CURRICULUM VITAE

June 2014

Bruce Michael McCormack, M.D.

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Education Brown University, BA, 1978-1982

Columbia University College of Physicians and Surgery, 1982-1986

Internship Mount Sinai Hospital, Intern in General Surgery, 1986-1987

Residency New York University Medical Center, Resident in Neurological Surgery, 1987-1992

Fellowships University of Florida, Spine Fellow and Neurosurgery Clinical Instructor, 1/93-7/93

University of New Mexico, Spine Fellow and Neurosurgery Clinical Instructor, 1/93-7/94

Experience Director of U.C.S.F NeuroSpinal Surgery Service Assistant Professor of Neurosurgery,

2/94-3/98

Board Certification American Board of Neurological Surgery: May 1998

MedicalNew York No: 173429-1LicensureNew Mexico No: 93-328

California No: G 078326

California Qualified Medical Examiner QME No: 919777

Professional American Association of Neurological Surgeons,

Societies Congress of Neurological Surgeons

San Francisco Medical Society California Medical Association North American Spine Society Cervical Spine Research Society

Research Viets Medical Student Fellowship Award: The Immunology

Awards of Penicillamine Induced Myasthenia Gravis 1983

NIH Medical Student Research Fellowship: The role of the locus caeruleus in cerebral blood flow and metabolism derangement after subarachnoid hemorrhage 1985

UCSF Academic Senate and REAC Awards: Evaluation of MK-801 and NBQX NMDA

receptor antagonists in an epidural indentation brain injury model 1994-95

Publications

- 1. McCormack BM, Swift DM, Hegemann MT, Solomon RA: Increase in Norepinephrine Synthesis in the Cerebral Hemispheres of Rats following Subarachnoid Hemorrhage. Brain Research 382395-598, 1986
- 2. Solomon RA, McCormack BM, Lovitz RN, Swift DM, Hegemann MT: Elevation of Brain Norepinephrine Concentration after Experimental Subarachnoid Hemorrhage. Neurosurgery 19:363-366, 1986
- 3. McCormack BM, Cooper PR, Persky M, Rothstein S: Extracranial Repair of Cerebrospinal Fluid Fistulas: Technique and Results in 37 Patients. Neurosurgery 27:412-418, 1990
- 4. McCormack BM, Cooper PR, Louie E, Koslow M: Management of Intracranial Mass Lesions in AIDS Patients. Contemporary Neurosurgery. Vol. 12, Number 10, 1990
- 5. McCormack BM, Miller DC, Budzilovich GN, Vorhees GJ, Ransohoff, J: Treatment and Survival of Low Grade Astrocytoma in Adults 1977-1988. Neurosurgery 31:636-642, 1992
- 6. Benzel EC, Rupp FW, McCormack BM, Baldwin NG, Anson JA, Adams MS: A comparison of fluoroscopy and CT -derived volumetric multiple exposure transmission holography for the guidance of lumbar pedicle screw insertion. Neurosurgery 37:711-716, 1995
- 7. McCormack B, Rupp FW, Baldwin NG, Adams M, Maher DJ: Anatomy of the Thoracic Pedicle. Neurosurgery 37:303-308, 1995
- 8. McCormack B, Weinstein P: Cervical Spondylosis-An update. Western J Med 165:43-51; 1996
- 9. McCormack B, Taylor S, Heath S, Scanlon J: CSF fistula/Pseudomeningocele in a patient with lumbar spinal implant treated with percutaneous epidural blood patch and a brief course of CSF diversion. Spine 21: 2273-2279, 1996
- 10. Manley GT, Lieberman D, Wachhorst S, Beck C, Chestnut R, McCormack B: Odontoid Screw Fixation: Results in 45 patients and comparative analysis of alternative techniques. J Neurosurgery: Spine (submitted)
- 11. Lieberman DM, Eichbaum E, Lamborn K, Gulla V, McCormack B, Risks, benefits, and alternatives to the use of posterior transarticular facet screws for atlantoaxial arthrodesis. J Neurosurgery: Spine (submitted)
- 12. Mummaneni PV, Pitts LH, McCormack BM, Corro JM, Weinstein PR: Microsurgical treatment of symptomatic sacral Tarlov Cysts. Neurosurgery, 47:74-79, 2000
- 13. Bruce McCormack MD, William Bowen MD, Stephen Gunther MD, Jonathan Linthicum MD, Michael Kaplan MD, Edward Eyster MD.: Carpal Tunnel Release Using MANOS CTR System: Preliminary Results in 52 Patients. 2012
- 14. Gregory Buncke MD, Bruce McCormack MD, Marko Bodor MD.: Ultrasound-Guided Carpal Tunnel Release using the MANOS CTS System. Volume 33, Issue 5, pages 362-366, July 2013. Microsurgery.
- 15. Bruce McCormack MD, Rafael C. Bundoc MD, Mario R. Ver MD, Jose Manuel F. Ignacio MD, Sigurd Berven MD, and Edward Eyster MD.: Percutaneous Posterior Cervical Fusion with DTRAX Facet System for Single Level Radiculopathy Results in 60 Patients. January 2013
- 16. Bruce McCormack, MD.: Carpal Tunnel Release Using the MANOS CTR System. In: Carpal Tunnel Syndrome. Risk Factors, Symptoms and Treatment Options. 2014 Nova Science Publishers, Inc. Novoa Biomedical. Chapter 2 pages 15-32.

