



## **Marcella Madera, M.D.**

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### **Education**

M.D., University of Oklahoma College of Medicine, Oklahoma City, OK 2004

B.A., Biochemistry/Molecular Biology, *Summa Cum Laude*, Washington University, St. Louis, MO 1999

### **Postdoctoral Training**

Spine Fellowship and Faculty Instructorship, Johns Hopkins College of Medicine Department of Neurosurgery, Baltimore, MD 2010-11

Residency, University of Cincinnati College of Medicine Neurosurgery Residency Training Program, Cincinnati, OH 2004-10

### **Academic and Leadership Appointments**

Assistant Professor Surgery, University of Texas Dell Medical School, Austin, TX 2016-present

### **Other Employment and Clinical Activities**

Board-certified (2015) Neurosurgeon, Austin Brain and Spine, Austin, TX 2011-present

### **Honors and Awards**

Graduated medical school with Special Distinction 2004

American Medical Women's Association Glasgow-Rubin Achievement Citation 2004

Alpha Omega Alpha, inducted as a medical school junior 2003

Robert I. Dubin, M.D. Memorial Award, Tulsa County Medical Society 2002

W.A. Showman, M.D. Award, Tulsa County Medical Society 2001

Mark R. Everett Award, Oklahoma City Community Foundation 2001

Dr. Fred S. Clinton Scholar (academic award for 4.00 GPA during both non-clinical years) 2000-1

### **Educational Activities**

#### **Educational Administration and Leadership**

Dell Medical School Surgery and Perioperative Care Departmental Council Neurosurgery Representative 2016-present

Dell Medical School Associate Chair of Education Search Committee Member 2015-16

**Updated:** 6/30/18

Dell Medical School Student Interviewer for 2016 Inaugural Incoming Class 2015

### **Development of Curricula and Educational Materials**

Dell Medical School Neuroscience: Disorders of the Spine Clinical Conference Director 2015-present

## **Professional Memberships and Activities with Leadership Positions**

2018 AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves Planning Committee Member 2017

2017 AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves Breakout Session Moderator 2017

2017 AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves Planning Committee Member 2016-17

Strategy for Value-Based Health Care Delivery with Harvard Business School Professor Michael Porter. Texas Executive Education, McCombs School of Business, The University of Texas at Austin, Participant September 2015

Texas Medical Association Leadership College Member 2014-15

2015 CNS Scientific Planning Committee Member 2014

North American Spine Society (NASS) 2012-present

American Association of Neurological Surgeons (AANS) Member 2010-present

Congress of Neurological Surgeons (CNS) Member 2010-present

AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves (DSPN) 2010-present

AO Spine 2010-present

## **Advising and Mentoring**

Dell Medical School Surgery Interest Group Sponsor 2017-present

Dell Medical School, Surgery Mentor 2015-present

## **Grants**

### **Completed**

Mayfield Educational Research Foundation, Medtronic, Inc. Neuromodulation 2007-09

**Marcella Madera, MD, Co-PI**, George Mandybur, MD, PI,  
Henry A. Nasrallah, MD, Co-PI, D. Michael Beal, MD, Co-I

Epidural Cortical Stimulation for Auditory Hallucinations Refractory to Antipsychotic Therapy: A Placebo-Controlled, Randomized Crossover Study in Patients with Schizophrenia

This study aimed to prove that transcranial magnetic stimulation-screened patients would improve with auditory hallucination symptoms after epidural cortical stimulation surgery.

Mayfield Educational Research Foundation, \$50,000 granted.  
Medtronic, Inc. Neuromodulation Research, devices granted.

Role: Residency research project

## Technology Development

### Devices/Software Applications

Patient IO, Advisory Board Member; acquired by Athena	2013-16
Healthy Life Enterprises, Medical Director	2017-present

## Active Research Activities and Clinical and Quality Improvement Projects

St. David's Hospital Spine Program Co-Director	2017-present
Dell Medical School Pain After Lumbar Fusion Clinical Care Pathway Physician Champion; this program aims to reduce narcotic use after lumbar fusion by incorporating ERAS and integrative modalities across the lumbar fusion care episode.	2017-present
Effects of Physical Therapy on Patients Undergoing Anterior and/or Posterior 1-2 Level Lumbar Fusions for Degenerative Lumbar Instability. Principal Investigator: Eric Truumees Role: Co-Investigator	2016-present
Sponsor: Pfizer United States (US) Investigational New Drug (IND) Number: BB-IND #14705 Principal Investigator (PI): Dr. Eric Truumees (Site PI) Title: A Phase 2b, Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Safety and Efficacy of Staphylococcus aureus 4-Antigen Vaccine (SA4Ag) in Adults Undergoing Elective Posterior Instrumented Lumbar Spinal Fusion Procedures Description: To assess the efficacy of SA4Ag in the prevention of postoperative S. aureus BSI and/or deep incisional or organ/space surgical-site infection (SSI) occurring within 90 days of elective posterior instrumented lumbar spinal fusion procedures, in adults aged 18 to <86 years. Role: Co-Investigator	2015-2017
Seton Hospital Network Spine Committee Co-chairperson; this committee works to develop and maintain spine care quality measures and metrics for the Seton Hospital Network	2012-16
Brackenridge Hospital Spine Committee Co-chairperson; this committee works to develop and maintain spine care quality measures and metrics for Brackenridge Hospital	2012-16

