship, University of Maryland School of Medicine
- House Wright Scholarship, University of Maryland School of Medicine
- Milton Ginsberg Memorial Award, University of Maryland School of Medicine
- New York Neurosurgical Society Resident Research Award
- Phi Beta Kappa National Honor Society, Loyola College
- Presidential Scholarship, Loyola College

## RECENT COURSES ATTENDED

Decision Making for Early Career Surgeons Miami, Florida	2013
Concepts in Lateral Approach Surgery Chicago, Illinois	2010
New Perspectives on Spine Surgery Miami, Florida	2010
Minimally Invasive Spine Surgery: Advanced Techniques Miami, Florida	2009
International Congress on Meningioma and Cerebral Venous System Boston, Massachusetts	2008
International Congress on Cerebral Revascularization St. Louis, Missouri	2007
Gamma Knife Certification Pittsburgh, Pennsylvania	2007

## PUBLICATIONS

### Peer-Reviewed Publications

1. Asmaro K, **Hornyak M**. Pituitary tumor apoplexy resulting in internal carotid artery occlusion and stroke with recanalization after tumor resection: case report, review of the literature, and treatment rationale. *J Neurology Neurosurg*, accepted.
2. Dornbos D, **Hornyak M**. Symptomatic ossified ligamentum flavum secondary to hyperparathyroidism. *J Spine Neurosurg*, 3:3, 2014.
3. Raja G, **Hornyak M**: Intraoperative rupture of remote aneurysm during transsphenoidal resection of pituitary macroadenoma. *OJMN*, 4:64-68, 2014.

4. Schreckinger M, Walker B, Knepper J, **Hornyak M**, Hong D, Kim JM, Folbe A, Guthikonda M, Mittal S, Szerlip NJ: Post-operative diabetes insipidus after endoscopic transsphenoidal surgery. *Pituitary*, 16(4): 445-51, 2013.
5. **Hornyak M**, Couldwell WT: Multimodality treatment for invasive pituitary adenomas. *Postgraduate Medicine*, 121(2): 168-176, 2009
6. **Hornyak M**, Digre M, Couldwell KT: Neuro-ophthalmologic manifestations of benign anterior skull base lesions. *Postgraduate Medicine*, 121(4): 103-114, 2009
7. **Hornyak M**, Osborne AG, Couldwell WT: Hypertrophic olivary degeneration after surgical resection of cavernous malformations of the brain stem. *Acta Neurochirurgica* 150(2):149-156, 2008
8. **Hornyak M**, Weiss MH, Nelson DH, Couldwell WT: Nelson syndrome: historical perspectives and current concepts. *Neurosurgical Focus* 23(3):E12, 2007
9. Hunter C, Paccione D, **Hornyak M**, Murali R: Giant cell tumors of the cervical spine. *Neurosurgery* 59(5):1142-1143, 2006
10. Braca J, **Hornyak M**, Murali R: Hemifacial spasm occurring in a patient with Marfan syndrome and Chiari I malformation: Case report. *Journal of Neurosurgery* 103(3):552-554, 2005
11. **Hornyak M**, Hillard V, Nwagwu C, Zablow B, Murali R: Ruptured intrasellar superior hypophyseal artery aneurysm presenting with pure subdural hematoma. *Interventional Neuroradiology* 10:55-58, 2004
12. **Hornyak M**, Mogilner A, Benzil DL: Sympathectomy for chronic pain management. *Contemporary Neurosurgery* 25(10), 2003

Book Authorships, Editorships, and Chapters

1. **Hornyak M**: Decompression of the superior orbital fissure. In: Mathog RH: *Atlas of Craniofacial Trauma* (2nd Edition). Philadelphia: Lippincott Williams & Wilkins, 2012
2. **Hornyak M**: Decompression of the optic nerve. In: Mathog RH: *Atlas of Craniofacial Trauma* (2nd Edition). Philadelphia: Philadelphia: Lippincott Williams & Wilkins, 2012
3. **Hornyak M**: Repair of a cribiform plate cerebrospinal fluid leak. In: Mathog RH: *Atlas of Craniofacial Trauma* (2nd Edition). Philadelphia: Philadelphia: Lippincott Williams & Wilkins, 2012
4. **Hornyak M**: Alternative technique of repairing inferior wall fracture of frontal sinus. In: Mathog RH: *Atlas of Craniofacial Trauma* (2nd Edition). Philadelphia: Philadelphia: Lippincott Williams & Wilkins, 2012
5. **Hornyak M**, Couldwell WT: Pituitary tumors, In: Hanna, EY (ed): *Comprehensive Management of Skull Base Tumors*, New York: Francis and Taylor Books, 2006

