

## ***CURRICULUM VITAE***

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### **1. PERSONAL INFORMATION**

#### **A. Education:**

- Undergraduate: Princeton University, Princeton, USA, 1988-1992, BA, Molecular Biology
- Graduate Education: National Institutes of Health, Bethesda, USA 1994-1995, Howard Hughes Research Scholar in Residence
- Medical Education: Weill Cornell Medical College, New York, USA, 1992-1997, MD
- Internship: Johns Hopkins Medical Institutions, General Surgery, Baltimore, USA, 1997-1998, John Cameron MD, Department Chair
- Residency: Johns Hopkins Medical Institutions, Orthopaedic Surgery, Baltimore, USA, 1998-2002, Frank Frassica MD, Department Chair
- Fellowship: Emory University Spine Center, Orthopaedic Surgery, Atlanta, USA, 2002-2003, John Heller MD, Fellowship Director

#### **B. Professional Experience:**

Attending Orthopaedic Surgeon, Co-Director Maryland Spinal Reconstructive Fellowship, St Joseph Medical Center, Baltimore, USA, 2003-2010

Attending Orthopaedic Surgeon, Greater Baltimore Medical Center, Baltimore, USA, 2003-2010

Attending Orthopaedic Surgeon, Assistant Professor, Johns Hopkins Hospital, USA, 2005-2015

Attending Orthopaedic Surgeon, Director of Spine Research and Education (2010-present), Director of Spinal Reconstructive Fellowship (2016-present), Director of Spine Division (2015-present), MedStar Union Memorial Hospital, Baltimore, USA

Professor, Dept of Orthopaedic Surgery, Georgetown University School of Medicine (2019-2020)

**C. Licensure:**

State: Maryland

License No: D00059863

Initial Date: 08/19/2003

Renewal/Expiration Date: 09/30/2021

**D. Certification:**

Board Certification: American Board of Orthopaedic Surgery

Date of Certification: 01/01/2005

Date of Re-certification: 12/31/2025

**E. Languages Spoken:**

English

**2. RESEARCH AND SCHOLARLY ACTIVITIES**

**A. Publications:**

**i. Original Papers in Refereed Journals**

1. Cunningham BW, Sponseller PD, Murgatroyd AA, Kikkawa J and **Tortolani JP**: A comprehensive biomechanical analysis of sacral alar iliac fixation: an in vitro human cadaveric model. (*E-Publication 1/7/2019 The Journal of Neurosurgery – Spine*).
2. Traynelis VC, Malone HR, Smith ZA, Hsu WK, Kanter AS, Qureshi SA, Cho SK, Baird EO, Isaacs RE, Rahman RK, Poleyeva G, Smith JS, Shaffrey C, **Tortolani PJ**, Stroh DA, Arnold PM, Fehlings MG, Mroz TE, Riew KD. Rare complications of cervical spine surgery: Horner's syndrome. *Global Spine J.* 2017 Apr;7:103S-8S. doi: [10.1177/2192568216688184](https://doi.org/10.1177/2192568216688184). Epub 2017 Apr 1. PubMed PMID: 28451480; PubMed Central PMCID: [PMC5400192](https://pubmed.ncbi.nlm.nih.gov/PMC5400192/).
3. Thompson SE, Smith ZA, Hsu WK, Nassr A, Mroz TE, Fish DE, Wang JC, Fehlings MG, Tannoury CA, Tannoury T, **Tortolani PJ**, Traynelis VC, Gokaslan Z, Hilibrand AS, Isaacs RE, Mummaneni PV, Chou D, Qureshi SA, Cho SK, Baird EO, Sasso RC, Arnold PM, Buser Z, Bydon M, Clarke MJ, De Giacomo AF, Derakhshan A, Jobse B, Lord EL, Lubelski D, Massicotte EM, Steinmetz MP, Smith GA, Pace J, Corriveau M, Lee S, Cha PI, Chatterjee D, Gee EL, Mayer EN, McBride OJ, Roe

- AK, Yanez MY, Stroh DA, Than KD, Riew KD. C5 palsy after cervical spine surgery: a multi-center retrospective review of 59 cases. *Global Spine J.* 2017 Apr;7:64S-70S. Epub 2017 Apr 1. doi: [10.1177/2192568216688189](https://doi.org/10.1177/2192568216688189). PubMed PMID 28451494; PubMed Central PMCID: [PMC5400195](https://pubmed.ncbi.nlm.nih.gov/PMC5400195/).
4. Schroeder GD, Hilibrand AS, Arnold PM, Fish DE<sup>3</sup>, Wang JC, Gum JL, Smith ZA, Hsu WK, Gokaslan ZL, Isaacs RE, Kanter AS, Mroz TE, Nassr A, Sasso RC, Fehlings MG, Buser Z, Bydon M, Cha PI, Chatterjee D, Gee EL, Lord EL, Mayer EN, McBride OJ, Nguyen EC, Roe AK, **Tortolani PJ**, Stroh DA, Yanez MY, Riew KD. Epidural hematoma following cervical spine surgery. *Global Spine J.* 2017 Apr;7:120S-6S. Epub 2017 Apr 1. doi: [10.1177/2192568216687754](https://doi.org/10.1177/2192568216687754). PubMed PMID: 28451483; PubMed Central PMCID: [PMC5400190](https://pubmed.ncbi.nlm.nih.gov/PMC5400190/).
  5. Daniels AH, Hart RA, Hilibrand AS, Fish DE, Wang JC, Lord EL, Buser Z, **Tortolani PJ**, Stroh DA, Nassr A, Currier BL, Sebastian AS, Arnold PM, Fehlings MG, Mroz TE, Riew KD. Iatrogenic spinal cord injury resulting from cervical spine surgery. *Global Spine J.* 2017 Apr;7:84S-90S. Epub 2017 Apr 1. doi: [10.1177/2192568216688188](https://doi.org/10.1177/2192568216688188). PubMed PMID: 28451499; PubMed Central PMCID: [PMC5400194](https://pubmed.ncbi.nlm.nih.gov/PMC5400194/).
  6. Stroh DA, **Tortolani PJ**. Cortical bone trajectory. *J. Am Acad Orthop Surg.* 2016 Nov;24:755-761. doi: [10.5435/JAAOS-D-15-00597](https://doi.org/10.5435/JAAOS-D-15-00597). PubMed PMID: 27755261.
  7. **Tortolani PJ**, Moatz BW, Parks BG, Cunningham BW, Seftor DO, Kretzer RM. Effectiveness of a cadaver training module to teach thoracic pedicle screw placement to orthopaedic residents. *Orthopedics.* 2013 Sep;36:e1128-e1133. doi: [10.3928/01477447-20130821-13](https://doi.org/10.3928/01477447-20130821-13). PubMed PMID: 24025002.
  8. Kretzer RM, Hsu W, Hu N, Umekoji H, Jallo GI, McAfee PC, **Tortolani PJ**, Cunningham BW. Adjacent level range of motion and intradiscal pressure after posterior cervical decompression and fixation: an in-vitro human cadaveric model. *Spine.* 2012 Jun 1;37:E778-85. doi: [10.1097/BRS.0b013e31824780b8](https://doi.org/10.1097/BRS.0b013e31824780b8). PubMed PMID: 22228326.
  9. Molina C, Sciubba DM, Chaput C, **Tortolani PJ**, Jallo GI, Kretzer RM. A computed tomography-based feasibility study of translaminar screw placement in the pediatric thoracic spine. *J Neurosurg Pediatr.* 2012 Jan;9:27-34. doi: [10.3171/2011.10.PEDS11121](https://doi.org/10.3171/2011.10.PEDS11121). PubMed PMID: 22208317.
  10. Kretzer RM, Chaput C, Sciubba DM, Garonzik IG, Jallo GI, McAfee PC, Cunningham BW, **Tortolani PJ**. A computed tomography-based morphometric study of thoracic pedicle anatomy in a random US trauma population. *J Neurosurg Spine.* 2011 Feb;14(2):235-43. Epub 2010 Dec 24. doi: [10.3171/2010.9.SPINE1043](https://doi.org/10.3171/2010.9.SPINE1043). PubMed PMID: 21184638.
  11. Kretzer RM, Hu N, Umekoji H, Sciubba DM, Jallo GI, **Tortolani PJ**, McAfee PC, Cunningham BW. The effect of spinal instrumentation on kinematics at the cervicothoracic junction: emphasis on soft tissue response using an in-vitro human cadaveric model. *J Neurosurg Spine.* 2010 Oct;13:435-42. doi: [10.3171/2010.4.SPINE09995](https://doi.org/10.3171/2010.4.SPINE09995). PubMed PMID: 20887140.
  12. Kretzer RM, Hu N, Kikkawa J, Garonzik IG, Jallo GI, **Tortolani PJ**, McAfee PC, Cunningham BW. Surgical management of two- versus three-column injuries of the cervicothoracic junction: biomechanical comparison of translaminar screw and pedicle screw fixation using a cadaveric model. *Spine (Phila Pa 1976).* 2010 Sep 1;35:E948-54. doi: [10.1097/BRS.0b013e3181e9f56c](https://doi.org/10.1097/BRS.0b013e3181e9f56c). PubMed PMID: 20581763.
  13. Kretzer RM, Chaput C, Sciubba DM, Conway JE, Garonzik IG, Jallo GI, McAfee PC, Cunningham BW, **Tortolani PJ**. A computed tomography-based feasibility study of translaminar screw fixation in the upper thoracic spine. *J Neurosurg Spine.* 2010 Mar;12:286-92. doi: [10.3171/2009.10.SPINE09546](https://doi.org/10.3171/2009.10.SPINE09546). PubMed PMID: 20192629.
  14. Cunningham BW, McAfee PC, Geisler FH, Holsapple G, Adams K, Blumenthal SL, Guyer RD, Cappucino A, Regan JJ, Fedder IL, **Tortolani PJ**. Distribution of in vivo and in vitro range of