Chapters

- 1. McCormack BM, Cooper PR: Head Injury. In: Habal MB, Ariyan S, ed., Facial Fractures. Toronto: BC Decker Inc, 1989, pp 57-97
- 2. Nockels R, McCormack B: Diagnosis and management of thoracolumbar and lumbar spine injuries, In: Youmans JR, ed., Neurological Surgery ~ Vol. 3, W.B. Saunders, 1995 pp. 2079-2096
- 3. McCormack BM, Cooper PR: Traumatic Cerebrospinal Fluid Fistulas. In: Narayan RK, Wilberger P, Povlishock JT, ed., Neurotrauma. New York, McGraw-Hill Inc, 1995 pp. 507-522
- 4. McCormack BM, Macmillan M, Fessler R: Management of thoracolumbar and sacral injuries. In: Tindall G, Barrow DL, Cooper PC, ed., The Practice of Neurosurgery. Baltimore: Williams and Wilkins, 1996, pp. 17211740
- 5. Benjamin V, McCormack BM: Tuberculum Sellae and Medial Sphenoidal Ridge Meningioma. In: Schmidek HH, Sweet WH, ed, Operative Neurosurgery techniques, 3rd ed, Orlando: Grune & Statton Inc, 1995, pp 403-414
- 6. McCormack BM, Maher DJ, Fessler R: Anterior Approaches to the Lumbar Spine. In: Menezes AH, Sonntag VKH, ed., Principles of Spinal Surgery. New York: McGraw-Hill Inc, 1995, pp. 854-865
- 7. McCormack B, Kalfas IH, Zide B: Cerebrospinal fluid fistula and pseudomeningocele after spinal surgery. In: Benzel EC, ed., Spine Surgery: Techniques, Complication Avoidance and Management. New York, Churchill, Livingstone, 1999, pp. 1465-1474
- 8. Kalfas IH, McCormack B: Intraoperative imaging of the spine. In: Benzel EC, ed., Spine Surgery: Techniques, Complication Avoidance and Management. New York, Churchill Livingstone, 1999, pp. 1221-1231
- 9. Eichbaum E, Matz P, McCormack B: Management of thoracic spine infections. In Benzel EC, Stillerman C, ed., The Thoracic Spine. New York, Churchill Livingstone, 1999, pp. 577-596
- 10. Bruce McCormack MD, William Bowen MD, Stephen Gunther MD, Jonathan Linthicum MD, Michael Kaplan MD and Edward Eyster MD.: Carpal Tunnel Release Using MANOS CTR System: Preliminary Results in 52 Patients. 2012
- 11. Iain H. Kalfas MD, Bjorn Lobo MD, Bruce M. McCormack MD, Barry M. Zide MD.: Cerebrospinal Fluid Fistula and Pseudomeningocele after Spine Surgery. In Edward C. Benzel. Spine Surgery Techniques, Complication, Avoidance and Management, Third Edition, Volume 2. Elsevier Saunders. Chapter 200 pages 1905-1909. 2012.
- 12. Bruce McCormack, MD.: Carpal Tunnel Release Using the MANOS CTR System. In: Carpal Tunnel Syndrome. Risk Factors, Symptoms and Treatment Options. 2014 Nova Science Publishers, Inc. Novoa Biomedical. Chapter 2 pages 15-32.

