

# **Nitin N. Bhatia, M.D.**

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## **CURRENT POSITION:**

Interim Chairman  
Residency Program Director  
Chief, Spine Service  
Co-Director, Spine Fellowship  
Associate Professor of Clinical Orthopaedics  
Department of Orthopaedic Surgery  
University of California, Irvine

## **EDUCATION:**

Stanford University, Stanford, California  
Bachelor of Science in Biology, 1990-1994  
Graduation with Honors

Baylor College of Medicine, Houston, Texas  
Doctor of Medicine with Highest Honors, 1994-1998  
AOA, Elected Junior Year  
Michael E. DeBakey Scholar Award  
Class Valedictorian

University of California, Los Angeles  
General Surgery Internship, 1998 - 1999  
Orthopaedic Surgery Residency, 1999 - 2003

University of Miami, Jackson Memorial Medical Center, Miami, Florida  
Combined Orthopaedic and Neurosurgical Spinal Surgery Fellowship  
(Dr. Frank J. Eismont, Director)  
July, 2003 – June, 2004

Miami Children's Hospital, Miami, Florida  
Spinal Deformity Fellowship (Dr. Harry L. Shufflebarger, Director)  
June, 2004 – August, 2004

## AWARDS AND HONORS:

Stanford University, Kappa Alpha Order Scholarship Award, 1993

Stanford University, Graduation with Honors, 1994

The Endocrine Society Student Research Award, 1994

*Pathogenic Role of Stem Cell Factor in Infertile Men with Sertoli Cell Only Syndrome.*

Baylor College of Medicine-Karolinska Institute Research Fellowship Award, 1997

*Compartmentalized Bone Regeneration of Cranial Defects with Biodegradable Barriers: an Animal Model.*

Baylor College of Medicine, Houston, Texas

Basic Science High Honors, 1995

Butler Award for Academic Excellence, 1995

Alumni Award for Academic Excellence, 1996

Alpha Omega Alpha, 1997 - 1998 (elected Junior year)

Graduation with Highest Honors, 1998

Most Outstanding Research by a Medical Student, 1998

Outstanding Student in Orthopaedic Surgery, 1998

Lange Medical Research Award, Baylor College of Medicine, 1998

Class Valedictorian, 1998

Michael E. DeBakey Scholar Award, 1998

University of California, Los Angeles

Physician of the Year nominee, 2001

Emergency Department Consultant of the Year nominee, 2001

Hibbs Award Nominee, Basic Science, Scoliosis Research Society, 2005

*Three-point versus Two-point fixation for Thoracolumbar Burst Fractures.*

Hibbs Award Nominee, Basic Science, Scoliosis Research Society, 2005

*Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury.*

Scoliosis Research Society

Edgar Dawson Traveling Fellowship, 2005

Outstanding Paper Nominee, Cervical Spine Research Society, 2005

*Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury.*

University of California, Irvine

Faculty Teaching Award, Orthopaedic Surgery, 2005

American Orthopaedic Association Emerging Leaders, 2005-2009

American Orthopaedic Association - Japanese Orthopaedic Association Exchange  
Traveling Fellow, 2008

Outstanding Paper Award Winner, Cervical Spine Research Society, 2008  
*The Role of Durotomy and Duraplasty Following Cervical Spinal Cord Injury in an  
Animal Model.*

Best Paper Award Winner, American College of Spine Surgery, 2009  
*The Role of Durotomy and Duraplasty Following Cervical Spinal Cord Injury in an  
Animal Model.*

The Harold and Nancy Willingham Award for Outstanding Research Paper, Western  
Orthopaedic Association, 2009  
*Biomechanical Evaluation Of Short-Segment Posterior Instrumentation With  
Crosslinks In An Unstable Human Burst Fracture Model.*

Hibbs Award Nominee, Basic Science, Scoliosis Research Society, 2009  
*Early Surgical Decompression with Duraplasty in Acute Spinal Cord Injury  
Improves Functional Recovery in an Animal Model.*

Resident Research Award, California Orthopaedic Association, 2010  
*Analysis of Prognostic Factors in Chordoma Using the California Cancer Registry.*

Triumvirate Grant Award, University of California, 2010  
*Quantitative MRI and MRA to Study Chronic Discogenic Low Back Pain.*

Orange County Medical Association, Physicians of Excellence, 2011-2017

Castle Connolly Top Doctors, 2016-2017

Southern California "SuperDoctors", Los Angeles Magazine, 2012-2017

## **RESEARCH GRANTS:**

Walter Lorenz Surgical Research Grant, 1998 - 1999  
*Compartmentalized Bone Regeneration of Cranial Defects with Biodegradable  
Barriers: an Animal Model*  
*Principal Investigator*  
*\$43,000 total costs*

Stryker Biotech Spine Research Grant, 2005 - 2007  
*Spinal Cord Injury Research Grant*  
*Principal Investigator*  
*\$4000 total costs*

EBI Spinal Cord Injury Research Grant, 2005 - 2007

*Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury*

*Principal Investigator*

*\$40,000 total costs*

Spinewave Lumbar Sagittal Balance Research Grant, 2005 - 2008

*Role of Intradiscal Expansion of Interbody Implants in Improving Lumbar Sagittal Balance*

*Principal Investigator*

*\$72,450 total costs*

Roman Reed Spinal Cord Injury Research Fund of California, 2007 - 2011

*Carbohydrate Metabolism Impairments in Chronic Human Spinal Cord Injury*

*Co-Investigator*

*\$26,850 total costs*

Dept. of Defense, U.S. Army Medical Research and Material Command, Congressionally Directed Medical Research Programs, Breast Cancer Research Program, 2007 - 2012

*Development and Evaluation of a Novel Radiation Therapy Technique for the Treatment of Vertebrae with Metastatic Lesions*

*Co-Investigator*

*\$499,434 total direct costs, \$761,637 total costs (direct+indirect)*

University of California, Triumvirate Research Grant, 2010-2011

*Quantitative MRI and MRA to Study Chronic Discogenic Low Back Pain*

*Co-Principal Investigator*

*\$15,000 total costs*

## **PEER REVIEWED PUBLICATIONS:**

1. *Transcriptional and Posttranscriptional Regulation of Inhibin alpha-Subunit Gene Expression in Rat Sertoli Cells by 8-Bromo-3', 5'-Cyclic-Adenosine Monophosphate.* Najmabadi H, Rosenberg LA, Yuan QX, Bhatia N, Albiston AL, Burger H, Bhasin S; Molecular Endocrinology, 7(4): 469-476, 1993.
2. *Congenital Syndromes Associated with Nonmelanoma Skin Cancer.* Gherardini G, Bhatia N, Stal S; Clinics of Plastic Surgery, 24(4):649-661, 1997.
3. *Compartmentalized Bone Regeneration of Cranial Defects with Biodegradable Barriers: an Animal Model.* Stal S, Tjelmeland K, Hicks J, Bhatia N, Eppley B, Hollier L; Journal of Craniofacial Surgery, 12(1):51-47, 2001.

