

CURRICULUM VITAE

ANTHONY HUNKYUN SIN, M.D.

Biographical Data

Place of Birth: Seoul, South Korea

Citizenship: U.S.A.

Current Title: Assistant Professor
Director of Complex Spinal Disorder
Department of Neurosurgery
LSUHSC – Shreveport
Shreveport, LA

Licensure and Certification

1997 - present: State of Georgia Medical License (044335)

1997 - present: State of New York Medical License (209045)

2002 – present: State of Louisiana Medical License (14773R)

2007 – present: State of Tennessee Medical License (42041)

March 2005: Neurosurgery Written Board Passed for Credit

Clinical Appointments

- June 2008 – present Assistant Professor
Department of Neurosurgery
LSUHSC – Shreveport
Shreveport, LA
- July 2007 – June 2008 Clinical Assistant Professor - Gratis
Department of Neurosurgery
LSUHSC – Shreveport
Shreveport, LA

Education and Training

- July 2007 – June 2008 Spine Fellowship with Dr. Kevin Foley
Minimally Invasive/Complex Spine Surgery
University of Tennessee – Memphis
- January 2006 – June 2007 Chief Resident in Neurosurgery
Department of Neurosurgery
Louisiana State University – Shreveport
Shreveport, Louisiana
Chairman: Anil Nanda, M.D.
- July 2002 – December 2005 Resident in Neurosurgery
Department of Neurosurgery
Louisiana State University – Shreveport
Shreveport, Louisiana
Chairman: Anil Nanda, M.D.
- Oct 30 – Nov 6, 2005 20th Annual RUNN Course
Course Directors: Allan Friedman, MD &
Robert Friedlaner, MD
Woods Hole, Massachusetts
- July 30 – Aug 1, 2004 Skull Base Surgery Course for Senior Residents
Course Director: Jon Robertson, MD
Memphis, Tennessee
- January 2004 – March 2004 Rotation in Neurology – required for NS Board
Department of Neurology
Louisiana State University – New Orleans
New Orleans, Louisiana
Chairman: Austin J. Sumner, M.D.
- July 2001 – June 2002 Internship in General Surgery

Department of Surgery
SUNY at Stony Brook
Stony Brook, New York
Chairman: John J. Ricotta, M.D.

October 1997 – June 2001

Clinical Fellow in Neurotrauma
Department of Neurosurgery, Mt. Sinai Services
Elmhurst Hospital Center
Elmhurst, New York
Advisor: Wesley A. King, M.D.
Jamie S. Ullman, M.D.

July 1996 - June 1997

Internship/Transitional Resident
Emory University School of Medicine
Atlanta, Georgia
Chairman: Juha P. Kokko, M.D., Ph.D.
Discipline: Internal Medicine

Graduate
July 1992 - June 1996

Emory University School of Medicine
Atlanta, Georgia
Degree: Doctor of Medicine

Undergraduate
September 1988 - May 1992

Johns Hopkins University
Baltimore, Maryland
Degree: BA with Honors
Major: Physics

Research

- June 2008 Comparison of fusion between semi-rigid PEEK rod vs. titanium rod using goat animal model
- November 2007 *In vivo* study of effects of RF device in regeneration of intervertebral disc using a rabbit retroperitoneal model.
- October 2007 Biomechanical study of nucleus replacement device.
- September 2007 Biomechanical comparison of lumbar arthroplasty devices: Pro-Disc vs. Maverick.
- August 2007 Analysis of cement distribution in new vertebroplasty device using cadaveric model with O-Arm.
- July 2007 Fatigue testing on new Synthes interspinous process device using robotic biomechanical testing frame.
- January 2004 Biomechanical comparison between a single level cervical corpectomy vs. two-level ACDF using a cadaver model.
Funded by Medtronic: \$10,000.00
- July 2003 Co-Principal Investigator
Principal investigator: Anil Nanda, MD
Predictive factors for dural tear and spinal fluid leak in lumbar spinal surgeries.
Louisiana State University – Shreveport
IRB approved protocol #H03-061
- October 1997 – June 2001 Mt. Sinai School of Medicine
Department of Neurosurgery
Advisors: Wesley A. King, MD
Jamie S. Ullman, M.D.
Project 1: Selective lobar resection in severe head injury: effect on patient outcome and ICP control.
Project 2: Retrospective study of severe head injury patients admitted to Elmhurst Hospital Center
in Queens, NY between 1995 and 1997
- Summer 1993; Fall 1995 Emory University School of Medicine
Department of Neurosurgery

Advisor: C. David James, Ph.D.

