AMERICAN ORTHOPAEDIC
FOOT & ANKLE SOCIETY

The AOFAS Research Grants Program

A 14 Year Review
1997 to 2011

Ongoing scientific research is vital to the future of medicine and orthopaedic surgery is no exception. Since 1997, the AOFAS has been providing grant funding opportunities for members and their fellows in training. One-year grants have been awarded on a range of orthopaedic foot and ankle topics utilizing a competitive review process.

The goal of the AOFAS Research Grants Program is to advance foot and ankle investigation by providing funding for promising research projects and encouraging supplemental submissions to national funding sources.

Grants awarded by the AOFAS have resulted in innovative insights in foot and ankle care, presentations at AOFAS and other educational meetings, published articles in *Foot & Ankle International* and other specialty journals, and larger grants from national sources.

Eligibility for grant funding is a benefit of membership in AOFAS, and either the principal or co-principal project investigator must be an AOFAS Active Member, Associate Member-Osteopathic, Candidate Member, or International Member.

The AOFAS Research Grants Program is funded by the Outreach & Education Fund (OEF) and the Orthopaedic Research and Education Foundation (OREF) with contributions from individuals and corporations.

This document is a summary of grants awarded and publications, presentations, and subsequent grants/awards received as reported to AOFAS by the grant recipients.

Timothy R. Daniels, MD, Chair
AOFAS Research Committee
June 16, 2011

Year Funded: 1997
Principal Investigator: Bruce J. Sangeorzan, MD
Project Title: Review of Technique and Demonstration of Experimental Flatfoot Model
Grant Amount: $5,000

Publications:

McCormack AP; Ching RP; Sangeorzan BJ. Biomechanics of Procedures Used in Adult Flatfoot Deformity. Foot & Ankle Clinic 6(1): 15-23, 2001

Niki H; Ching RP; Kiser P; Sangeorzan BJ. The Effect of Posterior Tibial Tendon Dysfunction on Hindfoot Kinematics. Foot & Ankle International 22(4): 292-300, 2001

Chi TD; Toolan BC; Sangeorzan BJ; Hansen ST. The Lateral Column Lengthening and Medial Column Stabilization Procedures. Clinical Orthopaedics and Related Research 365: 81-90, 1999

Ananthakrishnan D; Ching RP; Tencer A; Hansen ST; Sangeorzan BJ. Subluxation of the Talocalcaneal Joint in Adults Who Have Symptomatic Flatfoot. Journal of Bone and Joint Surgery 81-A(8): 1147-1154, 1999

Toolan BC; Sangeorzan BJ; Hansen ST. Complex Reconstruction for the Treatment of Dorsolateral Peritalar Subluxation of the Foot. Journal of Bone and Joint Surgery 81-A(11): 1545-1560, 1999

Sands AK; Early JS; Harrington RM; Tencer AF; Ching RP; Sangeorzan BJ. Effect of Variations in Calcaneocuboid Fusion Technique on Kinematics of the Normal Hindfoot. Foot & Ankle International 19(1): 19-25, 1998

McCormack AP; Niki H; Kaiser P; Tencer AF; Sangeorzan BJ. Two Reconstructive Techniques for Flatfoot Deformity Comparing Contact Characteristics of the Hindfoot Joints. Foot & Ankle International 19(7): 452-461, 1998

Reeck J; Felten N; Eng M; McCormack AP; Kiser P; Tencer AF; Sangeorzan BJ. Support of the Talus: A Biomechanical Investigation of the Contributions of the Talonavicular and Talocalcaneal Joints, and the Superomedial Calcaneonavicular Ligament. Foot & Ankle International 19(10): 674-682, 1998

Presentations:

Reeck J; Felten N; McCormack KP; Tencer AF; Sangeorzan BJ. Inferior and Medial Support of the Talus. "Contributions of the Talonavicular and Talocalcaneal Joints and the Superomedial Calcaneonavicular Ligament." Session 46, Paper # 279, Orthopaedic Research Society 44th Annual Meeting, New Orleans LA, March 19, 1998

Niki H; Ching RP; Kiser PK; Sangeorzan BJ. "Effect of Restoring Posterior Tibial Tendon Function in an Acquired Flatfoot Model." Session I, Paper #713, Orthopaedic Research Society 44th Annual Meeting, New Orleans LA, March 16, 1998

Sands AK; Harrington R; Tencer AF; Ching R; Sangeorzan BJ. "Kinematics of the Hindfoot with Lateral Lengthening at Calcaneal Cuboid Fusion." Orthopaedic Research Society 43rd Annual Meeting, San Francisco CA, February 13, 1997

Niki H; Ching RP; Kaiser; Sangeorzan BJ. "The Effect of Tibialis Posterior Tendon Rupture on Hindfoot Kinematics." Orthopaedic Research Society 43rd Annual Meeting, San Francisco CA, February 13, 1997

Niki H; McCormack; Felton; Kaiser; Tencer AF; Sangeorzan BJ. "Effective Foot Postion and Load Distribution Between the Talocalcaneal and Talonavicular Joints of the Hindfoot." Orthopaedic Research Society 43rd Annual Meeting, San Francisco CA, February 1997

Niki H; McCormack; Kaiser; Sangeorzan BJ; Tencer AF. "Effective Flatfoot Reconstruction Method on the Contact Characteristics of the Hindfoot." Orthopaedic Research Society 43rd Annual Meeting, San Francisco CA, February 1997

Further Grants / Awards:
"Biomechanics of Foot Deformities and Alternatives for Surgical Correction" Department of Veterans Affairs RR&D Center Grant, November 1, 1997-December 31, 1999, $293,000

Year Funded: 1997
Principal Investigator: Lisa T. DeGnore, MD
Project Title: Biomechanics of Lisfranc Joint
Grant Amount: $7,250

Publications:
Lakin RC; DeGnore LT; Pienkowski D. Contact Mechanics of Normal Tarsometatarsal Joints. Journal Bone Joint Surg. Am., 83(4): 520, 2001

Presentations:
AOFAS - date unknown

Further Grants / Awards:
none

Year Funded: 1997
Principal Investigator: Michael E. Brage, MD
Co-Investigator(s): Louis F. Draganich, PhD
Project Title: The Effects of Adult Acquired Flatfoot Deformity on the Tibiotalar Joint Contact Characteristics
Grant Amount: $7,250

Publications:
Friedman MA; Draganich LF; Toolan B; Brage ME. The Effects of Adult Acquired Flatfoot Deformity on Tibiotalar Joint Contact Characteristics. Foot & Ankle International, 22(3) 241-46, 2001

Presentations:
AOFAS Winter Meeting 2000

"The Effects of Adult Acquired Flatfoot Deformity on Tibiotalar Joint Contact Characteristics". 23rd Annual American Society of Biomechanics, Pittsburgh PA, Oct 21-23, 1999

Further Grants / Awards:
J. Leonard Goldner MD Award for Outstanding Basic Science Study, March 2000, $2,000, Brage ME; Draganich LF, "The Effects of Adult Acquired Flatfoot Deformity on the Tibiotalar Joint Contact Characteristics."

Year Funded: 1997
Principal Investigator: Zong-Ping Luo, PhD
Project Title: Biomechanical and Immunohistochemical Study of the MCL of the Big Toe MTP Joint
Grant Amount: $5,500

Publications:
Core, 1998 Sept (354) 235-40

Uchiyama E; Kitaoka HB; Luo ZP; Grande JP; Kura H; An KN. Pathomechanics of hallux valgus: biomechanical and immunohistochemical study. Foot & Ankle International, 26(9): 732-738, 2005.

