



Ajay Jawahar, MS, MD
Director of Medical Research
Spine Institute of Louisiana
Shreveport, Louisiana

Ajay Jawahar, MS, MD

Birthdate: March 14, 1965
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Personal Married-Lisa Louise
Children-Dylan (m), Stuti (f), Eleanor (f)

Board Certification

Physician and Surgeon License, Indian Medical Council (14232)	1989
Certified Clinical Research Coordinator and Associate (CRC/ CRA)	2006

Professional Appointments

Director of Medical Research Spine Institute of Louisiana, Shreveport, Louisiana	Oct 2005-Present
Assistant Professor of Research Department of Neurosurgery Louisiana State University Health Sciences Center - Shreveport	Aug 2004 – Jul 2005
Instructor Department of Neurosurgery Louisiana State University Health Sciences Center- Shreveport	Apr 2001-Jul 2004

Education and Qualifications

Post Doctoral Fellowship Neurosurgery Louisiana State University Health Sciences Center-Shreveport Shreveport, Louisiana	2000-2001
Stereotactic Radiosurgery Fellowship University of Pittsburgh Medical Center Pittsburgh, Pennsylvania	1998-2000
Chief Resident, Neurosurgery Indraprastha Apollo Institute of Neurosciences New Delhi, India	1997-1998
Resident, Neurosurgery Indraprastha Apollo Institute of Neurosciences New Delhi, India	1995-1997
Practicing General Surgeon , India	1992-1995

Chief Resident, General Surgery Dr. S.N. Medical College Hospital Jodhpur, Rajasthan, India	1991-1992
Resident, General Surgery Dr. S.N. Medical College Hospital Jodhpur, Rajasthan, India	1989-1991
Bachelor of Medicine and Bachelor of Surgery University of Rajasthan Rajasthan, India	1982-1987

Professional Memberships

Member American Association of Neurological Surgeons (AANS)	2003
International Member Congress of Neurological Surgeons of America (CNS)	2000
Member American Society for Stereotactic and Functional Neurosurgery	2003
Member Leksell Gamma Knife Society	1999

Awards and Honors

1. Award of Sponsorship from Elekta Instruments (Atlanta, GA) to present scientific work titled "Gamma Knife Stereotactic Radiosurgery in the treatment of multiple brain metastases: does external beam radiation really help?" 2001 Congress of Neurological Surgeons annual meeting in September 2001, San Diego, CA
2. Jason Cardelli Annual Award for excellence in Cancer Research from Feist Weiler Cancer Foundation of Northwest Louisiana. 2003
3. Mahaley Award for Excellence in Clinical Neurosurgical Research from National Brain Tumor Foundation, April 2005.
4. Recognition for excellence in Science and Engineering: The Marquis Who's Who 2006-2007.
5. Recognized as Faculty for 2007-2008: American College of Spine Surgeons, May 2007