Project 1: Gene amplification analysis in glial neoplasms.

Project 2: Analysis of glial tumors for expression of oncogene and tumor suppressor gene products.

Summer 1991

Johns Hopkins University Applied Physics
Laboratory

Advisor: Kim Fowler, M.S.

Project: Software development for computer-controlled, patient-interactive neurological stimulator system.

September 1990 - December 1991

Johns Hopkins School of Medicine
Department of Neurosurgery

Advisor: Richard B. North, M.D.

Project: Automated analysis of implanted electrode-stimulators by computer-controlled, patient-interactive neurological stimulator system.

September 1989 - May 1990

National Institute on Drug Abuse
Division of Neuroscience

Advisor: George Uhl, M.D., Ph.D.

Project: *In situ* studies of the central neurochemical receptors responsible for cocaine addictions using a rat model.

Peer Review Articles

1. **Sin AH**, Archaria R, Smith DR, Nanda A: 540-degree fusion adopting single-step anterior and posterior spinal instrumentation to correct severe cervical kyphosis: report of two cases. *Surg Neurol Jun*;61(6):515-22, 2004
2. Shaya M, Jawahar A, Caldito G, **Sin A**, Willis B, Nanda, A: Gamma knife radiosurgery for trigeminal neuralgia: a study of predictors of success, efficacy, safety, and outcome at LSUHSC. *Surg Neurol Jun*;61(6):529-34, 2004
3. **Sin AH**, Caldito G, Smith DR, Rashidi M, Willis B, Nanda A: Predictive Factors for Dural Tear and Cerebrospinal Fluid (CSF) Leak in Lumbar Spinal Surgeries. *Journal of Neurosurgery – Spine Sept*:5(3): 224-227, 2006
4. **Sin AH**, Gonzalez-Toledo E, Fowler M, Minagar A, Nanda A: Amyloidoma Presenting as a Butterfly Glioma on PET Scan and MR-Spectroscopy: A case report and review of the literature. *J La State Med Soc.* 2008 Jan-Feb;160(1):44-7, 49-50.
5. **Sin A**, Smith DR, Nanda A: Iatrogenic Splenic Injury During Anterior Thoracolumbar Spinal Surgery: Case Report. *Journal of Neurosurgery – Spine Aug*;7(2):227-9, 2007
6. **Sin AH**, Rashidi M, Caldito G, Nanda A: Surgical Treatment of Myelomeningocele: Year 2000 Hospitalization, Outcome and Cost Analysis in the U.S. *Childs Nerv Syst.* 2007 Oct;23(10):1125-7. Epub 2007 Jun 6
7. **Sin AH**, Mukherjee DP, Ogden AL, Robinson E, Smith DR, Nanda A: A Biomechanical Study of Anterior Plate Fixation of Cervical Spine Segments in a Simulated Spinal Fusion Model: Two-Level Discectomy versus Single-Level Corpectomy. *Accepted to Neurosurgery, May 2008*
8. **Sin AH**, Smith DR, Nanda A: Posterior C1-2 Fusion for Type II Odontoid Fracture in 2 year-old: Case Report and Review of Literature. *Accepted to LA State Medical Journal, January 2008*
9. **Sin AH**, Cardenas R, Vannemreddy P, Nanda A: Gamma Knife Stereotactic Radiosurgery for Intracranial Metastases from Conventionally Radioresistant Primary Cancers: Outcome Analysis of Survival and Control of Brain Disease. *Accepted to Southern Medical Journal, May 2008*
10. **Sin AH**, Brown B, Caldito G, Willis B, Smith DR, Nanda A: Prospective Study of Long-term Effects of Dural Tear and Cerebrospinal Fluid (CSF) Leak in Lumbar Spinal Surgeries. *Submitted to J of Spinal Disorder and Technique, May 2008*