- motion following 1-level arthroplasty with the CHARITE artificial disc compared with fusion. *J Neurosurg Spine*. 2008 Jan;8:3-5. doi: [10.3171/SPI-08/01/007](https://doi.org/10.3171/SPI-08/01/007). PubMed PMID: 18173340.
15. Singh K, Smucker JD, Ugbo JL, **Tortolani PJ**, Tsai L, Fei Q, Kuh S, Rumi M, Heller JG, Boden SD, Yoon ST. rhBMP-2 enhancement of posterolateral spinal fusion in a rabbit model in the presence of concurrently administered doxorubicin. *Spine J*. 2007 May-Jun;7:326-31. Epub 2006 Dec 22. doi: [10.1016/j.spinee.2006.06.397](https://doi.org/10.1016/j.spinee.2006.06.397). PubMed PMID: 17482116.
  16. Prybis BG, **Tortolani PJ**, Hu H, Zorn CM, McAfee PC, Cunningham MS. A comparative biomechanical analysis of spinal instability and instrumentation of the cervicothoracic junction: an in vitro human cadaveric model. *Journal Spinal Disord Tech*. 2007 May;20:233-8. doi: [10.1097/01.bsd.0000211279.60777.db](https://doi.org/10.1097/01.bsd.0000211279.60777.db). PubMed PMID: 17473645.
  17. **Tortolani PJ**, Cunningham BW, Eng M, McAfee PC, Holsapple GA, Adams KA. Prevalence of heterotopic ossification following total disc replacement. A prospective, randomized study of two hundred and seventy-six patients. *J Bone Joint Surg Am*. 2007 Jan;89(1):82-8. doi: [10.2106/JBJS.F.00432](https://doi.org/10.2106/JBJS.F.00432). PubMed PMID: 17200314.
  18. Tortolani PJ, **Cunningham BW**, **Vigna F**, Hu N, Zorn CM, McAfee PC. A comparison of retraction pressure during anterior cervical plate surgery and cervical disc replacement: a cadaveric study. *J Spinal Disord Tech*. 2006 Jul;19:312-7. doi: [10.1097/01.bsd.0000210117.01897.ca](https://doi.org/10.1097/01.bsd.0000210117.01897.ca). PubMed PMID: 16826000.
  19. McAfee PC, Geisler FH, Saiedy SS, Moore SV, Regan JJ, Guyer RD, Blumenthal SL, Fedder IL, **Tortolani PJ**, Cunningham B. Revisability of the CHARITE artificial disc replacement: analysis of 688 patients enrolled in the U.S. IDE Study of the CHARITE artificial disc. *Spine (Phila Pa 1976)*. 2006 May 15;31:1217-26. doi: [10.1097/01.brs.0000217689.08487.a8](https://doi.org/10.1097/01.brs.0000217689.08487.a8). PubMed PMID: 16688035.
  20. Tortolani PJ, Park AE, Attallah E, Kraiwattanpong C, Ugbo J-L, Heller JG, Boden SD, Yoon ST. The effects of doxorubicin (adriamycin) on spinal fusion: an experimental model of posterolateral lumbar spinal arthrodesis. *Spine J*. 2004 Nov-Dec;4:669-74. doi: [10.1016/j.spinee.2004.05.254](https://doi.org/10.1016/j.spinee.2004.05.254). PubMed PMID: 155541701.
  21. Carbone JJ, **Tortolani PJ**, Quartararo, L. Fluoroscopically assisted pedicle screw fixation for thoracic and thoracolumbar injuries: technique and short-term complications. *Spine (Phila Pa 1976)*. 2003 Jan;28:91-7. Doi: [10.1097/01.BRS.0000038156.11504.6A](https://doi.org/10.1097/01.BRS.0000038156.11504.6A). PubMed PMID: 12544964.
  22. **Tortolani PJ**, Carbone JJ, Quartararo, L. Greater trochanteric pain syndrome in patients referred to orthopaedic spine specialists. *Spine J*. 2002 Jul-Aug;2(4):251-4. PubMed PMID: 14589475.
  23. **Tortolani PJ**, McCarthy EF, Sponseller PD. Bone mineral density deficiency in children. *J Am Acad Orthop Surg*. 2002 Jan-Feb;10:57-66. PubMed PMID: 11809051.
  24. **Tortolani PJ**, Ain MC, Miller NH, Brumback R, Sponseller PD. Tibial nails for the treatment of femoral shaft fractures in adolescents: "off-label" usage. *Orthopedics*. 2001 Jun;24:553-7. PubMed PMID: 11430734.
  25. **Tortolani PJ**, Kaufman HS, Nahebedian MY, Frassica FJ. Pericapsular fistula of the hip after radiation therapy and resection of a rectal carcinoma. A case report. *J Bone Joint Surg*. 1999 Nov;81:1596-9.
  26. **Tortolani PJ**, Lal BK, Riva A, Johnston JA, Chen YQ, Reaman GH, Beckwith M, Longo D, Ortaldo JR, Bhatia K, McGrath I, Kehrl J, Tuscano J, McVicar DW, O'Shea JJ. Regulation of JAK3 expression and activation in human b cells and b cell malignancies. *J Immunol* 1995 Dec 1;155:5220-6. PubMed PMID: 7594533.
  27. Keegan, A.D., Johnston, J.A., **Tortolani PJ**, McReynolds, M.J., Kinzer, C., O'Shea, J.J., and Paul, W.E. Similarities and differences in signal transduction by interleukin 4 and interleukin 13: analysis

