

CURRICULUM VITAE

AMIR H. FAYYAZI, M.D.

PERSONAL DATA

ADDRESS: VSAS Orthopaedics
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EDUCATIONAL BACKGROUND

McDonogh School
Owingsmills, Maryland
September 1987 - June 1990

Johns Hopkins University
Bachelor of Science, Biomedical Engineering
Baltimore, Maryland
September 1990 - May 1994

Washington University School of Medicine
Doctor of Medicine
St. Louis, Missouri
August 1994 - May 1998

PROFESSIONAL TRAINING

INTERNSHIP: General Surgery, July 1, 1998 – June 30, 1999
The Milton S. Hershey Medical Center
Hershey, Pennsylvania

RESIDENCY: Orthopaedic Surgery, July 1, 1999 – June 30, 2003
The Milton S. Hershey Medical Center
Hershey, Pennsylvania

FELLOWSHIP: Spine Surgery, August 1, 2003 – July 31, 2004
Rush-Presbyterian, St. Luke Medical Center
Chicago, Illinois

HONORS AND AWARDS

Johns Hopkins University:

National Science Foundation Summer Fellowship, 1991
Provost's Award for Research Excellence, 1992
Biomedical Engineering Undergraduate Research Award, 1993
Tau Beta Pi (Engineering Honor Society), 1993-1994

The Milton S. Hershey Medical Center:

Bristol-Myers Squibb Scholar of Surgery Award, 1999
Pennsylvania Ortho. Assoc. Resident Research Award, 2002
Vernon Nickel Award, Orthopaedic Rehabilitation Assoc., 2002

VSAS Orthopaedics

Patients Choice Award, 2011

CERTIFICATION

Board Certified in Orthopaedic Surgery by American Board of
Orthopaedic Surgeons (ABOS)

LICENSURE

LICENSES:

Commonwealth of Pennsylvania, Department of State
Medical Physician and Surgeon

Illinois Department of Professional Regulation
Physician and Surgeon – Inactive

New York State Educational Department
Physician – Inactive

PROFESSIONAL MEMBERSHIPS

Cervical Spine Research Society (CSRS)

American Academy of Orthopaedic Surgery (AAOS)

North American Spine Society (NASS)

International Society for Advancement of Spine Surgery
(Formerly, Spine Arthroplasty Society)

- Education Committee Member
- Journal Reviewer

Pennsylvania Orthopaedic Society

EMPLOYMENT

9/1/2004-8/1/2007

Assistant Professor, Institute for Spine Care
Orthopedic and Neurological Surgery
Department of Orthopedic Surgery
550 Harrison Street
Syracuse, New York 13202-3072

8/1/2007-Current

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HOSPITAL PRIVELEDGES

Lehigh Valley Hospital, Cedar Crest
1200 S. Cedar Crest Blvd
Allentown, PA 18103
(610) 402-8000

Lehigh Valley Hospital, Muhlenberg
2545 Schoenersville, Rd.
Bethlehem, PA 18017-7300
(484) 884-6500

Westfield Hospital
4815 W Tilghman St.
Allentown, PA 18104
(610) 973-8400

St. Luke's Hospital, Allentown
1837 W Linden St.
Allentown, PA 18104
(610) 439-3263

CLINICAL AFFILIATION

Clinical Assistant Professor of Orthopaedics and Rehabilitation
Penn State College of Medicine

PUBLICATIONS (Peer-Reviewed)

1. **Fayazi, A.H.**, Lapidot, S.A., Huang, B.K., Tucker, R.W., Phair, R.D.: Resolution of the Basal Plasma Membrane Calcium Flux in Vascular Smooth Muscle Cells. *American Journal of Physiology* 270: H1972-H1978, 1996.
2. Lapidot, S.A., Huang, B.K., Russek, L.N., Brooks, A.E., **Fayazi, A.H.**, Phair, R.D.: Mechanisms for Ca Signaling in Vascular Smooth Muscle: Resolved from ⁴⁵Ca Uptake and Efflux Experiments. *Cell Calcium* 19: 167-184, 1996.
3. **Fayazi, A.H.**, Phair, R.D.: Calcium Release by the InsP3 Receptor is Incremental, not Quantal. *Circulation* 90: I37, 1994.
4. Phair, R.D., **Fayazi, A.H.**: A Three-State Ion Channel Model for Quantal Ca²⁺ Release by the Inositol Trisphosphate Receptor. *Biophysical Journal* 68: A122, 1995.
5. Silva, M.J., Hollstien, S.B., **Fayazi, A.H.**, Adler, P., Gelberman, R.H., and Boyer, Martin I.: The Effects of Multiple-Strand Suture Techniques on the Tensile Properties of Repair of the Flexor Digitorum Profundus Tendon to Bone. *The Journal of Bone and Joint Surgery* 80A(10): 1507-1514, October 1998.
6. **Fayazi, A.H.**, Reid, J.S., and Juliano, P.J.: Percutaneous Pinning of Talar Neck Fractures. *American Journal of Orthopaedics*. 31(2): 76-78, February 2002.
7. **Fayazi, A.H.**, Nguyen, H.A., and Juliano, P.J.: Intermediate Term Follow Up of Calcaneal Osteotomy and Flexor Digitorum Longus Transfer for Treatment of Posterior Tibial Tendon Dysfunction. *Foot and Ankle International*. 23(12): 1107-1111, December 2002.
8. **Fayyazi, A.H.**, Ludwig, S.C., Dabbah, M., Butler, R.B. and Gelb, D.E.: Preliminary Results of staged anterior debridement and reconstruction using titanium mesh cages in the treatment of thoracolumbar osteomyelitis. *The Spine Journal*. 4(4): 388-395
9. **Fayyazi, A.H.**, Hugate, R.R., Pennypacker, J.L., Gelb, D.E., and Ludwig, S.C.: Accuracy of Computed Tomography in Assessing Thoracic Pedicle Screw Malposition. *Journal of Spinal Disorder and Technique*. 17(5): 367-371, October 2004
10. **Fayyazi, A.H.** and Segal, L.S.: Surgical Excision of Symptomatic Lumbar Spinous Process Pseudoarthrosis. *Journal of Spinal Disorder and Technique*. 17(5): 439-441, October 2004
11. Ordway, N.R., Zhang, X., Cheng, C.C., Lu, Y.M., Fang, H., & **Fayyazi, A.H.**: Correlation of Cervical Endplate Strength with CT Measured Subchondral Bone Density. *European Spine Journal*. 16(12): 2104-9, August 22, 2007