Presentations:
Uchiyama E; Kitaoka HB; Luo ZP; Grande J; Kura H; An KN. "Biomechanics and immunohistochemical study of MCL of big toe." Trans. of the 47th Annual Meeting, Orthopaedic Research Society, San Francisco, CA, Feb. 25-28, 2001

Further Grants / Awards:
none

Year Funded: 1998
Principal Investigator: Neil Sharkey, PhD
Co-Investigator(s): Paul J. Juliano, MD; Peter R. Cavanagh, PhD
Project Title: Achilles Tendon Lengthening for Reduction of Forefoot Ulceration in the Diabetic Patient
Grant Amount: $10,000

Publications:
none

Presentations:
Published Abstracts:
Malloy PM; Becker, MB; Sharkey NA. "Effects of restricted ankle dorsiflexion on plantar pressure distributions." Transactions of the 23rd Annual Meeting of the American Society of Biomechanics, pp. 178-179, 1999

Sharkey NA; Hamel AJ. "Restricted ankle mobility alters ground reaction force and plantar pressure." Transactions of the Annual Meeting of the 46th Orthopaedic Research Society, p. 0192, 2000

Sharkey NA. "One step at a time: lessons learned from cadaver simulation of locomotion." Foot and Ankle Research Retreat II, USC, April 30-May 1, 2004. Also appears in: Journal of Orthopaedic and Sports Physical Therapy 34(9) A7-A9, 2004

Invited Presentations:
Note: Though not exclusively focused on tendo-Achilles lengthening, all of the presentations listed below included results from our AOFAS study.

Sharkey NA. Keynote Address for North American Society of Gait and Clinical Movement Analysis, Fourth Annual Meeting, Dallas, Texas. “High fidelity cadaver simulations of human gait” March 12, 1999

Sharkey NA. "Biomechanical indicators and assessments of lower extremity surgery." Department of Surgery, Milton S. Hershey Medical Center, Hershey, PA, March 1, 2000

Sharkey NA. "Biomechanical explorations of the foot and ankle: normal function, trauma, and surgical intervention." Division of Orthopaedic Surgery, Duke University Medical Center, Durham, NC, August 14, 2002

Sharkey NA. "Foot and ankle biomechanics in health and disease." Department of Orthopaedic Surgery, UC Davis Medical Center, Sacramento, CA, August 27, 2002

Sharkey NA. Keynote Address for Foot and Ankle Research Retreat II, University of Southern California, “One Step at a Time: Lessons Learned from Cadaver Simulations of Gait”, April 29, 2004

Sharkey NA. "High fidelity simulations of human gait: Approach and Findings" Department of Orthopaedics & Rehabiltation, Brown University, Providence, RI, March 16, 2005

Sharkey NA. "Hindfoot to forefoot: Ties that bind." Western Podiatric Medical Congress, Anaheim CA, June 9, 2005

Sharkey NA. "What we can learn from animated cadaver models of the foot." Buchanan Lecture, Department of Orthopaedics and Rehabilitation, The Milton S. Hershey Medical Center, College of Medicine, Hershey, PA, June 17, 2005

Sharkey NA. "Animated cadaver models of human locomotion: hesitant steps toward increased understanding." Department of Biomedical Engineering, Rensselaer Polytechnic Institute, Troy, NY, February 8, 2006

Sharkey NA. "Hindfoot to forefoot: ties that bind." Ninth Annual International Conference of Foot Biomechanics and Orthotic Therapy, Chicago IL, December 1-3, 2006

Further Grants / Awards:
Note: Though each of the projects listed below had or has different aims, each employed or employs techniques developed and perfected in the AOFAS study.

"An Objective Evaluation of Segmented Foot Models" National Institute of Child Health and Human Development, 6/1/06, $140,000

"In-Shoe Orthoses and External Load as Modulators of Local Bone Strain" College of Health and Human Development, Penn State, 7/1/04, $14,923

"Bone Strain During 0G Exercise" National Aeronautics Space Administration (PI: Cavanagh), 6/1/00, $653,306

"Design Criteria for Therapeutic Footwear in Diabetes" National Institute of Child Health and Human Development (PI: Cavanagh), 7/1/00, $1,185,669

"Kinematic and Kinetic Behavior of the Ankle Following Malleolar Fracture and Repair" Orthopaedic Trauma Association, 1/1/99, $19,995

Year Funded: 1998
Principal Investigator: Sheldon S. Lin, MD
Co-Investigator(s): J. Russell Parsons, PhD
Project Title: Delayed Fracture Healing in Diabetes Mellitus BB Wistar Rats: Model and Potential Txt
Grant Amount: $10,000

Publications:
Beam HA; Parsons JR; Lin SS. The effects of blood glucose control upon fracture healing in the BB Wistar rat with diabetes mellitus. Journal of Orthopaedic Research, 20(6):1210-6, 2002.

Gebauer GP; Lin SS; Beam HA; Vieira P; Parsons JR. Low-intensity pulsed ultrasound increases the fracture callus strength in diabetic BB Wistar rats but does not affect cellular proliferation. Journal of Orthopaedic Research, 20(3): 587-592, 2002.

Tyndall WA; Beam HA; Zarro CBS; O'Connor JP; Lin SS. Decreased Platelet Derived Growth Factor Expression During Fracture Healing in Diabetic Animals. Clinical Orthopaedics & Related Research, 408: 319-330, March 2003.

Lin SS. Role of RHPDGF in DM fracture healing. Journal of Orthopaedic Research, accepted 2009.

Dedania et al. Role of Linplant in segmental DM osseous healing. Journal of Orthopaedic Research, In Press 2010.

Coords et al. Role of LIPUS in DM fracture healing. Journal of Orthopaedic Research, In Press 2010.

Presentations:
Orthopaedic Research Society, Anaheim, Feb 1999

Orthopaedic Research Society, Orlando, March 2000

Further Grants / Awards:
OREF Research Grant, 1998, $100,000

Aircast Foundation Grant $100,000

Foundation and basis for subsequent 12 grants (>$500,000)

OREF, AAOS Clinical Scientist Traveling Fellowship, 2005

Year Funded: 1998
Principal Investigator: Thom A. Tarquinio, MD
Co-Investigator(s): Douglas E. Parsell, PhD
Project Title: Biomechanical Evaluation of Suture Anchor Strength for Reattachment of Achilles Insertion
Grant Amount: $5,000

Publications:
none

Presentations:
Southeastern Ortho Foot, April 1999

Rhettson Hobgood E; Parsell D. "Biomechanical Evaluation of Bone Suture Anchors" Southern Biomaterials Conference, Blacksburg VA, 2000

Smith WT; Tarquinio TA. "Biomechanical Evaluation of Bone Suture Anchors" Annual Mid-America Orthopaedic Association, Scottsdale AZ, Apr 2000

Further Grants / Awards:
Southern Biomaterials Conference, Blacksburg VA, Best Presentation Award, 2000

Year Funded: 1999
Principal Investigator: Jorge I. Acevedo, MD
Co-Investigator(s): Lew C. Schon, MD

Project Title: Comparative Biomechanical Analysis of Fusion Techniques for Tibiotalocalcaneal Arthrodesis
Grant Amount: $5,000

Publications:
Chiodo CP; Acevedo JI; Sammarco VJ; Parks BG; Boucher HR; Myerson MS; Schon LC. Intramedullary Rod Fixation Compared with Blade-Plate-and-Screw Fixation for Tibiotalocalcaneal Arthrodesis: A Biomechanical Investigation. J Bone Joint Surg Am. 85(12): 2425-2428, 2003.

