

**Jason M. Cuéllar M.D., Ph.D.**

**Orthopaedic Spine Surgeon**

Department of Orthopaedic Surgery

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**Education:**

**Undergraduate:**

American River College

Shasta College

University of California, Davis – B.S. in Neurobiology, Physiology & Behavior

**Graduate School (Ph.D.):**

University of California, Davis – Molecular, Cellular and Integrative Physiology

Doctoral advisor: Earl Carstens, Ph.D.

**Medical School (M.D.):**

Stanford University School of Medicine

**Internship:**

Orthopaedic Surgery, New York University Hospital for Joint Diseases

Program directors: Kenneth Egol M.D., Chair: Joseph D. Zuckerman M.D.

**Residency:**

Orthopaedic Surgery, New York University Hospital for Joint Diseases

Program directors: Kenneth Egol M.D., Chair: Joseph D. Zuckerman M.D.

**Musculoskeletal Research Fellowship:**

New York University Hospital for Joint Diseases

Research supervisor: Thorsten Kirsch, Ph.D.

**Fellowship in spine surgery:**

Spinal Disorders Fellowship, Cedars-Sinai Spine Center and Cedars-Sinai Medical Center

Fellowship director: Hyun W. Bae, M.D.

**Licensure:**

1. New York State Medical License, ID #264397, Issued 2-22-2012
2. California State Medical License, ID #A135554, Issued 4-9-2015

**Board certification:**

American Board of Orthopaedic Surgery (ABOS) board eligible

**Professional activities:**

1. Scientific consultant for Nevro Corporation: 2005 to 2014
2. Scientific consultant for Cytonics Corporation: 2006 to 2015
3. Scientific Advisory Board for Cytonics Corporation: 2006 to present
4. Member - International Society for the Advancement of Spine Surgery, ID#20030111501
5. Member - North American Spine Society, ID#123771
6. Member - American Academy of Orthopaedic Surgeons, ID#1032003
7. Member – North American Neuromodulation Society

**Honors and special awards:**

1. **Best paper award at ISSLS Annual Meeting** June 10, 2015, San Francisco, CA, USA. **Cuellar JM**, Stauff MP, Herzog R, Carrino JA, Baker G, Carragee EJ; USA  
Does provocative discography cause clinically important injury to the lumbar Intervertebral disc? A ten-year matched cohort study.
2. **2015 Frauenthal Award for Clinical Research, NYU HJD** for paper entitled “*Does Aspirin Administration Increase Preoperative Morbidity in Patients with Cardiac Stents Undergoing Spinal Surgery?*”
3. **2009 ISSLS Prize Winner co-author:** Does discography cause accelerated progression of degenerative changes in the lumbar disc: A ten-year cohort-controlled study. *Spine* 34(21):2338-45.
4. Stanford Anesthesia Departmental Research Award, 5/2008
1. Stanford Medical Research Scholar, 2006-2007
2. Graduation with honors, U.C. Davis, 2000 and 2004
3. Travel Award for 33<sup>rd</sup> annual Society for Neuroscience meeting, November 2003
4. Jastro-Shields Research Award. Fall 2000
5. Phi Sigma Society, Gamma Delta Chapter. January 2000.
6. Department citation for outstanding performance, Neurobiology, Physiology & Behavior, Class of 2000. June 2000.

**Research grants and fellowships; patents received; clinical innovations:**

1. **NIH R01 DE018531**, 2007-2011. Project title: Chronic compression of the trigeminal ganglia. Co-investigator. \$2M, Principal investigator: David Yeomans
2. **NIH-SBIR Grant 1R43NS065669-01A1**; 2010-2011; by NINDS Cytonics Corporation; Diagnostic Biomarkers for Radicular Pain; \$1.5M, Co-investigator. Principal investigator: Gaetano Scuderi.
3. Musculoskeletal research fellow: Department of Orthopaedic Surgery, NYU Hospital for Joint Diseases
4. Post-doctoral researcher: Department of Anesthesia, Stanford University School of Medicine, lab of David Yeomans, Ph.D.