PUBLICATIONS (Peer-Reviewed, continued)

12. Cheng, C.C., Ordway, N.R., Zhang, X., Lu, Y.M., Fang, H., & **Fayyazi, A.H.**: Loss of Cervical Endplate Integrity Following Minimal Surface Preparation. *Spine*. 32(17):1852-1855, August 2007
13. Zhang, X., Ordway, N.R., Tan, R., Rim, B.C., Fang, H., & **Fayyazi, A.H.**: Correlation of CT Measured Bone Density and Cervical Disc Bone-Endplate Strength and Stress. *Journal of Disorder and Techniques*. 21(6):400-405, August 2008
14. Ordway, N.R., **Fayyazi, A.H.**, Abjornson, C., Calabrese, J., Park, S.A., Fredrickson, B.E., Yonemura, K., & Yuan, H.A.: Twelve Month Follow-up of Lumbar Spine Range of Motion Following Intervertebral Disc Replacement Using Radiostereometric Analysis. *Spine Arthroplasty Society Journal* 2:9-15, Winter 2008
15. Park, S.A., Ordway, N.R., **Fayyazi, A.H.**, Fredrickson, B.E., & Yuan, H.A.: Measurement of Paradoxical and Coupling Motions Following Lumbar Total Disc Replacement. *Spine Arthroplasty Society*. 2:137-139, Summer 2008
16. Park, S.A., **Fayyazi, A.H.**, Ordway, N.R., Sun, M.H., Fredrickson, B.E., & Yuan, H.A.: Correlation of Radiostereometric Measured Cervical Range of Motion with Radiographic Finding Following Anterior Cervical Discectomy and Fusion. *Spine*. 34(7):680-6, April 1, 2009
17. **Fayyazi, A.H.**, Ordway, N.R., Park, S.A., Yonemura, K., Fredrickson, B.E., & Yuan, H.A.: Radiostereometric Analysis of Postoperative Motion Following Application of Dynesys Dynamic Posterior Stabilization System for Treatment of Degenerative Spondylolisthesis. *Journal of Spinal Disorder and Technique*, January 2010
18. Park, S.A., Ordway, N.R., **Fayyazi, A.H.**, Fredrickson, B.E., & Yuan, H.A.: Comparison of Cobb Technique, Quantitative Motion Analysis, and Radiostereometric Analysis in Measurement of Segmental Range of Motions Following Lumbar Total Disc Arthroplasty. *Journal of Spinal Disorder and Technique*. 22(8):602-9, December 2008
19. Hussain, M., Natarajan, R., **Fayyazi, A.H.**, Braaksma, B.R., Anderson, G.B., & An, H.S.: Screw angulation affects bone-screw stresses and bone graft load-sharing in anterior cervical corpectomy fusion with a rigid screw-plate construct: a finite element model study. *Spine Journal*. 9(12):1016-23, December 2009
20. Ordway, N.R., Rim, B.C., Tan, R., Hickman, R., & **Fayyazi, A.H.**: Anterior Cervical Interbody Constructs: Effect of a Repetitive Compressive Force on the Endplate. *Accepted to Journal of Orthopaedic Research*
21. **Fayyazi, A.H.**, Tan, R., Rim, B.C., Hickman, R., & Ordway, N.R.: Biomechanical Evaluation of Endplate Preparation and Fatigue on the Implant-Bone Interface Following Prodisc-C Total Disc Replacement. *In Preparation for Journal of Orthopaedic Research*

PUBLICATIONS (Peer-Reviewed, continued)

22. Rodrigues, D.C., Ordway, N.R., Ma, C., **Fayyazi, A.H.**, & Hasenwinkel, J.H.: An Ex Vivo Exothermal and Mechanical Evaluation of Two-solution Bone Cements in Vertebroplasty. *Spine Journal* 11(5):432-9, May 2011
23. **Fayyazi, A.H.**, Ordway, N.R., Svach, D., Chen, J., & Taormina, J.: Assessment of Magnetic Resonance Imaging Artifact Following Cervical Total Disc Arthroplasty. *In preparation for Journal of Spinal Disorder & Technique*
24. Park, S., **Fayyazi, A.H.**, Ordway, N.R., Yonemura, K.S., Fredrickson, B.E., & Yuan, H.A.: In Vivo Kinematics Using Radiostereometric Analysis for Dynamic Lumbar Stabilization in Comparison with Lumbar Discectomy and Posterior Lumbar Fusion. *Submitted to International Society for Advancement of Spine Surgery*
25. Toney, E., **Fayyazi, A.H.**, Weber, T.G., Maar, D.C., & Goodspeed, D.C.: Technical Trick, Tibiocalcaneal Pinning: Temporary Stabilization of Severe Calcaneus Fractures. *Submitted to Journal of Orthopaedic Trauma*