Clinical Research Trials

- 1. Co-Investigator and Study Director:** Prospective randomized trial to assess the safety of Synthes ARCH laminoplasty system in patients with multi-level cervical myelopathy and stenosis. 2007.
- 2. Co-Investigator and Study Coordinator:** Prospective randomized trial to assess the safety of Mobi- C artificial Intervertebral disc in patients with one and two-level cervical degenerative disc disease. 2007.
- 3. Co-Investigator and Study Director:** Prospective randomized to test the efficacy of Optimesh (Spineology Inc.) for Antero-lateral Lumbar Interbody Fusion: 2007-2009
- 4. Co-Investigator and Study Director:** Single arm prospective trial to test the efficacy of DePuy MIS VIPER pedicle screw system. 2007-2009.
- 5. Co-Investigator and Study Coordinator:** Prospective randomized trial to assess the safety of Kineflex CTM artificial Intervertebral disc in patients with one-level cervical degenerative disc disease. 2005.
- 6. Co-Investigator and Study Coordinator:** Prospective randomized trial to assess the safety of Kineflex CTM artificial Intervertebral disc in patients with one-level and two-level lumbar degenerative disc disease. 2005.
- 7. Co-Investigator and Study Coordinator:** Prospective randomized trial to compare the fusion rates using fixed-hole versus slotted-hole plates in patients undergoing anterior cervical fusion. 2005-2006
- 8. Principal Investigator:** A prospective randomized trial for evaluating the efficacy of Gamma Knife stereotactic radiosurgery in the treatment of cerebral metastases. 2001-2005
- 9. Principal Investigator:** A prospective phase II controlled, clinical trial to assess the safety of local therapy with BCNU-permeated wafers (GLIADEL®) followed by radiosurgery and conventional external beam radiation therapy in the management of patients with newly diagnosed Glioblastoma Multiforme
- 10. Co- principal Investigator:** Gamma Knife Stereotactic radiosurgery: Pain perception during head- frame application related to personality traits. 2001
- 11. Co-Investigator:** SEAL Subarachnoid Hemorrhage 2001. Microsurgery versus endovascular therapy for aneurysmal subarachnoid hemorrhage trial, 2001.
- 12. Co-Investigator:** Devco/Bayer Traumatic Brain Injury 2001 Randomized, double-blind, placebo-controlled global trial to evaluate the efficacy, safety and pharmacokinetic/ pharmacodynamic effects of a targeted exposure of intravenous repinotan (BAY x 23702) in patients with traumatic brain injury (TBI), 2001.

Grants

- 1. Co-Investigator**
Title: The effect of various endogenous lipopolysaccharides to enhance the neuro-vascular response to Gamma knife radiosurgery: An experimental study in rat model.
Period: July 1999 to April 2000.
Institution: University of Pittsburgh Medical Center, Pittsburgh, PA.
Principal Investigator: Glen Gobel DVM, Ph.D.

Agency: The Copeland Foundation

Amount: \$ 25,000.

2. Principal Investigator

Title: A prospective randomized trial for evaluating the efficacy of Gamma Knife stereotactic radiosurgery in the treatment of cerebral metastases. (IRB # H-00159).

Period: July 2001 to June 2002

Institution: Louisiana State University Health Science Center, Shreveport LA

Agency: Feist Weiler Biomedical Research Foundation of Northwest Louisiana.

Amount: \$ 24,900.

3. Principal Investigator

Title: An in-vitro study to assess the response of vascular endothelial cells to Gamma Knife stereotactic radiosurgery in an attempt to elucidate the chain of events at the molecular level.
7/2001-6/2002

Institution: Louisiana State University Health Science Center, Shreveport LA Agency:
Department of Neurosurgery research fund.

Amount: \$5,000.00

4. Principal Investigator

Title: A prospective phase II controlled, clinical trial to assess the safety of local therapy with BCNU-permeated wafers (GLIADEL®) followed by radiosurgery and conventional external beam radiation therapy in the management of patients with newly diagnosed Glioblastoma Multiforme.

8/1/2004 - 7/31/2006

Institution: Louisiana State University Health Science Center, Shreveport LA

Agency: Guilford Pharmaceuticals (Innovative research division)

Amount: \$ 95,000.00

5. Principal Investigator

Title: Mechanism of Brain Edema Following Gamma Knife Radiosurgery

Institution: Louisiana State University Health Science Center, Shreveport LA

Agency: Elekta Instruments AB Inc. (Department of Scientific Research). 2004-2005

Amount: \$ 40,000.00

6. Principal Investigator

Title: Mechanism of Brain Edema Following Gamma Knife Radiosurgery

Institution: Louisiana State University Health Science Center, Shreveport LA

Agency: Feist Weiler Biomedical Research Foundation of Northwest Louisiana. 2004-2005

Amount: \$ 21,200.