#### **Academic Lectures/Presentations:**

1. Cuéllar, JM, Martin Quirno; Kirk Campbell, Andrew Yoo, , Christian M. Hoelscher, Pedro A. Ricart-Hoffiz, Tate M. Andres, Thorsten Kirsch, Thomas J. Errico. The Effect of Prophylactic Local Epidural Steroid Delivery in a Spinal Cord Injury Model. *Annual Meeting of the International Society for the Advancement of Spine Surgery (ISASS), Barcelona, Spain, March 20-23, 2012.*
2. Cuéllar JM, Marlen N, Cuéllar VG, Angst MS, Yeomans DC, Montesano PX. Cytokines in the intervertebral disc of patients undergoing lumbar anterior discectomy and interbody fusion for degenerative disc disease. *Annual Meeting of the International Society for the Advancement of Spine Surgery (ISASS), Barcelona, Spain, March 20-23, 2012*
3. **Cuéllar JM**, Alataris K, Walker A, Yeomans DC, Antognini JF. Effect of High-Frequency Alternating Current on Spinal Afferent Nociceptive Transmission. Podium and poster presentations. *International Neuromodulation Society*, Berlin, Germany June 10-13, 2013.
4. **Cuéllar JM**, Petrizzo, A, Vaswani, R, Goldstein, JA, Bendo, JA. Does aspirin administration increase perioperative morbidity in patients with cardiac stents undergoing spinal surgery? AAOS Annual Meeting, Las Vegas, March 26, 2015
5. Spine grand rounds, “Artificial Disc Replacement”; June 29, 2016, Cedars-Sinai, Advanced Health Sciences Pavilion, Room PEC-5.
6. Department of Orthopaedic Surgery Grand Rounds, “Artificial Disc Replacement”, March 1, 2017, Cedars-Sinai Medical Center, Cancer Center Conference Room AC-1100

#### **Teaching/Mentoring Activities**

Lecture to orthopaedic surgery residents, Cedars-Sinai Medical Center, “Spinal infections” April 29, 2016.

#### **Community Service and Volunteer Work:**

1. Patzcuaro Hospital Experience and Language Program (Patzcuaro HELP) – co-director 2004-2009.

2. Clinical volunteer and medical supply donation organization; Patzcuaro HELP program participant and director, Patzcuaro, Mexico – 6/21/2005 to 8/21/2005
3. Operation Access – Kaiser San Francisco, 9/24/05
4. Operation Access – Kaiser South San Francisco – February 26, 2005
5. Operation Access – Mills Peninsula – June 4, 2005
6. Community volunteer; U.C. Davis Medical Center, orthopaedics floor – 1998-1999
7. Clinical volunteer and medical supply donation organization; Patzcuaro HELP program, Patzcuaro, Mexico – 6/18/2001 to 8/18/2001
8. Big Brothers/Big Sisters of Sacramento – 2/01/1999 to 6/01/2002
9. Clinical volunteer as spanish translator, Salud Clinic, Sacramento – 10/01/2001 to 4/01/2002