4. *Current Information Regarding the Biochemical and Genetic Events Which Occur During Disc Degeneration.* Bhatia N, Wang J; Current Opinion in Orthopaedics, 14(3):153-158, 2003.
5. *Adjacent Segment Degeneration in the Lumbar Spine.* Ghiselli G, Wang JC, Bhatia NN, Hsu WK, Dawson EG; J Bone Joint Surg Am, 86-A(7):1497-1503, 2004.
6. *The Role of the Sternocleidomastoid Muscle Flap for Esophageal Fistula Repair in Anterior Cervical Spine Surgery.* Navarro R, Javahery R, Eismont F, Arnold DJ, Bhatia NN, Vanni S, Levi AD; Spine, 30(20):617-633, 2005.
7. *Body Mass Index in Patients with Slipped Capital Femoral Epiphysis: A Predictive Model.* Bhatia NN, Pirpiris M, Otsuka N; Journal of Pediatric Orthopaedics, 26(2):197-9, 2006.
8. *Transplantation of Preconditioned Schwann Cells in Peripheral Nerve Grafts after Contusion in the Adult Spinal Cord: Improvement of Recovery in a Rat Model.* Rasouli A, Bhatia NN, Suryadevara S, Cahill K, Gupta R; J Bone Joint Surg Am, 88(11):2400-10, 2006.
9. *Minimally Invasive Atlanto-Odontoid Joint Injection for Involvement in Rheumatoid Arthritis* Kostanian VJ, Mathews MS, Westhout FD, Bhatia NN; Interventional Radiology, 12(4):359-363, 2006.
10. *Wound Complications from Idiopathic Clubfoot Surgery: a Comparison of the Modified Turco and the Cincinnati Treatment Methods.* Hsu WK, Bhatia NN, Raskin A, Otsuka NY; Journal of Pediatric Orthopaedics, 27(3):329-332, 2007.
11. *Transplantation of Preconditioned Schwann cells following Hemisection Spinal Cord Injury.* Dinh P, Bhatia NN, Cahill K, Gupta R; Spine, 32(9):943-9, 2007.
12. *A Prospective Evaluation of Diagnostic Modalities in Pediatric Back Pain.* Bhatia NN, Chow G, Timon S, Watts HG; Journal of Pediatric Orthopaedics. 28(2):230-3, 2008.
13. *Orthopaedic Surgeons and Spinal Cord Injury Patients.* Bhatia NN, Gupta G; AAOS Now, 3(2):2009, 27-31.
14. *Resection of Glial Scar Following Spinal Cord Injury.* Rasouli A, Bhatia N, Dinh P, Cahill K, Suryadevara S, Gupta R; J Orthop Research, 27(7):931-6, 2009.
15. *Biomechanical Evaluation of Short-Segment Posterior Instrumentation With and Without Crosslinks in a Human Cadaveric Unstable Thoracolumbar Burst Fracture Model.* Wahba G, Bhatia N, Bui C, Lee K, Lee TQ; Spine, 35(3):278-85, 2010.

16. *Advances in the Management of Spinal Cord Injury.* Gupta R, Bathen M, Smith J, Levi AD, Bhatia NN, Steward O; J Am Acad Ortho Surg, 18(4):210-22, 2010.
17. *The Role of Early Surgical Decompression of the Intra-Dural Space Following Cervical Spinal Cord Injury in an Animal Model.* Smith J, Anderson R, Pham T, Bhatia N, Steward O, Gupta R; J Bone Joint Surg Am, 92(5):1206-14, 2010.
18. *Modic Type I changes of the Lumbar Spine in Golfers.* Mefford J, Sairyo K, Sakai T, Hopkins J, Inoue M, Amari R, Bhatia N, Dezawa A, Yasui N; Skeletal Radiology, 40(4):467-73, 2011.
19. *Biomechanical Evaluation of an Expandable Cage in Single Segment Posterior Lumbar Interbody Fusion.* Bhatia NN, Lee KH, Bui CN, Luna M, Wahba GM, Lee TQ; Spine, 37(2):79-85, 2012.
20. *MRI Changes of the Spinal Subdural Space after Lumbar Spine Surgeries: Report of Two Cases.* Sakai T, Sairyo K, Bhatia NN, Miyagi R, Tamura T, Katoh S, Yasui N; Asian Spine J, 5(4):262-6, 2011.
21. *Retrospective Study of Deep Surgical Site Infections Following Spinal Surgery and the Effectiveness of Continuous Irrigation.* Chikawa T, Saka T, Bhatia NN, Sairyo K, Utsunomiya R, Nakamura M, Nakano S, Shimakawa T, Minato A; Br J Neurosurg, 25(5):621-4, 2011.
22. *Posterior Cervical Laminoplasty in the North American Population: A Minimum of Two Year Follow-Up.* Bhatia NN, Lopez G, Geck M, Gottlieb J, Eismont F; Clin Neurol Neurosurg, 138:165-168, 2015.
23. *Anterior Thoracolumbar Reconstruction Surgery for Late Collapse Following Vertebroplasty: Report of Three Cases.* Miyagi R, Sakai T, Bhatia NN, Sairyo K, Katoh S, Chikawa T; J Med Invest, 58(1-2):148-53, 2011.
24. *Flavokawain B, a Kava Chalcone, Induces Apoptosis in Synovial Sarcoma Cell Lines.* Sakai T, Ramez E, Guo Y, Kim KJ, Mefford J, Hopkins J, Bhatia NN, Zi X, Hoang BH; J of Orthop Res, 30(7):1045-50, 2012.
25. *Drivers of Surgery for the Degenerative Hip, Knee, and Spine: A Systematic Review.* Bederman SS, Rosen CD, Bhatia NN, Kiester PD, Gupta R; Clin Orthop Relat Res, Apr;470(4):1090-105, 2012.
26. *Analysis of Prognostic Factors in Patients With Chordoma Using the California Cancer Registry.* Lee J, Bhatia NN, Hoang B, Ziogas A, Zell J; J Bone Joint Surg Am, 94(4):356-63, 2012.
27. *Endoscopic Excision of a Juxtafacet Cyst in an Adolescent Athlete: A Case Report.* Hopkins J, Mefford J, Sakai T, Bhatia N, Sairyo K; J Neurol Surg A Cent Eur Neurosurg. 2013 Dec;74 Suppl 1:e66-9.

28. *Clinical Outcomes of Spinal Surgery in Patients Treated with Hemodialysis.* Chikawa T, Sakai T, Bhatia NN, Miyagi R, Sairyo K, Goda Y, Nakamura M, Nakano S, Shimakawa T, Minato A; J Spinal Dis Tech, 2013 Aug;26(6):321-4.
29. *Diffusion-Weighted Imaging and Diffusion Tensor Imaging of Asymptomatic Lumbar Disc Herniation.* Sakai, T, Miyagi, R, Yamabe, E, Fujinaga Y; Bhatia NN; Yoshioka, H; J Med Invest. 2014;61(1-2):197-203.
30. *Fixation Techniques for Complex Traumatic Sacral Fractures: A Systematic Review.* Bederman SS, Hassan JM, Shah KN, Kiester PD, Bhatia NN, Zamorano DP; Spine, 2013 Jul 15;38(16):E1028-40.
31. *Robotic Guidance for S2-Alar-Iliac Screws in Spinal Deformity Correction.* Bederman SS, Hahn P, Colin V, Kiester DP, Bhatia NN, Clin Spine Surg, 2017 Feb;30(1)E49-E53.
32. *Use of Lateral Access in the Treatment of the Revision Spine Patient.* Bederman SS, Le VH, Pahlavan S, Kiester DP, Bhatia NN, Deviren V; Scientific World J, 2012:308209.
33. *Surgical Techniques for Spinopelvic Reconstruction Following Total Sacrectomy: A Systematic Review.* Bederman SS, Shah KN, Hassan JM, Hoang BH, Kiester PD, Bhatia NN; Eur Spine J, 2014 Feb;23(2):305-19.
34. *Comparison of Two-Transsacral-Screw Fixation Versus Triangular Osteosynthesis Fixation for Transforaminal Sacral Fractures.* Min KS, Zamorano DP, Wahba GM, Garcia I, Bhatia N, Lee TQ; Orthopaedics, 2014 Sept;37(9)e754-e760.
35. *Reliability, Validity, and Responsiveness of the Western Ontario and McMaster Universities Osteoarthritis Index for Elderly Patients with a Femoral Neck Fracture.* HEALTH and FAITH Trial Investigators (Bhatia NN, Collaborator), J Bone Joint Surg Am, 2015 May 6;97(9):751-7.
36. *A Trial of Wound Irrigation in the Initial Management of Open Fracture Wounds.* FLOW Investigators (Bhatia NN, Collaborator), N Engl J Med, 2015 Dec 31;373(27):2629-41.
37. *The Influence of Insurance Status on the Surgical Treatment of Acute Spinal Fractures.* Daly MC, Patel MS, Bhatia NN, Bederman SS; Spine, 2016 Jan;41(1):E37-45.
38. *Total Medical Costs of Treating Femoral Neck Fracture Patients with Hemi- or Total Hip Arthroplasty: A Cost Analysis of a Multicenter Prospective Study.* HEALTH Trial Investigators (Bhatia NN, Collaborator), Osteoporosis Intl, 2016 Jun;27(6):1999-2008.

