

AMIETHAB AIYER, MD

EDUCATION & TRAINING

- Aug 1998—May 2002 University of California-Berkeley Berkeley, CA
B.A. in Molecular and Cellular Biology,
- Aug 2003—May 2008 Drexel University College of Medicine Philadelphia, PA
Doctorate of Medicine
- June 2007—June 2008 Rothman Institute/Thomas Jefferson Univ Philadelphia, PA
Research Fellowship in Orthopaedic Surgery with Dr Javad Parvizi
• Focus on chemical modification of bone allograft to target periprosthetic infection
- July 2008—Sept 2013 Penn State Hershey Medical Center Hershey, PA
Residency completed in Orthopaedic Surgery under director Dr Paul Juliano
- Oct 2013—July 2015 Institute for Foot and Ankle Reconstruction Baltimore, MD
Research and Clinical Fellowship in Orthopaedic Foot and Ankle Surgery with Dr Mark Myerson
- July 2014 ABOS Part 1 Baltimore, MD
Passed on July 10th, 2014

PROFESSIONAL EMPLOYMENT

- Oct 2015—present University of Miami/Miller School of Medicine Miami, FL
Assistant Professor, Chief of Foot & Ankle Service, Department of Orthopaedic Surgery

SPECIAL AWARDS & HONORS

1. **HAP Paul Award--ISTA** (2009): Ketonis C, **Aiyer A**, Barr S, Adams CS, Shapiro IM, Hickok NJ, Parvizi J, “**New Bactericidal Allogenic Bone constructs Offer Clear Advantages Over Elution Technologies**” *Proceeds of the Annual meeting of the International Society for Technology in Arthroplasty (ISTA), Hawaii, USA 2009*
2. **Founders Award—EOA** (2009): Ketonis C, Barr S, **Aiyer A**, Adams C, Shapiro IM, Hickok N, Parvizi J. “**Antibiotic Bone Allografts: An Improvement on Elution Technologies**” *Proceedings of the 40th Annual meeting of the Eastern Orthopaedic Association (EOA), June 17-20, 2009, Paradise Island, Bahamas*
3. **Sigma Xi Research Award** (2009): Ketonis C, **Aiyer A**, Parvizi J, Hickok N. “**Antibiotic modification of native grafts: Improving upon Nature’s scaffolds**” *Thomas Jefferson University Chapter Sigma Xi Student Research Day, April 8, 2009, Philadelphia, Pennsylvania, USA*
4. **OREF Resident Research Symposium Selection** (2009): **Aiyer A**, Ketonis C, Barr S, Adams C, Shapiro IM, Parvizi J, Hickok NJ, “**Antibiotic Modified Bone Allograft Prevents Biofilm Formation Without Compromising Mammalian Cell Expression Profiles**” *Proceedings of Philadelphia Area Orthopaedic Resident Education Foundation (OREF) Research Symposium, May 2009, Philadelphia, Pennsylvania, USA*

5. **AOFAS Resident Scholarship Selection** (2011), *AOFAS Annual Meeting, July 2011, Keystone, Colorado*
6. **OREF Resident Research Symposium Selection** (2012): **Aiyer A**, Hennrikus W, Walrath J, Groh B, Ostrov B., **Evaluation of Poly Articular Lyme Disease In the Pediatric Population**, *Proceedings of the Orthopaedic Research and Education Foundation (OREF) Resident Research Symposium, June 9th 2012, Philadelphia, PA, USA*
7. **Alan Levine Scholarship in Orthopaedic Graduate Medical Education** (2012), *45th Annual AAOS Course for Orthopaedic Educators, November 4th-8th 2012, Bloomington, Illinois*
8. **American Orthopaedic Association “Emerging Leaders Program” selection** (2013), *AOA Annual Meeting, June 2013, Denver Colorado*
9. **Arnold P Gold Resident Teacher Award** (2013), *Presented by the Medical School Class of 2014, Penn State Hershey College of Medicine*
10. **2nd Place Award--Techcelerator Entrepreneurial Competition** (2013): **Aiyer, A** Wawrzyniak J, Lynch S, Pujalte G, “Ridok: A mobile health application development company”, *Penn State/Hershey Medical Center, May 15th, 2013, Hershey, PA*,