Educational & Research Interests

Spine surgery and Instrumentation;; Image Guided Neurosurgery; Functional Neurosurgery for Movement Disorders; Linac & Gamma Knife Radiosurgery

Research and Publications

1. Nunley PD, Jawahar A, Brandao SM et al: Intradiscal Electrothermal Therapy (IDET) for Low Back Pain in Worker's Compensation Patients: Can It Provide a Potential Answer? Long Term Results; **Accepted in Journal of Spinal Disorders and Technique, February 2007**
2. Cavanaugh DA, Jawahar A, Lee JA et al: Intraspinal meningioma in a 101-year old: Should age determine the aggressiveness of intervention? **Accepted in Surgical Neurology, 2007**
3. Kerr EJ 3rd, Nunley PD, Cavanaugh DA, Heard JS, Jawahar A: Primary osteoblastic osteosarcoma in an elderly female: a case report of perplexing presentation. **Anticancer Res. 2006 Jul-Aug;26(4B):3117-21**
4. Xiao F, Pardue S, Nash T, Arnold TC, Alexander JS, Carden DL, Turnage R, Jawahar A, Conrad SA: Cell column chromatography: a new research tool to quantify cerebral cell volume changes following chemically-induced anoxia/re-oxygenation. **Acta Neurochir Suppl. 2005; 95:411-4.**
5. Wood K, Jawahar A, Smelley C, Mullapudi S, DeLaune A, Nanda A, Granger DN: Exposure of brain to high-dose, focused gamma rays irradiation produces increase in leukocytes-adhesion and pavingmenting in small intracerebral blood vessels. **Neurosurgery. 2005 Dec; 57(6):1282-8; discussion 1282-8.**
6. Campbell PG, Jawahar A, Fowler MR, Delaune A, Nanda A: Primary central nervous system lymphoma of the brain stem responding favorably to radiosurgery: a case report and literature review. **Surg Neurol. 2005 Nov; 64(5):400-5; discussion 405.**
7. Jawahar A, Shaya M, Campbell P, Ampil F, Willis BK, Smith D, Nanda A: Role of stereotactic radiosurgery as a primary treatment option in the management of newly diagnosed multiple (3-6) intracranial metastases. **Surg Neurol. 2005 Sep;64(3):207-12**
8. Jawahar A, Wadhwa R, Berk C, Caldito G, DeLaune A, Ampil F, Willis B, Smith D, Nanda A: Assessment of pain control, quality of life, and predictors of success after gamma knife surgery for the treatment of trigeminal neuralgia. **Neurosurg Focus. 2005 May 15; 18(5): E8.**
9. Ampil FL, Jawahar A, Krishnamsetty RM, Nanda A Palliation of brain stem metastasis in patients

with lung cancer by radiotherapy: how safe? **J Palliat Med. 2005 Apr;8(2): 269-71**

10. Karim A, McCarthy K, Jawahar A, Smith D, Willis B, Nanda A. Differential cyclooxygenase-2 enzyme expression in radiosensitive versus radioresistant glioblastoma multiforme cell lines. **Anticancer Res. 2005 Jan-Feb; 25(1B): 675-9.**
11. Sharp CD, Houghton J, Elrod JW, Warren A, Jackson 4th, Jawahar A, Nanda A, Minagar A, Alexander JS. N-methyl-D-aspartate receptor activation in human cerebral endothelium promotes intracellular oxidant stress. **Am J Physiol Heart Circ Physiol. 2005 Apr; 288(4):H1893-9.** Epub 2004 Dec 2.
12. Jawahar A, Cardenas RJ, Zwiag RM, Willis BK, Nanda A: A case report of complete disappearance of essential tremor after Gamma Knife radiosurgery. **J La State Med Soc. 2004 May-Jun; 156(3):140-2.**
13. Jawahar A; Ronnie E. Matthew; Alireza Minagar; Deepti Shukla; John Zhang, Brian K Willis; Federico Ampil, Anil Nanda: Gamma Knife radiosurgery in the management of brain metastases from lung carcinoma: A retrospective analysis of survival, local control and freedom from new brain metastases. **Journal of Neurosurgery, 2004 May; 100(5): 842-47**
14. Jawahar A, Ampil F, Wielbaecher C, Hartman GH, Zhang JH, Nanda A: Management strategies for patients with brain metastases: has radiosurgery made a difference? **South Med J. 2004 Mar;97(3):254-8**
15. Jawahar A, Jawahar LL, Nanda A, Sharp CD, Warren A, Elrod JW, Jennings M, Alexander JS, Minagar A: Stereotactic radiosurgery using the Leksell Gamma knife: current trends and future directives. **Front Biosci. 2004 Jan 1; 9:932-8.**
16. Jawahar A, Minagar A, Nanda A. Stereotactic Radiosurgery using the Leksell Gamma Knife: Current Trends and Future Directives. **Advances in Clinical Neurosciences 2003; 13:1-13**
17. Jawahar A, Weilbaecher C, Shorter C, Stout N, Nanda A: Multicentric glioblastoma multiforme determined by positron emission tomography: a case report. **Clin Neurol Neurosurg. 2003 Dec; 106(1): 38-40**
18. Jawahar A, Nanda A. Microsurgery for Potential Radiosurgical Skull Base Lesions: A Retrospective Analysis and Comparison of Results. **Skull Base Surgery, 2003, 13(3): 131-137,2003**
19. Jawahar A, Kondziolka D, Kanal E, Bissonette D, Lunsford LD. The trigeminal nerve before and after surgical intervention for trigeminal neuralgia. **Neurosurgery 2001; 48: 101-107.**