39. *Biomechanical Analysis of an S1 Pedicle Screw Salvage Technique via a Superior Articulating Process Entry Point.* Lee YP, Ihn HE, McGarry MH, Farhan SD, Bhatia N, Lee TQ; Spine, 2016 Jul 1;41(13):E778-84.
40. *The Reliability of Neuromonitoring to Detect Neurologic Injury During Lateral Interbody Fusion.* Lee YP, Gertsch J, Taylor W, Allison D, Attenello J, Nepomuceno K, Nepomuceno M, Bhatia N; Spine Research, 2015 Oct;1(5):1-6.
41. *Patient Reported Outcome Measures: How Do Digital Tablets Stack Up to Paper Forms? A Randomized Controlled Study.* Shah KN, Hoffman MR, Schwarzkopf R, Pourmand D, Bhatia NN, Rafijah G, Bederman SS. Am J Ortho, 2016 Nov/Dec;45(7):E451-457.
42. *Biomechanical Evaluation of Unilateral versus Bilateral C1 Lateral Mass-C2 Intralaminar Fixation.* Bhatia N, Rama A, Sievers B, Quigley, R, McGarry M, Lee YP, Lee TQ; Global Spine J, 2017 May;7(3):239-45.
43. *ICD 10 and Its Relevance to Spine Surgeons.* Doermann A; Massel D; Mayo B; Kiester D, Bhatia N, Lee YP; J Contemp Spine Surg, 2016 Sept, 17(9):1-5.
44. *Variables Affecting Return to Work After Spine Surgery in a Non-Workman's Compensation Population: A Retrospective Cohort Study.* Submitted for publication.
45. *Biomechanical Comparison of C1 Lateral Mass C2 Pars and C3 Lateral Mass Screw-Rod Construct versus C1 Lateral Mass C2 Pedicle Screw Fixation for Type II Odontoid Fractures.* Work in progress.
46. *Propionibacterium Acnes Biofilm is Present in Intervertebral Discs of Patients Undergoing Microdiscectomy.* Capoor M, Ruzicka F, Schmitz J, et al incl Bhatia N, Slaby O; PLoS One, 2017; 12(4): e0174518.
47. *How to Reduce Radiation Exposure During Spine Surgery.* Covarrubias J, Say I, Bhatia N, Lee YP; Cont Spine Surg, 2017 July; 18(7):1-7.
48. *Infection Rates with Use of Adjunctive Intrathecal Morphine.* Work in progress
49. *Intrawound Antibiotic Powder for Prophylaxis,* Work in progress.

#### **BOOK CHAPTERS:**

1. *Costal Cartilage Grafts.* In Evans G. ed., Operative Plastic Surgery. Appleton and Lange, Stamford, CT, 2000.



2. *The Management of Spinal Cord Injury in Thoracolumbar Trauma.* In Reitman C. ed, Management of Thoracolumbar Fractures, American Academy of Orthopaedic Surgery, Rosemont, IL, 2004.
3. *Disorder, Disease, and Injuries of the Spine.* In Skinner H ed. Current Diagnosis and Treatment in Orthopaedics. Lange/Mc-Graw Hill, New York, NY, 2006.
4. *Spinal Cord and Peripheral Nerve Injury.* In Orthopaedic Knowledge Update 9. American Academy of Orthopaedic Surgery, Rosemont, IL, 2007.
5. *Imaging of the Spine.* In Lieberman, JR ed. In Orthopaedic Board Review. American Academy of Orthopaedic Surgery, Rosemont, IL, 2008.
6. *Thoracic Spinal Stability: Decision Making.* In Patel V, ed. Spine Trauma – Surgical Techniques. Springer, Heidelberg, Germany, 2010.
7. *Lumbar Spinal Stability: Decision Making.* In Patel V, ed. Spine Trauma - Surgical Techniques. Springer, Heidelberg, Germany, 2010.
8. *Post-operative Spinal Infections.* In Garfin S, ed. Rothman-Simeone: The Spine, 6th Edition. Elsevier, Philadelphia, PA, 2011.
9. *Percutaneous Transsacral Lumbar Interbody Fusion.* In Wang J, ed. Advanced Reconstruction: The Spine. American Academy of Orthopaedic Surgery, Rosemont, IL, 2011.
10. *Long-term Outcomes and Complications following Anterior and Posterior Cervical Spine Surgery.* In Rao R, ed. Seminars in Spine Surgery. Stellar Medical Publications, Plymouth, MA, 2009.
11. *Spondylolisthesis and Spondylolysis.* In Orthopaedic Knowledge Update 10. American Academy of Orthopaedic Surgery, Rosemont, IL, 2011.
12. *Central Cord Syndrome: Acute Decompression versus Watch and Wait.* In The Cervical Spine, 5<sup>th</sup> Edition. Lippincott Williams and Wilkins, Philadelphia, PA, 2012.
13. *Spine Trauma: Low Lumbar Spine (including L3-L5).* In Spine Surgery Basics. Springer, Heidelberg, Germany, 2014.
14. *Thoracolumbar Fractures.* In Garg B, ed., Mastering Techniques in Orthopaedic Surgery: Spine. Jaypee Publishers, New Delhi, India, 2012.
15. *Cervical Spondyloarthropathy.* In Radcliff K, ed., Complications of Spinal Instrumentation. In press.

16. *Fungal Infections of the Spine: Clinical Presentations, Diagnosis, and Management.* In Wiesel S and Boden S, eds., Seminars in Spine Surgery. Elsevier, Cambridge, MA, 2015.
17. *Vertebral Compression Fractures.* In Orthopaedic Knowledge Online Journal. American Academy of Orthopaedic Surgery, Rosemont, IL, 2016.
18. *Post-operative Spinal Infections.* In Garfin S, ed. Rothman-Simeone: The Spine, 7th Edition. Work in progress.
19. *Vertebral Compression Fractures.* In Orthopaedic Knowledge Update 12. American Academy of Orthopaedic Surgery, Rosemont, IL, 2017.
20. *Lateral and Posterior Approaches to the Lumbosacral Spine.* In Garfin S, ed. Rothman-Simeone: The Spine, 7th Edition. Work in progress.

#### **PUBLISHED ABSTRACTS:**

1. *Pathogenic Role of Stem Cell Factor in Infertile Men with Sertoli Cell Only Syndrome.* Transactions of the Endocrine Society, 1994.
2. *Adjacent Segment Degeneration After Lumbar Fusion: Long Term Survivorship Analysis of 217 Patients.* Proceedings of the North American Spine Society, 2001.
3. *Proximal Segment Degeneration Following Posterior Lumbosacral Fusions (L4-S1 and L5-S1).* Transactions of the Scoliosis Research Society, 2002.
4. *A Prospective Evaluation of Diagnostic Modalities in Pediatric Back Pain.* Transactions of the Scoliosis Research Society, 2002.
5. *A Prospective Evaluation of Diagnostic Modalities in Pediatric Back Pain.* Transactions of the American Academy of Orthopaedic Surgery, 2003.
6. *Prospective Randomized Study of Modified Harrington Instrumentation Versus Segmental Instrumentation in Adolescent Idiopathic Scoliosis.* Proceedings of the North American Spine Society, 2003.
7. *Adjacent Segment Degeneration After Posterior Lumbosacral Fusion.* Proceedings of the North American Spine Society, 2003.
8. *Diagnostic Techniques Used in Pediatric Back Pain.* Proceedings of the North American Spine Society, annual meeting, 2003.
9. *Can Bilateral Hip Involvement with Slipped Capital Femoral Epiphysis be Predicted by the Body Mass Index?* Transactions of the Pediatric Orthopaedic Society of North America, 2004.