Presentations:
AOFAS Winter Meeting, San Francisco CA, 2001

Further Grants / Awards:
none

Year Funded: 1999
Principal Investigator: Nicholas A. Abidi, MD
Co-Investigator(s): Rocky S. Tuan, PhD
Project Title: Clinical Pathophysiology of Plantar Fasciitis
Grant Amount: $5,000

Publications:
none

Presentations:
none

Further Grants / Awards:
Nathan Shock Center of Excellence-Lankenea Med Research Grant - $29,000

Status Report: The lab folded and moved to NIH in 2003. (12/07)

Year Funded: 2000
Principal Investigator: Anthony D. Watson, MD
Project Title: Normal Human Talonavicular Joint Kinematics in Gait
Grant Amount: $10,000

Publications:
none

Presentations:
Galik K; Miller MC; He J; Towsen A; Watson AD. “Talonavicular Kinematics at Midsstance Resulting from Physiologic Muscle Loading.” Proceedings of the Orthopaedic Research Society, Dallas TX, 2004

Further Grants / Awards:
American Society for Surgery of the Hand, 2003-2004, $16,000

Year Funded: 2000
Principal Investigator: Thomas O. Clanton, MD

Project Title: Tendon Transfer Fixation in the Foot and Ankle: Biomechanical Comparison of Traditional Fixation Versus Bioabsorbable Screw Fixation
Grant Amount: $8,000

Publications:
Louden KW; Ambrose CG; Beaty SG; McGarvey WC; Clanton TO. Tendon transfer fixation in the foot and ankle: a biomechanical study evaluating two sizes of pilot holes for bioabsorbable screws. Foot & Ankle International 24(1): 67-72, 2003.

Ambrose CG; Kiebzak GM; Sabonghy EP; et al. Biomechanical Testing of Cadaveric Specimens: Importance of Bone Mineral Density Assessment. Foot & Ankle International. 23(9):850-855, 2002.

Clanton T; Perlman M. Technique Tip: Interference Screw Fixation of Tendon Transfers in the Foot and Ankle. Foot and Ankle International. 23(4):355-356, 2002.

Cohn JM; Sabonghy EP; Godlewski CA; Clanton TO; McGarvey WC. Tendon Fixation in Flexor Hallucis Longus Transfer: A Biomechanical Study Comparing a Traditional Technique Versus Bioabsorbable Interference Screw Fixation. Techniques in Foot & Ankle Surgery. 4(4):214-221, 2005.

Sabonghy EP; Wood R; Ambrose CG; McGarvey W; Clanton T. Tendon Transfer Fixation: Comparing a Tendon-to-Tendon Technique vs. Bioabsorbable Interference-Fit Screw Fixation. Foot & Ankle International. 24(3):260-262, 2003.

Ambrose CG; Clanton TO. Bioabsorbable Implants: Review of Clinical Experience in Orthopaedic Surgery. Annals of Biomedical Engineering. 32(1):171-177, 2004.

Presentations:
none

Further Grants / Awards:
The Use of Biotenodesis Screw for Foot and Ankle Surgery. Clanton; Guzel: Arthrex, Inc., 7/01/02 to 6/30/03, $26,305

Year Funded: 2001
Principal Investigator: David S. Levine, MD
Co-Investigator(s): James C. Otis, PhD
Project Title: The Effect of Achilles Tendon Stretching on Weightbearing
Grant Amount: $6,000

Publications:
none

Presentations:
Orthopaedic Research Society, 2003

Further Grants / Awards:
none

Year Funded: 2001
Principal Investigator: James A. Nunley, MD

Project Title: Identification of Potential Donor Rotational Bone Grafts using Vascular Territories in the Foot and Ankle
Grant Amount: $9,500

Publications:
Gilbert BJ; Horst F; Nunley JA. Potential Donor Rotational Bone Grafts Using Vascular Territories in the Foot and Ankle. JBJS 86A(9):1857-1873, 2004

Presentations:
Gilbert B. "Identification of Potential Donor Rotational Bone Grafts Using Vascular Territories in the Foot and Ankle." Ortho Carolina Oscar Miller Day, 23rd Annual Symposium Charlotte NC, October 2003

Gilbert B. "Vascularized Bone Grafts to the Foot and Ankle." American Orthopaedic Association Annual Meeting, Asheville NC, October 2002

Nunley J. "Uses of Vascularized Bone Grafting of Foot and Ankle." Southeastern Foot Club, Point Clear AL, May 2003

Nunley J. "Identification of Potential Donor Rotational Bone Grafts Using Vascular Territories in the Foot & Ankle." AOFAS Summer Meeting, Hilton Head SC, June 2003

Nunley J. "Treatment of Avascular Necrosis of the Talus." AOFAS Advanced Foot & Ankle Course, Atlanta GA, April 2006

Gilbert B. "Identification of Potential Donor Rotational Bone Grafts Using Vascular Territories in the Foot and Ankle." International Federation of Foot and Ankle Surgeons, Triennial Scientific Meeting San Francisco CA, September 2002

Gilbert B. "Identifikation potentieller gefaessgestielter Knochentranslantate am Fuss." German Association of Foot and Ankle Surgery, Koeln Germany, March 2004

Further Grants / Awards:
J. Leonard Goldner Award Best Basic Research- AOFAS, 2003

Year Funded: 2001
Principal Investigator: Jeffrey E. Johnson, MD
Co-Investigator(s): Jack R. Engsberg, PhD; Raja Dhalla, MD; Michael Mueller, PhD, PT
Project Title: The Effect of Variation in Rocker Sole Design on Gait Characteristics and Planter Pressures with Walking in a Total Contact Cast
Grant Amount: $8,500

Publications:
Dhalla R; Johnson JE; Engsberg J. Can the use of a terminal device augment plantar pressure reduction with a total contact cast? Foot & Ankle International 24(6): 500-505, 2003.

Presentations:
Dhalla R; Johnson JE; Engsberg J. "Can the use of a terminal device augment plantar pressure reduction with a total contact cast?" AOFAS Winter Meeting, Dallas TX, February 16, 2002

Further Grants / Awards:
none

Year Funded: 2001
Principal Investigator: Kenton R. Kaufman, PhD
Co-Investigator(s): Kota Watanabe, MD; Harold B. Kitaoka, MD
Project Title: Ankle Joint Stability: Ligamentous and Articular Constraints
Grant Amount: $6,500

Publications:
Watanabe K; Crevoisier XM; Kitaoka HB; Zhao KD; Berglund LJ; Kaufman KR; An K. Analysis of joint laxity after total ankle arthroplasty: Cadaver study. Clinical Biomechanics, 24(8):655-660, October 2009.

Presentations:
Watanabe K; Kitaoka H; Crevoisier X; Berglund L; Kaufman K; Zhao K; An K. "Stability of ankle replacement arthroplasty." Poster, Orthopaedic Research Society, New Orleans, LA, February 1-5, 2003.

Crevoisier X; Kitaoka H; Watanabe K; Fujii T; Berglund L; Kaufman K; An KN. "The effect of flexor digitorum longus tendon transfer and medial displacement calcaneal osteotomy for posterior tibial tendon dysfunction and flatfoot." Poster, Orthopaedic Research Society, New Orleans, LA, February 1-5, 2003.

Watanabe K; Kitaoka H; Crevoisier X; Berglund L; Zhao K; Kaufman K; An K. "Ankle stability ligamentous and articular restraints." Poster, Orthopaedic Research Society, New Orleans, LA, February 1-5, 2003

Watanabe K; Kitaoka H; Crevoisier X; Harbst K, Berglund L, Kaufman K: “The role of ankle ligaments and articular geometry in stabilizing the ankle.” AOFAS Summer Meeting Hilton Head, SC, 2003.