- of Janus kinase activation. *Proc Natl Acad Sci USA*. 1995 Aug 15;92:7681-5. PubMed PMID: 7544000. PubMed Central PMCID: PMC41209.
28. Bacon CM, **Tortolani PJ**, Shimosaka A, Rees, RC, Longo D, O'Shea JJ. Thrombopoietin induces tyrosine phosphorylation and activation of STAT5 and STAT3. *FEBS Lett*. 1995 Aug 14;370:63-8. PubMed PMID: 7544303.
  29. **Tortolani PJ**, Johnston JA, Bacon CM, McVicar DM, Shimosaka A, Linnekin D, Longo DL, O'Shea JJ. Thrombopoietin induces tyrosine phosphorylation and activation of the janus kinase, JAK2. *Blood*. 1995 Jun 15;85:3444-51. PubMed PMID: 7780132.

## ii. Reviews or Editorials in Refereed Journals

1. McAfee PC, Geisler FH, Saiedy S, Moore SV, Regan JJ, Guyer RD, Blumenthal SL, Fedder IL, **Tortolani PJ**, Cunningham B. Revisability of the CHARITE artificial disc replacement: analysis of 347 patients enrolled in the U.S. IDE study of the CHARITE artificial disc. In: McAfee PC (ed): *Roundtables in Spine Surgery, Complications and Revision Strategies in Lumbar Spine Arthroplasty*. 2005;1:73-96. (refereed)
2. **Tortolani PJ**, Cunningham BW, Vigna FE, Hu N, Zorn CM, McAfee PC. A comparison of retraction pressure during anterior cervical plate surgery and cervical disc replacement: a cadaveric study. In: McAfee PC, Anderson PA, Sasso RC (eds): *Roundtables in Spine Surgery, Recent Advances in Cervical Arthroplasty*. 2007;2(1):45-54. (refereed)
3. Auerbach M, **Tortolani PJ**. Is it time for a new standard? *Transfusion* 2014;54:263-5. (refereed)

## iii. Books or Chapters in Books

1. Lemma M, Herzka A, **Tortolani J**, Carbone JJ. Cauda equina syndrome secondary to lumbar disc prolapse. In: Vaccaro AR, Betz RR, Zeidman SM, eds: *Principles and Practices of Spine Surgery*. Philadelphia: WB Saunders Co.; 2002: 347-353.
2. **Tortolani PJ**, Yoon ST. Cervical spondylotic myelopathy. In Frymoyer JW, Wiesel SW, eds: *The Adult and Pediatric Spine*, 3rd ed. Philadelphia: Lippincott Williams & Wilkins; 2004: 701-712.
3. Saiedy S, **Tortolani PJ**: Lumbar anterior revision: preoperative preparation and approach considerations. In: Yue JJ, Bertagnolli R, McAfee PC, An HS, eds. *Motion Preservation Surgery of the Spine: Advanced Techniques and Controversies*. Philadelphia: Saunders; 2008: 373-376.
4. Gloystein D, **Tortolani PJ**, Stambough JL, Clouse EK. Complications of spine surgery: surgical site infections. *American Academy of Orthopaedic Surgeons. Orthopaedic Knowledge Online* 2010;8(7): <http://test2.aaos.org/oko/page.cfm?topic=SPI037>. Accessed May 25, 2010.
5. **Tortolani PJ**, Saiedy S, Fedder IN. Anterior lumbar approach. In: Wiesel SW (ed). *Operative Techniques in Orthopaedic Surgery*. Philadelphia: Lippincott Williams & Wilkins; 2011: 4530-4536.
6. **Tortolani PJ**, McAfee PC, Scott-Young M: Anterior lumbar interbody fusion, disc replacement and corpectomy. In Wiesel SW (ed). *Operative Techniques in Orthopaedic Surgery*. Philadelphia: Lippincott Williams & Wilkins, 2011: 4634-4645.
7. Sinkov V, **Tortolani PJ**. Whiplash associated disorders. In: Raj Rao (ed). *Orthopaedic Knowledge Update (OKU) Spine 4*. Rosemont: American Academy of Orthopaedic Surgeons; 2012: 273-282.
8. Moatz B, Ludwig SC, **Tortolani PJ**. Fractures and dislocations of the lumbar and lumbosacral spine. *American Academy of Orthopaedic Surgeons. Orthopaedic Knowledge Online* 2012;10(8): <https://www.aaos.org/OKUJ/vol10/issue8/SPI050>. Accessed July 30, 2012.
9. Stroh DA, Moatz BW, **Tortolani PJ**. Rehabilitation after spine surgery--relevant anatomy. In: Green A, Hayda, eds. *Postoperative Orthopaedic Rehabilitation*. Lippincott Williams & Wilkins, 2017:545-555.

#### iv. Other Publications

##### Invited Review Articles

1. **Tortolani PJ**, McCarthy EF, Lietman SA, Bluemke DA, Zerhouni EA, Frassica FJ. Soft tissue tumors: distinguishing the benign from the malignant. *J Musculoskeletal Med.* 1999; 16(8):469-76.
2. **Tortolani PJ**, Lemma M, Riley L.H. III. Lumbar spinal stenosis in the elderly. *J Musculoskeletal Med.* 2004 Jan.
3. Vigna F, **Tortolani PJ**. Cervical myelopathy: differential diagnosis. *Semin Spine Surgery.* 2004 Dec; 16:228-233.
4. **Tortolani PJ**, Saiedy SS, McAfee PC. Failures of Lumbar Disc Replacement. *Semin Spine Surgery* June 2006; 18:78-86.
5. Hebel MH, Saiedy S, **Tortolani PJ**, McAfee PC. Revision of lumbar total disc arthroplasty and other instrumentation. *Seminars in Spine Surgery.* March 2008; 20(1):46-52
6. Hebel MH, **Tortolani PJ**. Idiopathic scoliosis in adults: classification, indications, and treatment options. *Semin Spine Surgery.* 2009 Mar;21(1) 16-23.
7. Carl K, Park AP, **Tortolani PJ**. Epidemiology of catastrophic spine injuries in high school, college, and professional sports. *Semin Spine Surg.* 2010;22:168-172.
8. Moatz B, **Tortolani PJ**. Cervical disc arthroplasty: Pros and cons. *Surg Neurol Int Spine* 2012;3:(Suppl) S216-S24.
9. Moatz B, Ludwig SC, **Tortolani PJ**. Fixation in osteoporotic patients. *Contemporary Spine Surg* 2013;14:1-7.
10. Moatz B, **Tortolani PJ**. TLIF and PLIF utilizing BMP-2 in the treatment of degenerative spondylolisthesis: neither safe nor cost effective. *Surg Neurol Int Spine* 2013 Mar;4 (Suppl 2):S67-S73.