Posters

1. **Hornyak M**, Leonard CS: Role of voltage-gated potassium channels (Kv3) in repetitive firing in neurons of the murine subthalamic nucleus. Society for Neuroscience, Detroit, MI. 13 May 2013.

2. **Hornyak M**, Smith JS, Moorthy C, Benzil DL: Significant pain relief and few complications seen in initial experience with spine stereotactic radiosurgery. North American Spine Society 19th Annual Meeting, Chicago, IL. Oral poster presentation. October 2004
3. **Hornyak M**, Leonard C: The role of voltage-gated potassium channels in repetitive firing in neurons of the subthalamic nucleus. American Association of Neurological Surgeons Annual Meeting, San Francisco, CA. Poster presentation. April 2006

## **PRESENTATIONS**

### Oral Presentations

1. **Hornyak M**, Couldwell WT: Contemporary re-appraisal of Nelson syndrome. International Neurosurgery Winter Meeting, Zermatt, Switzerland. Oral presentation. January 2007
2. **Hornyak M**, Leonard C: The role of Kv3 channels in neurons of the subthalamic nucleus. New York Neurosurgical Society Meeting, New York, NY. Oral presentation. Research Award Winner. March 2005
3. **Hornyak M**, Rovit R, Simon A, Couldwell WT: Irving S. Cooper and the early surgical management of movement disorders. Oral presentation. CNS Annual Meeting, San Diego CA, 2001.
4. **Hornyak M**, Chin L: Radiosurgery for pituitary adenoma. AANS Annual Meeting, San Francisco, CA, 2000.

### Invited Lectures and Grand Rounds

1. **Hornyak M**: Surgical anatomy of the cervical vertebral artery and atlantoaxial segment. DMC Resident's Lab, DMC Surgical Hospital, Troy, MI. 18 Jan 2014
2. **Hornyak M**: Spine and Spinal Cord Injury, Visiting Professor Michigan State University School of Medicine Department of Orthopedic Surgery, Troy, MI, 8 Jan 2014.
3. **Hornyak M**: Neurosurgical Emergencies, Surgery Grand Rounds Visiting Professor, Basset Hospital, Cooperstown, NY, 14 October 2013.
4. **Hornyak M**: Carotid endarterectomy – clinical considerations and cases. Neurosurgery Grand Rounds. Harper University Hospital. Detroit, MI. 17 July 2013.
5. **Hornyak M**: Surgical anatomy and technique of transsphenoidal pituitary surgery. Wayne State University Department of Otolaryngology Grand Rounds, Harper Hospital, Detroit, MI, 1 May 2013.
6. **Hornyak M**: Temporal Bone Pathology and Surgical Anatomy. Neurosurgery Grand Rounds. Harper University Hospital. Detroit, MI. October 17, 2012
7. **Hornyak M**: Surgical Management of Trigeminal Neuralgia and Hemifacial Spasm. Neurosurgery Grand Rounds. Harper University Hospital. Detroit, MI. September 19, 2012
8. **Hornyak M**: Venous anatomy of the posterior fossa. Neurosurgery Grand Rounds. Harper University Hospital. Detroit, MI. 1 Aug 2012
9. **Hornyak M**: Surgical anatomy of the cavernous sinus. Neurosurgery Grand Rounds, Harper Hospital. Detroit, MI. April, 2012.
10. **Hornyak M**: ICU Protocols and Standards of Care. Neurosurgery Grand Rounds. Harper University Hospital. Detroit, MI. February 29, 2012
11. **Hornyak M**: Surgery for cerebral aneurysms Part II. Neurosurgery Grand Rounds, Harper Hospital. Detroit, MI. February 2, 2012
12. **Hornyak M**: Neurofibromatosis: Surgical Cases and Discussion. Neurosurgery Grand Rounds. Harper University Hospital. Detroit, MI. January 4, 2012