PUBLICATIONS (Invited)

1. **Fayyazi, A.H.**, Gelb, D.E., and Ludwig, S.C.: Thoracic Pedicle Screw Instrumentation. *Current Opinion in Orthopaedics*. 13(3): 200-206, June 2002.
2. **Fayyazi, A.H.**, Gelb, D.E., and Ludwig, S.C.: Thoracic Pedicle Screw Instrumentation. *Contemporary Spine Surgery*. 3(12): 89-95, December 2002.
3. Philip S. Yuan, Alexander R. Vaccaro, Stephen J. Timon, and **Fayyazi, A.H.**, Cervical disc degeneration becomes higher priority in light of aging population. *Orthopaedic Today*. 27:30, 2007

BOOK CHAPTERS

1. **Fayyazi, A.H.**, Juliano, P.J.: "Percutaneous Pinning of Talus Fractures". In Lippert FG III, and Hansen S.T. (Eds.), *Foot and Ankle Disorders: Tricks of the Trade*, Thieme Medical and Scientific Publishers, New York, NY, May, 2003.
2. **Fayyazi, A.H.**, An, H.S.: "Optima Spinal Fixation System: Instrumentation Technique". In Kim DH, Vaccaro AR, and Fessler RG (Eds.), *Spinal Instrumentation, Surgical Techniques*, Thieme Medical Publishers, New York, NY, May 2005.
3. **Fayyazi, A.H.**, Biyani, A., An, H.S.: "Laminoplasty Techniques". In Kim DH, Henn J, Vaccaro AR, and Dickman C (Eds.), *Surgical Anatomy and Techniques to the Spine*, Elsevier, Philadelphia, PA, November, 2005.
4. **Fayyazi, A.H.**, Phillips, F.: "Kyphoplasty". In Slipman CW, Derby R, Simeone FA, and Mayer TG (Eds.), *Interventional Spine: An Algorithmic Approach*, Saunders, London, UK, February 2007
5. **Fayyazi, A.H.**, An, H.S.: "Anterior / Posterior Cervical Instrumentation". In Jenis LG and An HS (Eds.), *Spine Surgery Complications: Treatment and Prevention*, Lippincott Williams & Wilkins, New York, NY, November 2005
6. **Fayyazi, A.H.**, Yuan, H., Goel, V.K.: "Biomechanics of Spinal Instrumentation: Application for Trauma". In Zigler, J.E., Eismont, F.J., Garfin, S.R., and Vaccaro, A.R. (Eds), *Spine Trauma (2nd Edition)*, American Academy of Orthopaedic Surgeons, Rosemont, IL 2011
7. **Fayyazi, A.H.**, Yuan, H.: "Nucleoplasty". In Vaccaro, AR, Papadopoulos, S, Traynelis, V, Haid, R. Jr., and Sasso, R (Eds.), *Spine Arthroplasty: The Preservation of Motion*, Elsevier, Philadelphia, PA, January 2007

PRESENTATIONS

1. **Fayazi, A.H.**, Reid, J.S., and Juliano, P.J.: "Percutaneous Pinning of Talar Neck Fractures: Technical Pearls". Society of Military Orthopaedic Surgeons, December 2000 (San Antonio, Texas), Poster
2. **Fayazi, A.H.**, Nguyen, H.A., and Juliano, P.J.: "Intermediate Term Follow Up of Calcaneal Osteotomy and Flexor Digitorum Longus Transfer for Treatment of Posterior Tibial Tendon Dysfunction". American Orthopaedic Association Resident Meeting, March 2001 (Hershey, Pennsylvania), Podium Presentation
3. **Fayazi, A.H.**, Nguyen, H.A., and Juliano, P.J.: "Intermediate Term Follow Up of Calcaneal Osteotomy and Flexor Digitorum Longus Transfer for Treatment of Posterior Tibial Tendon Dysfunction". American Orthopaedic Foot and Ankle Society, July 2001 (San Diego, California), Podium Presentation
4. **Fayazi, A.H.**, Ludwig, S.C., and Gelb, D.E.: "Thoracolumbar Osteomyelitis Treated with Staged Anterior Debridement and Reconstruction Using Titanium Cages Followed by Delayed Posterior Spinal Fusion: Preliminary Results". International Meeting on Advanced Spine Techniques, July 2001 (Nassau, Bahamas), Podium Presentation
5. **Fayazi, A.H.**, Ludwig, S.C., and Gelb, D.E.: "Thoracolumbar Osteomyelitis Treated with Staged Anterior Debridement and Reconstruction Using Titanium Cages Followed by Delayed Posterior Spinal Fusion: Preliminary Result". Eastern Orthopaedic Association, October 2001 (Bermuda), Podium Presentation
6. **Fayazi, A.H.**, Hugate, R.R., Gelb, D.E., Pennypacker, J., and Ludwig, S.C.: "A Comparison of Three Methods of Thoracic Pedicle Screw Placement". Eastern Orthopaedic Association, October 2001 (Bermuda), Podium Presentation
7. **Fayazi, A.H.**, Ludwig, S.C., and Gelb, D.E.: "Staged Anterior Debridement and Reconstruction Using Titanium Mesh Cages in Treatment of Thoracolumbar Osteomyelitis: Preliminary Result". American Orthopaedic Association Resident Meeting, April 2002 (Memphis, Tennessee), Podium Presentation
8. **Fayazi, A.H.**, Hugate, R.R., Pennypacker, J., Gelb, D.G., and Ludwig, S.C.: "Placement of Pedicle Screws in the Thoracic Spine: Comparative Accuracy of Three Techniques". American Orthopaedic Association Resident Meeting, April 2002 (Memphis, Tennessee), Podium Presentation
9. **Fayazi, A.H.**, Ludwig, S.C., Hugate, R., Pennypacker, J., Wallach, D.M., and Gelb, D.E.: "Accuracy of Computed Tomography in Assessment of Thoracic Pedicle Screw Position". International Meeting on Advanced Spine Techniques, July 2002 (Switzerland), Podium Presentation