## Publications

### Peer-reviewed publications

1. Truumees E; **Madera M**, Brady J, Deily, S, McGinty T, Singh D. Should Physical Therapy be Incorporated in Patient Care Post 1-2 Level Lumbar Fusions for Degenerative Lumbar Instability? -A Comparative Outcome Analysis. Submitted to J Neurosurg Spine Jun 2017.
2. **Madera M**, Brady J, Deily S, McGinty T, Moroz L, Singh D, Tipton G, Truumees E. The Role of Physical Therapy and Rehabilitation after Lumbar Fusion Surgery for Degenerative Disease: A Systematic Review. J Neurosurg Spine. 2017 Jun;26(6):694-704
3. Laufer I, Sciubba DM, **Madera M**, Bydon A, Witham TJ, Gokaslan ZL, Wolinsky JP. Surgical management of metastatic spinal tumors. Cancer Control. 2012 Apr;19(2):122-8.
4. **Madera M**, Crawford F, Mangano FT. Management of the cervical spine in a patient with Larsen Syndrome. J Neurosurg Pediatrics. 2008 Apr;1(4):320-4.
5. Parikh S, **Koch M\***, Narayan R. Traumatic Brain Injury. Int Anesthesiol Clin. 2007 Summer; 45(3):119-35.
6. Ma R, Rundle D, Jacks J, **Koch M\***, Downs T, Tsiokas L. Inhibitor of myogenic family, a novel suppressor of store-operated currents through an interaction with TRPC1. J Biol Chem. 2003 Dec 26;278(52):52763-72.

### Books & Chapters

1. Laufer I, **Madera M**, Sciubba D, Gokaslan Z. Treatment of Spinal Metastatic Tumors. In: Principles of Neurosurgery, Third Edition, Ellenbogen, RG and Abdulrauf, S, eds. Elsevier, USA 2010: 437-444.
2. **Madera MA** and Tobler WD. Miniframe Stereotactic Apparatus. In: Textbook of Stereotactic and Functional Neurosurgery, 2nd Edition, Lozano AM et al, eds. Springer-Verlag, Germany. 2009: 521-531.
3. Narayan R, Timmons S, **Koch M\***. Traumatic Brain Injury. In: The Merck Manual, 18<sup>th</sup> Edition, Beers MH ed. Merck Research Laboratories, Whitehouse Station, NJ. 2006: 2572-2579. **3**

### Non-print / Online materials

1. NASS "Paths to Leadership" video [https://www.youtube.com/watch?v=SfGXoU\\_ESwA](https://www.youtube.com/watch?v=SfGXoU_ESwA)
2. **Koch M\***, Narayan RK, Timmons S. Traumatic Brain Injury. In: The Merck Manual Professional Edition, Porter RS ed. Merck Research Laboratories, Whitehouse Station, NJ. 2008 online. <http://www.merck.com/mmpe/sec21/ch310/ch310a.html>

## Editorial Responsibilities

North American Spine Society Annual Meeting Abstract Reviewer

2015, 2017

## Invited Presentations, Posters & Abstracts

### International

**Madera M**, Laufer I, Bydon A, Sciubba D, Witham T, Gokaslan Z, Wolinsky JP. April 2011  
 "Complications and Oncologic Outcomes After Multilevel En Bloc Spondylectomy in 11 Patients." AOSpine North America Fellows Forum, Banff Springs, Canada, March 31- Poster, Top 10 Poster Winner, Oral Presentation.

**National**

- 1. Singh D, Truumees E, McGinty T, Deily S, Brady J, **Madera M**. Should Physical Therapy be Incorporated in Patient Care Post 1-2 Level Lumbar Fusions for Degenerative Lumbar Instability? -A Comparative Outcome Analysis. North American Spine Society, Orlando, FL, Podium Abstract Presentation 2017; AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves, Orlando, FL, Podium Abstract Presentation 2018 October 2017,  
March 2018
- 2. **Madera M**, Brady J, Deily S, McGinty T, Moroz L, Singh D, Tipton G, Truumees E. The Role of Physical Therapy and Rehabilitation after Lumbar Fusion Surgery for Degenerative Disease: A Systematic Review. Academy of Orthopaedic Surgeons, Orlando, FL, Podium Presentation, presented by Truumees, E. March 2016
- 3. **Madera M, Tobler W**. "Outpatient Fusion at L5-S1 with the AxiaLIF Procedure." Society for Minimally Invasive Spine Surgery Annual Meeting, San Diego, CA, Poster. November  
2007

**Regional**

- 1. **Madera M**. "Thoracic Spine Pathology and Surgical Management." Brackenridge Hospital Nursing Education Conference, Austin, TX, Oral Presentation. September  
2014
- 2. **Madera M**. "Update on Bone Extenders and Biologics for Lumbar Fusion." Seton Brain and Spine Institute "Current Concepts in Spine Management: Best Practices and New Technologies" conference, Austin, TX, Oral Presentation. November  
2013
- 3. **Madera M**. "Spine Oncology: A Surgical Perspective." Seton Brain and Spine Institute "Neuro-oncology: Redefining What is Possible" conference, Austin, TX, Oral presentation. June 2012
- 4. **Madera M**, Steinberg T. "Divergent trafficking of cx43 and cx46 does not depend on the carboxyl terminus of the proteins in COS-7 cells" and "COS-7 cells provide a useful model for studying differential trafficking of connexins." WU HHMI Annual Summer Research Conferences. Posters. 1997-98

**Community Service**

Ballet Austin, Board Member 2012-present

\*"Koch" is a former last name.