Abstracts

- 1. Solomon R, McCormack B, Lovit R, Swift D, Hegemenn MT: Activation of the locus caeruleus after subarachnoid hemorrhage. 11th International Joint Conference on Stroke and Cerebrocirculation. San Francisco, CA, February 1986
- 2. McCormack BM, Miller DC, Budzilovich GN, Ransohoff J: Pathology and Survival of Low Grade Glioma. 11th Annual International Congress of Neuropathology, March 1990

- 3. Benzel EC, Rupp FW, McCormack BM, Baldwin NG, Anson JA: A Comparison of Fluoroscopy and CT Derived Holography for the Guidance of Lumbar Pedicle Screw Insertion. The Rachidian Society 2nd Annual Meeting, Hawaii, March 1994
- 4. McCormack B, Rupp FW, Baldwin NG, Adams M, Maher DJ: Anatomy of the Thoracic Pedicle. 11th Annual Meeting of the Joint Section on disorders of the spine and peripheral nerves. Phoenix, Arizona, February 1995
- 5. Adams MS, Benzel EC, McCormack BM, Baldwin NG, Maher DJ: Anatomic considerations regarding the dentate ligament: A cadaver study. 11th Annual Meeting of the Joint Section on disorders of the spine and peripheral nerves. Phoenix, Arizona, February 1995
- 6. Malone DG, Benzel EC, Baldwin NG, Adams MS, McCormack BM, Caruso JR: The outrigger attachment for vertebrectomy with posterior instrumentation. Rocky Mountain Neurosurgical Society Sun Valley, Idaho, June 1995
- 7. Benzel EC, Rupp FW, McCormack BM, Baldwin NG, Anson JA: Holographic definition of pathological spinal anatomy: A case report. AANS Annual Meeting, Orlando, Florida, April 1995
- 8. McCormack BM, Taylor SL, Heath S, Scanlon J: Pseudomeningocele/CSF fistula in patients with lumbar spinal implants treated with epidural blood patch and a brief course of closed subarachnoid drainage. Congress of Neurological Surgeons, San Francisco, California, October 1995
- 9. McCormack BM, Taylor SL, Heath S, Scanlon S: Smoking Cessation in Elective Spinal Fusion candidates. Congress of Neurological Surgeons, San Francisco, California, October 1995
- 10. Sundaresan S, McCormack B, McDermott M, Nockels R, Weinstein P: Placement of pedicle screws using frameless stereotaxyin a cadaver. Congress of Neurological Surgeons, San Francisco, October 1995
- 11. McCormack BM, Nockels RP, Weinstein P, Sundareson S, Hu SS, Scanlon J: Fixation of lumbar vertebra with both pedicle. Screws and laminar hooks: An instrumentation technique for thoracolumbar fractures. Congress of Neurological Surgeons, San Francisco, California, October 1995
- 12. Nockels RP, Kim D, Cobbs C, McCormack B, McDermott M: Early stereotactic experience with the spine and spinal cord. Congress of Neurological Surgeons, San Francisco, California, October 1995
- 13. Eichbaum E, Rezai A, Nockels R, Cooper P, McCormack: Initial Circumferential Surgery for Cervical Osteomyelitis: Congress of Neurological Surgeons, 47th Annual Meeting, New Orleans, Louisiana, September 1997 .
- 14. McCormack B, Eichbaum E, Marinchak T, Sparks C, Gulla V: Trans-Cervical Odontoidectomy: A New Surgical Technique. Congress of Neurological Surgeons, New Orleans, Louisiana, September 1997
- 15. Eichbaum E, Rezai A, Woo H, Nockels R, Cooper P, McCormack B: Initial Circumferential Surgery for Cervical Osteomyelitis. North American Spine Society, New York City, New York, October 1997
- 16. Lieberman D, Gulla V, Lamborn K, McCormack B: Risks, benefits and alternatives to posterior transarticular screw fixation for atlantoaxial instability. AANS Annual Meeting, Philadelphia, Pennsylvania, April 1998
- 17. McCormack B, Lieberman D, Eichbaum E, Beck C, Wachhorst, Manley GT: Odontoid Screw Fixation: Results in 36 patients and comparative Analysis of Alternative techniques. The Western Neurosurgical Society. Napa, California, November 1998