MEMBERSHIP/LEADERSHIP POSITIONS

PROFESSIONAL ORGANIZATIONS

1. **Member, American Academy of Orthopaedic Surgeons (2008-Present)**
2. **Member, Emerging Leaders Program, American Orthopaedic Association (2012-Present)**
3. **Member, American Orthopaedic Foot and Ankle Society (2014-Present)**

COMMITTEES

1. **Member, Postgraduate Education & Training, AOFAS, (2015-present)**

LEADERSHIP

1. **Drexel University College of Medicine, Class President** (2006-2007, Drexel University, Philadelphia, PA)
Working with other Drexel University students to help put together school wide activities, community service projects, as well as activities for the 4th year class.

EDUCATIONAL

1. **Member, Residency Education Committee;** (2010-2013, Penn State College of Medicine, Hershey, PA)
Work with other residents and faculty members to identify curricular issues and make improvements to the educational experience of the orthopaedic surgery residency
2. **Founder, Orthopaedic Residency Advice Forum;** (2010-2013, Penn State College of Medicine, Hershey, PA)
Organize advising sessions with the 1st-4th year medical students, to review basic topics in orthopaedics and provide information regarding the orthopaedic surgery residency application process.

PUBLICATIONS

PEER REVIEWED MANUSCRIPTS

1. Ketonis C, Adams CS, Barr S, **Aiyer A**, Shapiro IM, Parvizi J, Hickok NJ. “**Antibiotic modification of native grafts: improving upon nature’s scaffold**” *TISSUE ENGINEERING PART A* (2010) 16(6). pp2041-9 (published)
2. **Aiyer A**, Juliano P, “**Tendon Transfers for Hallux Varus**” *TECHNIQUES IN FOOT & ANKLE SURGERY* (2013) 12(1):16-24 (published)
3. **Aiyer A**, Varacallo M, Boateng H, Reid JS, “**Humeral shaft fracture with ipsilateral anterior shoulder dislocation and posterior elbow dislocation: A case report and review of the literature**”, *JOURNAL OF BONE & JOINT SURGERY—CASE CONNECTOR* (2014) (published)
4. **Aiyer A**, Walrath J, Hennrikus WL, “**Lyme Arthritis of the Pediatric Ankle: A Case Report**”, *ORTHOPAEDICS* (2014) (in press)
5. Cerrato R, **Aiyer A**, Campbell JT, Jeng CL, Myerson MS, “**Reproducibility of Computer Tomography to Evaluate Ankle and Hindfoot Fusions: Correlation Amongst Surgeons**”, *FOOT & ANKLE INTERNATIONAL*. (2014) (published)
6. **Aiyer A**, Hennrikus WL, Walrath J, Groh B, Ostrov B “**Evaluation of Poly Articular Lyme Disease in the Pediatric Population**” *JOURNAL OF CHILDREN’S ORTHOPAEDICS* (2014) (published)
7. **Aiyer, A**, Shariff R, Shub J, Ying L, Myerson MS “**Defining the Prevalence of Metatarsus Adductus in Patients Undergoing Hallux Valgus Surgery**”, *FOOT & ANKLE INTERNATIONAL* (2014) (published)