10. *Body Mass Index in Patients with Slipped Capital Femoral Epiphysis.* Transactions of the American Academy of Orthopaedic Surgery, 2004.
11. *Outcome Differences for Primary and Recurrent Disc Excision Patients Treated by a Single Surgeon.* Proceedings of the North American Spine Society, 2004.
12. *Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury.* International Meeting for Advanced Spinal Techniques (IMAST), annual meeting, 2005.
13. *Resection of Glial Scar Following Spinal Cord Injury.* Transactions of the International Meeting for Advanced Spinal Techniques (IMAST), 2005.
14. *Novel Transplantation of Preconditioned Schwann cells for Spinal Cord Injury with a Contusion Model.* The Spine Journal 4(4S): 33S, July/August 2005.
15. *Results of Cervical Open-Door Laminoplasty in Patients with Tandem Cervical and Lumbar Stenosis.* The Spine Journal 4(4S): 2005.
16. *Results of Open Door Laminoplasty for Cervical Spondylotic Myelopathy in a North American Population.* The Spine Journal 4(4S): 2005.
17. *Three-point versus Two-point fixation for Thoracolumbar Burst Fractures.* Transactions of the Scoliosis Research Society, 2005. Russell Hibbs Award Finalist.
18. *Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury.* Transactions of the Scoliosis Research Society, 2005. Russell Hibbs Award Finalist.
19. *Results of Open Door Laminoplasty for Cervical Spondylotic Myelopathy in the Elderly Population.* Proceedings of the Cervical Spine Research Society, 2005.
20. *Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury.* Proceedings of the Cervical Spine Research Society, 2005.
21. *Results of Open Door Laminoplasty for Cervical Spondylotic Myelopathy in a North American Population.* Proceedings of the Cervical Spine Research Society, 2005.
22. *Transplantation of Preconditioned Schwann cells following Hemisection Spinal Cord Injury.* Transactions of the Orthopaedic Research Society 31:1257, 2006.
23. *Transplantation of Preconditioned Schwann cells for Spinal Cord Injury with a Contusion Model.* Transactions of the Orthopaedic Research Society 31:1261, 2006.

24. *Resection of Glial Scar Following Spinal Cord Injury.* Transactions of the Orthopaedic Research Society 31:1258, 2006.
25. *Do Patients with Concurrent Lumbar Stenosis Have Impaired Results Following Cervical Laminoplasty for Spondylotic Myelopathy?* Bhatia N, Geck M, Gottlieb J, Harrison R, Eismont F; Proceedings of the North America Spine Society and Japanese Spine Research Society, Spine Across the Sea: 51-52, 2006.
26. *Laminoplasty for Cervical Spondylotic Myelopathy in the Elderly North American Population: Minimum of Two Year Follow-Up.* Bhatia N, Geck M, Gottlieb J, Harrison R, Eismont F; Proceedings of the North America Spine Society and Japanese Spine Research Society, Spine Across the Sea: 52, 2006.
27. *Novel kyphoplasty/brachytherapy technique for the treatment of vertebral metastases: A mathematical modeling feasibility study.* Proceedings of the Chao Family Comprehensive Cancer Center Conference, Rancho Mirage, CA, 2006.
28. *Novel kyphoplasty/brachytherapy technique for the treatment of vertebral metastases: A Monte Carlo feasibility study.* Marcus P, Sehgal V, Al-Ghazi M, Ramsinghani N, Hoang B, Bhatia N, Skinner H, Keyak J; Med Physics 34:2475-2475, 2007.
29. *The Role of Durotomy and Duraplasty Following Cervical Spinal Cord Injury in an Animal Model.* Proceedings of the Cervical Spine Research Society 36th annual meeting, Austin, TX, 2008.
30. *Biomechanical Evaluation of Short-Segment Posterior Instrumentation with Crosslinks in an Unstable Human Burst Fracture Model.* Transactions of the Orthopaedic Research Society annual meeting, Las Vegas, NV, 2009.
31. *Biomechanical Evaluation of an Expandable Cage in Single Segment Posterior Lumbar Interbody Fusion.* Transactions of the Orthopaedic Research Society annual meeting, Las Vegas, NV, 2009.
32. *Biomechanical Comparison of Trans-Sacral and Triangular Osteosynthesis in a Vertically Unstable Pelvic Fracture Model.* Transactions of the Orthopaedic Research Society annual meeting, Las Vegas, NV, 2009.
33. *The Role of Decompression with either Durotomy or Duraplasty Following Cervical Spinal Cord Injury.* Transactions of the Orthopaedic Research Society annual meeting, Las Vegas, NV, 2009.
34. *Posterior Cervical Instrumentation: Past, Present, and Future and the Roy-Camille Technique of Lateral Mass Fixation.* Bhatia N, Sairyo K. Transactions of the Japanese Society for Spine Surgery and Related Research, 38<sup>th</sup> Annual Meeting, Kobe, Japan, 2009.

35. *Spinal Surgery and Implants*. Bhatia N. Proceedings of the American Society of Mechanical Engineering 4<sup>th</sup> Frontiers in Biomedical Devices Conference and Exhibition, Irvine, CA, 2009.
36. *Biomechanical Evaluation of an Expandable Cage in Single Segment Posterior Lumbar Interbody Fusion*. Bhatia N, Lee K, Bui C, Whaba G, Estess A, Luna M, Lee TQ. Proceedings of the American Society of Mechanical Engineering 4<sup>th</sup> Frontiers in Biomedical Devices Conference and Exhibition, Irvine, CA, 2009.
37. *Biomechanical Evaluation of Short-Segment Posterior Instrumentation With Crosslinks in an Unstable Human Burst Fracture Model*. Wahba G, Bhatia N, Lee T. Proceedings of the American Society of Mechanical Engineering 4<sup>th</sup> Frontiers in Biomedical Devices Conference, American Society of Mechanical Engineering, Irvine, CA, 2009.
38. *Biomechanical Comparison of Trans-Sacral and Triangular Osteosynthesis in a Vertically Unstable Pelvic Fracture Model*. Zamorano D, Min K, Wahba G, Bhatia N, Garcia I, Lee T. Proceedings of the American Society of Mechanical Engineering 4<sup>th</sup> Frontiers in Biomedical Devices Conference, American Society of Mechanical Engineering, Irvine, CA, 2009.
39. *Early Surgical Decompression with Duraplasty in Acute Spinal Cord Injury Improves Functional Recovery in an Animal Model*. Smith J, Anderson R, Pham T, Bhatia N, Steward O, Gupta R. Transactions of the Scoliosis Research Society annual meeting, San Antonio, 2009.
40. *Short-Segment Posterior Instrumentation in Unstable Thoracolumbar Burst Fractures: Do Crosslinks Improve Biomechanical Stability?* Wahba G, Bhatia N, Bui C, Lee K, Lee TQ. Proceedings of the annual meeting of the North American Spine Society, San Francisco, 2009.
41. *The Role of Decompression with Either Durotomy or Duraplasty Following Cervical Spinal Cord Injury*. Smith J, Anderson R, Pham T, Bhatia N, Steward O, Gupta R. Proceedings of the annual meeting of the North American Spine Society, San Francisco, 2009.
42. *Comparison of Trans-sacral and Triangular Osteosynthesis in an Unstable Pelvic Fracture*. Min KS, Zamorano D, Wahba G, Garcia I, Bhatia N, Lee TQ. Transactions of the annual meeting of the American Academy of Orthopaedic Surgery, New Orleans, 2010.
43. *Analysis of Prognostic Factors in Chordoma Using the California Cancer Registry*. Lee J, Bhatia N, Hoang B, Ziogas A, Zell J. Proceedings of the annual meeting of the California Orthopaedic Association, Lake Tahoe, 2010.