- 18. Lieberman D, McCormack B, Pitts L, Sluckey A, Weinstein P: Is anterior resection of odontoid pseudotumor necessary for reversal of myelopathy. The Western Neurosurgical Society. Napa, California, November 1998
- 19. McCormack B, Eichbaum E, Chestnut R, Manley G, Jacobs A, Lieberman D: Odontoid Screw Fixation: Treatment and Results in 41 patients. North American Spine Society, San Francisco, California, October 1998
- 20. Lieberman D, McCormack B, Eichbaum E: Should placement of posterior transarticular screws be the initial surgical procedure for atlantoaxial arthrodesis? North American Spine Society, San Francisco, California, October 1998
- 21. Manley G, McCormack B: Odontoid Screw Fixation in the Elderly. AANS Annual Meeting, New Orleans, Louisiana, April 1999
- 22. Manley G, Katz J, Anchetta M, Shapiro W, McCormack: Postoperative Airway Complications in a Series of 599 Cervical Spine Surgical Procedures. AANS New Orleans, Louisiana, March 1999
- 23. McCormack B, Manley G: Non-linear Tapered Lag Screw Design for Odontoid Fracture Fixation. International Society for Neurosurgical Instrumentation Inventors II, Las Vegas, Nevada, March 1999
- 24. McCormack B, Cheng L, Yingling C, Gardi J: Intraoperative nerve monitoring to prevent Homer's syndrome from endoscopic sympathectomy for hyperhydrosis. The Western Neurosurgical Society, Coeur d'Alene, Idaho, 1999
- 25. McCormack B, Cheng L, Yingling C, Gardi J: Intraoperative nerve monitoring to prevent Homer's syndrome from endoscopic sympathectomy for hyperhydrosis. Congress of Neurological Surgery, Boston, Mass., Oct 30-Nov 4, 1999
- 26. Mummaneni P, Pitts L, McCormack B, Corroo J, Weinstein P: Microsurgical treatment of symptomatic Sacral Tarlov Cysts. Congress of Neurological Surgery, Boston, Mass., Oct 30-Nov 4, 1999
- 27. McCormack B, Cheng L: Surgical Management of Os Odontoideum. Congress of Neurological Surgery, Boston, Mass., Oct 30-Nov 4, 1999.
- 28. McCormack B, Cheng L, Jablon D, Small M: Thorascopic Assisted Spinal Surgery: A technique for the general neurosurgeon. The Western Neurosurgical Society, Mauna Lani Bay Hotel, Hawaii, September 9-12, 2000
- 29. Moore C, Gardi J, McCormack B, Cheng L: Intraoperative monitoring during endoscopic sympathectomy for relief of hyperhydrosis. American Society of Neuro-monitoring. San Diego, May, 2000
- 30. Bruce McCormack, MD William Bowen MD, Stephen Gunther MD, Jonathan Linthicum MD, Michael Kaplan MD and Edward Eyster MD.: Carpal Tunnel Release Using MANOS CTR System: Preliminary Results in 52 Patients. 2012
- 31. Bruce McCormack MD, Rafael C. Bundoc MD, Mario R. Ver MD, Jose Manuel F. Ignacio MD, Sigurd Berven MD, and Edward Eyster MD.: Percutaneous Posterior Cervical Fusion with DTRAX Facet System for Single Level Radiculopathy Results in 60 Patients.