20. Jawahar A, Kondziolka D, Garces YI, Flickinger JC, Pollock BE, Lunsford LD. Stereotactic radiosurgery of haemangioblastoma of the brain. **Acta Neurochiurgica** 2000; 142: 641-645.
21. Jawahar A, Kondziolka D, Flickinger JC, Lunsford LD. Adjuvant Stereotactic Radiosurgery for Anaplastic Ependymoma. **Stereotactic and Functional Neurosurgery** 1999; 73: 23-30
22. Jawahar A, Willis BK, Smith DR, Ampil F, Datta R, Nanda A: First 100 cases of Gamma Knife radiosurgery in Louisiana: Analysis of demographics and early results. **J La State Med Soc** 2002; 154: 31 -36
23. Jawahar A, Ampil F, Hartman G, Nanda A: Analysis of factors affecting outcomes in patients with metastatic cauda equina compression: a 20-year single institution experience. **Neurosurgery Quarterly** 12(2), 2002, Lippincott William and Wilkins, Inc. Philadelphia
24. Jawahar A, Willis BK, Smith DR, Nanda A et al: Gamma knife radiosurgery for brain metastases: do patients benefit from adjuvant external beam radiotherapy? **Stereotact Funct Neurosurg.** 2002; 79 (3-4):262-71
25. Shaya M, Jawahar A, Caldito G, Sin A, Willis BK, Nanda A: Gamma knife radiosurgery for trigeminal neuralgia: a study of predictors of success, efficacy, safety, and outcome at LSUHSC. **Surg Neurol.** 2004 Jun; 61(6): 529-34
26. Sharp CD, Jawahar A, Warren AC, Elrod JW, Nanda A, Alexander JS: Gamma Knife irradiation increases cerebral endothelial expression of ICAM-1 and E-Selectin. **Neurosurgery.** 2003 Jul; 53(1): 154-61
27. Datta R, Jawahar A, Ampil FL, Shi R, Nanda A, D'Augustino H: Survival in relation to radiotherapeutic modality for brain metastasis: Whole brain irradiation versus Gamma Knife radiosurgery. **American Journal of Clinical Oncology**, 72(4), Aug 2004.
28. DeLaune A, Jawahar A, Nanda A: The Gamma Knife nurse: Defining roles and responsibilities. **Journal of Neuroscience Nursing** 34(1), 2002, 25-30
29. Niranjana A, Jawahar A, Kondziolka D, Lunsford LD. A comparative analysis of radiosurgery, thalamotomy and deep brain thalamic stimulation for movement disorders: results and complications. **Stereotactic and Functional Neurosurgery** 1999; 72: 178-84
30. Ampil FL, Martinez RL, Jawahar A, Willis BK, Nanda A: Management of epidural cauda equina disease of prostate cancer by radiotherapy. **Radiation Medicine: 2003, Vol 21 (4); 145-149.**
31. Nanda A, Vannemreddy PSSV, Willis BK, Baskaya MK, Jawahar A: Management of carotid artery injuries: Louisiana State University Shreveport experience. **Surg Neurol** 2003 Mar; 59(3):