Further Grants / Awards:
Methodology developed led to additional projects related to total ankle arthroplasty stability. 11 07

Year Funded: 2001
Principal Investigator: Rita M. Patterson, PhD
Project Title: Kinematic Analysis of the Normal and Flatfoot Deformity
Grant Amount: $9,500

Publications:
none

Presentations:
Patterson R. "Foot/ Ankle Kinematics: Comparative Analysis of Normal Foot vs. Flat Foot Deformity." 20th Annual Houston Conference on Biomedical Engineering Research, Houston TX, April 3-4, 2003

Patterson R. "Foot/ankle kinematics: Comparative analysis of normal foot vs. flat foot deformity." Summer Bioengineering Conference, Key Biscayne FL, June 25-29, 2003

Further Grants / Awards:
none

Year Funded: 2002
Principal Investigator: Judith F. Baumhauer, MD
Project Title: MRI Evaluation of First Metatarsophalangeal Joint Kinematics
Grant Amount: $4,820

Publications:
Nawoczenski DA; Ketz J; Baumhauer JF. Dynamic Kinematic and Plantar Pressure Changes Following Cheilectomy For Hallux Rigidus: A Mid-Term Followup. Foot & Ankle International; 29:265, 2008.

Ketz J; Baumhauer JF; Nawoczenski. Kinetic and Kinematic Changes in the First Metatarsophalangeal Joint After Cheilectomy. Techniques in Foot and Ankle Surgery, 5(4):266-271, 2006.

A Prospective In Vivo Analysis of First Metatarsophalangeal Joint Mechanics under Loading Conditions Using Magnetic Resonance Imaging Following Cheilectomy. Submitted to JBJS

Presentations:
Baumhauer JF; Nawoczenski D; DiGiovanni BF; Wilding G; Grant BM; Hanson AE; Jackstadt EN: "The Reliability and Validity of the American Orthopaedic Foot and Ankle Society Clinical Rating Scale." (Poster Presentation) AOFAS Annual Summer Meeting, Seattle, WA, July 2004.

Ketz J; Baumhauer J; Nawoczenski D. Eposter: "MRI Evaluation of First MTP Joint Kinematics Preliminary Work." AOFAS Annual Summer Meeting, San Diego, CA, 2006.

“A Prospective in Vivo Analysis of First Metatarsophalangeal Joint Mechanics under Loading Conditions Using Magnetic resonance Imaging Following Cheilectomy.” Eastern Orthopaedic Association 39th Annual Meeting, 2008.

"A Prospective in Vivo Analysis of First Metatarsophalangeal Joint Mechanics Under Loading Conditions Using Magnetic resonance Imaging Following Cheilectomy.” AOFAS 24th Annual Summer Meeting, Denver, CO, 2008.

Nawoczenski DA, Patel A, Mann L, Baumhauer JF: "Improvement in foot function following a six week non-operative intervention in patients with hallux rigidus." AOFAS 26th Annual Summer Meeting, National Harbor, MD, 2010.

Further Grants / Awards:
Roger Mann Award 2006

Year Funded: 2002
Principal Investigator: Judith F. Baumhauer, MD
Project Title: Reliability and Validity of the American Orthopaedic Foot and Ankle Clinical Rating Scale
Grant Amount: $3,135

Publications:
Baumhauer JF; Nawoczenski DA; DiGiovanni BF; Wilding GE. Reliability and validity of the American Orthopaedic Foot and Ankle Society clinical rating scale: a pilot study for the hallux and lesser toes. Foot & Ankle International 27(12): 1014-1019, 2006.

Presentations:
Baumhauer J. "Reliability & Validity of the AOFAS Clinical Rating Scale." Eastern Orthopaedic Association, 2004

Baumhauer J. "Foot and Ankle Outcome Scales." Grand Rounds, St. Louis- Newark NJ-Tuscon AZ

Preliminary paper AOFAS Summer 2003; full paper submitted to AOFAS specialty day 2004

Baumhauer J. “Functional Foot Assessment as it Relates to Injury.” 55th NATA Annual Meeting & Clinical Symposia, Baltimore, MD, June 2004.

Baumhauer J. “Factors to Consider in Selecting a Clinical Outcome Instrument.” Harvard Combined Orthopaedic Residency Grand Rounds, Boston, MA, June 2009.

Further Grants / Awards:
OREF Health Service Award (MPH), 2003-05, $150,000

Year Funded: 2002
Principal Investigator: Mark A. Glazebrook, MD
Project Title: Experimental Overuse Achilles Tendinopathy: Establishment and Histological Validation of a Rat Tendonosis Model with Characterization of Molecular Cross Linking, Collagen Types I and III, Biomechanical Properties and Effect of Mechanical Stress
Grant Amount: $8,395

Publications:
Glazebrook MA; Wright JR; Langman M; Stanish WD; Lee JM. Histological analysis of achilles tendons in an overuse rat model. Journal of Orthopedic Research.Volume 26 (6): 840-846, June 2008.

Related Textbook Publications:
Glazebrook MA 2007 . "What is the Best Treatment for Achilles Tendon Rupture?" in Evidence-Based Orthopaedics, edited by Dr James G. Wright. Elsevier 1600 JFK Blvd., Suite 1800 Philadelphia, PA 19103

Glazebrook MA 2007. Tendon Disorders in the Lower Extremity (Pages 887-898). In Practical Orthopaedic Sports Medicine and Arthroscopy Edited by Don Johnson, M.D., and Rob Pedowitz, M.D. Lippencott Williams and Wilkins Philadelphia, PA 19103.

Stanish WD; Glazebrook (2003). Achilles Tendon Disease: A review of the Basic Science. In Evolving strategies in the Diagnosis and Treatment of Tendinopathy an ISAKOS manuscript. editor- Annunziato Amendola

Amendola A; Glazebrook (2003). Achilles Tendon Disease: Clinical Management. In Evolving strategies in the Diagnosis and Treatment of Tendinopathy an ISAKOS manuscript. editor- Annunziato Amendola

Amendola A; Glazebrook (2001). Tendon problems of foot and Ankle. In Tendinopathy: Basic Science and Clinical Management. Eds. Maffulli N., Renstrom P and Leadbetter. Springer-Verlag London Limited. Godalming, Surrey UK (In Press)

Presentations:
Glazebrook MA; Jahangir J; Stanish W; Gibbons P; Lee M. "Age and overuse running effects on collagen cross linking patterns in Achilles tendons using hydrothermal testing." (Poster) 2007 AOFAS 23rd Annual Summer Meeting Toronto, Ontario Canada July 13-15, 2007.

Paper #58: "Achilles tendinosis: establishment and Validation of a Rat Over Use Exercise Model." Canadian Orthopaedics Research Association Annual Meeting, Toronto Ontario, June 2, 2006

"Achilles Tendinosis: Establishment of a rat overuse exercise model and characterization of the structural/mechanical features of the normal rat Achilles tendon." Canadian Orthopaedics Association Annual Meeting, Calgary Alberta, June 18, 2004

"Achilles Tendon Disease: Establishing an animal model and an investigation of biochemistry and biomechanics:A preliminary report." Canadian Orthopaedics Association Annual Meeting, Winninepeg, Oct. 1, 2003

Glazebrook MA, "Achilles Tendinosis Biology." Atlantic Provinces Orthopaedic Society Conference, Ingonish NS, September 2002

"Instructional Course Lecture: Acute Achilles Ruptures # 8." Canadian Orthopaedics Association Annual Meeting, Toronto Ontario, June 3, 2006

"Symposium on Basic Science for Foot & Ankle: Update on Achilles Tendonitis." Canadian Orthopaedics Association Annual Meeting, Toronto Ontario, June 3, 2006

Further Grants / Awards:
2007 Dalhousie University Undergraduate Research Award for Paul Gibbons for best poster for Dalhousie Medical student summer research working with Dalhousie Medical faculty Member Mark Glazebrook. (June-Aug 2007) : Age and overuse running effects on collagen cross linking patterns in Achilles tendons using hydrothermal testing.