44. *Analysis of Prognostic Factors in Chordoma Using the California Cancer Registry.* Lee J, Bhatia N, Hoang B, Ziogas A, Zell J. Transactions of the annual meeting of the American Academy of Orthopaedic Surgery, San Diego, CA, 2011.
45. *Biomechanical Comparison of Unilateral versus Bilateral C1-C2 Fixation Following Odontoid Fracture.* Bhatia N, Rama A, Sievers B, Quigley R, Lee TQ, Proceedings of the annual meeting of the American College of Spine Surgery, Las Vegas, NV, 2011.
46. *The Influence of Insurance Status on the Surgical Treatment of Acute Spine Fractures.* Proceedings of the annual meeting of the Cervical Spine Research Society, Phoenix, AZ, 2012.
47. *Biomechanical Evaluation of Unilateral and Bilateral C1 Lateram Mass – C2 Intralaminar Screw Rod Fixation.* Bhatia N, Rama A, Sievers B, Quigley R, Lee TQ, Transactions of the annual meeting of the Orthopaedic Research Society, San Francisco, CA 2012.
48. *Biomechanical Study Of Sublaminar Polyester Bands Versus Pedicle Screws In Adolescent Idiopathic Scoliosis Model.* Transactions of the annual meeting of the American Academy of Orthopaedic Surgery, Chicago, IL, 2013.
49. *The Influence of Insurance Status on the Surgical Treatment of Acute Spinal Fractures.* Proceedings of the annual meeting of the American Orthopaedic Association, Denver, CO, 2013.
50. *Exploring the Efficacy of a Self-Sterilizing Orthobiologic PEEK as a Viable Biomaterial for Spinal Surgery.* The Spine J, 2013, 13:9, S162-163.
51. *Accuracy of Pedicle Screw placement in Revision Spine Surgery using Robotic Guidance.* The Spine J, 2014, 14:11, S65.
52. *Accuracy of Pedicle Screw placement in Revision Spine Surgery using Robotic Guidance.* Global Spine J, 2015; 05:A106
53. *Use of a Superior Articulating Process Entry Point for Revision S1 Screws.* Proceedings of the International Society for the Advancement of Spine Surgery, Annual Meeting, Las Vegas, NV 2016.
54. *Examining the Anti-Biofilm and Osteoconductive Properties of a PEEK-Silver Zeolite Composite in Spine.* Proceedings of the Annual Meeting of the International Meeting for Advanced Spinal Techniques, Washington, D.C., 2016.
55. *Does the Addition of Tobramycin Decrease Infection Risk in Patients Undergoing Lumbar Spinal Instrumented Fusions.* The Spine J, Proceedings of the North American Spine Society, 2016.

56. *Infection rates with use of adjunctive intrathecal morphine in posterior instrumented spinal fusion surgery: preliminary findings of a retrospective study.* Proceedings of the Society for Technology in Anesthesia (STA), San Diego, CA, 2017.

#### **SCIENTIFIC PRESENTATIONS:**

*Pathogenic Role of Stem Cell Factor in Infertile Men with Sertoli Cell Only Syndrome.* The Endocrine Society, annual meeting, 1994.

*Adjacent Segment Degeneration After Lumbar Fusion: Long Term Survivorship Analysis of 217 Patients.* North American Spine Society, annual meeting, 2001.

*Proximal Segment Degeneration Following Posterior Lumbosacral Fusions (L4-S1 and L5-S1).* Scoliosis Research Society, annual meeting, 2002.

*A Prospective Evaluation of Diagnostic Modalities in Pediatric Back Pain.* Scoliosis Research Society, annual meeting, 2002.

*Diagnostic Techniques Used in Pediatric Back Pain.* North American Spine Society, annual meeting, 2003.

*Adjacent Segment Degeneration After Posterior Lumbosacral Fusion.* North American Spine Society, annual meeting, 2003.

*Prospective Randomized Study of Modified Harrington Instrumentation Versus Segmental Instrumentation in Adolescent Idiopathic Scoliosis.* North American Spine Society, annual meeting, 2003.

*A Prospective Evaluation of Diagnostic Modalities in Pediatric Back Pain.* American Academy of Orthopaedic Surgery, annual meeting, 2003.

*Outcome Differences for Primary and Recurrent Disc Excision Patients Treated by a Single Surgeon.* North American Spine Society, annual meeting, 2004.

*Body Mass Index in Patients with Slipped Capital Femoral Epiphysis.* American Academy of Orthopaedic Surgery, annual meeting, 2004.

*Can Bilateral Hip Involvement with Slipped Capital Femoral Epiphysis be Predicted by the Body Mass Index?* Pediatric Orthopaedic Society of North America, annual meeting, 2004.

*Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury.* International Meeting for Advanced Spinal Techniques (IMAST), annual meeting, 2005.

*Resection of Glial Scar Following Spinal Cord Injury.* International Meeting for Advanced Spinal Techniques (IMAST), annual meeting, 2005.

*Results of Cervical Open-Door Laminoplasty in Patients with Tandem Cervical and Lumbar Stenosis.* North American Spine Society, annual meeting, 2005.

*Results of Open Door Laminoplasty for Cervical Spondylotic Myelopathy in a North American Population.* North American Spine Society, annual meeting, 2005.

*Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury.* North American Spine Society, annual meeting, 2005.

*Three-point versus Two-point fixation for Thoracolumbar Burst Fractures.* Scoliosis Research Society, annual meeting, 2005. Hibbs Award Nominee.

*Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury.* Scoliosis Research Society, annual meeting, 2005. Hibbs Award Nominee.

*Results of Open Door Laminoplasty for Cervical Spondylotic Myelopathy in a North American Population.* Cervical Spine Research Society, annual meeting, 2005.

*Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury.* Cervical Spine Research Society, annual meeting, 2005. Outstanding Paper nominee.

*Results of Open Door Laminoplasty for Cervical Spondylotic Myelopathy in the Elderly Population.* Cervical Spine Research Society, annual meeting, 2005.

*Novel Transplantation of Preconditioned Schwann cells for Spinal Cord Injury with a Contusion Model.* Orthopaedic Research Society annual meeting, 2006.

*Resection of glial scar following spinal cord injury.* Orthopaedic Research Society annual meeting, 2006.

*Transplantation of Preconditioned Schwann cells following Hemisection Spinal Cord Injury.* Orthopaedic Research Society annual meeting, 2006.

*Do Patients with Concurrent Lumbar Stenosis Have Impaired Results Following Cervical Laminoplasty for Spondylotic Myelopathy?* North America Spine Society and Japanese Spine Research Society, Spine Across the Sea, 2006.

*Laminoplasty for Cervical Spondylotic Myelopathy in the Elderly North American Population: Minimum of Two Year Follow-Up.* North America Spine Society and Japanese Spine Research Society, Spine Across the Sea, 2006.



- Novel kyphoplasty/brachytherapy technique for the treatment of vertebral metastases: A mathematical modeling feasibility study.* Chao Family Comprehensive Cancer Center Conference, Rancho Mirage, CA, Nov 3-5, 2006.
- Lost in Translation? Is Cervical Laminoplasty Valid in the North American Population.* Japanese Orthopaedic Association annual meeting, Sapporo, Japan, 2008.
- Cervical Open-Door Lamnioplasty in North American Spondylotic Myelopathic Patients.* 5th Alps Orthopaedic Seminar in Shinshu University, Shinshu, Japan, 2008.
- The Role of Durotomy and Duraplasty Following Cervical Spinal Cord Injury in an Animal Model.* Cervical Spine Research Society, 36<sup>th</sup> annual meeting, Austin, TX, 2008.
- Biomechanical Evaluation of Short-Segment Posterior Instrumentation with Crosslinks in an Unstable Human Burst Fracture Model.* Orthopaedic Research Society annual meeting, Las Vegas, NV, 2009.
- Biomechanical Evaluation of an Expandable Cage in Single Segment Posterior Lumbar Interbody Fusion.* Orthopaedic Research Society annual meeting, Las Vegas, NV, 2009.
- Biomechanical Comparison of Trans-Sacral and Triangular Osteosynthesis in a Vertically Unstable Pelvic Fracture Model.* Orthopaedic Research Society annual meeting, Las Vegas, NV, 2009.
- The Role of Decompression with either Durotomy or Duraplasty Following Cervical Spinal Cord Injury.* Orthopaedic Research Society annual meeting, Las Vegas, NV, 2009.
- Posterior Cervical Instrumentation: Past, Present, and Future.* Japanese Society for Spine Surgery and Related Research, 38<sup>th</sup> Annual Meeting, Kobe, Japan, 2009.
- Biomechanical Evaluation of Short-Segment Posterior Instrumentation with Crosslinks in an Unstable Human Burst Fracture Model.* Frontiers in Biomedical Devices Conference, American Society of Mechanical Engineering, Irvine, CA, 2009.
- Biomechanical Evaluation of an Expandable Cage in Single Segment Posterior Lumbar Interbody Fusion.* Frontiers in Biomedical Devices Conference, American Society of Mechanical Engineering, Irvine, CA, 2009.
- Biomechanical Comparison of Trans-Sacral and Triangular Osteosynthesis in a Vertically Unstable Pelvic Fracture Model.* Frontiers in Biomedical Devices Conference, American Society of Mechanical Engineering, Irvine, CA, 2009.
- Spinal Surgery and Implants.* Frontiers in Biomedical Devices Conference, American Society of Mechanical Engineering, Irvine, CA, 2009.