PRESENTATIONS (continued)

10. **Fayazi, A.H.**, Hugate, R., Pennypacker, J., Ludwig, S.C., and Gelb, D.E.: "Placement of Pedicle Screws in the Thoracic Spine: Comparative Accuracy of Three Techniques". International Meeting on Advanced Spine Techniques, July 2002 (Switzerland), E-Poster.
11. **Fayazi, A.H.**, Hugate, R.R., Pennypacker, J., Gelb, D.E., and Ludwig, S.C.: "Accuracy of Computed Tomography in Assessment of Thoracic Pedicle Screw Position". North American Spine Society, October 2002 (Montreal, Canada), Podium Presentation
12. **Fayazi, A.H.**, Nguyen, H.A., and Juliano, P.J.: "Intermediate Term Follow Up of Calcaneal Osteotomy and Flexor Digitorum Longus Transfer for Treatment of Posterior Tibial Tendon Dysfunction". Annual Meeting of Pennsylvania Orthopaedic Society, November 2002 (Philadelphia, Pennsylvania) , Podium Presentation – Second Place, Resident Research Award.
13. **Fayyazi, A.H.**, Nguyen, H.A., and Juliano, P.J.: "Intermediate Term Follow Up of Calcaneal Osteotomy and Flexor Digitorum Longus Transfer for Treatment of Posterior Tibial Tendon Dysfunction". American Association of Orthopaedic Surgeons, Specialty Day, March 2004 (San Francisco, California), Podium Presentation – Vernon Nickel Award
14. **Fayyazi, A.H.**, Hussain, M., Natarajan, R., Phillips, F., & An, H.S.: "Effect of Screw Angulation on the Bone Graft Load Sharing and Bone-Screw Stresses in Anterior Cervical Corpectomy Fusion with Rigid Plate Screw Construct: A Finite-Element Model Study". Second Annual DePuy Spine Fellows Course, June 2004 (Boston, Massachusetts), Podium Presentation – Best Basic Science Paper
15. **Fayyazi, A.H.**, Hussain M., Natarajan, R., Phillips, F, and An, H.S.: "Effect of Screw Angulation on the Bone Graft Load Sharing and Bone-Screw Stresses in Anterior Cervical Corpectomy Fusion with Rigid Plate Screw Construct: A Finite-Element Model Study". IMAST, July 2005 (Banff, Alberta, Canada), E-Poster.
16. **Fayyazi, A.H.**, Hussain M., Natarajan, R., Phillips, F, and An, H.S.: "Effect of Screw Angulation on the Bone Graft Load Sharing and Bone-Screw Stresses in Anterior Cervical Corpectomy Fusion with Rigid Plate Screw Construct: A Finite-Element Model Study", World Spine III, August 2005 (Rio de Janeiro, Brazil), Podium Presentation
17. **Fayyazi, A.H.**, Hussain M., Natarajan, R., Phillips, F., and An, H.S.: "Effect of Graft-Endplate Contact Surface Morphology on the Biomechanics of Anterior Cervical Corpectomy Fusion and Rigid Plating: A Finite-Element Model Study", World Spine III, August 2005 (Rio de Janeiro, Brazil), Podium Presentation

PRESENTATIONS (continued)

