

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

**Dept. of Orthopaedic Surgery  
University of California, Irvine  
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Orange, CA 92868**

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bhatian@uci.edu**

## **CURRENT POSITION:**

Chief, Orthopaedic Spine Service  
Director, Comprehensive Spine Program  
University of California, Irvine

Residency Program Director  
Assistant Professor of Clinical Orthopaedic Surgery  
Department of Orthopaedic Surgery  
University of California, Irvine

## **EDUCATION:**

University of Miami, Jackson Memorial Medical Center, Miami, Florida  
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

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

Baylor College of Medicine, Houston, Texas  
Doctor of Medicine with Highest Honors, 1994-1998  
Class Valedictorian

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

## **AWARDS AND HONORS:**

AOA-JOA Traveling Fellowship, 2008

AOA Emerging Leaders Program, 2005-2008

University of California, Irvine  
Faculty Teaching Award, Orthopaedic Surgery, 2005

Scoliosis Research Society  
Edgar Dawson Traveling Fellowship, 2005

University of California, Los Angeles  
Physician of the Year nominee, 2001  
Emergency Department Consultant of the Year nominee, 2001

Baylor College of Medicine, Houston, Texas  
Class Valedictorian, 1998  
Michael E. DeBakey Scholar Award, 1998  
Most Outstanding Research by a Medical Student, 1998  
Alpha Omega Alpha, elected 1997 (Junior year)  
Graduation with Highest Honors, 1998  
Outstanding Student in Orthopaedic Surgery, 1998  
Alumni Award for Academic Excellence, 1996  
Basic Science High Honors, 1995  
Butler Award for Academic Excellence, 1995

Stanford University, Stanford, California  
Graduation with Honors, 1994  
Kappa Alpha Order Scholarship Award, 1993

## **RESEARCH GRANTS AND AWARDS:**

Dept. of Defense, U.S. Army Medical Research and Material Command, Congressionally Directed Medical Research Programs, Breast Cancer Research Program  
*Development and Evaluation of a Novel Radiation Therapy Technique for the Treatment of Vertebrae with Metastatic Lesions*

Roman Reed Spinal Cord Injury Research Fund of California, 2007  
*Carbohydrate Metabolism Impairments in Chronic Human Spinal Cord Injury*

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

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

Outstanding Paper Nominee, Cervical Spine Research Society, 2005

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

Spinewave Lumbar Sagittal Balance Research Grant, 2006-2007

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

EBI Spinal Cord Injury Research Grant, 2005-2007

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

Stryker Biotech Spine Research Grant, 2005

*Resection of Glial Scar Following Spinal Cord Injury.*

Lange Medical Research Award, Baylor College of Medicine, 1998

Walter Lorenz Surgical Research Grant, 1998

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

Baylor College of Medicine-Karolinska Institute Research Fellowship, 1997

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

The Endocrine Society Student Research Award, 1994

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

#### **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; Journal of Bone and Joint Surgery, 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; Journal of Bone and Joint Surgery. 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. A27(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. Accepted for publication.
13. *Proximal Segment Degeneration Following Posterior Lumbosacral Fusions (L4-S1 and L5-S1).* Submitted for publication.
14. *Posterior Cervical Laminoplasty in the North American Population: A Minimum of Two Year Follow-Up.* Submitted for publication.

#### **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. *Imaging of the Spine.* In Lieberman, JR. ed. Orthopaedic Board Review. American Academy of Orthopaedic Surgery, Rosemont, IL. In press.
5. *Spinal Cord and Peripheral Nerve Injury.* In Orthopaedic Knowledge Update 9. American Academy of Orthopaedic Surgery, Rosemont, IL. In press.

#### **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.* Chao Family Comprehensive Cancer Center Conference, Rancho Mirage, CA, Nov 3-5, 2006.

#### **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.

### **WORKS IN PROGRESS:**

*Hand Function in Patients with Acute Spinal Cord Injury: A Prospective Study*

*The Effect of Loading on Autonomic Regulation, Muscle Mass, and Bone Density in Patients with Chronic Spinal Cord Injury*

*The Role of In-Vivo Cage Expansion for Improvement of Lumbar Lordosis following TLIF or PLIF*

*Os Odontoneium with Associated Upper Cervical Anomalies*

*Autonomic Dysfunction and Training in Patients with Chronic and Acute Spinal Cord Injury*

*Chronic AVM of the Upper Lumbar Spine Secondary to Atherosclerosis*

*Carbohydrate Metabolism Impairments in Chronic Human Spinal Cord Injury*

*Non-surgical Treatment of Thoracolumbar Burst Fractures with Significant Canal Compromise: A Prospective Study*

*Hook versus Pedicle Screw Constructs for Rotational Rigidity*

*Comparison of Balance Measuring Devices in Adolescent Idiopathic Scoliosis*

*Adjacent Segment Degeneration After Anterior Cervical Fusion.*

*Adjacent Segment Degeneration After Posterior Spinal Fusion in Patients with Adolescent Idiopathic Scoliosis: a Long Term Survivorship Analysis.*

### **INVITED LECTURES:**

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

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

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

*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.

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

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

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

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

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

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

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

*Spinal Cord Injury*. Seaspine Users Meeting, 2005

*Posterior Cervical Laminoplasty*. Blackstone Instructional Meeting, 2005

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

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

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

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

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

*The Role of Body Mass Index in the Management of Slipped Capital Femoral Epiphysis.* Shriners Hospital for Children, Los Angeles, 2002

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

*Transcriptional and Posttranscriptional Regulation of Inhibin alpha-Subunit Gene Expression in Rat Sertoli Cells by 8-Bromo-3', 5'-Cyclic-Adenosine Monophosphate.* Stanford University, Biology Honors Seminar, 1994

#### **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

#### **COURSE CHAIRMAN:**

Regional Spinal Surgery Conference, University of California, Irvine, 2004 - 2008

PediGuard Animal Lab, University of California, Irvine, 2005 - 2008

#### **EDITORIAL BOARDS:**

Editor, Contemporary Spine Surgery

Editor, Orthopaedic Knowledge Online

#### **PROFESSIONAL ORGANIZATIONS:**

American Academy of Orthopaedic Surgeons, Member  
Cervical Spine Research Society, Member  
North American Spine Society, Member  
Scoliosis Research Society, Candidate Member  
American Orthopaedic Association: Emerging Leaders Program  
California Orthopaedic Association, Member  
Western Orthopaedic Association, Member  
UC Irvine University Physicians and Surgeons  
Alpha Omega Alpha Honor Society  
American Orthopaedic Association Emerging Leaders Program  
The Scoliosis Association

**PROFESSIONAL CERTIFICATION:**

State of California Board of Medical Examiners, 2000  
DEA Certification, 2000  
American Board of Orthopaedic Surgery, 2006

**COMMITTEE POSITIONS HELD:**

Board Member, Western Orthopaedic Association, Orange County Chapter  
UC Irvine Medical Center Communications Board  
UC Irvine Medical Center New Technologies Panel  
UC Irvine Medical Center Surgical Block Time Committee  
Orthopaedic Surgery Resident Education Committee  
UCI University Physicians and Surgeons Credentials Committee  
Orthopaedic Surgery Resident Selection Committee  
Orthopaedic Surgery Overhead Committee  
Neurorehabilitation Task Force  
Pain Management Task Force  
UC Irvine Combined Spine Program Board of Directors