##### Letters, Correspondence

1. **Tortolani, P.J.** The Crossroads: Orthopaedic Surgery Meets Molecular Biology. 1999 Wyeth-Ayerst Resident Report: American Academy of Orthopaedic Surgeons 66<sup>th</sup> Annual Meeting. Anaheim, CA February, 1999.

v. Abstracts for Conference papers and posters

- July 2018           Cunningham BW, Riggleman JR, Mullinix KP, Brooks DM, Wenhai Wang W, **Tortolani PJ**. An Investigational Study of Titanium Plasma Spray on Osseointegration of PEEK and Titanium Implants – An In Vivo Animal Model. 25<sup>th</sup> IMAST, July 2018. \*Whitecloud basic science award finalist
- March 2014           Moatz BW, **Tortolani PJ**, Cunningham BW. Defining the learning curve for thoracic pedicle screw placement among orthopedic residents. Medstar Health Research Symposium, Columbia, MD. - Poster Presentation
- Tortolani PJ**. How to achieve compliance with outcomes data using an E-data collection method. 10<sup>th</sup> Annual Evidence and Technology Spine Summit of the North American Spine Society (NASS), Park City, UT. – Poster Presentation.
- Tortolani PJ**. Open decompression and fusion remain the gold standard for degenerative spondylolisthesis and stenosis. Presented at the Federation of Spine Associations Specialty Day of the American Academy of Orthopaedic Surgeons (AAOS), New Orleans, LA, March 28, 2014.
- July 2013           Moatz BW, **Tortolani PJ**, Cunningham BW. Defining the learning curve for thoracic pedicle screw placement among orthopedic residents. North American Spine Society (NASS), Naples, FL- Paper Presentation
- Dec. 2011           Kretzer RM, Hsu W, Hu N, Umekoji H, Jallo GI, McAfee PC, **Tortolani PJ**, Cunningham BW. Adjacent Level Stress following Long Segment Posterior Cervical Decompression and Fixation: An *In Vitro* Human Cadaveric Model. Cervical Spine Research Society, Charlotte, NC – Paper
- Resident/Fellow Research Award – 3<sup>rd</sup> Place
- Cunningham BC, McAfee PC Sciubba DM, Kretzer RM, Hu N, Jallo GI, Umekoji H, **Tortolani PJ**. The Effect of Spinal Instrumentation on Kinematics at the Cervicothoracic Junction: Emphasis on Soft Tissue Responses Using an *In Vitro* Human Cadaveric Model. Cervical Spine Research Society, Charlotte, NC – Paper
- Sept 2010           Kretzer RM, Hu N, Umekoji H, Sciubba DM, Jallo GI, McAfee PC, **Tortolani PJ**, Cunningham BW. The effect of spinal instrumentation on kinematics at the cervicothoracic junction: emphasis on soft tissue response using an in-vitro human cadaveric model. Scoliosis Research Society (SRS) 45th Annual Meeting, Kyoto, Japan; September 21-24, 2010: Poster Presentation.
- Oct 2010           Musante DB, Coric D, Guyer RD, Gordon C, Nunley P, Carmody C, Dimmig TA, Taylor W, Buckley R, Rhee J, Gertszten PC, **Tortolani PJ**, Rappaport J, Knight RQ, Dix G, Foley KT, Bitan FD, Bains R, Herkowitz HN. Comparison of Radiographic Findings of Total Disc Replacement vs Anterior Cervical Fusion: 24-Month Follow-up from a Prospective, Randomized, Controlled, Multicenter Trial with 269 Patients. North American Spine Society, Orlando, FL – Paper

Guyer RD, Coric D, Nunley P, Gordon C, Carmody C, Dimmig TA, Taylor W, Buckley R, Rhee J, Gertszten PC, **Tortolani PJ**, Rappaport J, Knight RQ, Dix G, Foley KT, Bitan FD, Bains R, Herkowitz HN. Prospective, Randomized, Multicenter Trial Comparing Cervical Disc Replacement to Anterior Cervical Fusion in 269 Patients: 24-Month Follow-up. North American Spine Society, Orlando, FL – Paper.

May 2010 Kretzer RM, Hu N, Kikkawa J, Garonzik IM, Jallo GI, **Tortolani PJ**, McAfee PC, Cunningham BW. Multidirectional flexibility properties of translaminar screw vs. pedicle screw fixation at the cervicothoracic junction – an in-vitro cadaveric model. American Association of Neurological Surgeons (AANS) Annual Meeting, Philadelphia, PA; May 1-5, 2010: Poster Presentation.

Dec 2009 Kretzer RM, Chaput C, Sciubba DM, Garonzik IM, Jallo GI, McAfee PC, Cunningham BW, **Tortolani PJ**. A CT-based feasibility study of translaminar screw fixation in the upper thoracic spine. Cervical Spine Research Society (CSRS) 37th Annual Meeting, Salt Lake City, UT; Dec. 2-5, 2009: “Posters Live” Session; Top 5 Abstract Award.

Oct 2009 Kretzer RM, Chaput C, Sciubba DM, Conway JE, Garonzik IM, Jallo GI, McAfee PC, Cunningham BW, **Tortolani PJ**. A CT-based feasibility study of translaminar screw vs. pedicle screw fixation in the upper thoracic spine. Congress of Neurological Surgeons (CNS) Annual Meeting, New Orleans, LA; Oct. 24-29, 2009: Poster Presentation.

Kretzer RM, Chaput C, Sciubba DM, Garonzik IM, Jallo GI, McAfee PC, Cunningham BW, **Tortolani PJ**. The effect of spinal level on thoracic pedicle screw trajectory in a random US trauma population. Congress of Neurological Surgeons (CNS) Annual Meeting, New Orleans, LA; Oct. 24-29, 2009: Poster Presentation.

Kretzer RM, Chaput C, Sciubba DM, Garonzik IM, Jallo GI, McAfee PC, Cunningham BW, **Tortolani PJ**. Variation in thoracic pedicle screw entry point by spinal level. Congress of Neurological Surgeons (CNS) Annual Meeting, New Orleans, LA; Oct. 24-29, 2009: Poster Presentation.

Kretzer RM, Chaput C, Sciubba DM, Garonzik IM, Jallo GI, McAfee PC, Cunningham BW, **Tortolani PJ**. The effect of gender on choice of thoracic pedicle screw length and diameter. Congress of Neurological Surgeons (CNS) Annual Meeting, New Orleans, LA; Oct. 24-29, 2009: Poster Presentation.

Kretzer RM, Chaput C, Sciubba DM, Garonzik IM, Jallo GI, McAfee PC, Cunningham BW, **Tortolani PJ**. The effect of the aorta on pedicle screw trajectory in the thoracic spine. Congress of Neurological Surgeons (CNS) Annual Meeting, New Orleans, LA; Oct. 24-29, 2009: Poster Presentation.