184 -90

32. Ampil FL, Burton GV, Mills GM, Jawahar A, Pelsler R, Nanda A: Cauda equina compression in breast cancer: incidence and treatment outcome. **European Journal of Gynaecology Oncology** 2001; 22(4): 257-9
33. Minagar A, Long A, Ma T, Jackson TH, Kelley RE, Ostanin DV, Sasaki M, Warren AC, Jawahar A, Cappell B, Alexander JS: Interferon (IFN)-beta1a and IFN-beta1b Block IFN-gamma-Induced Disintegration of Endothelial Junction Integrity and Barrier. **Endothelium**. 2003; 10 (6): 299-307
34. Sharp CD, Hines I, Houghton J, Warren A, Jackson IV TH, Jawahar A, Nanda A, Elrod JW, Long A, Minagar A, Alexander JS: Glutamate Causes a Loss in Human Cerebral Endothelial Barrier Integrity through the Activation of the N-Methyl-D-Aspartate Receptor (NMDAR). **Am J Physiol Heart Circ Physiol**. 2003 July

Book Chapters

1. Niranjana A, Jawahar A, Lunsford LD: Radiosurgery: New frontiers and future directions. Germano IM (ed) **LINAC and Gamma Knife Radiosurgery**. AANS: 253-266, 1999.
2. Jawahar A, Nanda A: Vein of Galen Malformations. Ramamurthi B, Tandon PN (eds): Textbook of Neurosurgery, Third edition, B.I.Churchill Livingstone (New Delhi), 2002.
3. Nanda A, Jawahar A: Moderate and severe head injury. Evans R (ed) **Saunders Manual of Neurologic Practice**. W B Saunders. 494 - 500
4. Jawahar A, Lunsford LD: Stereotactic Radiosurgery For Benign Skull-Base Tumors. **Your Doctor.Com**, 2001.
5. Prasad VSSV, Nanda A, Jawahar A: Acute Traumatic Spinal Cord Injury, **Medlink.com**, 2001.
6. Prasad VSSV, Nanda A, Jawahar A: Acute Traumatic Cranial Neuropathy, **Medlink.com**, 2001.

Presentations

1. Jawahar A, Nunley PD, Kerr EJ et al: Prospective randomized single blind trial to assess the effect of plate design on clinico-radiological outcomes of anterior cervical fusion surgery. 2007 Annual meeting of American College of Spine Surgery, Nashville, TN, May 2-6, 2007.
2. Jawahar A, Nunley PD, Brandao SM et al: Intradiscal Electrothermal Therapy (IDET) for Low Back Pain in Worker's Compensation Patients: Can It Provide a Potential Answer? Long

Term Results. 2007 Annual meeting of American College of Spine Surgery, Nashville, TN, May 2-6, 2007.

3. Nunley PD, Jawahar A, Mukherjee DP et al: Fusion Versus Hybrid After 2-Level Lumbar Discectomy: Does Construct Actually Affect Pressure At Adjacent Levels? A Biomechanical Study. Annual Meeting of International Spine Arthroplasty Society, Berlin, Germany, May 1-5, 2007.
4. Jawahar A, Nanda A, Campbell P et al: A prospective randomized clinical trial to assess the efficacy of Gamma Knife radiosurgery alone in the treatment of 1-3 brain metastases from a known primary. Award winning presentation. 2005 Annual Meeting of American Association of Neurological Surgeons, New Orleans, LA, April 14-18, 2005
5. FL Ampil, A Jawahar, GM Mills, RM Krishnamsetty: Brain-stem metastasis in lung cancer patients: A treatment conundrum? The 3rd International Chicago Symposium on Malignancies of the lung and Head & Neck October 7 to 9, 2004
6. Sibile Pardue, Taffney Nash, Feng Xiao, Thomas C. Arnold, J. Steven Alexander, Ajay Jawahar, Donna L. Carden, Richard Turnage, Steven A. Conrad Cell Column Chromatography: A New Research Tool To Quantify Cerebral Cell Volume Changes Following Chemically-Induced Anoxia/Re-Oxygenation: Society for Academic Emergency Medicine Annual Meeting in Orlando, May 16-19, 2004
7. Ajay Jawahar MD, Mark Shaya MD, Cedric Shorter BS et al: Radiosurgery for Skull-Base Meningiomas: Corroboration of Clinical and Radiological Outcomes. Presented at the 2004 annual meeting of North American Skull Base Society, Feb 2004, New Orleans.
8. Ajay Jawahar MD¹, Gloria Caldito PhD³, Lisa L. Jawahar RT², Allyson DeLaune CNRN¹, Federico Ampil MD², Ratna Datta PhD² and Anil Nanda MD: A prospective trial to assess the efficacy of Gamma Knife radiosurgery alone in the treatment of brain metastases. 53rd Annual Meeting of Congress of Neurological Surgeons, Denver, 2003.
9. Ajay Jawahar, Ronnie E. Matthew, Deepti Shukla, Brian K Willis, Donald R Smith, Federico Ampil and Anil Nanda: Gamma Knife radiosurgery in the management of brain metastases from lung carcinoma: Factors affecting survival, local control and freedom from new brain metastases. Oral platform presentation at the quadrennial meeting of the AASFNS May 18-21, 2003.
10. D Shukla, A Jawahar, ML Nordberg, M Constantinescu, M Fowler: Alterations in Cell Cycle