*Early Surgical Decompression with Duraplasty in Acute Spinal Cord Injury Improves Functional Recovery in an Animal Model.* Scoliosis Research Society, 44<sup>th</sup> Annual Meeting, San Antonio, TX, 2009.

*Short-Segment Posterior Instrumentation in Unstable Thoracolumbar Burst Fractures: Do Crosslinks Improve Biomechanical Stability?* North American Spine Society, 24<sup>th</sup> Annual Meeting, San Francisco, 2009.

*The Role of Decompression with Either Durotomy or Duraplasty Following Cervical Spinal Cord Injury.* North American Spine Society, 24<sup>th</sup> Annual Meeting, San Francisco, 2009.

*Comparison of Trans-sacral and Triangular Osteosynthesis in an Unstable Pelvic Fracture.* American Academy of Orthopaedic Surgery, Annual Meeting, New Orleans, 2010.

*Analysis of Prognostic Factors in Chordoma Using the California Cancer Registry.* California Orthopaedic Association, Annual Meeting, Lake Tahoe, CA, 2010.

*Prognostic Factors for Patients with Chordoma*  
Western Orthopaedic Association, Annual Meeting, Monterey, CA, 2010.

*Analysis of Prognostic Factors in Chordoma Using the California Cancer Registry.* North American Spine Society, Annual Meeting, Orlando, FL, 2010.

*Flavokawain B, a Kava Chalcone, Induces Apoptosis in Synovial Sarcoma Cell Lines.* American Association for Cancer Research, Annual Meeting, Orlando, FL, 2011.

*Analysis of Prognostic Factors in Chordoma Using the California Cancer Registry.* American Academy of Orthopaedic Surgery, Annual Meeting, San Diego, CA, 2011.

*Biomechanical Comparison of Unilateral versus Bilateral C1-C2 Fixation Following Odontoid Fracture.* American College of Spine Surgery, Annual Meeting, Las Vegas, NV, 2011.

*Biomechanical Evaluation of Single Rod Versus Dual Rod Posterior Spinal Fixation for Adolescent Idiopathic Scoliosis in a Sawbone Model.* Orthopaedic Research and Education Foundation Research Symposium, Irvine, CA, 2012.

*Biomechanical Evaluation of Unilateral and Bilateral C1 Lateram Mass – C2 Intralaminar Screw Rod Fixation.* Orthopaedic Research Society, Annual Meeting, San Francisco, CA 2012.

*The Influence of Insurance Status on the Surgical Treatment of Acute Spine Fractures.* Cervical Spine Research Society, Annual Meeting, Phoenix, AZ, 2012.

- Biomechanical Study Of Sublaminar Polyester Bands Versus Pedicle Screws In Adolescent Idiopathic Scoliosis Model.* American Academy of Orthopaedic Surgery, Annual Meeting, Chicago, IL, 2013.
- The Influence of Insurance Status on the Surgical Treatment of Acute Spinal Fractures.* American Orthopaedic Association, Annual Meeting, Denver, CO, 2013.
- Antimicrobial Efficacy of a Novel Orthobiologic PEEK in Treating Surgical Site Spine Infections.* North American Spine Society, Summer Session, Boca Raton, FL, 2013.
- Exploring the Efficacy of a Self-Sterilizing Orthobiologic PEEK as a Viable Biomaterial for Spinal Surgery.* North American Spine Society, Annual Meeting, New Orleans, LA, 2013.
- Accuracy of Pedicle Screw placement in Revision Spine Surgery using Robotic Guidance.* North American Spine Society, Annual Meeting, San Francisco, CA, 2014.
- Use of a Superior Articulating Process Entry Point for Revision S1 Screws.* International Society for the Advancement of Spine Surgery, Annual Meeting, Las Vegas, NV 2016.
- Examining the Anti-Biofilm and Osteoconductive Properties of a PEEK-Silver Zeolite Composite in Spine.* International Meeting for Advanced Spinal Techniques, Annual Meeting, Washington, D.C., 2016.
- Does the Addition of Tobramycin Decrease Infection Risk in Patients Undergoing Lumbar Spinal Instrumented Fusions.* North American Spine Society, Annual Meeting, Boston, MA, 2016.
- Infection Rates With Use of Adjunctive Intrathecal Morphine in Posterior Instrumented Spinal Fusion Surgery: Preliminary Findings of a Retrospective Study.* Society for Technology in Anesthesia (STA), Annual Meeting San Diego, CA, 2017.
- Biomechanical Evaluation of Unilateral versus Bilateral C1 Lateral Mass-C2 Intralaminar Fixation.* Intl Society for Advancement of Spine Surgery, Annual Meeting, Boca Raton, FL, 2017.
- Biomechanical Comparison of C1 Lateral Mass C2 Pars and C3 Lateral Mass Screw-Rod Construct versus C1 Lateral Mass C2 Pedicle Screw Fixation for Type II Odontoid Fractures.* North American Spine Society (NASS), Annual Meeting, Orlando, FL, 2017.
- Variables Affecting Return to Work After Spine Surgery in a Non-Workers' Compensation Population: A Retrospective Cohort Study.* North American Spine Society (NASS), Annual Meeting, Orlando, FL, 2017.

## INVITED LECTURES:

*Kartagener's Syndrome in a Patient with Craniofacial Abnormalities.* Plastic Surgery Grand Rounds, Baylor College of Medicine, 1996

*Posterior Cervical Surgery.* Symposium for Minimally Invasive and Posterior Cervical Surgery, 2004

*New Technologies in Spine Surgery.* Neurosurgery Grand Rounds, University of California, Irvine, 2005

*Low Back Pain and the Primary Care Physician.* Family Practice Review Symposium, Long Beach Memorial Hospital, 2005

*Lumbar Spinal Stenosis and Back Pain.* Grand Rounds, Kaiser Whittier Medical Center, 2005

*Spinal Cord Injury Complications.* Grand Rounds, Torrance Memorial Medical Center, 2005

*Posterior Cervical Laminoplasty.* Blackstone Instructional Meeting, 2005

*Spinal Cord Injury.* Seaspine Users Meeting, 2005

*Adult Back Pain.* Grand Rounds, Lakewood Regional Medical Center, 2005

*Diagnostic Techniques Used in Pediatric Back Pain.* University of California, Irvine, Graduate Research Forum, 2005

*New Technologies in Spinal Surgery.* Neurosurgery Grand Rounds, University of California, Irvine, 2005

*Spinal Cord Injury Complications,* Grand Rounds, Torrance Memorial Hospital, Torrance, CA, 2005

*Techniques in Posterior Cervical Fixation.* Current Concepts and Techniques for Spine Surgery Symposium, San Diego, CA 2005

*Lumbar Spinal Stenosis and Back Pain.* Grand Rounds, Kaiser Whittier Medical Center, Whittier, CA, 2005

*Modern Techniques in Spinal Surgery.* Western Orthopaedic Association, 2005

*Laminoplasty in the North American Population.* University of California, Irvine, Graduate Research Forum, 2005

*Posterior Cervical Surgery and Instrumentation.* AO North America, Chicago, IL 2006.