Marbel Prize - Dalhousie School of Biomedical Engineering Excellence in Research Award – PhD Category Achilles Tendon Disease: Establishing an animal model and an investigation of histology biochemistry and biomechanics. (May 9, 2005)

Dalhousie School of Biomedical Engineering Research Day Honourable Mention. Achilles Tendon Disease: Establishing an animal model and an investigation of histology biochemistry and biomechanics. (May 9, 2005)

Dalhousie School of Biomedical Engineering Research Day First Prize. Achilles Tendon Disease: Establishing an animal model and an investigation of biochemistry and biomechanics (A preliminary report). (May 6, 2003)

Year Funded: 2002
Principal Investigator: Michael P. Schaefer, MD
Project Title: The Effect of Foot Orthoses on Posterior Tibialis, Tibialis Anterior, and Peroneus Longus Muscle Electromyographic Activity During Walking and Running
Grant Amount: $8,650

Publications:
none

Presentations:
Schaefer MP; Smith J; Londono MU; McLean TJ; Irby SE; Kotajarvi BR; Kaufman KR. "The Effect of Foot Orthoses on Posterior Tibialis, Tibialis Anterior, and Peroneus Longus Muscle Electromyographic Activity During Walking and Running" (Slide Presentation), American College of Sports Medicine Annual Meeting, Indianapolis IN, 2004: Medicine and Science in Sports and Exercise Vol 36(5)S178, 2004

Further Grants / Awards:
none

Year Funded: 2003
Principal Investigator: Michael E. Brage, MD
Co-Investigator(s): Scott T. Ball, MD; David Amiel, PhD
Project Title: The effect of intra-articular fractures on fractures on cartilage in humans
Grant Amount: $5,600

Publications:
Ball ST; Jadin K; Allen RT; Schwartz AK, Sah RL; Brage ME. Chondrocyte Viability After Intra-articular Calcaneal Fractures in Humans Foot & Ankle International 28 (6): 665-668, June 2007.

Presentations:
"Effect on calcneus fracture on cartilage." AOFAS Annual Summer Meeting, 2005

Brage ME et al: "Chronrocyte Viability after Intraarticular Calcaneus Fractures in Humans." Paper presentation, AAOS Annual Meeting, Chicago IL, March, 2006

Further Grants / Awards:
J. Leonard Goldner MD Award for Outstanding Basic Science Study, Brage ME; Ball ST; Jadin K; Allen RT; Schwartz AK; Sah RL, "Chrondrocyte Viability after Intraarticular Calcaneus Fractures in Humans," July 2005, $1,000

Year Funded: 2003
Principal Investigator: Nelson Fong SooHoo, MD
Project Title: Design and implementation of a prospective foot and ankle outcomes database
Grant Amount: $8,000

Publications:
SooHoo NF; Samimi D; Vyas R; Botzler T. Evaluation of the validity of the Foot Function Index. Foot & Ankle International, 27(1):38-42, Jan 2006

SooHoo NF; Vyas R; Samimi D. Responsiveness of the Foot Function Index, AOFAS Clinical Rating Systems, and SF-36 Following Foot and Ankle Surgery. Foot & Ankle International, 27(11):930-4, Nov 2006.

Presentations:
SooHoo NF; Samimi D; Vyas R; Botzler T. “Evaluation of the validity of the Foot Function Index”. AOFAS Annual Summer Meeting, Boston, 2005

SooHoo NF; Vyas R; Samimi D. “Responsiveness of the Foot Function Index, AOFAS Clinical Rating Systems, and SF-36 Following Foot and Ankle Surgery.” AOFAS Annual Summer Meeting, La Jolla 2006.

Further Grants / Awards:
OREF Career Development, 2009-2012

OREF/Current Concepts in Joint Replacement Award, 2008

OREF Research Grant, 2006, $50,000

Year Funded: 2003
Principal Investigator: William Ledoux, PhD
Co-Investigator(s): Bruce J. Sangeorzan, MD
Project Title: Investigation of midtarsal locking
Grant Amount: $10,000

Publications:
Blackwood CB; Yuen TJ; Sangeorzan BJ; Ledoux WR. “The midtarsal joint locking mechanism”, Foot & Ankle International, 26(12), 1074-1080, 2005

Presentations:
Blackwood CB; Yuen TJ; Sangeorzan BJ; Ledoux WR. “Quantification of the midtarsal joint locking mechanism” p. 155 (poster presentation), AOFAS Annual Summer Meeting, Seattle WA, 2004

Further Grants / Awards:
none

Year Funded: 2003
Principal Investigator: Yuki Tochigi, MD, PhD
Co-Investigator(s): Charles L. Saltzman, MD; J. James Rudert, PhD; Thomas D. Brown, PhD
Project Title: The role of the ankle articular surfaces in controlling joint motion
Grant Amount: $9,197

Publications:
Tochigi Y; Rudert MJ; Amendola A; Brown TD; Saltzman CL. Tensile engagement of the peri-ankle ligaments in stance phase. Foot & Ankle International, 26(12):1067-73, 2005

Tochigi Y; Rudert MJ; Saltzman CL; Amendola A; Brown TD. The contribution of articular surface geometry to ankle stabilization. J Bone Joint Surg Am, 88(12):2704-13, 2006

Presentations:
Tochigi Y; Amendola A; Ruder MJ; Baer TE; Brown TD; Saltzman CL. "The Role of the Peri-ankle Ligaments in Stance Phase." AOFAS Annual Summer Meeting, Hilton Head, SC, June 2003

Tochigi Y; Ruder MJ; Amendola A; Brown TD; Saltzman CL. "Tensile engagement of the peri-ankle ligaments in stance phase." 50th Annual Meeting of the Orthopaedic Research Society, San Francisco, CA, March 2004

Tochigi Y; Rudert MJ; Amendola A; Brown TD; Saltzman CL. "The contribution of articular surface geometry on ankle stabilization." AOFAS Annual Summer Meeting, Boston, MA, July 2005

Tochigi Y; Rudert MJ; Saltzman CL; Amendola A; Brown TD. "The contribution of articular surface geometry on ankle stabilization." 20th Congress of the International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics, Cleveland, OH, July 31-August 5, 2005

Tochigi Y; Rudert MJ; Saltzman CL; Amendola A; Brown TD. "The mechanism of ankle stabilization: the role of articular geometry as the primary restraint." 10th world congress of the Osteoarthritis Research Society International, Boston, Massachusetts, December 8-11, 2005

Tochigi Y; Rudert MJ; Saltzman CL; Amendola A; Brown TD. "The effect of articular surface topographic variability on ankle stabilization." 52nd Annual Meeting of the Orthopaedic Research Society, Chicago, Illinois, March 19-22, 2006

Tochigi Y; Rudert MJ; Saltzman CL; Amendola A; Brown TD. "The contribution of articular surface geometry on ankle stabilization." 73rd Annual Meeting of the American Academy of Orthopaedic Surgeons, Chicago, Illinois, March 22-26, 2006

Further Grants / Awards:
Chiba University Orthopaedic Alumni, April 1, 2005, $2,857

Year Funded: 2004
Principal Investigator: Brian C. Toolan, MD
Co-Investigator(s): Rebecca A. Cerrato, MD; Rex Haydon, MD, PhD
Project Title: Augmentation of Achilles Tendon Healing Using Gene Therapy with BMP 14 in a Rat Model
Grant Amount: $10,000

Publications:
Bolt P; Clerk N; Luu HH; Kang Q; Kummer J; Deng, Z-L; Olsen K; Primus F; Montag AG; He TC; Haydon RC; Toolan BC. BMP14 gene therapy increases tendon tensile strength in a rat model of Achilles tendon injury. J Bone Joint Surg. 89:1315-1320, 2007

Presentations:
Bolt P; Clerk N; Luu HH; Kang Q; He TC; Haydon RC; Toolan BC. "BMP14 gene therapy effectively increases tendon tensile strength in a rat model of Achilles tendon injury." 73rd Annual Meeting of the American Academy of Orthopaedic Surgeons, March 22-26, 2006, Chicago, IL.