Gene Expression and Proliferative markers in Recurrent Post Gamma Knife Radiation Brain Tumors. Annual meeting of American Society of Clinical Pathology, New Orleans, 2003.

11. Jawahar A, Patwardhan R, DeLaune A, Willis BK, Smith DR, Nanda A: Stereotactic radiosurgery using the Leksell Gamma Knife for the treatment of primary cerebral malignancies: LSUHSC-S experience. 29th annual meeting of Louisiana Neurosurgical Society, New Orleans, LA. 2003.
12. Shaya M, Sin A, Jawahar A, Willis BK, Nanda A: Gamma surgery for trigeminal neuralgia: Does vascular compression affect the outcome? 29th annual meeting of Louisiana Neurosurgical Society, New Orleans, LA. 2003.
13. Jawahar A, Patwardhan R, Nanda A, Weilbacher C et al: Persisted Brain Edema following Gamma Knife Stereotactic Radiosurgery: Characteristics and Predictive factors. 53rd annual meeting of the Congress of Neurological Surgeons, Philadelphia, PA.
14. Jawahar A, Matthew E, Manchandia A, nanda A: Interventions for trigeminal neuralgia: Comparison and outcomes for MVD and radiosurgery at a single institution. 11th International meeting of the Leksell Gamma Knife Society, May 2002, Prague, Czech.
15. Jawahar A, McNabb B, Ampil F, Nanda A: Effectiveness of stereotactic radiosurgery in the treatment of small intracerebral metastases: A comparative analysis with external beam radiation. 28th annual meeting of Louisiana Neurosurgical Society, January 25-26,2002, Alexandria, La.
16. Datta R, Ampil; F, Datta H, Jawahar A: Radiotherapy of brain metastases: whole brain versus Gamma Knife: treatment outcome at first glance. 12th international congress on anti cancer treatment. Feb 4-7, 2002, Paris, France.
17. Jawahar A, Willis BK, Smith DR, Nanda A et al: Gamma knife radiosurgery for brain metastases: do patients benefit from adjuvant external beam radiotherapy? 51st annual meeting of the Congress of Neurological Surgeons. September 29-october 4,2001, San Diego, CA.
18. Jawahar A, Vannamerreddy PSSV, Willis BK, Nanda A: Analysis of treatment options, outcomes and influencing factors in the management of patients with carotid artery injury. 51st annual meeting of the Congress of Neurological Surgeons. September 29-october 4,2001, San Diego, CA.
19. Jawahar A, Ampil F, Nanda A: Metastatic cauda equina tumors: Analysis of 20-year results

and factors affecting outcome. AANS, April 2001, Toronto, Canada.