### **Bibliography/publications:**

#### A. Research papers – peer-reviewed:

1. **Cuellar, JM** and Lanman, TH. “Text Neck”: An epidemic of the modern era of cell phones? *The Spine Journal* 2017 (*In Press*).
2. **Cuellar, JM** and Passias, P. Cervical Spondylotic Myelopathy: A review of clinical diagnosis and treatment. *Bulletin of the Hospital for Joint Diseases* 2017; 75(1):21-9.
3. Montesano, PX and **Cuéllar JM**. Cytokines in the intervertebral discs of patients undergoing lumbar discectomy and fusion for degenerative disc disease. *Orthopedics and Rheumatology Open Access Journal* 2017; 4(3):555638.
4. Montesano, PX, **Cuéllar JM** and Scuder, GJ. Intradiscal injection of an autologous alpha-2-Macroglobulin (A2M) concentrate alleviates back pain in FAC-positive patients. *Orthopedics and Rheumatology Open Access Journal* 2017; 4(2):555634.
5. **Cuéllar JM**, Cuéllar, V.G., Scuderi, G.J. Alpha-2-Macroglobulin: Autologous protease inhibition technology. *Phys Med Rehabil Clin N Am* 2016, 27(4):909-919, PubMed:2778907
6. **Cuéllar JM**, Stauff MP, Herzog RJ, Carrino JA, Baker GA, Carragee EJ. Does provocative discography cause clinically important injury to the lumbar intervertebral disc? A 10-year matched cohort study. *Spine J.* 2016 Mar;16(3):273-80. 2015 Jun 29. PubMed: 26133255.
7. **Cuéllar JM**, Field JS, Bae HW. Distraction Laminoplasty with Interlaminar Lumbar Instrumented Fusion (ILIF) for Lumbar Stenosis with or Without Grade 1 Spondylolisthesis: Technique and 2-year Outcomes. *Spine* 2016. PubMed ID: 26839990.
8. Cuéllar, VG, **Cuéllar, JM**, Kirsch, T and Strauss EJ. Correlation of synovial fluid biomarkers with cartilage pathology and associated outcomes in knee arthroscopy. *Arthroscopy* October 29, 2015
9. **Cuéllar JM**, Stauff MP, Herzog R, Carrino JA, Baker G, Carragee EJ; USA Does provocative discography cause clinically important injury to the lumbar Intervertebral disc? A ten-year matched cohort study. *The Spine Journal* 16(3):273-80
10. **Cuéllar JM**, Petrizzo, A, Vaswani, R, Goldstein, JA, Bendo, JA. Does aspirin administration increase perioperative morbidity in patients with cardiac stents undergoing spinal surgery? *Spine* 2015, 40(9):629-635. PubMed ID: 26030214
11. Tzabazis A, Mechanic J, Miller J, Klukinov M, Pascual C, Manering N, Carson DS, Jacobs A, Qiao Y, **Cuellar J**, Frey WH 2nd, Jacobs D, Angst M, Yeomans DC. Oxytocin