July 2009 **Tortolani PJ**, Seftor JC, Chaput CD, Kretzer RM, Kikkawa J, Hu N, McAfee PC,



- Cunningham BW. Assessing the Learning Curve for Freehand Thoracic Pedicle Screw (TPS) Insertion Utilizing a Novel Morphologic Landmark. 16<sup>th</sup> IMAST, Vienna, Austria – Poster
- Saiedy S, McAfee PC, Geisler FH, Moore S, Regan J, Guyer R, Blumenthal S, Fedder IL, **Tortolani PJ**, Cunningham BW. Revision Following Lumbar Total Disc Replacement: Analysis of Reoperations in the US IDE Study of Lumbar Arthroplasty. 16<sup>th</sup> IMAST, Vienna, Austria: Paper Presentation
- July 2008 **Tortolani PJ**, McAfee PC, Cunningham BW, Donahue M. A Novel Threaded Locking Mechanism for Pedicle Screws in Adult and Pediatric Spinal Deformities: Clinical and Radiographic Outcomes. 15<sup>th</sup> IMAST, Hong Kong - Poster
- Klein RA, **Tortolani PJ**, Seftor JC, Hu N, Kikkawa J, McAfee PC, Cunningham BW. A Comparative Analysis of Thoracic Pedicle Pilot Holes vs. Pedicle Screw Insertion Using a Novel Morphologic Landmark 15<sup>th</sup> IMAST, Hong Kong – Poster
- May 2008 Klein RA, **Tortolani PJ**, Seftor JS, Hu N, Kikkawa J, McAfee PC, Cunningham BW. A Comparative Analysis of Thoracic Pedicle Pilot Holes vs. Pedicle Screw Insertion Using a Novel Morphologic Landmark. World Spine Congress, Geneva, Switzerland -Poster
- Oct 2007 McAfee P, Cunningham B, **Tortolani J**, Hebel N. Success Rates of Bone Marrow Aspirate with PEEK Cages versus Allograft in Anterior Cervical Fusion. North American Spine Society, Austin, Texas – Poster Presentation
- Cunningham BC, Demuth G, McAfee PC, Scott-Young M, Yoon KJ, Blumenthal S, Guyer RD, Geisler F, Regan J, Conix B, Hes R, Pimenta L, Diaz R, Fedder IL, **Tortolani PJ**. Survivorship Analysis of the Charite Artificial Disc: Review of 1,938 Patients from Eight Leading International Spine Centers. North American Spine Society, Austin, Texas – Podium Presentation
- Sept 2007 **Tortolani J**, Cunningham BW, Hu N, McLoughlin J, Hess SJ, McAfee PC. A Comparative Biomechanical Analysis of a Novel Anterior Transarticular C1-C2 Instrumentation for Unstable Dens Fractures: An In Vitro Human Cadaveric Model. Scoliosis Research Society, Edinburgh, Scotland – Poster Presentation
- July 2007 Cunningham BW, Demuth G, McAfee PC, Scott-Young M, Yoon KJ, Blumenthal SL, Guyer RD, Geisler F, Regan JJ, Conix B, Hes R, Pimenta L, Diaz R, Fedder IL, **Tortolani J**. Survivorship Analysis of the Charite Artificial Disc: Review of 1,938 Patients from 8 Leading International Spine Centers. The 14<sup>th</sup> International Meeting on Advanced Spine Techniques, Bahamas – Podium
- Tortolani J**, Cunningham BW, Hu N, McLoughlin J, Hess SJ, McAfee PC. A Comparative Biomechanical Analysis of a Novel Anterior Transarticular C1-C2 Instrumentation for Unstable Dens Fractures: An In Vitro Human Cadaveric Model. The 14<sup>th</sup> International Meeting on Advanced Spine Techniques, Bahamas – Podium
- May 2007 Cunningham BC, Demuth G, McAfee PC, Scott-Young M, Yoon KJ, Blumenthal S,

Guyer RD, Geisler F, Regan J, Conix B, Hes R, Pimenta L, Diaz R, Fedder IL, **Tortolani PJ**. Survivorship Analysis of the Charite Artificial Disc: Review of 1,938 Patients from Eight Leading International Spine Centers. Spine Arthroplasty Society Berlin, Germany – Podium

April 2005 McAfee PC, Geisler F, Saiedy S, Moore S, Regan J, Blumenthal S, Guyer R, Fedder I, **Tortolani J**, Cunningham B. Revisability of the Charite Artificial Disc Replacement- Analysis of 347 patients enrolled in the US IDE Study of the Charite Artificial Disc. Spine Arthroplasty Society. New York, NY – Podium

March 2005 Cunningham BC, **Tortolani PJ**, McAfee PC, Adams K, Holsapple G. The Incidence of Heterotopic Ossification in Total Disk Replacements: A Prospective Randomized FDA Study in 275 Consecutive Patients. American Academy of Neurological Surgeons. Phoenix, AZ - Podium

Feb.2005 Perez OA, **Tortolani PJ**, Etienne G, McCarthy EF, Jones LC, Hungerford DS, Mont MA. Rapidly Progressive Hip Disease: Demographic, Histopathologic, and Radiographic Aspects. American Academy of Orthopaedic Surgeons, Washington DC - Poster

Singh K, Smucker JD, Ugbo JL, **Tortolani PJ**, Tsai L, Fei Q, Kuh S, Rumi M, Heller JG, Boden SD, Yoon ST. rhBMP-2 enhancement of posterolateral spinal fusion in a rabbit model in the presence of concurrently administered doxorubicin. CSRS, San Diego, CA – Poster

2004 Dec.2004 Prybis BG, **Tortolani PJ**, Hu H, Zorn CM, McAfee PC, Cunningham MS. A Comparative Biomechanical Analysis of Spinal Instability and Instrumentation of the Cervicothoracic Junction: An in-vitro Human Cadaveric Model. CSRS, Boston, MA - Podium

2004 Dec.2004 **Tortolani PJ**, Cunningham BC, Vigna F, Hu N, Zorn C, and McAfee PC. Intra-Esophageal Pressure During Anterior Cervical Plating Versus Cervical Disc Replacement: A Cadaveric Study. CSRS, Boston, MA - Poster

Oct 2004 **Tortolani PJ**, Park AE, Attallah E, Kraiwattanpong C, Ugbo J-L, Heller JG, Boden SD, Yoon ST. The Effects of Doxorubicin on Spinal Fusion: An Animal Model. North American Spine Society, San Diego, CA.- Poster

Sept 2004 **Tortolani PJ**, Cunningham BC, McAfee PC, Adams K, Holsapple G. The Incidence of Heterotopic Ossification in Total Disk Replacements: A Prospective Randomized FDA Study in 275 Consecutive Patients.39<sup>th</sup> Annual Scoliosis Research Society. Buenos Aeres, Argentina.- Podium

July 2004 **Tortolani PJ**, Cunningham BC, McAfee PC, Adams K, Holsapple G. The Incidence of Heterotopic Ossification in Total Disk Replacements: A Prospective Randomized FDA Study in 275 Consecutive Patients. 11<sup>th</sup> International Meeting on Advanced Spine Techniques. Bermuda.- Poster