Selected Invited Presentations

- 1. Invited Speaker, Minor Head Injury Conference, "Neurosurgical Management of the Head Injured Patient." Manhattan VA Hospital, New York City, New York, June 1992
- 2. Course Instructor, Practical techniques in Spinal Instrumentation, University of Florida Departments of Neurosurgery and Orthopaedic Surgery, Orlando, Florida, May 1993

- 3. Course Instructor, AANS Professional Development Course on "Surgical Exposure of the Spine", Albuquerque, New Mexico, November 1993
- 4. Course Instructor, AANS Professional Development Course on "Spine Surgery: A Comprehensive Approach Hands-On.", Albuquerque, New Mexico, May 1994
- 5. Course Instructor and Invited Speaker, "Anterior Cervical Spine, Anatomy and Instrumentation", Practical techniques in Spinal Instrumentation, University of Florida Departments of Neurosurgery and Orthopaedic Surgery, Orlando, Florida, September 1994
- 6. Course Instructor, Thoracolumbar Instrumentation, Congress of Neurosurgeons, Annual Meeting, Chicago, Illinois 1994
- 7. Invited Speaker, 19th Annual Neurosurgery Postgraduate Course, Thoracolumbar Injuries: Medical versus Surgical Management. San Francisco, California, December 1994
- 8. Invited Speaker, Thoracolumbar Injuries, Medical Staff Grand Rounds, Community Hospital of the Monterey, California, November 1994
- 9. Course Instructor, Posterior Thoracolumbar Instrumentation, AANS 11th Annual Meeting of the Joint Section on disorders of the spine and peripheral nerves. Phoenix, Arizona, February 1995.
- 10. Course Instructor, Thoracolumbar Instrumentation, AANS Annual Meeting, Orlando, Florida, April 1999
- 11. Invited Speaker, Advances in Spinal Surgery, Kentfield Rehabilitation Hospital, Kentfield, California, October 1995
- 12. Course Faculty, Percutaneous Spinal Techniques, Congress of Neurological Surgeons Annual Meeting San Francisco, California, October 1995
- 13. Course Instructor, Introduction to Thoracolumbar Stabilization, Congress of Neurological Surgeons Annual Meeting, San Francisco, California, October 1995
- 14. Invited Lecturer, Spine Update Seminar for Nurses, Congress of Neurological Surgeons Annual Meeting San Francisco, California, October 1995
- 15. Invited Lecturer, Comprehensive Spine Review: National Center for Advanced Medical Education, "Pathophysiology and treatment of lumbar and lumbosacral degenerative instability and degenerative disc disease" and "Spinal infection: epidural abscess, discitis, osteomyelitis", Chicago, Illinois, November 1995
- 16. Invited Speaker, Indications for surgical treatment of back pain, Kentfield Rehabilitation Hospital Neurosurgery Advisory, Kentfield, California, October 1995
- 17. Course Instructor, Introduction to Thoracolumbar Stabilization, AANS 1996 Annual Meeting, Minneapolis, Minnesota, April 1996
- 18. Instructor, Introduction to Thoracolumbar Stabilization, Congress of Neurological Surgeons, 46th Annual Meeting, San Diego, California, August 1997
- 19. Instructor, Surgical Exposure of the Thoracic and Lumbar Spine, Congress of Neurological Surgeons, 47th Annual Meeting, New Orleans, Louisiana, September 1996.
- 20. Course Director, Minimally Invasive Spinal Surgery, Congress of Neurological Surgeons, 47th Annual Meeting, New Orleans, Louisiana, September 1997.