- receptor: Expression in the trigeminal nociceptive system and potential role in the treatment of headache disorders. *Cephalalgia*. 2015 Nov 20. PubMed ID: 26590611
12. Zhao YP, Tian QY, Liu B, **Cuellar J**, Richbrough B, Jia TH, Liu CJ. Progranulin knockout accelerates intervertebral disc degeneration in aging mice. *Sci Rep*. 2015 Mar 16;5:9102. PubMed ID: 25777988.
  13. **Cuellar JM**, Yoo A, Tovar N, Coelho PG, Jimbo R, Vandeweghe S, Kirsch T, Quirno M, Errico TJ. The Effects of Amicar and TXA on Lumbar Spine Fusion in an Animal Model. *Spine* 2014, 39(19):E1132-1137; PubMed ID: 24979407.
  14. **Cuellar JM**, Golish, SR, Leroux, EJ, Reuter, MW, Carragee, EJ, Hanna, LS and Scuderi, GJ. Does a fibronectin and aggrecan complex play a role in painful vertebral disks? 2013 *PMR* 2013, 5(4):297-3021; PubMed ID: 23490723.
  15. **Cuellar JM**, Alataris K, Walker A, Yeomans DC, Antognini JF. Effect of High-Frequency Alternating Current on Spinal Afferent Nociceptive Transmission. *Neuromodulation*. 2013; 16(4):318-327; PubMed ID: 23252766
  16. **Cuellar JM**, Borges PM, Cuellar VG, Yoo A, Scuderi GJ, Yeomans DC. Cytokine Expression in the Epidural Space: A Model of Non-compressive Disc Herniation-induced Inflammation. *Spine* 2013; 38(1):17-23 PubMed ID: 22648034
  17. Golish SR, Hanna LS, **Cuellar JM**, Fernyhough JC, Campbell DR, Carragee EJ, Scuderi GJ. Are persistently symptomatic vertebral compression fractures associated with abnormal inflammatory profiles? A prospective study. *J Spinal Disord Tech*. 2011 Apr;24(2):121-5. PubMed ID: 21445026.
  18. Cuellar VG, **Cuellar JM** and Scuderi GS. Identification of meniscus damage biomarker: Implications for the future treatment of knee injury. *Therapy* 8(3):289-91, 2011.
  19. Scuderi GJ, Golish SR, Cook FF, **Cuellar JM**, Bowser RP, Hanna LS. (2011) Identification of a novel fibronectin-aggrecan complex in the synovial fluid of knees with painful meniscal injury. *J Bone Joint Surg Am*. 2011 Feb;93(4):336-40.
  20. Cuellar VG, **Cuellar JM**, Vaccaro AR, Carragee EJ, Scuderi GJ. (2010) Accelerated degeneration after failed cervical and lumbar nucleoplasty. *J. Spinal Disord. Tech*. Dec;23(8):521-4.
  21. Cuellar VG, **Cuellar JM**, Golish SR, Yeomans DC, Scuderi GJ. (2010) Cytokine profiling in acute anterior cruciate ligament injury. *Arthroscopy*. Oct;26(10):1296-301.
  22. **Cuellar JM**, Manering NA, Klukinov M, Nemenov MI, Yeomans DC. (2010) Thermal nociceptive properties of trigeminal afferent neurons in rats. *Molecular Pain*. Jul 7;6:39.
  23. Tzabazis AZ, Niv SH, Manering NA, Klyukinov M, **Cuellar JM**, Bhatnagar A, Yeomans DC. (2010) Trigeminal antihyperalgesic effect of intranasal carbon dioxide. *Life Sci*. 2010 Jul 3;87(1-2):36-41.
  24. Scuderi GJ, Woolf N, Dent K, Golish SR, **Cuellar JM**, Cuellar VG, Yeomans DC, Carragee EJ, Angst MS, Bowser R, Hanna LS. (2010) Identification of a complex between fibronectin and aggrecan G3 domain in synovial fluid of patients with painful meniscal pathology. *Clinical Biochem*. Jul;43(10-11):808-14.
  25. **Cuellar, J.M.**, Golish, S.R., Reuter, M.W., Cuellar, V.G., Angst, M.S., Carragee, E.J., Yeomans, D.C. and Scuderi, G.J. Cytokine evaluation in individuals with low back pain using discographic lavage. *The Spine Journal* 2010 Mar;10(3):212-8.
  26. **Cuellar J.M.**, Scuderi, G.J., Cuellar V.G, Golish, S.R. and Yeomans, D.C.. (2009) Diagnostic utility of cytokine biomarkers in the evaluation of acute knee pain. *Journal of Bone and Joint Surgery Oct; 91(10):2313-20*.
  27. Scuderi, G.J., **Cuellar, J.M.**, Cuellar, V.G., Yeomans, D.C., Carragee, E.J. and Angst, M.S. (2009). Epidural interferon gamma-immunoreactivity: a biomarker for lumbar nerve root irritation. *Spine Oct 1; 34(21):2311-2317*.