May 2004 Cunningham BC, **Tortolani PJ**, McAfee PC, Adams K, Holsapple G. The

- Incidence of Heterotopic Ossification in Total Disk Replacements: A Prospective Randomized FDA Study in 275 Consecutive Patients. Spinal Arthroplasty Society, Vienna, Austria.- podium
- March 2004 Heller JG, **Tortolani, P.J.**, Park AP, Tong G, and Goffin H. Computed Tomography (CT) Scan Assessment of Paravertebral Bone Formation After Total Cervical Disc Replacement: Temporal Relationships and the Effect of NSAID's. American Academy of Neurological Surgeons, San Diego, CA, March 2004.- Podium
- Dec 2003 **Tortolani PJ**, Heller JG, Park AP, Tong G, and Goffin H. Computed Tomography (CT) Scan Assessment of Paravertebral Bone Formation After Total Cervical Disc Replacement: Temporal Relationships and the Effect of NSAID's CSRS, Phoenix, AZ.- Podium
- Tortolani PJ**, Park AE, Attallah E, Kraiwattanpong C, Ugbo J-L, Heller JG, Boden SD, Yoon ST. The Effects of Doxorubicin on Spinal Fusion: An Animal Model. CSRS, Phoenix, AZ – Podium
- July 2003 Heller JG, **Tortolani PJ**, Park AP, Tong G, and Goffin H. Computed Tomography (CT) Scan Assessment of Paravertebral Bone Formation After Total Cervical Disc Replacement: Temporal Relationships and the Effect of NSAID's CSRS Europe, Barcelona, July 2003.- Podium
- Oct 2002 Gordon NE, **Tortolani PJ**, Brushart TM: Innervation of the Elbow. American Society for Surgery of the Hand. October 2002.- Podium
- May 2002 **Tortolani PJ**, Carbone JJ, Quartararo L. Prevalence of Greater Trochanteric Pain Syndrome in Low Back Pain. 9<sup>th</sup> International Meeting on Advanced Spine Techniques. Montreax, Switzerland. - Poster
- Nov 2001 Carbone JJ, Quartararo L, **Tortolani PJ**: The Use of Thoracic Pedicle Screws For Posterior Spinal Fusions: Technique and Complications. Spine, Science, and Management Course for Residents and Fellows. New Orleans, LA – Poster
- April 2001 **Tortolani PJ**, Carbone JJ, Quartararo L, Goldstein J. Greater Trochanteric Pain Syndrome (Trochanteric Bursitis) in Patients Referred for Orthopaedic Spine Surgery. 34<sup>th</sup> Annual Residents' Conference, The American Orthopaedic Association and The Orthopaedic Research and Education Foundation, Hershey, Pennsylvania, - Podium
- March 2001 Carbone JJ, Quartararo L., **Tortolani PJ**: The Use of Thoracic Pedicle Screws For Posterior Spinal Fusions: Technique and Complications. American Academy of Orthopaedic Surgeons 68<sup>th</sup> Annual Meeting, San Francisco, CA - Poster
- April 2000 **Tortolani, P.J.**, Goldstein, J., Quartararo, L., and Carbone, J.J. Greater trochanteric pain syndrome in patients referred for orthopaedic spine surgery. Maryland Orthopaedic Association 2000 Annual Meeting, Baltimore, MD, April 2000. - Podium
- July 1995 **Tortolani, P.J.**, Johnston, J.A., Bacon, C., Linnekin, D., and O'Shea, J.J.

Thrombopoietin induces tyrosine phosphorylation and activation of JAKs and STATs. 9<sup>th</sup> International Congress of Immunology, San Francisco, CA, July 1995. - Poster

July 1995      Chen YQ, Johnston JA, **Tortolani PJ**, Bacon C, Riedy MC, O'Shea JJ. Regulation of IL-2-JAK-STAT signaling by activation in human T lymphocytes. 9<sup>th</sup> International Congress of Immunology, San Francisco, CA, July 1995. - Poster

June 1995      **Tortolani PJ.** Thrombopoietin (TPO) Induces Tyrosine Phosphorylation and Activation of JAK2, STAT5 and STAT3. Presented at the 9<sup>th</sup> Annual Research Symposium, HHMI-NIH Research Scholars Program.- Poster

**B. Research Funding:** *(Instructions: Please be certain to provide information that is accurate and unambiguous. Information may be compared with that available elsewhere, e.g. the NIH RePORTER and the Office of Sponsored Programs. Delete those that do not apply; add if multiple)*

### iii. Previous

1. Agency: DePuy-Synthes Spine, Inc., Raynham, Massachusetts

Title: Biomechanical Testing of Translaminar vs. Pedicle Screw Fixation in the Upper Thoracic Spine

Dates: 2008-2009

PI: Bryan Cunningham PhD

Total Funding: \$30,000

Role on Project: Sub-investigator

Description: Provided technical guidance on screw placement and assisted in establishing clinical relevance both in study design and manuscript preparation.

Percent effort: 10%

2. Agency: DePuy-Synthes Spine, Inc., Raynham, Massachusetts

Title of Project: Changes in Adjacent Level Range of Motion and Intradiscal Pressure after Long Segment Posterior Cervical Fixation – An In-Vitro Human Cadaveric Model

Dates: 2010

PI: Bryan Cunningham PhD

Funding: \$30,000

Role: Sub-investigator

Description: As co-investigator on this award I provided technical assistance on placement of spinal fixation and assisted in establishing clinical relevance with regard to study design and manuscript preparation

Percent effort: 10%

3. Agency: Globus Medical, Inc., Audobon, Pennsylvania

Title of Project: Effectiveness of a Cadaver Training Module to Teach Thoracic Pedicle Screw Placement to Orthopaedic Residents

Funding: \$8,900

Date: 2011

Role: Principal Investigator

Description: As principal investigator I was involved in all aspects of study design, study execution and manuscript preparation

Percent effort: 50%

4. Agency: Spineology Inc., St Paul, Minnesota

Title of Project: Cortical (mediolateral, cauda-cranial) Pedicle Screw in lumbar degenerative spondylolisthesis and focal spinal stenosis: Cost-Analysis and Outcomes vs. Traditional Pedicle Screw Fixation

Funding: \$21,125

Dates: 2014-2018

Role: Principal Investigator

Description: As principal investigator I was responsible for enrolling all patients, performing all of the surgery and seeing all patients at scheduled follow-up time points. I supervised and assisted a research assistant and research coordinator during the study period.

Percent Effort: 60%

5. Agency: Globus Medical, Inc., Audubon, Pennsylvania

Title of Project: Investigating the Role of 3-D Printed Titanium Architectures and Laser-Etched Titanium Surfaces on the Bone-Implant Osseointegration in an Ovine Model.

PI: Bryan Cunningham PhD

Funding: \$290,940.32

Date: 2018

Role: Co-Investigator

Description: Assisted in surgical procedures and preparation of manuscript.

Percent effort: 20%

6. Agency: BiomUp, Inc., New York, New York

Title of Project: An Investigational Study of the Neurohistopathologic Response following Epidural Application of HemoBlast™ - An *In-Vivo* Ovine Laminectomy Model –

PI: Bryan Cunningham PhD

Funding: \$397,350.56

Date: 2019

Role: Co-Investigator

Description: Assisted in surgical procedures and preparation of manuscript.