8. **Aiyer A**, Hennrikus WL, “**Foot Pain in the Child & Adolescent**”, *PEDIATRIC CLINICS OF NORTH AMERICA* (2014) (published)
9. Yu G, Zhao Y, **Aiyer A**, Tang X, Xie M, Zeng L, Li B, Yang Y, “**Repair of the acute deltoid ligament complex rupture associated with ankle fractures: a multicenter clinical study**”, *JOURNAL OF FOOT & ANKLE SURGERY* (2015) (published)
10. Myerson M, **Aiyer A**, Berger D, “**Reconstruction of the Tibialis Anterior Tendon: A Novel Technique**”, *Status: TECHNIQUES IN FOOT & ANKLE SURGERY* (2015) (published)
11. Myerson M, **Aiyer A**, Ellington JK, “**Revision Total Ankle Replacement**”, 2015, *Status: JOURNAL OF BONE AND JOINT SURGERY (ESSENTIAL SURGICAL TECHNIQUES)* (published)
12. **Aiyer, A**, Myerson M, Dall G, Price J, Widmer J, “**The Biomechanical Evaluation of Revision First Metatarsophalangeal Arthrodesis: A Cadaveric Study**”, *FOOT & ANKLE SPECIALIST* (2015) (published)
13. **Aiyer, A**, Egol K, Parvizi J, Schwartz AK, Mehta S, “**Orthopaedic Surgery: Perspectives on Matching into Residency**”, *CURRENT ORTHOPAEDIC PRACTICE* (2015) (accepted for publication)
14. Updegrave GF, **Aiyer A**, Fortuna K, “**Segmenetal Forearm Fracture Due to Grip-Lock Injury in Male Gymanst**” *JBJS CASE CONNECTOR*, 2015 May 27; 5 (2): e43
15. Berger D, **Aiyer A**, Myerson MS, “**Evaluation and Surgical Management of the Overcorrected Clubfoot Deformity in the Adult Patient**”, *FOOT AND ANKLE CLINIC* (2015) (accepted for publication)
16. **Aiyer A**, Russell NA, Pelletier MH, Myerson MS, Walsh WR, “**The Impact of Nitinol Staples on the Compressive Forces, Contact Area and Mechanical Properties in Comparison to a Claw Plate for the Lapidus Arthrodesis**”, 2015, *FOOT & ANKLE SPECIALIST* (2015) (accepted for publication)
17. **Aiyer A**, Shub, J, Shariff R, Ying L, Myerson MS “**Radiographic Recurrence of Deformity After Hallux Valgus Surgery In Patients With Known Metatarsus Adductus**”, *FOOT & ANKLE INTERNATIONAL* (2015) (accepted for publication)
18. **Aiyer A**, Kish A, Goodspeed D, Armstrong AA “**Acromial Malunion After Prior Acromioplasty Associated with Deltoid Dysfunction**”, *TECHNIQUES IN SHOULDER & ELBOW SURGERY* (2015) (accepted for publication)
19. **Aiyer A**, Dall G Shub J, Myerson MS, “**Radiographic correction following reconstruction of adult acquired flat foot**

deformity using the Cotton medial cuneiform osteotomy - a case control study”, FOOT & ANKLE INTERNATIONAL (2015) (accepted for publication)

20. Russell NA, Regazzola G, **Aiyer A**, Nomura T, Pelletier MH, Myerson MS, Walsh WR, “**Evaluation of Nitinol Staples for the Lapidus Arthrodesis in a Reproducible Biomechanical Model**”, FRONTIERS IN SURGERY: ORTHOPAEDIC SURGERY (2015) (accepted for publication)