28. Carragee, E.J., Don, A. Hurwitz, E. **Cuéllar, J.M.**, Carrino, J. and Herzog, R. **2009 ISSLS Prize Winner**: Does discography cause accelerated progression of degenerative changes in the lumbar disc: A ten-year cohort-controlled study. *Spine* 34(21):2338-45.
29. Merrill, A.W., **Cuéllar, J.M.**, Judd, J.H., Carstens, M.I. and Carstens, E. (2008) Effects of TRPA1 agonists mustard oil and cinnamaldehyde on lumbar spinal wide dynamic range neuronal responses to innocuous and noxious cutaneous stimuli in rats. *J. Neurophysiol.* 99(2):415-425.
30. Dutton R.C., **Cuéllar J.M.**, Eger E.I., Antognini, J.F. and Carstens E. (2007) Temporal and Spatial Determinants of Sacral Dorsal Horn Neuronal Windup in Relation to Isoflurane-induced Immobility. *Anesthesia & Analgesia* 105(6):1665-74.
31. Simons C.T., **Cuéllar J.M.**, Moore, J.A., Pinkerton K.E., Uyeminami D., Carstens M.I., Carstens E. (2005) Nicotinic receptor involvement in antinociception induced by exposure to cigarette smoke. *Neuroscience Letters* 389(2):71-6
32. **Cuéllar J.M.**, Antognini J.F., Montesano P.X. and Carstens, E. (2005) Application of nucleus pulposus to L5 dorsal root ganglion in rats enhances nociceptive dorsal horn neuronal windup. *Journal of Neurophysiology* 94(1):35-48
33. **Cuéllar, J.M.**, Dutton, R.C., Antognini, J.F. and Carstens, E. (2005) Differential effects of halothane and isoflurane on dorsal horn neuronal windup and excitability. *British Journal of Anesthesiology* 94(5):617-25
34. **Cuéllar, J.M.**, Antognini, J.F. and Carstens, E. (2004) An *in vivo* method for recording single unit activity in lumbar spinal cord in mice anesthetized with a volatile anesthetic. *Brain Research Protocols* 13(2):126-134.
35. **Cuéllar, J.M.**, Antognini, J.F., Eger, E.I and Carstens, E. (2004) Halothane depresses C-fiber evoked windup of deep dorsal horn neurons in mice. *Neuroscience Letters* 363(3):207-11
36. **Cuéllar, J.M.**, Montesano, PX, Carstens, E (2004) Role of TNF-alpha in sensitization of nociceptive dorsal horn neurons induced by application of nucleus pulposus to L5 dorsal root ganglion in rats. *Pain* 110(3):578-587
37. Nojima, H, **Cuéllar, JM**, Simons, CT, Carstens, MI, Carstens, E (2004) Spinal *c-fos* expression associated with spontaneous biting in a mouse model of dry skin pruritis. *Neuroscience Letters* 361(1-3):79-82.
38. Nojima, H., Simons, C.T., **Cuéllar, J.M.**, Iodi-Carstens, M., Moore, J.A., Carstens, E. (2003) Opioid modulation of scratching and spinal *c-fos* expression evoked by intradermal serotonin. *The Journal of Neuroscience* 23(34):10784-10790
39. Boucher, Y., Simons, C. T., **Cuéllar, J. M.**, Jung, S. W., Carstens, M. I., Carstens, E. (2003) Activation of brain stem neurons by irritant chemical stimulation of the throat assessed by c-fos immunohistochemistry. *Experimental Brain Research* 148 (2):211-8
40. **Cuéllar, J. M.**, Jinks, S. L., Simons, C. T., Carstens, E. (2003) Deletion of the preprotachykinin A gene in mice does not reduce scratching behavior elicited by intradermal serotonin. *Neuroscience Letters* 339(1):72-6

## **Chapters:**

1. **Cuéllar, J.M.** and Carstens, E. Sensitization in animal models of radiculopathic pain. In: Hyperalgesia: Molecular Mechanisms and Clinical Implications, Progress in Pain Research and Management, Vol. 30; Editors: Brune, K and Handwerker, H.O. IASP Press 2004.
2. **Cuéllar, J.M.** and Carstens, E. Electrophysiological evidence of enhanced nociceptive transmission in response to dorsal root exposure to nucleus pulposus. In: Immune and Glial Regulation of Pain; Editors: Linda Watkins, Joyce DeLeo, and Linda Sorkin; IASP Press 2007.