*Low Back Pain.* Grand Rounds, South Coast Medical Center, 2006

*Lumbar Spinal Disorders and the Primary Care Physician.* Family Practice Review Symposium, UC Irvine-Long Beach Memorial Hospital, Long Beach, CA 2006

*Cervical Evaluation in the Multi-Trauma Patient.* University of California, Irvine, Graduate Research Forum, 2007

*Anterior Cervical Surgery Advanced Techniques.* Cervical and Lumbar Instructional Course, Santa Monica, CA, 2007

*Lumbar Spinal Stenosis, Back Pain, and Disc Herniations.* Family Practice Review Symposium, UC Irvine-Long Beach Memorial Hospital, Long Beach, CA 2007

*Complications of Posterior Cervical Surgery.* Complex Cervical Surgery Symposium, Denver, CO, 2008

*Modern Techniques in Spinal Surgery.* University of California, Irvine, Department of Biomechanical Engineering, BME 200, 2008

*Outcomes of Posterior Cervical Laminoplasty in Various American Population.* Grand Rounds, Kyoto Prefectural University of Medicine, Kyoto, Japan, 2008

*The Efficacy of Posterior Cervical Laminoplasty in Elderly Myelopathic Patients.* Grand Rounds, Dokkyo Medical University, Dokkyo, Japan, 2008

*Lost in Translation? Is Cervical Laminoplasty a Valid Technique in the North American Population?* Grand Rounds, Department of Orthopaedic Surgery, Wakayama Medical University, Wakayama, Japan, 2008

*Lumbar Spinal Disorders.* Grand Rounds, Lakewood Medical Group, Lakewood, CA, 2009

*Recent Updates in Spinal Surgery Techniques.* University of California, Irvine, Department of Biomechanical Engineering, BME 200, 2009

*Modern Updates in American Orthopedics and Spine Surgery.* Grand Rounds, Tokushima University, Tokushima, Japan, 2009

*Spinal Surgery and Implants.* The American Society of Mechanical Engineering 4<sup>th</sup> Frontiers in Biomedical Devices Conference and Exhibition, Irvine, CA, 2009

*Biomechanical Evaluation of an Expandable Cage in Single Segment Posterior Lumbar Interbody Fusion.* The American Society of Mechanical Engineering 4<sup>th</sup> Frontiers in Biomedical Devices Conference and Exhibition, Irvine, CA, 2009

*Metastatic Spine Disease: Surgical Management.* Contemporary Concepts in Spine Surgery, American College of Spinal Surgery, Newport Beach, CA, 2009

*Cervical Laminoplasty versus Laminectomy and Fusion.* Advanced Techniques in Spine Surgery, Boston, MA, 2009.

*Techniques for Open and Minimally Invasive Transforaminal Lumbar Interbody Fusion (TLIF).* Advanced Techniques in Spine Surgery, Boston, MA, 2009.

*Anterior Cervical Discectomy and Fusion versus Cervical Total Disc Arthroplasty.* Advanced Techniques in Spine Surgery, Boston, MA, 2009.

*Minimally Invasive Cervical Spine Surgery.* Pain Management Grand Rounds, University of California, Irvine, 2010.

*Posterior Minimally Invasive Approaches to the Cervical Spine.* Instructional Course Lecture, American Academy of Orthopaedic Surgery, Annual Meeting, New Orleans, LA, 2010.

*Spinal Surgery Implants: Development and Modern Approach.* 5<sup>th</sup> Annual Conference of Spine Surgeons of Spain and Portugal, Lisbon, Portugal, 2010.

*Internal Decapitation: Review of the Literature and Case Presentation.* 5<sup>th</sup> Annual Conference of Spine Surgeons of Spain and Portugal, Lisbon, Portugal, 2010.

*The Anterior Approach for Treatment of Thoracolumbar Fractures and Dislocations.* 5<sup>th</sup> Annual Conference of Spine Surgeons of Spain and Portugal, Lisbon, Portugal, 2010.

*Minimally Invasive Cervical Spine Surgery,* Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, San Diego, CA, 2011.

*Post-operative Anterior Cervical Hematoma and Cricothyroidotomy: How to Manage and Treat.* 4<sup>th</sup> Annual Cervical Spine Decompression and Stabilization Techniques, Cervical Spine Research Society, St. Louis, MO, 2011.

*The Cervical Spine: "State of the Art".* 1<sup>st</sup> Annual UC Irvine Spine Symposium, Irvine, CA, 2011.

*Diagnosis and Management of Cervical Spinal Disorders.* 7<sup>th</sup> Annual Surgery for Primary Care Physicians Conference, Orange, CA, 2011.

*Emergent Cricothyroidotomy and Airway Management.* 16<sup>th</sup> Annual Cervical Spine Research Society Instructional Course, Phoenix, AZ, 2011.

*Difficult Patient-Physician Interactions, The Art of Doctoring,* Orange, CA, 2012.

*Minimally Invasive Posterior Cervical Spinal Surgery,* Symposium in Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, San Francisco, CA, 2012.

*Anterior Cervical Spine Surgery: Treatments and Complications.* 5<sup>th</sup> Annual Cervical Spine Decompression and Stabilization Techniques, Cervical Spine Research Society, St. Louis, MO, 2012.

*Unmet Needs in Spinal Surgery.* Clinical Needs Symposium, Beckman Laser Institute, Irvine, CA, 2012.

*Posterior Cervical Instrumentation and Fixation.* The Art of Spine, Dana Point, CA, 2012.

*Adult Spinal Deformity.* MOC Review Course, American Academy of Orthopaedic Surgery, San Francisco, CA 2012.

*Infections of the Spine.* MOC Review Course, American Academy of Orthopaedic Surgery, San Francisco, CA 2012.

*Difficult Patient-Physician Interactions, The Art of Doctoring,* Orange, CA, 2013.

*Minimally Invasive Posterior Cervical Spinal Surgery.* Symposium in Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, Chicago, IL, 2013.

*Tracheotomy and Cricothyroidotomy.* Instructional Course Lecture, Cervical Spine Research Society, Annual Meeting, Los Angeles, CA, 2013.

*Complex and Minimally Invasive Cervical Spine Surgery.* UC Irvine Spine Symposium: Current Treatment of Spinal and Other Orthopaedic Conditions: An Evidence-Based Approach from Childhood to Adults, Irvine, CA, 2014.

*Cervical Decompression: Anterior, Posterior, or Both?,* Harbor-UCLA Medical Center, Department of Orthopaedic Surgery, Grand Rounds, Torrance, CA 2014.

*What's New in Adult Spine Surgery: Cervical Spine.* California Orthopaedic Association, Annual Meeting, Indian Wells, CA 2015

*Post-Operative Pain Management: A Modern Approach.* Western Orthopaedic Association Annual Meeting, Coeur d'Alene, ID 2015

*What's New in Adult Spine Surgery.* California Orthopaedic Association, Annual Meeting, Dana Point, CA 2016

**INVITED FACULTY:**

Symposium for Minimally Invasive and Posterior Cervical Surgery, San Diego, CA, 2004

Moderator, Basic Science, North American Spine Society, 2005

Advanced Surgical Techniques Meeting, Santa Monica, CA, 2005

Family Practice Review Symposium, UC Irvine-Long Beach Memorial Hospital, Long Beach, CA 2005

Symposium for Lumbar and Cervical Surgery, New York, NY, 2005

Family Practice Review Symposium, UC Irvine-Long Beach Memorial Hospital, Long Beach, CA 2005

Advanced Spinal Techniques, Dallas, Texas, 2006

19th Annual Disorders of the Spine, Whistler, Canada, 2007

Cervical and Lumbar Instructional Course, Santa Monica, CA 2007

20th Annual Disorders of the Spine, Whistler, Canada, 2008

Complex Cervical Surgery Symposia, Denver, Colorado, 2008

Visiting Professor, Wakayama Medical University, Japan, 2008

Visiting Professor, Dokkyo Medical University, Japan, 2008

Visiting Professor, Keio University, Japan, 2008

Invited Guest Lecturer, Japanese Orthopaedic Association Annual Meeting, Sapporo, Japan, 2008

Visiting Professor, Shinshu University School of Medicine, Japan, 2008

Visiting Professor, Kyoto Prefectural University of Medicine, Japan, 2008

Visiting Professor, Tokushima Prefectural University, Japan, 2009

Moderator, Posterior Cervical Surgery, Japanese Society for Spine Surgery and Related Research, 38<sup>th</sup> Annual Meeting, Kobe, Japan, 2009



Moderator, Post-operative Complications, Contemporary Concepts in Spine Surgery, The American College of Spinal Surgery, Newport Beach, CA, 2009

Moderator, Spinal Surgery and Implants, Frontiers in Biomedical Devices Conference, American Society of Mechanical Engineering, Irvine, CA, 2009

Lecturer and Moderator, Advanced Techniques in Spine Surgery, Boston, MA, 2009.