Bolt P; Clerk N; Luu HH; Kang Q; He TC; Haydon RC; Toolan BC. "BMP14 gene therapy effectively increases tendon tensile strength in a rat model of Achilles tendon injury." AOFAS Annual Winter Meeting, Chicago IL, March 25, 2006

Bolt P; Clerk N; Luu HH; Kang Q; He TC; Haydon RC; Toolan BC. "BMP14 gene therapy effectively increases tendon tensile strength in a rat model of Achilles tendon injury." 24th Annual Meeting of the Mid-America Orthopaedic Association, San Antonio TX, April 20, 2006

Bolt P; Clerk N; Luu HH; Kang Q; He TC; Haydon RC; Toolan BC. "BMP14 gene therapy effectively increases tendon tensile strength in a rat model of Achilles tendon injury." 13th Annual Charles B. Huggins Research Conference, University of Chicago Department of Surgery, Chicago IL, May 6, 2006

Bolt P; Clerk N; Luu HH; Kang Q; He TC; Haydon RC; Toolan BC. "BMP14 gene therapy effectively increases tendon tensile strength in a rat model of Achilles tendon injury." 74th Annual Meeting of the American Academy of Orthopaedic Surgeons, San Diego CA, February 14-18, 2007

Bolt P; Clerk N; Luu HH; Kang Q; He TC; Haydon RC; Toolan BC. "BMP14 gene therapy effectively increases tendon tensile strength in a rat model of Achilles tendon injury." 120th Annual Meeting of the American Orthopaedic Association, Asheville NC, June 13-16, 2007

Further Grants / Awards:
Dallas B. Phemister Award, Mid America Orthopaedic Association, April 2006

Year Funded: 2004
Principal Investigator: Charles L. Saltzman, MD
Co-Investigator(s): Jason M. Wilken, PhD, MPT
Project Title: The Effect of Walking Speed on Forefoot Motion and Loading in Patients with Ankle Arthordesis or Arthoplasty
Grant Amount: $9,145

Publications:
Wilken J; Rao S; Estin M; Saltzman CL; Yack HJ. A new device for assessing ankle dorsiflexion motion: reliability and validity. J Orthop Sports Phys Ther. 41(4):274-80, April 2011.

Wilken J; Rao S; Saltzman C; Yack HJ. The effect of arch height on kinematic coupling during walking. Clin Biomech (Bristol, Avon). 26(3):318-23, March 2011.

Expected Papers- in draft form:

Wilken JM; Saltzman CL; Yack HJ. New Insights Into Arch Function During Gait.

Wilken JM; Yack HJ; Saltzman CL. The Effect of Arch Height on Foot Function During Gait

Wilken JM; Yack HJ; Saltzman CL. The Windlass Mechanism, Supination and the Effect of Arch Height

Presentations:
Wilken J; Saltzman C; Yack HJ. "Timing and Expression of the Windlass Mechanism During Gait." APTA combined sections Meeting, Boston MA, February 2007

Wilken J; Saltzman C; Yack HJ. "New Insights Into Windlass Mechanism Function." Joint ESMAC & GCMAS Meeting, Amsterdam, The Netherlands,September 2006

Wilken J; Saltzman C; Rao S; Yack HJ. "The First Metatarsal as a Fixed Strut: New Insights Into Dynamic Arch Function." Annual Meeting, International Society of Biomechanics, Cleveland OH, August 2005

Wilken J; Saltzman C; Rao S; Yack HJ. "New Insight Into Arch Kinematics During Gait." AOFAS Annual Summer Meeting, Boston MA, July 2005

Wilken J; Saltzman C; Yack HJ. "A New Understanding of Foot Motion: First Metatarsal Kinematics and Arch Elongation During Gait." Combined Sections Meeting, American Physical Therapy Association, New Orleans LA, February 2005

Further Grants / Awards:
none

Year Funded: 2004
Principal Investigator: James A. Nunley, MD
Co-Investigator(s): Farshid Guilak, PhD
Project Title: The impact of Interleukin 17 on the Production of Nitric Oxide and Prostaglandin E2 in Normal and Osteoarthritic Human Ankle and Knee Cartilage
Grant Amount: $8,991

Publications:
Chuckpaiwong B; Charles HC; Kraus VB; Guilak F; Nunley JA. Age-Associated Increases in the Size of the Infrapatellar Fat Pad in Knee Osteoarthritis as Measured by 3T MRI. Journal of Orthopaedic Research, www.interscience.wiley.com. 9999:1–6, 2010

Presentations:
Fermor B. "Inflammatory Mediators and Mechanical Loading of the Joint." European Calcified Tissues Society, Prague, 2006

Fermor B. "Oxygen, nitric oxide and osteoarthritis." European Cells and Materials Meeting, Davos Switzerland, 2006

Guilak F. "Biomechanics and inflammation in osteoarthritis: From organism to organelle." Chancellor's Distinguished Lectureship, Louisiana State University, 2006

Guilak F. "Biomechanics, obesity, and osteoarthritis: Is inflammation the link?" Health and Exercise Sciences Seminar. Wake Forest University- Winston-Salem NC, 2006

Further Grants / Awards:
none

Year Funded: 2005
Principal Investigator: Eric M. Bluman, MD, PhD
Co-Investigator(s): Mark S. Myerson, MD
Project Title: Biomechanical and Anatomic Analysis of Minimally Invasive Deltoid Ligament Reconstruction
Grant Amount: $6,600

Publications:
Jeng CL; Bluman EM; Myerson MS. Minimally invasive deltoid ligament reconstruction for stage IV flatfoot deformity. Foot & Ankle International, 32(1):21-30, Jan 2011.

Bluman EM; Myerson MS. Stage IV posterior tibial tendon rupture. Foot and Ankle Clin of North America 12 (2): 341-362, June 2007.

Chapter in the upcoming textbook: Operative Techniques in Foot and Ankle Surgery

Presentations:
2 Podium Presentations at AOFAS
1 Podium Presentation at Society of Military Orthopaedic Surgeons
1 Grand Rounds given at Madigan Army Medical Center

Further Grants / Awards:
none

Year Funded: 2005
Principal Investigator: James W. Brodsky, MD
Co-Investigator(s): Fabian E. Pollo, PhD
Project Title: Hindfoot motion after reconstruction for posterior tibial tendon dysfunction
Grant Amount: $6,400

Publications:
Brodsky J; Royer C; Pollo F; Charlick D; Coleman S. Hindfoot Motion and Function Following Tibialis Posterior Tendon Reconstruction. Foot & Ankle International. Accepted for publication February 2009 [Paper #FAI-2008-003346R].

Presentations:
Pollo F; Brodsky J; Coleman S; Baum B. "Hindfoot Motion After Reconstruction for Posterior Tibial Tendon Dysfunction." Gait and Clinical Movement Analysis Society, Springfield MA, April 11-14, 2007

Charlick, A; Brodsky, J; Pollo, F; Coleman, S. "Hindfoot Motion Following Reconstruction for Posterior Tibial Tendon Dysfunction." AOFAS Annual Summer Meeting, Denver CO, 2008.