18. Lu, Y.M., Cheng, C.C., Fang, H., Zhang, X., Ordway, N.R., **Fayyazi, A.H.**: “Correlation of Cervical Endplate Strength with CT Measured Subchondral Bone Density”, Cervical Spine Research Society, December 2005 (San Diego, California), Podium Presentation
19. Cheng, C.C., Lu, Y.M., Fang, H., Zhang, X., Ordway, N.R., **Fayyazi, A.H.**: “Loss of Endplate Integrity Following Minimal Surface Preparation”, Cervical Spine Research Society, December 2005 (San Diego, California), Podium Presentation
20. Ordway, N.R., Cheng, C.C., Lu, Y.M., Fang, H., Zhang, X., **Fayyazi, A.H.**: “Loss of Endplate Integrity Following Minimal Surface Preparation”, Orthopaedic Research Society, March 2006 (Chicago, Illinois), Poster
21. **Fayyazi, A.H.**, Lu, Y.M., Cheng, C.C., Fang, H., Zhang, X., and Ordway, N.R.: “Correlation of Cervical Endplate Strength with CT Measured Subchondral Bone Density”, Orthopaedic Research Society, March 2006 (Chicago, Illinois), Poster
22. **Fayyazi, A.H.**, Ordway, N.R., Lu, Y.M., Cheng, C.C., Fang, H., Zhang, X., Bisen, V.: “Correlation of Cervical Endplate Strength with CT Measured Subchondral Bone Density”, Spine Arthroplasty Society, May 2006 (Montreal, Canada), Podium Presentation
23. **Fayyazi, A.H.**, Ordway, N.R., Cheng, C.C., Lu, Y.M., Fang, H., Zhang, X., Bisen, V.: “Loss of Endplate Integrity Following Minimal Surface Preparation”, Spine Arthroplasty Society, May 2006 (Montreal, Canada), Podium Presentation
24. Ordway, N.R., Fredrickson, B.E., Yonemura, K., **Fayyazi, A.H.**, and Yuan, H.A.: “Eighteen Month Follow-up of Lumbar Spine Range of Motion Following Intervertebral Disc Replacement Using Radiostereometric Analysis”, Spine Arthroplasty Society, May 2006 (Montreal, Canada), Poster
25. **Fayyazi, A.H.**, Ordway, N.R., Fredrickson, B.E., Yonemura, K., and Yuan, H.A.: “Eighteen Month Follow-Up of Lumbar Spine Range of Motion Following Intervertebral Disc Replacement using Radiostereometric Analysis”, International Meeting of Advanced Spine Techniques, July, 2006 (Athens, Greece), E-Poster
26. **Fayyazi, A.H.**, Ordway, N.R., Zhang, X., Rim, B., Tan, R., and Abjornson, C.: “Evaluation of Magnetic Resonance Imaging Techniques for Reduction of Artifact Surrounding Cervical Total Disc Arthroplasty”, International Meeting of Advanced Spine Techniques, July, 2006 (Athens, Greece), E-Poster

PRESENTATIONS (continued)

27. **Fayyazi, A.H.**, Ordway, N.R., Fredrickson, B.E., and Yuan, H.A.: “Radiostereometric Analysis of Postoperative Motion Following Application of Dynesys Dynamic Posterior Stabilization System for Treatment of Degenerative Spondylolisthesis”, International Meeting of Advanced Spine Techniques, July, 2006 (Athens, Greece), E-Poster
28. **Fayyazi, A.H.**, Ordway, N.R., Fredrickson, B.E., and Yuan, H.A.: “Radiostereometric Analysis Comparing a Variable Angle Locking and a Dynamic Cervical Plate”, International Meeting of Advanced Spine Techniques, July, 2006 (Athens, Greece), E-Poster
29. **Fayyazi, A.H.**, Ordway, N.R., Zhang, X., Rim, B., Cheng, C.C., and Tan, R.: “Correlation of CT Measured Bone Density and Prodisc-C-Bone Endplate Strength and Stress”, International Meeting of Advanced Spine Techniques, July, 2006 (Athens, Greece), E-Poster
30. **Fayyazi, A.H.**, Ordway, N.R., Lu, Y.M., Cheng, C.C., Fang, H., and Zhang, X.: “Correlation of Cervical Endplate Strength with CT Measured Subchondral Bone Density”, International Meeting of Advanced Spine Techniques, July, 2006 (Athens, Greece), E-Poster
31. **Fayyazi, A.H.**, Ordway, N.R., Cheng, C.C., Lu, Y.M., Fang, H., and Zhang, X.: “Loss of Endplate Integrity Following Minimal Surface Preparation”, International Meeting of Advanced Spine Techniques, July, 2006 (Athens, Greece), E-Poster
32. Hussain, M., **Fayyazi, A.H.**, Natarajan, R.N., Andersson, G.B., and An, H.S.: “Effect of Uni- And Bi-Cortical Screw Angulation on the Stability of Multi-Level Corpectomy Construct – A Finite Element Model Study”, Annual Meeting of American Society of Biomechanics, September 2006 (Blacksburg, Virginia) , Podium Presentation
33. **Fayyazi, A.H.**, Ordway, N.R., Lu, Y.M., Cheng, C.C., Fang, H., and Zhang, X.: “Correlation of Cervical Endplate Strength with CT Measured Subchondral Bone Density”, Scoliosis Research Society, September, 2006 (Monterey, California), Poster
34. **Fayyazi, A.H.**, Ordway, N.R., Fredrickson, B.E., Yonemura, K., and Yuan, H.A.: “Eighteen Month Follow-Up of Lumbar Spine Range of Motion Following Intervertebral Disc Replacement using Radiostereometric Analysis”, North American Spine Society, September, 2006 (Seattle, Washington), Poster
35. **Fayyazi, A.H.**, Ordway, N.R., Rim, B.C., and Tan, R.: “Evaluation of Magnetic Resonance Imaging Techniques for Reduction of Artifact Surrounding Cervical Total Disc Arthroplasty”, Cervical Spine Research Society, November, 2006 (Palm Beach, Florida), Poster

PRESENTATIONS (continued)