3. **Cuéllar, J.M.** and Carragee, E.J. Ch 27 - Basic science of discography and provocative testing. In: Basic Science of Spinal Diseases; Editors: Alok Sharan, Simon Tang and Alexander Vaccaro. Jaypee Press, 2013
4. **Cuéllar, J.M.** and Hyun Bae. Posterior Cervical Laminoplasty. In: Operative Techniques in Spine Surgery, 3<sup>rd</sup> Edition. Editors: Alexander R. Vaccaro and Eli M. Baron
5. **Cuéllar, J.M.**, Kim, Terrence, Bhamb, Neil and Lanman, Todd H. Cervical Total Disc Replacement. In: Operative Techniques in Spine Surgery, 3<sup>rd</sup> Edition. Editors: Alexander R. Vaccaro and Eli M. Baron

### **Abstracts from national and international scientific conferences:**

1. G. Scuderi, J. Cuellar, P. Montesano; Intradiscal injection of an autologous alpha-2-macroglobulin (A2M) concentrate alleviates back pain in FAC-positive patients; ISASS April 6-8, 2016, Las Vegas, NV
2. Gaetano J Scuderi , Pasquale X Montesano and Jason Cuellar MD; Improving Response to Treatment for Patients with DDD by the use of Molecular Markers. AAOS Annual Meeting, March 2016, Orlando, FL
3. **Cuellar JM**, Stauff MP, Herzog R, Carrino JA, Baker G, Carragee EJ; USA Does provocative discography cause clinically important injury to the lumbar Intervertebral disc? A ten-year matched cohort study. ISSLS Annual Meeting June 10, 2015, San Francisco, CA, USA. **Best paper award.**
4. Cuéllar VG, **Cuéllar, JM**, Kirsch T and Strauss EJ. Identification of Synovial Fluid Biomarkers for Cartilage Pathology and Associated Outcomes in Knee Arthroscopy, AAOS Annual Meeting, Las Vegas, March 26, 2015
5. **Cuéllar JM**, Petrizzo, A, Vaswani, R, Goldstein, JA, Bendo, JA. Does aspirin administration increase perioperative morbidity in patients with cardiac stents undergoing spinal surgery? AAOS Annual Meeting, Las Vegas, March 26, 2015
6. **Cuéllar JM**, Alataris K, Walker A, Yeomans DC, Antognini JF. Effect of High-Frequency Alternating Current on Spinal Afferent Nociceptive Transmission. Podium and poster presentations. *International Neuromodulation Society*, Berlin, Germany June 10-13, 2013.
7. Cuéllar VG, **Cuéllar JM**, **Browning, S**, Scuderi GJ, Golish SR, Hanna LS. Is there a chondroprotective effect of autologous protease inhibitor concentrate on an osteoarthritis rabbit model? A pilot study. Orthopaedic Research Society Annual Meeting, Jan 26-29, 2013, San Antonio, Texas.
8. Martin Quirno; Kirk Campbell, Andrew Yoo, Jason M. Cuellar, Christian M. Hoelscher, Pedro A. Ricart-Hoffiz, Tate M. Andres, Thorsten Kirsch, Thomas J. Errico. The Effect of Prophylactic Local Epidural Steroid Delivery in a Spinal Cord Injury Model. *North American Spine Society 27<sup>th</sup> Annual Meeting*, Dallas, Tx, October 24-27, 2012