Percent effort: 20%

**C. Invited Lectures:**

CME Instruction

April 2001

Current Concepts in Geriatric Orthopaedics, "Lumbar Stenosis in the Elderly",  
Baltimore, MD

- May 2005 The Spine Study Group 16<sup>th</sup> Symposium “New Technology: Concepts and Controversies”, Palm Beach, FL.
- “Minimally Invasive Trans-psoas and Trans-sacral Fusions”
  - “Spondylolisthesis debate: Transforaminal Lumbar Interbody Fusion”
  -
- May 2006 Primary Care Approach to Treating the Injured Athlete Annual Conference, “Spondylolisthesis”. Greater Baltimore Medical Center, Baltimore, MD
- May 2006 The Spine Study Group 17<sup>th</sup> Symposium, “New Technology: Concepts and Controversies”, Palm Beach, FL
- “Advances in Cervical Fixation”
  - “Lumbar Disc Debate: Charite”
  - “Interspinous Spacers”
- Nov 2006 Musculoskeletal Education Research - Monterey, CA
- “Classification Systems – Defining Cervical Instability”
  - “Avoiding Complications in Lumbar Disc Replacement”
- May 2007 The Spine Study Group 18<sup>th</sup> Symposium – Palm Beach, FL
- “Complications of Cervical Disc Replacement”
  - “Complications of Lumbar Disc Replacement”
- Feb 2008 Federation of Spine Associations: Specialty Day. American Academy of Orthopaedic Surgeons. Las Vegas, NV
- Debate: Operative Management of Adult Scoliosis
- May 2008 Peter Mack Memorial Lecture: Johns Hopkins Department of Orthopaedic Surgery. Baltimore, MD
- Lumbar Disc Replacement
- May 2009 The Spine Study Group 20<sup>th</sup> Symposium – Palm Beach, FL
- “Alternative Income Streams”
  - “Surgery for Axial Neck Pain: If and When”
- May 2010 The Spine Study Group 21<sup>th</sup> Symposium – Palm Beach, FL
- “Cervical Disc Replacement for Myelopathy
- Oct 2010 Pediatric Symposium – Union Memorial Hospital, Baltimore, MD
- “Adolescent Idiopathic Scoliosis: An Update”

- May 2012                      The Spine Study Group 23<sup>rd</sup> Symposium – Palm Beach, FL
- Infuse for TLIF: Are you Crazy
  - I'd still have an ACDF if it were my neck
- Feb 2013                      The Association of Collaborative Spine Research – Spine Study Group – San Diego, CA
- Who is at Risk for PJK and How This Influences Selection of Proximal Levels
  - Anterior Corpectomy, Decompression, Reconstruction
- March 2013                    Federation of Spine Associations: Specialty Day. American Academy of Orthopaedic Surgeons, Chicago, IL
- What are the Current Day Indications for Halo Vest Application and What are the Reported Complications?
- May 2013                      Grand Rounds- Johns Hopkins Dept. of Orthopaedic Surgery.
- Gifted Thumbs: How Surgical Residents Acquire Surgical Acumen
- Jan 2014                      The Association of Collaborative Spine Research – Spine Study Group – San Diego, CA
- Proximal thoracolumbar junctional failure: Tips for Avoidance and Treatment
  - Treat the Curve, Avoid the Inevitable
- March 2014                    Federation of Spine Associations: Specialty Day. American Academy of Orthopaedic Surgeons, New Orleans, LA
- Open Decompression and Fusion Remain the Gold Standard for Degenerative Spondylolisthesis and Stenosis.
- May 2015                      The Association of Collaborative Spine Research – Spine Study Group – Miami, FL
- Thoracolumbar burst fractures with neurologic deficit: Posterior approach is best.
- Oct 2018                      Grand Rounds: Georgetown University Dept of Orthopaedic Surgery
- Approaching the Patient with Thoracolumbar Deformity

- Feb 2020                    2020 Maryland Orthopaedic Association Annual Meeting, Annapolis, MD
- Instrumented Spinal Fusion: Are ASCs ready for Primetime?

Clinical Instruction

- May 2006                    Spine Reconstruction Techniques, Course Faculty and Instructor, Vitruvian Institute, Baltimore, MD
- March 2007                Hands-On Spine Surgery Review Course: Course Faculty and Instructor, Johns Hopkins International Center for Orthopaedic Advancement, Baltimore, MD
- May 2007                    Spine Reconstruction Techniques, Johns Hopkins Dept of Neurosurgery Resident Instruction. Course Faculty and Instructor, Vitruvian Institute, Baltimore, MD
- April 2009                Orthopaedic Boards Review Course and Osteotomy Workshop, Globus Medical Headquarters, Audobon, PA.

Workshops/seminars

- Jan 2004                    Charite Lumbar Disc Replacement: Surgeon Education and Training. Course Faculty, DePuy-Spine Training Facility, Cincinnati, OH.
- May 2004                    Charite Lumbar Disc Replacement: Surgeon Education and Training Course Faculty, DePuy-Spine Training Facility, Cincinnati, OH.
- July 2004                    Charite Lumbar Disc Replacement: Surgeon Education and Training. Course Faculty, DePuy-Spine Training Facility, Cincinnati, OH
- Oct 2004                    Porous Coated Motion Cervical Disc Replacement: Surgeon Education and Training, Course Faculty, Karlsbad, Germany

Online

- 2004-2005                The Spine Forum, Co-Director for educational, interactive spine website for residents, fellows, attending surgeons

**D. Editorships, Editorial Boards, and Reviewing Activities**

1.     *Surgical Neurology International*, Consulting Editor, July 2012-2017
2.     *Spine Deformity*, Associate Editor, March 2013-present
3.     *Scoliosis Research Society*, Abstract review team, 2007

**3. TEACHING, MENTORING, AND ADVISING**

**A. Teaching Activities**

**i. Medical School Courses:**



1996-1997

George N. Papanicolaou Fellow in Clinical Anatomy, Department of Cell Biology and Anatomy, Cornell University Medical College, Gross Anatomy Course, *Gross Anatomy Laboratories*

**ii. Medical School Clerkships:** Medical students from outside institutions perform clinical clerkships at MedStar Union Memorial Hospital. We structure these clerkships such that each student spends 1 week out of 4 on a sub-specialty service.

Name of Clerkship: Orthopaedic Surgery – subspecialty: Spine

Role: As director of the division of spine surgery and director of spine education and research at MedStar Union Memorial Hospital, I am responsible for all of the educational activities occurring in our division. This includes but is not necessarily limited to: creating and implementing a core curriculum and didactic conference schedule (bimonthly spine conferences and quarterly morbidity and mortality conference), organizing and leading journal clubs, organizing and leading multi-disciplinary case review conferences (weekly), hands on teaching in the operating room, and one-on-one teaching of clinical skills in the office setting.

Number of Direct Contact Hours\*: 4 hours/day when a medical student is in on service

Year(s) Taught: 8

Number of Students: 6/year

Overall Evaluation Score: NA

**iii. Residency**

Role: As director of the division of spine surgery and director of spine education and research at MedStar Union Memorial Hospital, I am responsible for all of the educational activities occurring in our division. This includes but is not necessarily limited to: creating and implementing a core curriculum and didactic conference schedule (bimonthly spine conferences and quarterly morbidity and mortality conference), organizing and leading journal clubs, organizing and leading multi-disciplinary case review conferences (weekly), hands on teaching in the operating room, and one-on-one teaching of clinical skills in the office setting.

Number of Direct Contact Hours: 8 hours/day when resident on service

Years Taught: 8

Number of Residents: 4/year

Overall Evaluation Score: NA

Average number of Clinical Fellows you train per year (see *Mentoring* below) = 1

Average number of Residents you train per year = 4

Average number of Medical students you train per year = 4

**B. Mentoring/Spinal Reconstructive Fellowship:**

Role: As director of the division of the Spinal Reconstructive Fellowship at MedStar Union Memorial Hospital, I am responsible for all of the educational activities occurring in our division. This includes but is not necessarily limited to: creating and implementing a core curriculum and didactic conference schedule (bimonthly spine conferences and quarterly morbidity and mortality conference), organizing and leading journal clubs, organizing and leading multi-disciplinary case review conferences (weekly), hands on teaching in the operating room, and one-on-one teaching of clinical skills in the office setting.