36. Rim, B.C., Tan, R., Hickman, R.H., **Fayyazi, A.H.**, & Ordway, N.R.: “Influence of the Cortical Shell and the Trabecular Bone Mineral Density on The Stiffness of the Cervical Endplate”, Orthopaedic Research Society, February, 2007 (San Diego, California), Poster
37. **Fayyazi, A.H.**, Ordway, N.R., Calabrese, J., Fredrickson, B.E., and Yuan, H.A.: “Six Month Follow-Up Comparing a Variable Angle Locking and a Dynamic Cervical Plate Using Radiostereometric Analysis”, Orthopaedic Research Society, February, 2007 (San Diego, California), Poster
38. **Fayyazi, A.H.**, Ordway, N.R., Rim, B.C., and Tan, R.: “Evaluation of Magnetic Resonance Imaging Techniques for Reduction of Artifact Surrounding Cervical Total Disc Arthroplasty”, Spine Arthroplasty Society, May, 2007 (Berlin,Germany), Poster
39. Ordway, N.R., **Fayyazi, A.H.**, Rim, B.C., Tan, R., Hickman, R.: “Correlation of Prodisc-C Failure Strength With Bone Mineral Content and Endplate Strength”, Spine Arthroplasty Society, May, 2007 (Berlin,Germany), Poster
40. Ordway, N.R., **Fayyazi, A.H.**, Rim, B.C., Tan, R., Hickman, R.: “The Effect of Endplate Preparation and Fatigue on the Implant-Bone Interface of a Prodisc-C Total Disc Replacement”, Spine Arthroplasty Society, May, 2007 (Berlin, Germany), Poster
41. Park, S.A., Ordway, N.R., **Fayyazi, A.H.**: “Intervertebral Kinematics following Lumbar Discectomy: Preliminary Study of 1-year follow-up”, International Meeting of Advanced Spine Technique, July, 2007 (Nassau, Bahamas), E-Poster
42. Ordway, N.R., **Fayyazi, A.H.**, Rim, B.C., Tan, R., Hickman, R.: “Biomechanical Analysis of Anterior Cervical Implant Subsidence with Repetitive Compressive Force”, International Meeting of Advanced Spine Technique, July, 2007 (Nassau, Bahamas), E-Poster
43. Ordway, N.R., **Fayyazi, A.H.**, Rim, B.C., Tan, R., Hickman, R.: “The Effect of Endplate Preparation and Fatigue on the Implant-Bone Interface of a Prodisc-C Total Disc Replacement”, International Meeting of Advanced Spine Technique, July, 2007 (Nassau, Bahamas), E-Poster
44. **Fayyazi, A.H.**, Ordway, N.R., Fredrickson, B.E., & Yuan, H.A.: “In Vivo Biomechanical Evaluation of Third Generation Anterior Cervical Plate: A Radiostereometric Analysis”, World Spine, August, 2007 (Istanbul, Turkey) , Podium Presentation

PRESENTATIONS (continued)

45. **Fayyazi, A.H.**, Ordway, N.R., Fredrickson, B.E., & Yuan, H.A.: “Radiostereometric Analysis of Postoperative Motion Following Application of Dynesys Dynamic Posterior Stabilization System for Treatment of Degenerative Spondylolisthesis”, World Spine, August, 2007 (Istanbul, Turkey), E-Poster
46. **Fayyazi, A.H.**, Ordway, N.R., Rim, B.C., Tan, R., & Hickman, R.: “The Effect of Endplate Preparation and Fatigue on the Implant-Bone Interface of a Prodisc-C Total Disc Replacement”, World Spine, August, 2007 (Istanbul, Turkey) , Podium Presentation
47. Park, S.A., Ordway, N.R., Calabrese, J, Yuan, H.A. & **Fayyazi, A.H.**: "Can Intervertebral Kinematics Predict Clinical Outcome of Lumbar Discectomy?", American society of Biomechanics, August, 2007 (Stanford University), Poster
48. Park, S.A., Ordway, N.R., Yuan, H.A., Fredrickson, B.E., Sun, M., **Fayyazi, A.H.**: "Accuracy of Radiographic Intervertebral Kinematics as a Determinant of Lumbar Fusion", American society of Biomechanics, August, 2007 (Stanford University), Poster
49. **Fayyazi, A.H.**, Park, S.A., Ordway, N.R., Fredrickson, B.E., Yuan, H.A.: “In Vivo Biomechanical Evaluation of Third Generation Anterior Cervical Plate: A Radiostereometric Analysis”, Cervical Spine Research Society, November, 2007 (San Francisco, California), Poster
50. Ordway, N.R., **Fayyazi, A.H.**, Rim, B.C., Tan, R, & Hickman, R.: “The Effect of Endplate Preparation and Fatigue on the Implant-Bone Interface of a Prodisc-C Total Disc Replacement”, Cervical Spine Research Society, November, 2007 (San Francisco, California), Poster
51. Park, S.A., Ordway, N.R., Fredrickson, B.E., Yuan, H.A., Sun, M.H., & **Fayyazi, A.H.**: “Segmental Micro-kinematics of Plated Two-Level Anterior Cervical Discectomy and Fusion: Effects of Time, Level and Grade of Fusion”, Cervical Spine Research Society, November, 2007 (San Francisco, California), Poster
52. Park, S.A., Ordway, N.R., **Fayyazi, A.H.**, Fredrickson, B.E., and Yuan, H.A.; “Measurement of Paradoxical and Coupling Motions following Lumbar Total Disc Replacement”, Asia-Pacific Spine Arthroplasty Society, January, 2008 (Seoul, Korea), Podium Presentation
53. Park, S.A., Ordway, N.R., **Fayyazi, A.H.**, Fredrickson, B.E., and Yuan, H.A.; “In Vivo Kinematics Using Radiostereometric Analysis for Dynamic Lumbar Stabilization in Comparison with Lumbar Discectomy and Posterior Lumbar Fusion”, Asia-Pacific Spine Arthroplasty Society, January, 2008 (Seoul, Korea), Podium Presentation