13. **Hornyak M:** Neurosurgery Oral Boards: My Experience. Neurosurgery Grand Rounds. Harper Hospital, Detroit, MI December 14, 2011
14. **Hornyak M:** Introduction to Neurosurgery. WSU 1st, 2nd and 3rd Year WSU Medical Students. Neurosurgery Interest Group. Margherio Conference Center. Detroit, MI. September 16, 2011
15. **Hornyak M,** Lindstrom C: Neuro-otologic investigations. Neurosurgery Grand Rounds, Harper Hospital. Detroit, MI. Aug 2011.
16. **Hornyak M:** General Neurosurgery Lecture. WSU Medical Students. Margherio Conference Center, Detroit, MI. May 25, 2011
17. **Hornyak M:** Neurosurgery Emergencies Lecture. WSU Medical Students. Margherio Conference Center, Detroit, MI. April 4, 2011
18. **Hornyak M:** Dalton B: Sawbones Workshop: Spondylolisthesis. Neurosurgery Grand Rounds, Harper Hospital, Detroit, MI. March 16, 2011
19. **Hornyak M:** Retrosigmoid Approach. St. John Providence Hospital / Neurosurgery Cranial Cadaver Lab. Southfield, MI. February 12, 2011
20. **Hornyak M:** General Neurosurgery Lecture. WSU Medical Students. Margherio Conference Center, Detroit, MI. February 2, 2011
21. **Hornyak M:** Surgery for cerebral aneurysms Part I. Neurosurgery Grand Rounds, Harper Hospital. Detroit, MI. Oct 2011.
22. **Hornyak M:** Neurosurgical Emergencies. Grand rounds, visiting professor. Departments of Emergency Medicine, Neurology, and Internal Medicine. Henry Ford Hospital, Clinton Township, MI. April 2010
23. **Hornyak M:** Spinal Trauma. Grand rounds, visiting professor. Physical Medicine and Rehabilitation, DMC Rehab Institute of Michigan, Detroit, MI. March 2009
24. **Hornyak M:** The thalamus- surgical anatomy and considerations. Neurosurgery Grand Rounds, Harper Hospital. Detroit, MI. Dec 2007.
25. **Hornyak M:** Skull base meningioma. Grand rounds, visiting professor. UMDNJ, Newark, NJ. Oral presentation. April 2007

## PRESENTATIONS

### *Didactic Dissection Lab*

1. **Hornyak, M:** The Orbitozygomatic approach. WSU – Michigan State skull base dissection. Providence Hospital, Feb 8-9 2014.
2. Folbe A, **Hornyak M:** Endoscopic sinus and anterior skull base anatomy and surgical technique. WSU Dept of Otolaryngology dissection lab, Lande Building, Detroit, MI. 14 December 2013.
3. **Hornyak M:** Anterior clinoidectomy. WSU Skull base laboratory, Elliman Research Building, Detroit MI, 17 August 2013.
4. **Hornyak M:** Microsuturing techniques. WSU Skull base Laboratory; Elliman Research Building Rm 133, Detroit, MI. 18 May 2013.
5. **Hornyak, M:** The Orbitozygomatic approach. WSU – Michigan State skull base dissection. Providence Hospital, Feb 2013.
6. **Hornyak M:** Transbasal anterior cranial fossa approaches. WSU Skull Base Laboratory. Elliman Research Building Rm 133, Detroit, MI. 5 January 2013.
7. **Hornyak M,** Monsell E: Temporal bone dissection. WSU Skull Base Laboratory, Elliman Research Building Rm 133, Detroit, MI. 20 October 2012.
8. **Hornyak, M:** The Orbitozygomatic approach. WSU – Michigan State skull base dissection. Providence Hospital, Feb 2012.

9. **Hornyak, M:** The Retrosigmoid and far lateral approaches. WSU – Michigan State skull base dissection. Providence Hospital, Feb 2011.

**OTHER SERVICE**

1. Wayne State Univ. School of Medicine Mentoring Program 2008 – 2014  
Mentor medical students  
Including: CV workshop, mock interview night
2. WSU Dept of Neurosurgery Mentoring Program 2013 - 2014  
Mentor neurosurgery residents