11. **Sin AH**, Shorter C, Smith DR, Nanda A: Long-term Treatment of Thoracic and Lumbar (T/L) Spinal Disease via Anterior Approach at Single institution: LSUHSC-Shreveport Experience *Under editorial review, August 2008*
12. Hebert BF, **Sin AH**, Smith DR, Nanda A: Long-term outcome following occipitocervical fusions and comparison of surgical techniques. *Submitted to Spine, May 2008*
13. **Sin AH**, Smith DR, Nanda A: Salvaging Failed Pedicles Screws Using Polymethylmethacrylate(PMMA): Technical Case Report. *Submitted to LA State Medical Journal, August 2008*
14. DiAngelo DJ, McVay BJ, **Sin AH**, Foley KT, Scifert J, Cornwall B: Biomechanical Comparison of Two-level Anterior Lumbar Interbody Fusion (ALIF) Supplemented by Posterior Non-segmental Constructs. *In preparation for publication*
15. Adawy A, Sin AH, Foley KT: Step by Step approach for minimally invasive TLIF using the METRx tubular retractors. *In preparation for publication*
16. Kuelling FA, Foley KT, Liebenberg E, **Sin AH**, Lotz JC: Plasma-based bipolar radiofrequency enhances proteoglycan production in the intervertebral disc and is associated with the transition of a notochordal nucleus pulposus to a fibrocartilaginous nucleus pulposus.

Book Chapters

1. **Sin AH**, Ullman JS: Associated Central Nervous System Injury in Pediatric Head and Neck Trauma, in Rothschild (ed): Facial Plastic Surgery Clinics of North America, Philadelphia: W.B. Saunders Company
2. Ullman JS, **Sin AH**: Central Nervous System Failure: Neurotrauma Trials, in Faist, Baue, and Frye (eds): SIRS, MODS, MOF - Systemic Inflammatory Response Syndrome, Multiple Organ Dysfunction Syndrome, and Multiple Organ Failure-Pathophysiology, Prevention, and Therapy, Springer-Verlag
3. Rashidi M, **Sin AH**, Nanda A: Multiple aneurysms. Ramamurthi B, Tandon PN(eds): Textbook of Neurosurgery, Third edition, B.I.Churchill Livingstone (New Delhi), 2002
4. **Sin AH**, Foley KT: Decompressive Surgery for HNP (Open, Micro, and Minimally Invasive Approaches). Phillips FM, Laurysen C (eds): The Lumbar Intervertebral Disc, Thieme Medical (New York), 2007

Published Comments

1. **Sin AH**, Nanda A: *Neurosurgery*. 2007 Apr;60(4):E773; discussion E773.

Internet Publications

1. Ullman JS, **Sin AH**: Epidural Hemorrhage. www.eMedicine.com, 2002
2. Vannemreddy P, **Sin AH**, Nanda A: Lumbosacral plexus injuries. www.Medlink.com, 2003
3. Foley KT, **Sin AH**: Minimally invasive posterior cervical discectomy. AANS Online Course

Oral Presentations

1. **Sin AH**, Arginteanu MF, Ullman JS, et al: Selective lobar resection in severe head injuries: effect on ICP and outcome. In Mt. Sinai Neurosurgery Research Day, June 1998, New York
2. Psarros T, Ullman JS, **Sin AH**, et al: Cerebral perfusion pressure(CPP) protocol in patients with severe closed head injury: a preliminary comparison between cohorts at the same institution. Annual Meeting of the Congress of Neurological Surgeons, 1998, Seattle
3. **Sin AH**, Ullman JS: 3-year experience in CPP-management protocol for severe head injury. In Mt. Sinai Neurosurgery Research Day, June 1999, New York
4. **Sin AH**, Ullman JS, Nfonoyim J: CPP intensive care management of severe head injury patients: A four year comparison study at Elmhurst Hospital. In Mt. Sinai Neurosurgery Research Day, May 2001, New York
5. **Sin AH**, Archaria R, Smith DR, Nanda A: 540~degree fusion adopting single-step anterior and posterior spinal instrumentation to correct severe cervical kyphosis: report of two cases. 29th Annual Louisiana Neurological Society Meeting, January 2003, New Orleans.
6. **Sin AH**: Invited Guest Speaker for Special Lecture Series. CPP intensive care management of severe head injury patients: A four year comparison study at Elmhurst Hospital Seoul National University – Department of Neurosurgery, October 1, 2003, Seoul, Korea
7. **Sin AH**, Caldito G, Smith, D, Rashidi M, Wiilis B, Nanda A: Predictive factors for dural tear and cerebrospinal fluid leak in lumbar spinal surgeries. 30th Annual Louisiana Neurological Society Meeting, January 2004, Lake Charles, LA
8. **Sin AH**, Rashidi M, Nanda A: Surgical treatment of myelomeningocele: Hospitalization, outcome, and cost analysis. Scientific Session IV – Pediatrics Annual Meetings of the American Association of Neurological Surgeons, 2004, Orlando
9. **Sin AH**, Smith D, Nanda A: A Biomechanical Comparison Study after Anterior Plate Fixation in a Cadaver Model: Two Level Discectomy vs. Single Level Corpectomy. 31st Annual Louisiana Neurological Society Meeting, January 2005, New Orleans, LA
10. **Sin AH**, Nanda A: Multiple cerebral aneurysms. 32nd Annual Louisiana Neurological Society Meeting, January 2006, Shreveport, LA