9. Cuéllar, JM, Martin Quirno; Kirk Campbell, Andrew Yoo, , Christian M. Hoelscher, Pedro A. Ricart-Hoffiz, Tate M. Andres, Thorsten Kirsch, Thomas J. Errico. The Effect of Prophylactic Local Epidural Steroid Delivery in a Spinal Cord Injury Model. ***Annual Meeting of the International Society for the Advancement of Spine Surgery (ISASS)***, Barcelona, Spain, March 20-23, 2012.
10. Cuéllar, VG, Cuéllar JM, Borges PM, Scuderi GJ, Yeomans DC. Cytokine profiling in an animal model of non-compressive intervertebral disc herniation using epidural lavage. ***Annual Meeting of the International Society for the Advancement of Spine Surgery (ISASS)***, Barcelona, Spain, March 20-23, 2012.
11. Cuéllar JM, Marlen N, Cuéllar VG, Angst MS, Yeomans DC, Montesano PX. Cytokines in the intervertebral disc of patients undergoing lumbar anterior discectomy and interbody fusion for degenerative disc disease. ***Annual Meeting of the International Society for the Advancement of Spine Surgery (ISASS)***, Barcelona, Spain, March 20-23, 2012
12. Cuéllar, JM, Golish, SR, Cuéllar, VG, Song, Y and Hanna, LS. Can intraarticular cytokine profiling predict the development of knee pain? Four-year follow-up of asymptomatic controls. **Orthopaedic Research Society**. San Francisco, 2012
13. Carragee EJ, Cuéllar JM, Hurwitz, E, Carrino, JA, Herzog, RJ. Does Provocative Discography Cause Clinically Important Injury to the Lumbar Intervertebral Disc? ***Annual Meeting of the American Academy of Orthopaedic Surgeons***. San Francisco, 2012
14. Scuderi GJ, Cuéllar JM, Cuéllar VG, Golish SR, Angst M, Yeomans DC. Presence of a novel complex of structural proteins in intervertebral discs by discography, in ***Annual Meeting of the American Academy of Orthopaedic Surgeons***. New Orleans, 2010.
15. Scuderi, GJ, Cuéllar, JM, Gabrovsky, V, Carragee, EJ, Yeomans, DC and Angst, MS. Epidural Interferon Gamma correspondence with lumbar radiculopathy. Oral presentation at: **North American Spine Society**; Ontario, Canada. (2008, October).
16. Scuderi, GJ, Cuéllar, JM, Gabrovsky V, Vaccaro, AR and Carragee, EJ. Accelerated degeneration and instability after cervical and lumbar nucleoplasty: a pilot study of negative long-term consequences? Poster presented at: **North American Spine Society**; Ontario, Canada. (2008, October).
17. Scuderi, GJ; Cuéllar, JM; Gabrovsky, V., Yeomans, D. and Angst, M. A cytokine biomarker and potential therapeutic target for disc herniation-induced sciatica. **Orthopaedic Research Society**, San Francisco, CA March 2-5, 2008
18. Cuéllar, J.M., Scuderi, GJ, Gabrovsky, V, Golish, S.R., and Yeomans, D.C. Diagnostic utility of cytokine biomarkers in the evaluation of meniscal pathology following acute knee injury, a comparison study with normal volunteers. **Orthopaedic Research Society**, San Francisco, CA March 2-5, 2008
19. Borges, P.M., Cuéllar, J.M., Gabrovsky, V., Scuderi, G.J. and Yeomans, D.C. An animal model for the investigation of nucleus pulposus-induced inflammatory cytokine modulation. **Cervical Spine Research Society**, San Francisco, CA, November 2007.
20. Scuderi, G.J., Cuéllar, J.M., Gabrovsky, V., Yeomans, D.C. and Angst, M.S. Resolution of Radiculopathy in Patients Identified with Cytokine Biomarker Corresponds to Inflammatory Blockade in an Animal Model of Disc-Herniation. **Cervical Spine Research Society**, San Francisco, CA, November 2007. Oral presentation.
21. Scuderi, GJ, Cuéllar, JM, Gabrovsky, V, Yeomans, DC and Angst, MS A Cytokine Biomarker And Potential Therapeutic Target For Disc Herniation-Induced Sciatica,