Further Grants / Awards:
none

Year Funded: 2005

Principal Investigator: Johnny T.C. Lau, MD
Co-Investigator(s): Timothy R. Daniels, MD
Project Title: A randomized controlled trial of 1st MTP joint fusion compared to 1st MTP hemiarthroplasty in severe hallux rigidus
Grant Amount: $10,000

Publications:
none

Presentations:
none

Further Grants / Awards:
A randomized controlled clinical trial of 1st MTPJ arthrodesis compared to 1st MTPJ hemiarthroplasty in severe hallux rigidus. Lau J, Daniels T, Waddell J, Mahomed N: Canadian Orthopaedic Foundation 2003-2004, $10,000

A randomized controlled clinical trial of 1st MTPJ arthrodesis compared to 1st MTPJ hemiarthroplasty in severe hallux rigidus. Lau J, Daniels T, Mahomed N: Physician Service Incorporated, 2004-2006, $73,000

Status Report: Investigators are performing an analysis on the data. 3/09

Year Funded: 2005
Principal Investigator: Robert S. Adelaar, MD
Co-Investigator(s): Aaron T. Scott, MD; Travis M. Hendry, MD; Jennifer Wayne, PhD
Project Title: The effect of medial calcaneal osteotomy and lateral column lengthening on forefoot pressures
Grant Amount: $10,000

Publications:
Scott AT; Hendry TM; Iaquinto JM; Owen JR; Wayne JS; Adelaar RS. Plantar pressure analysis in cadaver feet after bony procedures commonly used in the treatment of stage II posterior tibial tendon insufficiency. Foot & Ankle International, 28(11):1143-53, November 2007.

Presentations:
Scott A. "Plantar Foot Pressures Following Corrective Procedures for Flatfoot." Orthopedic Research Society, San Diego CA, Feb 2007

Scott A & Hendry T. "Plantar Foot Pressures Following Corrective Procedures for Flatfoot." AOFAS Annual Meeting, Toronto, July 2007

Further Grants / Awards:
none

Year Funded: 2005
Principal Investigator: Timothy R. Daniels, MD
Project Title: Ankle arthrodesis vs. Ankle arthoroplasty for End Stage ankle arthritis: a prospective functional comparison
Grant Amount: $10,000

Publications:

Glazebrook M; Daniels T; Younger A; Foote CJ; Penner M; Wing K; Lau J; Leighton R; Dunbar M. Comparison of Health-Related Quality of Life Between Patients with End-Stage Ankle and Hip Arthrosis. Journal of Bone & Joint Surgery (American), 90: 499-505, Mar 2008.

Presentations:
Daniels T; Duggal N; Yeung M; Redekop S. "Ankle arthroplasty versus ankle arthrodesis for end-stage ankle arthritis: A functional comparison." The 2nd Joint International Federation of Foot and Ankle Societies Meeting, Naples Italy, Sep 15, 2005

Daniels T; Duggal N; Yeung M; Redekop S. "A functional analysis of ankle arthroplasty for end-stage ankle arthritis." The 2nd Joint International Federation of Foot and Ankle Societies Meeting, Naples Italy, Sep 15, 2005

Duggal N; Yeung M; Redekop S; Daniels TR. "A functional analysis of ankle arthroplasty for end-stage arthritis." AOFAS Annual Summer Meeting, Boston MA, Jul 14-17, 2005

Further Grants / Awards:
First Prize for Poster competition- AOFAS, Jul 14-17, 2005, $2,000

Best Clinical Paper, International Federation of Foot & Ankle Societies, Sep 15, 2005, $5000

Year Funded: 2006
Principal Investigator: Jeffrey Houck, PhD, PT
Co-Investigator(s): Judith F. Baumhauer, MD
Project Title: Effect of Bracing and strengthening exercise on foot kinematics and functionin subjects with stage II PTTD
Grant Amount: $10,000

Publications:
Neville C; Flemister A; Houck J. Deep Posterior Compartment Strength and Foot Kinematics in Subjects With Stage II Posterior Tibial Tendon Dysfunction. Foot & Ankle International, 31(4):320-328, 2010.

O'Connor K; Houck J; Baumhauer J. Patient factors in the selection of operative vs non-operative surgery for Posterior tibial tendon Dysfunction. Foot & Ankle International, 31(3):197-202, 2010.

Neville C; Houck J. Deep Posterior Compartment Strength and Foot Kinematics in subjects with Stage II Posterior Tibial Tendon Dysfunction. Foot & Ankle International, 30(6):530-9, 2009.

Neville C; Flemister A; Houck J. Choosing Among 3 Ankle-Foot Orthoses for a Patient with Stage II Posteriot Tibial Tendon Dysfunction. Journal of Orthopedic and Sports Physical Therapy, 39(11):816-824, 2009.

Houck J; Neville CG; Flemister AS. Foot Kinematics during a Bilateral Heel Rise Test in Participants with Stage II Posterior Tibial Tendon Dysfunction (PTTD). Journal of Orthopedic and Sports Physical Therapy, 39(8):593-603, 2009.

Houck J; Neville C; Tome J; Flemister A. Ankle and Foot Kinematics in Subjects with stage II PTTD during the Stance Phase of Gait. Foot & Ankle International, 30(6):530-9, 2009.

Neville C; Flemister A; Houck J. Effect of the AirLift PTTD Brace on Foot Kinematics in subjects with Stage II Posterior Tibial Tendon Dysfunction, Journal of Orthopedic and Sports Physical Therapy, 39(3):201-9, 2009.

Houck J; Nomides C; Neville C. The effect of Stage II Posterior Tibial Tendon Dysfunction on Deep Compartment Muscle Strength: A New Strength Test. Foot & Ankle International, 29(9): 895-902, 2008.

Neville C; Flemister AS; Houck JR. Science Behind use of Orthotic Devices to Manage Posterior Tibial Tendon Dysfunction. Techniques in Foot & Ankle Surgery, 7(2):125-133, 2008.

Neville CG; Flemister AS; Tome J; Houck J. Comparison of Changes in Posterior Tibialis Muscle Length between Subjects with Posterior Tibial Tendon Dysfunction and Healthy Controls during Walking. Journal of Orthopedic and Sports Physical Therapy, 37 (11): 661-9, Nov 2007.

Presentations:
Neville CG; Flemister SA; Houck J. "Sagittal Plane Ankle and Midfoot Kinematics in Subjects with Stage II PTTD during the stance phase of Gait." AOFAS Annual Summer Meeting, Toronto, July, 2007. (Nominated for Goldner Award.)

Neville CG; Flemister SA; Buamhauer J; Houck J. "Effects of Bracing and Strengthening Exercise on Foot Kinematics and Function in Subjects with Stage II PTTD." AOFAS Annual Summer Meeting, Toronto, July, 2007.

Neville; et al, "Ankle Joint Power in Subjects with Stage II PTTD". Gait & Clinical Movement Analysis Society. Annual Meeting, Springfield, MA, 2007.

Nomides; et al, "Deep Compartment Muscle Strength in Subjects with Stage II PTTD." Gait & Clinical Movement Analysis Society. Annual Meeting, Springfield, MA, 2007.

Neville; et al, "Effect of the AirLift PTTD Brace on Foot Kinematics in subjects with Stage II Posterior Tibial Tendon Dysfunction (PTTD)." Combined Sections Meeting American Physical Therapy Association, Boston MA. 2007.

Nomides C; Neville C; Flemister SA; Houck J. "The Effect of Stage II Posterior Tibial Tendon Dysfunction on Deep Compartment Muscle Strength." (Manuscript in preparation) Gait & Clinical Movement Analysis Society Annual Meeting, Spring 2007.