Mentor: P. Justin Tortolani MD

Previous Co-mentors (2003-2010): Paul C. McAfee MD, Ira Fedder MD, John Seftor MD

Current Co-mentors (2010-present): Paul Asdourian MD, Zeena Dorai MD, Mesfin Lemma MD, Brad Moatz MD

Mentees/Spine Fellows:

2003-2004

- Franco Vigna, MD
- Stacy Dinkins, DO
- Brad Prybis, MD

2004-2005

- Jason Bergandi, MD
- Sam Hess, MD
- James McLoughlin, MD

2005-2006

- Victor Hayes, MD
- Farhan Siddiqi, MD
- Mike Dabbah, MD

2006-2007

- Spencer Stoetzel, MD
- Nick Grimaldi, DO
- Nader Hebefa, MD

2007-2008

- Michael Donahue, DO
- Charles Davis, MD
- Richard Klein, MD

2008-2009

- Ivan Lamotta, MD

- David Gloystein, MD
- 2009-2010
- Vladimir Sinkov, MD, Manchester, NH
- 2016-2017
- Harish Kempekowda MD
- 2017-2018
- Abhijeet Kadam MD
- 2018-2019
- Mohit Kukreja MD
- 2019-2020
- James Klunk, DO

Outcomes:

Grants:

- 2017-2018 OMeGA Grant: \$14,000  
K2M Spine Fellowship Educational Grant: \$25,000
- 2018-2019 OMeGA Grant: \$15,000

Publications: Fellows and Residents have co-authored numerous papers and presentations both during and subsequent to the fellowship. Please see *Publications* section.

#### 4. SERVICE

**A. University Service: NA**

**B. MedStar or Hospital Service**

- 2005-2009 Patient Safety Committee, St Joseph Medical Center
- 2008 Search Committee: Chief of General Surgery, St Joseph Medical Center
- 2010-2016 Surgery Policy Committee, MedStar Union Memorial

2010-2020	Resident Credentialing Committee, MedStar Union Memorial Hospital Dept. of Orthopaedic Surgery  Orthopaedic Research Committee, MedStar Union Memorial Hospital, Dept. of Orthopaedic Surgery
2013-2017	Board of Directors, MedStar Union Memorial Hospital
2013-2020	Philanthropy Committee, MedStar Union Memorial Hospital  Chair, Spine Fellowship Program Committee, MedStar Union Memorial Hospital
2015-2017	Chair, Executive Council, MedStar Union Memorial Department of Orthopaedic Surgery
2017-2020	Interdisciplinary Model of Care (IMOC) Committee, Physician Leader Orthopaedic Surgery

**C. Professional Service (all voluntary):**

1994-present	Board of Directors: Beth C. Tortolani Foundation.
2011-2013	Cervical Spine Research Society: Program Committee
2016-2019	Cervical Spine Research Society: Seed Starter Grant Committee
2018-2022	Scoliosis Research Society: Research Grant Committee
2018-2020	Scoliosis Research Society: Safety and Value Committee

**5. HONORS AND AWARDS**

June 1991	GTE Academic All-American: First Team
June 1992	Princeton University <ul style="list-style-type: none"> <li>• Magna cum laude, Princeton University</li> <li>• E.R. Squibb Thesis Prize, Princeton Univ., Outstanding Thesis in Department of Molecular Biology</li> <li>• Captain, NCAA Division I Lacrosse Championship team</li> <li>• William Winston Roper Trophy, Male Athlete of the Year, Princeton Univ.</li> <li>• Higginbotham Trophy, Most Valuable Player, Men's Lacrosse Princeton Univ.</li> <li>• GTE Academic All-American: First Team</li> </ul>

- USILA All-American

May 1995	Cornell University Medical College <ul style="list-style-type: none"> <li>• MD with Honors in Research, Cornell University Medical College</li> <li>• Alan von Kreuter Cancer Research Prize, Cornell University Medical College, Outstanding research in the basic mechanisms of cancer and related disease.</li> </ul>
May 1996	Alpha Omega Alpha, Cornell University Medical College
May 1997	Dean William Mecklenburg Polk Prize, Outstanding Basic Science Research, Cornell University Medical College
June 1998	Arnold M. Seligman Award, Most Outstanding Surgical Resident, The Johns Hopkins Hospital and Sinai Hospital of Baltimore
May 1999	Manhasset High School Lacrosse Hall of Fame
Oct 2002	Emanuel B. Kaplan Award, American Society for Surgery of the Hand Anatomical Excellence in Surgery of the Hand
Sept 2007	Finalist, Moe Award for Basic Science Research, Scoliosis Research Society
Feb 2008	Edgar Dawson Traveling Fellowship, Scoliosis Research Society  Hospital for Joint Diseases, Host: Frank Schwab, MD
May 2008	Peter Mack Memorial Lecture – Johns Hopkins Medical Institutions, Dept of Orthopaedic Surgery
Nov 2008	“Top Docs” Orthopaedic Spine, as voted by peers, Baltimore Magazine
Nov 2009	“Top Docs” Orthopaedic Spine, as voted by peers, Baltimore Magazine
Oct 2010	Best Paper Award, North American Spine Society (Proceedings of the NASS 25 <sup>th</sup> Annual Meeting/The Spine Journal 10 (2010) 1S-179S, p 32S.
Dec 2010	Resident/Fellow Best Paper Award, 3 <sup>rd</sup> Place. Cervical Spine Research Society (Co-author).
July 2012	Consulting Editor. <i>Surgical Neurology International – SNI: Spine</i>
Nov 2012	“Top Docs” Orthopaedic Spine, as voted by peers, Baltimore Magazine
Feb 2013	Association of Collaborative Spine Research – Spine Study Group 1 <sup>st</sup> Annual Meeting, San Diego California. Course Co-Chairman
Mar 2013	Associate Editor. <i>Spine Deformity</i> . The Official Journal of the Scoliosis Research Society.

Nov 2013	"Top Docs" Orthopaedic Spine, as voted by peers, Baltimore Magazine
Nov 2014	"Top Docs" Orthopaedic Spine, as voted by peers, Baltimore Magazine
Nov 2015	"Top Docs" Orthopaedic Spine, as voted by peers, Baltimore Magazine
Nov 2016	"Top Docs" Orthopaedic Spine, as voted by peers, Baltimore Magazine
Nov 2017	"Top Docs" Orthopaedic Spine, as voted by peers, Baltimore Magazine
Nov 2018	"Top Docs" Orthopaedic Spine, as voted by peers, Baltimore Magazine
Nov 2019	"Top Docs" Orthopaedic Spine, as voted by peers, Baltimore Magazine

## 6. PROFESSIONAL SOCIETY MEMBERSHIP

2005-present	American Academy of Orthopaedic Surgeons
2005-present	North American Spine Society
2007-present	Scoliosis Research Society
2009-present	Cervical Spine Research Society

*I certify that this curriculum vitae is a current and accurate statement of my professional record.*

Signature: \_\_\_\_\_ P. Justin Tortolani \_\_\_\_\_

Date: \_\_\_1-19-2021\_\_\_\_\_