11. **Sin AH**, Shorter CD, Smith DR, Nanda A: Long-term Treatment of Thoracic and Lumbar (T/L) Spinal Disease via Anterior Approach at Single Institution: LSUHSC-Shreveport Experience. 33rd Annual Louisiana Neurological Society Meeting, January 2007, Shreveport, LA
12. **Sin AH**, Brown B, Caldito G, Willis B, Smith DR, Nanda A: Prospective Study of Long-term Effects of Dural Tear and Cerebrospinal Fluid (CSF) Leak in Lumbar Spinal Surgeries. Southern Neurosurgical Society Annual Meeting, March 2007, Sea Island, GA
13. **Sin AH**: Overview of Minimally Invasive Spinal Surgery. Spine Update 2008, October 2008, Shreveport, LA
14. **Sin AH**: Step-by-Step Minimally Invasive TLIF. 48th Annual Meeting of the Korean Neurosurgical Society, October 2008, Seoul, Korea

Poster Presentations

1. **Sin AH**, James CD: Gene amplification analysis in glial neoplasms. In 39th Annual Emory Medical Student Research Day, November 1993, Atlanta
2. Psarros T, Ullman JS, **Sin AH**, et al: Cerebral perfusion pressure(CPP) management in patients with closed head injury: a comparison between cohorts at the same institution. In 3rd Annual Mt. Sinai Medical Student Research Day, February 1998, New York
3. **Sin AH**, Arginteanu MF, Ullman JS, et al: Selective lobar resection in severe closed head Injury: effect on patient outcome. Annual Meeting of the Congress of Neurological Surgeons, 1998, Seattle
4. **Sin AH**, Ullman JS, Byun HS, et al: Effect of multiple trauma in patients with severe closed head injury. Annual Meetings of the American Association of Neurological Surgeons, 1999, New Orleans
5. **Sin AH**, Arginteanu MF, Ullman JS, et al: Use of selective lobar resection to control intracranial pressure resistant to maximum medical treatment in severe closed head injury patients. Annual Meetings of the American Association of Neurological Surgeons, 1999, New Orleans
6. **Sin AH**, Ullman JS, Byun HS, et al: Cerebral perfusion pressure (CPP) - management protocol for severe head injury: three year experience. Annual Meetings of the American Association of Neurological Surgeons, 2000, San Francisco