NATIONAL SCIENTIFIC PRESENTATIONS

1. Ketonis C, **Aiyer A**, Adams C, Shapiro IM, Hickok NJ, Parvizi J. “**A new generation of bone grafts with tethered antibiotics**”. *Proceedings of the 55th Annual Meeting of the Orthopaedic Research Society, February 22-25, 2009, Las Vegas, NV, USA.*
2. Ketonis C, **Aiyer A**, Hickok N, Parvizi J. “**Modification of Allografts with Vancomycin Does Not Hamper Biocompatibility**” *Proceedings of the 27th Annual meeting of European Bone and Joint Infection Society (EBJIS), September 18-20, 2008, Barcelona, Spain*
3. Ketonis C, **Aiyer A**, Hickok N, Parvizi J. “**New Generation of Infection Resistant Bone Grafts**” *Proceedings of the 27th Annual meeting of European Bone and Joint Infection Society (EBJIS), September 18-20, 2008, Barcelona, Spain*
4. Ketonis C, **Aiyer A**, Barr S, Adams C, Hickok N. “**Human Osteoblasts show less intracellular S. Aureus following Rapamycin Treatment**” *Proceedings of the 27th Annual meeting of European Bone and Joint Infection Society (EBJIS), September 18-20, 2008, Barcelona, Spain*
5. **Aiyer A**, Antoci V, Ketonis C, Hickok N, Parvizi J. “**Vancomycin-Implant Does not Induce Resistance Development**” *Proceedings of the 27th Annual meeting of European Bone and Joint Infection Society (EBJIS), September 18-20, 2008, Barcelona, Spain*
6. Ketonis C, **Aiyer A**, Chen C, Hickok N, Parvizi J. “**Vancomycin-Modified Allograft is Stable and Bactericidal Over Time**” *Proceedings of the 27th Annual meeting of European Bone and Joint Infection Society (EBJIS), September 18-20, 2008, Barcelona, Spain*
7. Ketonis C, **Aiyer A**, Hickok N, Parvizi J. “**A Novel Modification of Bone Grafts Inhibits Bacterial Colonization**”. *Proceedings of the 30th Annual meeting The American Society for Bone and Mineral Research (ASBMR), September 12-16, 2008, Montreal, Quebec, Canada*
8. Ketonis C, Antoci V Jr, **Aiyer A**, Adams C, Shapiro IM, Parvizi J, Hickok NJ. “**Modification of Ti alloy surfaces: retention of topography with attachment of active antibiotics**” *Proceedings of the 54th Annual Meeting of the Orthopaedic Research Society, March 2-5, 2008, San Francisco, California, USA.*
9. **Aiyer A**, Antoci V Jr, Ketonis C, Ducheyne P, Adams C, Shapiro IM, Hickok NJ, Parvizi J. “**A nanoscale, antibiotic modified titanium surface does not foster the emergence of resistance in S. epidermidis**” *Proceedings of the 54th Annual Meeting of the Orthopaedic Research Society, March 2-5, 2008, San Francisco, California, USA.*
10. Ketonis C, **Aiyer A**, Adams CS, Shapiro IM, Hickok NJ, Parvizi J. “**Bone Graft Modification with Antibiotics Confers Protection from Bacteria**” *Proceedings of the 18th Annual Open Annual Scientific Meeting of the Musculoskeletal Infection Society (MSIS), Aug 8-9, 2008, Lake Tahoe, California, USA*
11. Ketonis C, **Aiyer A**, Shapiro IM, Hickok NJ, Parvizi J, Adams CS. “**Vancomycin Modified Allografts Retain Osteoblastic Cell Biocompatibility**” *Proceedings of the 18th Annual Open Annual Scientific Meeting of the Musculoskeletal Infection Society (MSIS), Aug 8-9, 2008, Lake Tahoe, California, USA*
12. Ketonis C, **Aiyer A**, Shapiro IM, Adams CS, Parvizi J, Hickok NJ. “**Vancomycin Modified Bone Allograft Provides Long Term Protection from Staphylococcus Aureus Colonization**” *Proceedings of the 18th Annual Open Annual Scientific Meeting of the Musculoskeletal Infection Society (MSIS), Aug 8-9, 2008, Lake Tahoe, California, USA*
13. Shariff R, **Aiyer A**, Studeman K, Myerson M, “**A Cadaveric Study Correlating Gross Anatomical and Histopathological Changes associated with Morton’s neuroma**”, *Proceedings of the 45th Annual Meeting of the American Foot and Ankle Society, September 21-23, 2014, Chicago, Illinois, USA*