- 21. Course faculty, Lumbosacral Instrumentation and Fusion: Screws, Dowel and Cage Technology. Congress of Neurological Surgeons, 47th Annual Meeting, New Orleans, Louisiana, September 1997
- 22. Course Moderator, Consultants Comer: Thoraco-lumbar fractures, Congress of Neurological Surgeons, 47th Annual Meeting, New Orleans, Louisiana, September 1997
- 23. Course Speaker. Biomechanics Made Ridiculously Simple. Congress of Neurological Surgeons, 47th Annual Meeting, New Orleans, Louisiana, September 1997
- 24. Course Instructor, Introduction to Thoracolumbar Stabilization, AANS Annual Meeting, Philadelphia, Pennsylvania, April 1998
- 25. Instructor, Surgical Exposure of the Thoracic Spine, AANS Annual Meeting, Philadelphia, Pennsylvania, April 1998
- 26. Invited Speaker, Atlantoaxial Arthrodesis. Stanford Department of Neurosurgery Grand Rounds, Palo Alto, California, June 1998
- 27. Instructor, Minimally Invasive Lumbar Spinal Surgery. Congress of Neurological Surgeons. The 48th annual Meeting of the Congress of Neurological Surgeons, Seattle, Washington, October 1998
- 28. Instructor, Surgical Exposure of Thoracic and Lumbar Spine. Congress of Neurological Surgeons. The 48th Annual Meeting of the Congress of Neurological Surgeons. Seattle, Washington, October 1998
- 29. Instructor, Lumbosacral Instrumentation and fusion: Cages, Dowels and Screws. Congress of Neurological Surgeons. The 48th Annual Meeting of the Congress of Neurological Surgeons. Seattle, Washington, October 1998
- 30. Faculty, Thoracic and Lumbar Stabilization and Fusion Practical Clinic. AANS Annual Meeting, New Orleans, Louisiana, May 1999
- 31. Co-Moderator: Fessler RG, McCormack B: Scientific Session IV B: Spinal Surgery. International Society for Neurosurgical Instrument Inventors II, Las Vegas, Nevada, May 1999
- 32 Course Faculty. Spine Surgery-Hands on: A Comprehensive Approach for Neurosurgeons and Neuroscience Nurses. AANS Professional Development Course. Albuquerque, New Mexico, May 1999
- 33. Instructor, Minimally Invasive Lumbar Spinal Surgery. Congress of Neurological Surgeons. The 49th annual Meeting of the Congress of Neurological Surgeons, Boston, Mass, November, 1999
- 34. Luncheon Seminar Speaker: Anterior Approaches to the skull Base. Congress of Neurological Surgeons. The 49th Annual Meeting of the Congress of Neurological Surgeons, Boston, Mass, November, 1999
- 35. Invited Speaker Hand H Seminars: Surgical Management of Hyperhydrosis. Las Vegas, Nevada, May 2000
- 36. Invited Speaker: Thorascopic sympathectomy for hyperhydrosis. XLVII Annual Symposium of the Medical Society of the United States and Mexico. San Francisco, CA, October 18-21, 2000
- 37. Invited Speaker: Minimally Invasive Spinal Surgery. San Luis Obispo Hospital "Spine Day" April 2000
- 38. Invited Speaker and Course Director. "Kyphoplasty" First World Congress of Minimally Invasive Surgery, Alexis Park Resort Hotel, Las Vegas, Nevada, Dec 7-10, 2000