PRESENTATIONS (continued)

54. Ordway, N.R., Park, S.A., Fredrickson, B.E., Yuan, H.A., **Fayyazi, A.H.**; “In Vivo Kinematics Following Dynamic Lumbar Stabilization”: A Comparison to Lumbar Discectomy and Posterior Lumbar Fusion”, Orthopaedic Research Society, March, 2008 (San Francisco, California), Poster
55. Ordway, N.R., **Fayyazi, A.H.**, Rim, B.C., Tan, R., Hickman, R.; “Biomechanical Analysis of Anterior Cervical Implant Subsidence with Repetitive Compressive Force”: A Comparison to Lumbar Discectomy and Posterior Lumbar Fusion”, Orthopaedic Research Society, March, 2008 (San Francisco, California), Poster
56. Ordway, N.R., Tan, R., Rim, B.C., Hickman, R., Allen, M.J., **Fayyazi, A.H.**; “The Effect of Endplate Preparation and Fatigue on the Implant-Bone Interface of a Prodisc-C Total Disc Replacement”, Orthopaedic Research Society, March, 2008 (San Francisco, California), Podium Presentation
57. Park, S.A., **Fayyazi A.H.**, Ordway N.R., Fredrickson B.E., Yuan H.A.; “Assessment of Motion Quality Following Lumbar Total Disc Arthroplasty and Lumbar Discectomy”, Spine Arthroplasty Society, May 2008 (Miami, Florida), Podium Presentation
58. Park, S.A., Ordway N.R., **Fayyazi A.H.**, Fredrickson B.E., Yuan H.A.; “Assessment of Lumbar Segmental Range of Motion Following Dynamic Stabilization in Comparison to Lumbar Discectomy and to Posterior Fusion with Pedicle Instrumentation”, Spine Arthroplasty Society, May 2008 (Miami, Florida), Podium Presentation
59. Park, S.A., Ordway N.R., **Fayyazi A.H.**, Fredrickson B.E., Yuan H.A.; “Comparison of Cobb Technique and Radiostereometric Analysis in Measurement of Segmental Range of Motions Following Lumbar Total Disc Arthroplasty”, Spine Arthroplasty Society, May 2008 (Miami, Florida), Poster
60. **Fayyazi, A.H.**, Ordway, N.R., Rim, B.C., Tan, R., & Hickman, R.: “The Effect of Endplate Preparation and Fatigue on the Cervical Total Disc Implant-Bone Interface”, North American Spine Society, October 2008 (Toronto, Canada), E-Poster
61. **Fayyazi, A.H.**, Svach D., Hanson S., Chen J., Taoramina J, & Ordway, N.R.; “Evaluation of the Quantity and the Quality of MRI Artifact Following Cervical Total Disc Arthroplasty”, NASS Spring Break, April 2009 (Puerto Rico), Podium Presentation
62. Sun, M., Ordway, N.R., **Fayyazi, A.H.**, Yuan, H.A., Fredrickson, B.E.; “Radiostereometric Range of Motion Analysis of Prodisc Lumbar Arthroplasty at Two Year Follow-Up”, North American Spine Society, November 2009 (San Francisco, California), E-Poster

PRESENTATIONS (continued)

63. **Fayyazi, A.H.**, Svach, D., Hanson, S., Chen, J., Taormina, J., & Ordway, N.R., “Improved Assessment of MRI Artifact Following Cervical Total Disc Arthroplasty”, Cervical Spine Research Society, December 2009 (Salt Lake City, Utah). Podium Presentation
64. Rodrigues, D., Ma, C., Ordway, N.R., Schroeder, A, Miller, M, **Fayyazi, A.H.**, & Hasenwinkel, J.M., “An Ex Vivo Exothermal and Mechanical Evaluation of Two-solution Bone Cements Containing Cross-linked Poly(methyl methacrylate) Particles in Vertebroplasty”, Orthopaedic Research Society, March 2010 (New Orleans, Louisiana). Poster
65. **Fayyazi, A.H.**, Svach, D., Hanson, S., Chen, J., Taormina, J., & Ordway, N.R., “Improved Assessment of MRI Artifact Following Cervical Total Disc Arthroplasty”, Spine Arthroplasty Society, April 2010 (New Orleans, Louisiana). Oral Poster Presentation
66. Rodrigues, D., Ma, C., Ordway, N.R., Schroeder, A, Miller, M, **Fayyazi, A.H.**, & Hasenwinkel, J.M., “An Ex Vivo Exothermal and Mechanical Evaluation of Two-solution Bone Cements Containing Cross-linked PMMA Particles in Vertebroplasty”, Spine Arthroplasty Society, April 2010 (New Orleans, Louisiana). Poster Presentation
67. Fayyazi, A.H., Buckley, R, Lorio, M., Yuan, P., DeVine, J.G., & Smith, K.K., “Evaluation of Radiographic and Patient Outcomes Following Lumbar Spine Fusion Using Demineralized Bone Matrix (DBM) Mixed With Autograft”, North American Spine Society, October 2010 (Orlando, Florida). Focused Presentation
68. Fayyazi, A.H., Smith, K.K., Buckley, R, Lorio, M., Yuan, P., & DeVine, J.G., “Comparison of patients undergoing 1- and 2-level Lumbar Fusions Using Demineralized Bone Matrix (Optecure, Exactech Inc.) as a Bone graft extender when compared with Autograft”, International Society for Advancement of Spinal Surgery, April 2011 (Las Vegas, Nevada), Podium Presentation