- North American Spine Society**, October 2007, Austin Texas, selected for oral presentation.
22. Borges, P.M., Cuéllar J.M., Gabrovsky V., Scuderi G.J. and Yeomans D.C. An animal model for the investigation of nucleus pulposus-induced inflammatory cytokine modulation. Society for Neuroscience 2007, San Diego, CA.
  23. Cuéllar J.M., Nemenov M.I., Klyukinov M. and Yeomans D.C. Differential activation of trigeminal nociceptors using a diode infrared laser. Society for Neuroscience 2007, San Diego, CA.
  24. Klyukinov M, Manering, N., Cuéllar, J.M., Nemenov M.I. and Yeomans D.C. A rodent model of trigeminal neuralgia. Society for Neuroscience 2007, San Diego, CA.
  25. Gabrovsky, V., Cuéllar, J.M., Calos, M.P. and D.C. Yeomans. Non-viral gene therapy technology in the treatment of neuropathic pain. 10<sup>th</sup> Annual American Society for Gene Therapy Meeting. Seattle, WA May 30-Jun 3, 2007.
  26. Cuéllar, JM, Nemenov, MI, Klyukinov, M, Yeomans, DC Response properties of rat trigeminal ganglion nociceptive neurons to cutaneous thermal stimulation with a diode laser. American Pain Society, Washington DC, May 2-5, 2007.
  27. Iodi-Carstens, M., Merrill, A.W., \*Cuéllar, J.M., Carstens, E. Effects of TRPA1 agonists mustard oil (MO) and cinnamaldehyde (CA) on lumbar wide dynamic range (WDR) dorsal horn neuronal responses, Society for Neuroscience 2006, Atlanta, Georgia
  28. Cuéllar, JM, Nemenov, MI, Klyukinov, M, Yeomans, DC Nociceptor-selective activation by diode laser. Society for Neuroscience 2006, Atlanta, Georgia
  29. Nemenov, MI, Cuéllar, JM, Tzabazis, AZ, Klyukinov, M, Manering, N, Yeomans, DC. Infrared diode laser stimulation of C or A nociceptors in rats. Program No. 746.10. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2005. Online
  30. Cuéllar, JM, Judd, JH, Moore, JA, Carstens, E. Chemical desensitization and thermal sensitization of spinal dorsal horn neurons by topical mustard oil. *International Association for the Study of Pain; 11<sup>th</sup> World Congress on Pain*, Sydney, Australia, August 25, 2005
  31. Nemenov, MI, Greenspan, JD, Crottaz-Herbette, S, Cuéllar, JM, Yeomans, DC Pricking Pain vs. Burning Pain Selectively Evoked by Infrared Diode Laser Stimulation. *International Association for the Study of Pain; 11<sup>th</sup> World Congress on Pain*, Sydney, Australia, August 25, 2005
  32. Crottaz-Herbette, S, Nemenov, MI, Angst, MS, Klyukinov, M, Cuéllar, JM, Yeomans, DC. Selective Activation Of C vs. A Nociceptors By Infrared Diode Laser Stimuli In Humans: An Evoked Potential Study. *International Association for the Study of Pain; 11<sup>th</sup> World Congress on Pain*, Sydney, Australia, August 22, 2005
  33. Cuéllar, J.M., Montesano, P.X. Antognini, J.F. and Carstens, E. Application of nucleus pulposus to L5 dorsal root ganglion in rats enhances nociceptive dorsal horn neuronal windup. Society for neuroscience 34<sup>th</sup> annual meeting, San Diego, October 23-28, 2004.
  34. Cuéllar, J.M., Dutton, R.C., Antognini, J.F., Jinks, S.L., Mitsuyo, T. and Carstens, E. Differential effects of halothane (HAL) and isoflurane (ISO) on dorsal horn neuronal windup. Society for neuroscience 34<sup>th</sup> annual meeting, San Diego, October 23-28, 2004.
  35. Cuéllar, J.M., Montesano, P.X. and Carstens, E. Role of TNF- $\alpha$  in sensitization of nociceptive dorsal horn neurons induced by application of nucleus pulposus to L5 dorsal root ganglion in rats. **International Society for the Study of the Lumbar Spine, Spineweek** 2004, Porto, Portugal, May 31-June 5 2004.
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