7. **Sin AH**, Ullman JS, Byun HS, et al: CPP-based intensive care management of sever head injury patients: A four year comparison study. Annual Meetings of the American Association of Neurological Surgeons, 2002, Chicago
8. **Sin AH**, Ullman JS, Byun HS, et al: Effect of hyperventilation on outcome after severe head injury. Annual Meetings of the American Association of Neurological Surgeons, 2002, Chicago
9. Shaya M, **Sin AH**, Jawahar A, Willis B, Nanda A: Gamma surgery for trigeminal neuralgia: does vascular compression affect the outcome? Annual Meetings of the American Association of Neurological Surgeons, 2003, San Diego
10. **Sin AH**, Nanda A: Benign cranial nerve tumors: comparison of radiosurgery And surgical excisions. Annual Meetings of the American Association of Neurological Surgeons, 2004, Orlando
11. **Sin AH**, Nanda A: Comparison of malignant to benign pineal region tumor: Incidence and treatment options. Annual Meetings of the American Association of Neurological Surgeons, 2004, Orlando
12. **Sin AH**, Nanda A: National trends in the treatment of cavernous angiomas: the year 2000. Annual Meetings of the American Association of Neurological Surgeons, 2004, Orlando
13. **Sin AH**, Smith DR, Nanda A: Treatments for hospitalized patients with herniated cervical disc disease in 2000. Annual Meetings of the American Association of Neurological Surgeons, 2004, Orlando
14. **Sin AH**, Nanda A: National trend of spinal stimulators placements: indications, immediate outcome, and cost analysis. Annual Meetings of the American Association of Neurological Surgeons, 2004, Orlando
15. **Sin AH**, Nanda A: Utilization of ventriculoperitoneal shunt (VPS) for non-congenital communicating hydrocephalus. Annual Meetings of the American Association of Neurological Surgeons, 2004, Orlando
16. **Sin AH**, Smith DR, Nanda A: Predictive Factors for Dural Tear and Cerebrospinal Fluid (CSF) Leak in Lumbar Spinal Surgeries. Annual Meeting of the Congress of Neurological Surgeons, 2004, San Francisco
17. **Sin AH**, Mukherjee DP, Ogden AL, Robinson E, Smith DR, Nanda A: A Biomechanical Study of Anterior Plate Fixation of Cervical Spine Segments in a Simulated Spinal Fusion Model: Two-Level Discectomy versus Single-Level Corpectomy. Annual Meetings of the American Association of Neurological

- Surgeons, 2005, New Orleans
18. **Sin AH**, Shorter CD, Smith DR, Nanda A: Long-term Treatment of Thoracic and Lumbar (T/L) Spinal Disease via Anterior Approach at Single Institution: LSUHSC-Shreveport Experience. Southern Neurosurgical Society Annual Meeting, March 2007, Sea Island, GA
 19. Hebert B, **Sin AH**, Smith DR, Nanda A: Long-term outcome after occipitocervical(OC) instrumentation. Annual Meeting of the Congress of Neurological Surgeons, 2007, San Diego
 20. Kuelling FA, Foley KT, Liebenberg E, **Sin AH**, Lotz JC: Plasma-based bipolar radiofrequency enhances proteoglycan production in the intervertebral disc and is associated with the transition of a notochordal nucleus pulposus to a fibrocartilaginous nucleus pulposus. Annual Meeting of the Congress of Neurological Surgeons, 2008, Orlando

Awards and Honors

- 1989: Dean's list
The Johns Hopkins University
- 1992: Graduated with Honors in physics
Johns Hopkins University
- Summer 1993: Dean's summer research student fellowship
Emory University School of Medicine
- January 22, 2005 John Jackson Award for Best Clinical Paper
Louisiana Neurosurgical Society Annual Meeting

Organizations

- 2003 – Present Congress of Neurological Surgeons
Active Member
- 2003 – Present American Association of Neurological Surgeons
Resident Member
- 2003 – Present American Association of Neurological Surgeons
Section on Neurotrauma and Critical Care
Member
- 2003 – Present American Association of Neurological Surgeons
Section on Spine and Peripheral Nerve
Member
- 2003 – Present American Association of Neurological Surgeons
Section on Tumor
Member
- 2003 – Present Shreveport Medical Society
Member-at-large
- 1994 - 1995 Medical School Applicant Interview Committees
Emory University School of Medicine
- 1992 - 1996 Medical Student Section, Member
American Medical Association

Hospital Appointments

1. Louisiana State University Medical Center – Active Medical Staff
2. Willis Knighton Healthcare System – Active Medical Staff
3. LSUMC Special Care Committee – Member
4. LSUMC Trauma Committee - Member

Personal References

Anil Nanda, MD, FACS
Chairman of Neurosurgery
LSUHSC-Shreveport
(318) 675 - 6196

Donald R. Smith, MD
Clinical Professor of Neurosurgery
LSUHSC-Shreveport
(318) 635 - 6363

Brian Willis, MD, FACS
Professor of Neurosurgery
LSUHSC-Shreveport
(318) 742 - 8583

Kevin T. Foley, MD
Professor of Neurosurgery
University of Tennessee - Memphis
(901) 259 - 5322

Jon H. Robertson, MD
Professor of Neurosurgery
University of Tennessee - Memphis
(901) 448 - 6375