Lecturer, Instructional Course Lectures, Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, New Orleans, LA, 2010.

Lecturer, 5<sup>th</sup> Annual Conference of Spine Surgeons of Spain and Portugal, Lisbon, Portugal, 2010.

Program Chair and Moderator, Annual Meeting, Western Orthopaedic Association, Monterey, CA, 2010.

Moderator, Spinal Surgery and Implants, Frontiers in Biomedical Devices Conference, American Society of Mechanical Engineering, Newport Beach, CA, 2010.

Moderator and Lecturer, Instructional Course Lectures, Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, San Diego, CA, 2011.

Lecturer and Lab Instructor, 4<sup>th</sup> Annual Cervical Spine Decompression and Stabilization Techniques, Cervical Spine Research Society, St. Louis, MO, 2011.

Faculty Member, 16<sup>th</sup> Annual Instructional Course, Cervical Spine Research Society, Phoenix, AZ, 2011.

Moderator and Lecturer, Instructional Course Lectures, Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, San Francisco, CA, 2012.

Moderator and Lecturer, The Art of Spine, Annual Meeting, Dana Point, CA, 2012

Lecturer and Lab Instructor, 5<sup>th</sup> Annual Cervical Spine Decompression and Stabilization Techniques, Cervical Spine Research Society, St. Louis, MO, 2012.

Moderator and Lecturer, Instructional Course Lectures, Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, Chicago, IL, 2013

Moderator and Lecturer, Spine Science and Art Study Group, Annual Meeting, Park City, UT, 2013

Faculty Member, 18<sup>th</sup> Annual Instructional Course, Cervical Spine Research Society, Los Angeles, CA, 2013.

Moderator and Lecturer, Spine Science and Art Study Group, Annual Meeting, Park City, UT, 2014

Moderator and Lecturer, UC Irvine Spine Symposium, Irvine, CA, 2014.

Moderator and Lecturer, Interactive Spine Summit: West, Dana Point, CA, 2014

Visiting Professor, Harbor-UCLA Medical Center, Torrance, CA, 2014

Moderator and Lecturer, Spine Science and Art Study Group, Annual Meeting, Park City, UT, 2015

Moderator and Lecturer, California Orthopaedic Association Annual Meeting, Indian Wells, CA 2015

Moderator, Western Orthopaedic Association Annual Meeting. Coeur d'Alene, ID 2015

Moderator and Lecturer, Spine Science and Art Study Group, Annual Meeting, Park City, UT, 2016

Moderator and Lecturer, California Orthopaedic Association Annual Meeting, Dana Point, CA 2016

Moderator and Lecturer, Spine Science and Art Study Group, Annual Meeting, Park City, UT, 2017

Moderator, Western Orthopaedic Association Annual Meeting, Kauai, HI, 2017

#### **PROGRAM COMMITTEES:**

Chairman, Program Committee, Western Orthopaedic Association, Annual Meeting, Monterey, CA, 2010

Program Committee, Western Orthopaedic Association, Annual Meeting, 2009 – 2011

Chairman, Regional Spinal Surgery Conference, University of California, Irvine, 2004 - present

Chairman, PediGuard Technique Symposium, University of California, Irvine, 2005 – 2010

Program Chairman, UC Irvine Spine Symposium, 2011, Irvine, CA

Director, Self-Assessment Examination Program, Western Orthopaedic Association,  
Portland, OR, Annual Meeting 2012

Course Chairman, Spinal Surgery Alumni Educational Course, University of California,  
Irvine, 2012

Chairman, The Art of Spine, Annual Meeting, Dana Point, CA, 2012

Symposium Director, Biologics, North American Spine Society, Annual Meeting, Dallas,  
TX, 2012

Chairman, Spine Science and Art Study Group, Park City, UT, 2013

Program Committee, International Society for the Advancement of Spine Surgery,  
Vancouver, Canada, 2013

Chairman, Innovative Spine Summit, Annual Meeting, Dana Point, CA, 2013

Chairman, Spine Science and Art Study Group, Park City, UT, 2014

Chairman, UC Irvine Spine Symposium: Current Treatment of Spinal and Other  
Orthopaedic Conditions: An Evidence-Based Approach from Childhood to Adults,  
Irvine, CA, 2014

Chairman, Interactive Spine Summit: West, Annual Meeting, Dana Point, CA 2014

Chairman, Spine Science and Art Study Group, Park City, UT, 2015

Chairman, Interactive Spine Summit: Annual Meeting, Dana Point, CA 2015

Chairman, UC Irvine Orthopaedic Symposium: Modern Trends in Joint Arthroplasty,  
Irvine, CA, 2015

Program Committee, Cervical Spine Research Society, San Diego, CA 2015

Chairman, Spine Science and Art Study Group, Park City, UT, 2016

Chairman, UC Irvine Orthopaedic Symposium: Modern Trends in Orthopaedic Trauma,  
Newport Beach, CA, 2016

Chairman, Interactive Spine Summit: Annual Meeting, Dana Point, CA 2016

Program Committee, Cervical Spine Research Society, Toronto, Canada 2016

Chairman, Spine Science and Art Study Group, Park City, UT, 2017

Program Committee, Cervical Spine Research Society, Hollywood, FL 2017

**EDITORIAL POSITIONS:**

Editor, Contemporary Spine Surgery

Editor, Orthopaedic Knowledge Online

Contributor, SpineUniverse.com

Contributor, SpineFellows.com

Reviewer, The Spine Journal

Reviewer, Clinical Orthopaedic and Related Research

Reviewer, Journal of Applied Physiology

Faculty, OrthoCases.com

Editor, SpineLine, 2012-2015

**PROFESSIONAL ORGANIZATIONS:**

American Academy of Orthopaedic Surgeons, Member

American Orthopaedic Association, Elected Member

Cervical Spine Research Society, Elected Member

North American Spine Society, Member

Scoliosis Research Society, Elected Member

California Orthopaedic Association, Member

Western Orthopaedic Association, Member

Alpha Omega Alpha Honor Society

**PROFESSIONAL CERTIFICATION:**

Medical License, State of California Board of Medical Examiners, 2000

DEA Certification, 2000

Board Certification, American Board of Orthopaedic Surgery, 2006  
Recertification passed 2014 (valid until 2026)

**COMMITTEE POSITIONS HELD:**

Board Member, Western Orthopaedic Association 2011- 2017

Treasurer, Western Orthopaedic Association, 2013-2017

CME Committee, Western Orthopaedic Association, 2012 – 2014

CME Committee, University of California, Irvine, School Of Medicine, 2009 – 2017

UC Irvine School of Medicine Senate Assembly Orthopaedic Surgery Representative,  
2010 – 2017

UC Irvine Program in Ethics, Medical Humanities, and Spiritual Care, Associate Faculty,  
2013-2017

North American Spine Society, Committee on Biologics and Basic Science, 2011 – 2015