14. Dall G, **Aiyer A**, Shub J, Myerson MS, “**Evaluation of the Effect of the Cotton Osteotomy on the Medial Arch during Adult Flatfoot Correction**”, *Proceedings of the Annual Meeting of the American Academy of Orthopaedic Surgery (AAOS)*, March 24th-28th, 2015
15. **Aiyer A**, Russell NA, Pelletier MH, Myerson MS, Walsh WR, “**The Impact of Nitinol Staples on the Compressive Forces, Contact Area and Mechanical Properties in Comparison to a Claw Plate for the Lapidus Arthrodesis**”, *Proceedings of the Annual Meeting of the Orthopaedic Research Society (ORS)*, March 28th-31st, 2015

REGIONAL & LOCAL SCIENTIFIC PRESENTATIONS

1. Ketonis C, **Aiyer A**, Parvizi J, Hickok N. “**Antibiotic modification of native grafts: Improving upon Nature’s scaffolds**”. *Thomas Jefferson University Chapter Sigma Xi Student Research Day, April 8, 2009, Philadelphia, Pennsylvania, USA – Award Poster*
2. Ketonis C, Barr S, **Aiyer A**, Adams C, Shapiro IM, Hickok N, Parvizi J. “**Antibiotic Bone Allografts: An Improvement on Elution Technologies**” *Proceedings of the 40th Annual meeting of the Eastern Orthopaedic Association (EOA)*, June 17-20, 2009, Paradise Island, Bahamas – **Founders’ Top Paper Award**
3. Ketonis C, **Aiyer A**, Barr S, Parvizi J, Shapiro I, Hickok N, Adams C. “**Rapamycin: Can it Protect Cells from Internalizing Bacteria?**” *Proceedings of the 39th Annual meeting of the Eastern Orthopaedic Association (EOA)*, October 22-25, 2008, Lake Las Vegas, NV
4. Ketonis C, **Aiyer A**, Shapiro I, Hickok N, Parvizi J. “**Covalent Modification of Bone Grafts with Antibiotics: A New Paradigm**” *Proceedings of the 39th Annual meeting of the Eastern Orthopaedic Association (EOA)*, October 22-25, 2008, Lake Las Vegas, NV
5. **Aiyer A**, Ketonis C, Shapiro I, Hickok N, Parvizi J. “**S. Epidermidis Remains Susceptible to a Nanoscale, Antibiotic Modified Titanium Surface after Multiple Rechallenges**” *Proceedings of the 39th Annual meeting of the Eastern Orthopaedic Association (EOA)*, October 22-25, 2008, Lake Las Vegas, NV
6. Ketonis C, Antoci V, **Aiyer A**, Adams C, Shapiro I, Parvizi J, Hickok N. “**Attachment of Active Antibiotics On Ti Alloy Surfaces With no Effect on Topography**”. *Proceedings of the 39th Annual meeting of the Eastern Orthopaedic Association (EOA)*, October 22-25, 2008, Lake Las Vegas, NV
7. Antoci V, Ketonis C, **Aiyer A**, Adams C, Parvizi J, Freeman T, Shapiro I, Hickok N. “**Musculoskeletal Cell Attachment and Maturation Is Not Affected On A Bactericidal Vancomycin-Implant**”. *Proceedings of the 39th Annual meeting of the Eastern Orthopaedic Association (EOA)*, October 22-25, 2008, Lake Las Vegas, NV
8. Elamas C, Ketonis C, **Aiyer A**, Volpe A, Barr S, Parvizi J, Hickok N, Schaefer T. “**Vancomycin Can be Covalently Bonded to Stainless Steel To Prevent Bacterial Colonization**”. *Proceedings of the 39th Annual meeting of the Eastern Orthopaedic Association (EOA)*, October 22-25, 2008, Lake Las Vegas, NV
9. Ketonis C, **Aiyer A**, Hickok N, Parvizi J. “**Antibiotic Tethering to Bone Grafts Confers Protection from Infections**”. *Thomas Jefferson University Chapter Sigma Xi Student Research Day, April 2, 2008, Philadelphia, Pennsylvania, USA*
10. **Aiyer A**, Hennrikus W, Walrath J, Groh B, Ostrov B., “**Evaluation of Poly Articular Lyme Disease In the Pediatric Population**”, *Penn State/Hershey Medical Center Resident Research day, March 9th, 2012, Hershey, Pennsylvania*
11. **Aiyer A**, Hennrikus W, Walrath J, Groh B, Ostrov B., “**Evaluation of Poly Articular Lyme Disease In the Pediatric Population**”, *Penn State/Hershey Medical Center Pediatrics Research Day, April 5th, 2012, Hershey, Pennsylvania*
12. **Aiyer A**, Hennrikus W, Walrath J, Groh B, Ostrov B., “**Evaluation of Poly Articular Lyme Disease In the Pediatric Population**”, *Proceedings of the 43rd Annual Meeting of the Eastern Orthopaedic Association (EOA)*, June 20th-23rd 2012, Lake George, New York, USA
13. **Aiyer A**, Hennrikus W, Walrath J, Groh B, Ostrov B., “**Evaluation of Poly Articular Lyme Disease In the Pediatric Population**”, *American Academy of Pediatrics, Annual Meeting, October 27th 2013, Orlando, Florida, USA*