INVITED SPEAKER

1. **Fayyazi, A.H.:** “Idiopathic Scoliosis”, Rush Neurosurgery / Orthopaedics Spine Review Course, November 2003.
2. **Fayyazi, A.H.:** “Spine Terminology”, AO North America Nursing Continuing Education, November 12, 2005 (Detroit, Michigan)
3. **Fayyazi, A.H.:** “Adjacent Level Disease”, Motion Preservation in the Treatment of Cervical Radiculopathy and Myelopathy Course Symposium, World Spine III, August 2005 (Rio de Janeiro, Brazil)
4. **Fayyazi, A.H.:** “Adjacent Level Disease”, Spine Fellows Reunion, August 12, 2005 (Savannah Dhu Lodge, NY)
5. **Fayyazi, A.H.:** “Potential Role of Radiostreometric Analysis(RSA) in Evaluating Spinal Segment Motion”, SUNY Upstate, Ground Rounds, February 8, 2006 (Syracuse, NY)
6. **Fayyazi, A.H.:** “Treatment of Cervical Disk Disease: past, present and future”, NY International Association for Rehabilitation Professionals (IARP), April 6, 2006 (Syracuse)
7. **Fayyazi, A.H., Ordway, N.R.:** “Radiostereometric Analysis (RSA) in Evaluating Spinal Segment Motion”, Syracuse/Upstate Biomaterials/Biomechanics (SUBB) Group Meeting, April 7, 2006 (Syracuse)
8. **Fayyazi, A.H.:** “Advances in Cervical Spine Treatment”, Health Link, September 7, 2006 (Syracuse, NY)
9. **Fayyazi, A.H.:** “Thoracolumbar Trauma”, New Technologies, Old Complications: The Surgical Treatment of Spinal Disorders, October 26-28, 2006 (Niagra on The Lake)
10. **Fayyazi, A.H.:** “Cervical Adjacent Segment Disease”, New Technologies, Old Complications: The Surgical Treatment of Spinal Disorders, October 26-28, 2006 (Niagra on The Lake)
11. **Fayyazi, A.H.:** “Lumbar Spine Pathologies”, PMR Lecture, March 8, 2007 (Syracuse, NY)
12. **Fayyazi, A.H.:** “Adult Spinal Deformity”, NYC Deformity Meeting, April 27, 2007 (New York, NY)
13. **Fayyazi, A.H.:** “RSA Evaluation of Spinal Kinematics”, International Symposium on Clinical and Scientific Research in RSA, October 22-25, 2009 (Cape Breton , Nova Scotia)

INVITED SPEAKER (continued)

14. **Fayyazi, A.H.:** “Cervical Spine – Anatomy, Terminology, and Radiographic Imaging”, AO North America Nursing Continuing Education, May 15, 2010 (Bethlehem, PA)
15. **Fayyazi, A.H.:** “Cervical Spine – Degenerative Spine, Surgical Approaches, and Non-Fusion Technologies”, AO North America Nursing Continuing Education, May 15, 2010 (Bethlehem, PA)
16. **Fayyazi, A.H.:** “Inovations in Spine Surgery”, AO North America Nursing Continuing Education, February 6, 2011 (Milwaukee, Wisconsin)
17. **Fayyazi, A.H.:** “Treatment of Cervical Degenerative Disc Disease”, Alliance Impairment Annual Meeting, May 12, 2011
18. **Fayyazi, A.H.:** “Short-term result of anterior cervical discectomy and fusion”, Titan Incorporated, November 19, 2011

CLINICAL RESEARCH STUDIES

SUNY Upstate Medical University (August 2004 – August 2007)

1. “Settling Characteristic of Anterior Cervical Plates”: Primary Investigator, Supported by Abbott Spine, SUNY Upstate University
2. “A Single Blind, Multi-Center, Two Armed, Randomized, Prospective Clinical Study Comparing Opte-Cure™ Autograft Extender to Autograft Only in Posterior Lumbar Fusion and Anterior Lumbar Interbody Fusion”: Primary Investigator, Supported by Exactech Inc., SUNY Upstate University
3. “A Prospective Randomized Clinical Investigation of the Cervitech, Inc. Porous Coated Motion Artificial Disk for Stabilization of the Cervical Spine at One Level between C3-4 and C7-T1”: Primary Investigator, Supported by Cervitech Inc., SUNY Upstate University
4. “Use of Radiostereometric Analysis (RSA) for Measuring Spinal Motion Following Lumbar or Cervical Spinal Surgery”, Primary Investigator, Supported by DePuy Spine, SUNY Upstate University
5. “Stabilimax NZ®, Dynamic Spine Stabilization System”, Primary Investigator, Supported by Applied Spinal Technologies Inc., SUNY Upstate University
6. “Comparison of DISCOVER™ Artificial Cervical Disc and ACDF for Treatment of Cervical DDD”, Co-Investigator, Supported by DePuy Spine, SUNY Upstate University

Lehigh Valley Hospital (August 2007 – December 2010)

1. “Stabilimax NZ®, Dynamic Spine Stabilization System”, Co-Investigator, Supported by Applied Spinal Technologies Inc., Lehigh Valley Hospital

BASIC SCIENCE RESEARCH

Syracuse University

1. “Novel Two-Solution Based Bone Cements for Vertebroplasty and Kyphoplasty”, Clinical Co-Investigator, Wallace H. Coulter Foundation, Syracuse University