- 39. Instructor, Minimally Invasive Lumbar Spine Surgery. Congress of Neurological Surgeons, The 50th annual Meeting of the Congress of Neurological Surgeons, 2000
- 40. Instructor, Minimally Invasive Lumbar Spine Surgery. Congress of Neurological Surgeons, The 51th annual Meeting of the Congress of Neurological Surgeons, 2002
- 41. Instructor, Minimally Invasive Lumbar Spine Surgery. Congress of Neurological Surgeons, The 52th annual Meeting of the Congress of Neurological Surgeons, 2003
- 42. Instructor, Minimally Invasive Lumbar Spine Surgery. Congress of Neurological Surgeons, The 53th annual Meeting of the Congress of Neurological Surgeons, 2004
- 43. Instructor, Minimally Invasive Lumbar Spine Surgery. Congress of Neurological Surgeons, The 54th annual Meeting of the Congress of Neurological Surgeons, 2005
- 44. Instructor, Global Spine Course, San Francisco Ca, 2005
- 45. Director-North for CANS Board of Directors, 2007
- 46. Case discussion: When is Minimally Invasive Enough? Panel: Hsu, Andrews, McCormack, Tay, Saal, 2007
- 47. Invited Speaker: "Carpal Tunnel Syndrome: Old and New Treatments" Connecticut Orthopaedic Society, 2011 Annual Meeting. May 13, 2011, Farmington, CT
- 48. e-Poster Presentation. AANS/CNS. "Carpal Tunnel Release Using the MANOS CTR System: Preliminary Results in 52 Patients". Orlando, FL. March 7-10, 2012.
- 49. Invited Speaker. "Percutaneous Posterior Cervical Fusion with DTRAX Facet System for Single Level Radiculopathy Results in 60 Patients". Neurosurgical Society of America. Park City, Utah. June 10-13, 2012.
- 50. Invited Speaker: ACNS (Asian Congress of Neurological Surgeons) 2012. "Percutaneous Posterior Cervical Fusion with DTRAX Facet System for Single Level Radiculopathy Results in 60 Patients". September 2-5, 2012. Istanbul, Turkey.
- 51. Invited Speaker. ACNS (Asian Congress of Neurological Surgeons) 2012. "Carpal Tunnel Release Using the MANOS CTR System: Preliminary Results in 52 Patients". September 2-5, 2012. Istanbul, Turkey.
- 52. Invited Speaker. The Western Neurosurgical Society. "Percutaneous Posterior Cervical Fusion with DTRAX Facet System for Single Level Radiculopathy Results in 60 Patients". Annual Meeting. September 10, 2012. Colorado Springs, CO.
- 53. Invited Speaker. The Western Neurosurgical Society. "Carpal Tunnel Release Using the MANOS CTR System: Preliminary Results in 52 Patients". Annual Meeting September 7-10, 2012. Colorado Springs, CO.
- 54. Invited Speaker. Golden Jubilee Congress of the Asia Pacific Orthopaedic Association (APOA) 2012. "Percutaneous Posterior Cervical Fusion with DTRAX Facet System for Single Level Radiculopathy Results in 60 Patients". October 3-6, 2012. New Delhi, India.
- 55. Invited Speaker. Golden Jubilee Congress of the Asia Pacific Orthopaedic Association (APOA) 2012. "Carpal Tunnel Release Using the MANOS CTR System: Preliminary Results in 52 Patients". October 3-6, 2012. New Delhi, India.

- 56. Invited Speaker. Rome Spine 2012, VII Annual Congress. "DTRAX: indication, clinical results, complications". December 6-7, 2012. Via Aurelia Antica, 414 Roma.
- 57. Invited Moderator. B. McCormack (USA) and P.P.M. Menchetti (Firenze). Nuove Technologie Terapeutiche. VII Congresso Annuale. Rome Spine 2012.
- 58. Invited Speaker. 7th German Spine Conference 2012. "DTRAX: indication, clinical results, complications". December 6-8, 2012. Stuttgart, Germany.