20. Jawahar A, Kondziolka D, Flickinger JC, Lunsford LD: The role of radiosurgery in patients with hemangioblastomas. Oral platform presentation at the AANS meeting held in April 2000 San Francisco, CA.
21. Jawahar A, Kondziolka D, Lunsford LD: Shifting sands of radiosurgery: A comparison of the indications and insurance providers over a period of 5 years. Oral platform presentation at the Annual Leksell Gamma Knife society meeting held in April 2000 at the Squaw Valley, CA.
22. Jawahar A, Kondziolka D, Kanal E, Lunsford LD: Effects of trigeminal neuralgia or its management on the trigeminal nerve and regional structures: An evaluation with high-resolution imaging. Oral platform presentation at the Congress of Neurological Surgeons held in September 2000 in San Antonio
23. Jawahar A, Kondziolka D, Flickinger JC, Lunsford LD: Radiosurgery for anaplastic ependymoma in children and adults: indications and results. Oral platform presentation at the quadrennial meeting of the AASFNS July 7-10 1999.
24. Niranjan A, Jawahar A, Kondziolka D, Flickinger JC, Lunsford LD: A comparative analysis of radiosurgery, thalamotomy and deep brain thalamic stimulation for movement disorders: results and complications. Oral platform presentation at AASFNS July 1999.

Invited Lectures

- Lecturer, Principle of Gamma Knife Stereotactic Radiosurgery and its Application in Treating Movement Disorders, January 26, 2001.
- Lecturer, Principles and Practice of Gamma Knife Stereotactic Radiosurgery and Results of the First 100 Cases at LSUHSC- Shreveport, February 2001.
- Lecturer, Neurosurgical Perspective of Cerebrovascular Occlusive Disease, April 10, 2001.
- Lecturer, Traumatic Brain Injury, April 17, 2001.
- Lecturer, Gamma Knife Radiosurgery, 3rd year medical students, monthly.
- Invited guest speaker: Strategies in the management of brain metastases: has radiosurgery made a difference? 15th annual meeting of the Southern Association for Research in Psychiatry, April 12-13,2002, Shreveport, La.
- Lecturer, Stereotactic Radiosurgery using the Leksell Gamma Knife: LSUHSC-S experience. Department of Otorhinolaryngology, Mar 9, 2004, Shreveport, La.
- Invited Faculty Lecture: What is the definition of Balance? Comparison of disc pressures for Total Disc Arthroplasty and Arthrodesis in Lumbar Spine. 2007 Annual Meeting of American College of Spine Surgery, Nashville, TN; May 2-6, 2007.
- Invited Faculty Lecture: Cervical Spine Arthrodesis: Which allograft heals best and

can allografts compare to autografts? 2007 Annual Meeting of American College of Spine Surgery, Nashville, TN; May 2-6, 2007.

Continuing Medical Education

2007

American College of Spine Surgeons Annual Meeting
Nashville, TN May 2007

2006

Annual Meeting of North American Spine Society
Seattle, WA September 2006

American College of Spine Surgeons Annual Meeting
Colorado Springs, CO May 2006

2005

Annual Meeting of American Association of Neurological Surgeons
New Orleans, LA April 2005

2001

Louisiana Association of Neurological
Surgeons 27th Annual Meeting
New Orleans, LA January 2001

North American Skull Base Society Annual Meeting
Orlando, FL March 2001 March 2001

2000

Annual Meeting of the American Association of Neurological Surgeons
San Francisco, CA 2000

10th Annual Meeting of the Leksell Gamma Knife Society
Lake Tahoe, CA April 2000

Gamma Knife Radiosurgery: Impact on Contemporary
Neurosurgery & Potential for Future Applications May 2000

Primary & Metastatic Brain Tumors: Does Surgery Really Help? July 2000

Polygenic Spine Infections: The San Antonio Experience August 2000

IRB Regulations Governing the Informed Consent Process August 2000

Congress of Neurological Surgeons Annual Meeting San Antonio, TX	Sept 2000
Management of Craniovertebral Instability	Dec 2000
1999	
Quadrennial meeting of the American Society of Stereotactic and Functional Neurosurgery Utah	July 1999
1998	
Second Workshop on Interventional Neuroradiology New Delhi, India	Feb 1998
Symposium on treatment plan optimization in radiation therapy New Delhi, India	April 1998