14. **Aiyer, A**, Shariff R, Shub J, Ying L, Myerson MS “**Evaluating the Impact of Metatarsus Adductus on Patients Undergoing Hallux Valgus Surgery**”, *American Orthopaedic Foot & Ankle Society (AOFAS), Annual Meeting, July 15th-18th 2015, Long Beach, CA, US*

PROJECTS IN PROGRESS

1. **Aiyer A**, Varacallo M, Hennrikus WL “**Modalities for Evaluating/Assessing Orthopaedic Surgery Residents**”, 2014, *Status: Manuscript being edited for submission to Journal of Bone and Joint Surgery (Topics in Training)*
2. **Aiyer A**, Kish A, Hennrikus WL, “**Pediatric Hand Injuries**”, 2014, *Status: Manuscript being edited for submission to Contemporary Pediatrics*
3. **Aiyer, A**, Shub J, Shariff R, Ying L, Myerson MS, “ **Proposal of an Algorithmic Approach to the Treatment of Hallux Valgus Deformity in Patients with Metatarsus Adductus** “, 2014, *Status: Manuscript being edited for submission to Foot and Ankle International*
4. Shariff R, **Aiyer A**, Studeman K, Myerson MS, “**A Cadaveric Study Correlating Gross Anatomical and Histopathological Changes associated with Morton’s neuroma**”, 2014, *Status: Manuscript being written for submission to Foot and Ankle International*
5. Shariff R, **Aiyer A**, Myerson MS, “**Radiographic and Clinical Outcomes of Midfoot Bone Block Distraction Arthrodesis**”, 2015, *Status: Manuscript being written for submission to Foot and Ankle International*

NON-ACADEMIC ACHIEVEMENTS

1. **Coordinator of “Esperanza: Creating Hope for Children”, Charity Fundraiser for UNICEF** (2006, Drexel University, Philadelphia, PA)
Worked with other Drexel University students, to put together a social function to raise funds for the international children’s organization, UNICEF. The event was able to draw >300 people and raised \$1500 for the victims of this catastrophe.
2. **Co-founder of “A Hope for Recovery”, fundraising effort for the victims of the South Asian Tsunami** (2005-6, Drexel University, Philadelphia, PA)
Worked with students from University of Illinois and UC Berkeley to establish one of the first collegiate movements to raise funds for the victims of Tsunami of South Asia. In conjunction with 27 other schools across the country, HFR sold rubber bracelets that were designed to spread the message of hope for the victims of this catastrophe. HFR was able to raise close to \$10,000.
3. **Coordinator for “Tsunami Relief Fundraiser 2005”** (2005, Drexel University, Philadelphia, PA)
Worked with other Drexel University students, to put together a social function to raise funds for victims of the South Asian Tsunami catastrophe. The event was able to draw 200 people and raised \$2400 for the victims of this catastrophe