Further Grants / Awards:
Effect of Bracing and Strengthening Exercise on PTTD. Primary Investigator- Jeff Houck, Co-Investigator- Adolph S. Flemister, Sponsor: NIH NIAMS 1R15AR054507-01A1, Fall, 2007-Fall, 2010, $209,000

Year Funded: 2006
Principal Investigator: Lew C. Schon, MD
Co-Investigator(s): Gregory P. Guyton, MD
Project Title: Inflammatory cytokines expression in degenerative tendonosisquantitative description and relation to whole tendon mechanical stimuli
Grant Amount: $10,000

Publications:
Courneya JP; Luzina IG; Zeller CB; Rasmussen JF; Bocharov A; Schon LC; Atamas SP. Interleukins 4 and 13 modulate gene expression and promote proliferation of primary human tenocytes, Fibrogenesis & Tissue Repair, 3:9, June 10, 2010

Han S-H; Lee JW; Guyton GP; Parks BG; Courneya JP; Schon LC. Effect of extracorporeal shock wave therapy on cultured tenocytes. Foot & Ankle International, 30(2): 93-8, 2009.

Scherb MB; Han S-H; Courneya JP; Guyton GP; Schon LC. Effect of bupivacaine on cultured tenocytes. Orthopedics, 32(1): 26, January 2009.

"In Vitro Response of Normal and Diseased Tenocytes to PDGF-BB" this paper is in its final stage 5/11

Presentations:
Numerous grand rounds and lectures including this material

"Effects of Shockwave on Cultured Tenocytes" Union Memorial Hospital, orthopaedic eductational luncheon 2007

AOFAS Annual Summer Meeting, Toronto, July, 2007

Lee JW, Han SH, Schon LC, Choi WJ. "Altered gene expression using microarray and real-time PCR in posterior tibial tendon dysfunction." 15th Triennial Asia Pacific Orthopaedic Association (AOPA) Congress, Seoul, Korea, September 13, 2007. (Research Award winner)

Han SH, Lee JW, Parks BG, Guyton GP, Courneya JP, Schon LC. "The effect of extracorporeal shock wave therapy on cultured tenocytes." AOFAS Annual Summer Meeting, Denver, CO, 2008. (J. Leonard Goldner Award winner)

ORS poster on PDGF effect on human tenocytes, 2010.

Further Grants / Awards:
"In Vitro Response of Normal and Diseased Tenocytes to PDGF-BB." BioMimetic Therapeutics, Inc., Franklin, TN, 2007-2008

Union Memorial Hospital Orthopaedic Research Committee, 2007

Medstar Research Institute, 2007

APOA Research Award, 2007

J. Leonard Goldner Award, AOFAS Annual Summer Meeting, 2008

"Bone and tendon healing mechanisms of mesenchymal stem cells and hematopoetic progenitors derived from human adult bone marrow." Maryland Stem Cell Research Fund, 2008-2010 (co-investigator)

Year Funded: 2006
Principal Investigator: Robin Queen, PhD
Co-Investigator(s): James A. Nunley, MD
Project Title: Second and third MT stress fracture: gender, kinematics, kinetics and plantar plate difference as they relate to stress fracture
Grant Amount: $10,000

Publications:
Bischof JE; Abbey AN; Chuckpaiwong B; Nunley JA; Queen RM. Lower Extremity Kinematics and Kinetics in Women with a History of Second Metatarsal Stress Fractures. Gait and Posture. 31: 502-505, 2010.

Chuckpaiwong B; Cook CE; Nunley JA. Stress Fractures of the Second Metatarsal Base Occur in Nondancers. Clinical Orthopaedics & Related Research. 461:197-202, August 2007.

Chuckpaiwong B; Cook CE; Pietroban R; Nunley JA. Second Metatarsal Stress Factors in Sports. Comparative Risk Factors Between Proximal and Non-Proximal Locaton. British Journal of Sports Medicine, 41: 510 - 514, August 2007.

Queen RM; Abbey AN; Chuckpaiwong B; Nunley JA. Plantar Loading Comparisons between Women with a History of Second Metatarsal Stress Fractures and Normal Controls. American Journal of Sports Medicine, 37(2): 390-5, Feb 2009.

Presentations:
Mail NA; Hardaker WM; Queen RM; Nunley JA. "Gender Difference - Dominant and Non-Dominant Asymetry in Measurement of the Medial Longitudinal Arch." AOFAS Annual Summer Meeting, La Jolla CA, 2006.

Queen RM; Abbey AN; Chuckpaiwong B; Nunley JA. "Plantar Loading Comparison between Men and Women and Women with a Previous 2nd or 3rd Metatarsal Stress Fracture." AOFAS Annual Summer Meeting, Denver CO, 2008.

Queen RM; Chuckpaiwong B; Nunley JA. "A Comparison of Ankle Mechanics and Ground Reaction Forces in Women with a Metatarsal Stress Fracture and Matched Controls." AOFAS Annual Summer Meeting, Denver CO, 2008.

Further Grants / Awards:
none

Year Funded: 2006
Principal Investigator: Steven L. Haddad, MD
Co-Investigator(s): Cary Templin, MD
Project Title: The effect of continuous irrigation during burring on thermal necrosis and fusion strength in rabbit arthrodesis model
Grant Amount: $10,000

Publications:
currently submitting for publication 6/21/10

Presentations:
AOFAS Winter Meeting, San Diego, Feb. 2007 (Podium)
AAOS Annual Summer Meeting, San Diego, Feb. 2007 (Poster)

Further Grants / Awards:
none

Year Funded: 2007
Principal Investigator: Lew C. Schon, MD
Co-Investigator(s): Su-Young Bae, MD, PhD; Stuart D. Miller, MD
Project Title: Quantitative and qualitative description: Effects of bone marrow derived growth factors and cytokines on autogenous mesenchymal stem cells of various aspiration sites
Grant Amount: $10,000

Publications:
Jia X; Peters PG; Schon LC. The use of platelet-rich plasma (PRP) in the management of foot and ankle conditions. Operative Techniques in Sports Medicine. Accepted for publication 2011

Textbook chapter written:
Musculoskeletal clinical applications of Stem Cells in Book: Stem Cell Labeling for Delivery and Tracking

Presentations:
Numerous grand rounds and lectures including this material

"Retrospective review of 25 cases of concentrated BMA for clinical indications." ORS, 2009.

Courneya J-P; Luzina IG; Orlov MD; Schon LC; Atamas SP. "Bone Marrow Stem Cells Heal Tendon via Secreted Factors." World Stem Cell Meeting, September 2009 (Poster)

Schon LC; Dunn R; Gamez L. "Cell concentrate from autologous bone marrow augments bone grafting in the lower extremity." AOFAS Annual Meeting, Washington DC, July 2010.

Further Grants / Awards:
"High-density nanofilms for orthopedic therapies." Maryland Nanobiotechnology Research and Industry Competition Grant awarded by the Maryland Technology Development Corporation (TEDCO) & Maryland Biotechnology Center, Department of Business and Economic Development (DBED), 2009-2011 (Co-Investigator)

"Bone and tendon healing mechanisms of mesenchymal stem cells and hematopoetic progenitors derived from human adult bone marrow." Maryland Stem Cell Research Fund, 2008-2010 (Co-Investigator)

Year Funded: 2007
Principal Investigator: Mark A. Glazebrook, MD
Co-Investigator(s): Timothy R. Daniels, MD; Alastair Younger, MD
Project Title: Canadian Orthopaedic Foot and Ankle Society (COFAS) multi-centered randomized case controlled trial on clinical and radiographic outcome of total ankle arthroplasty vs. ankle ankle arthrodesis
Grant Amount: $10,000

Publications:
none

Presentations:
none

Further Grants / Awards:
none

Status Report: Patient enrollment ongoing. 6/29/10

Year Funded: 2007
Principal Investigator: Michael S. Pinzur, MD
Co-Investigator(s): Avinash Patwardhan, PhD
Project Title: Load Transfer in Transtibial Amputation with Distal Tibio-Fibular Bond Bridging
Grant Amount: $10,000

Publications:
none

Presentations:
none

Further Grants / Awards:

none

Status Report: Investigators are in the process of completing the study and should have data by the end of the summer. 5/13/11

Year Funded: 2007
Principal Investigator: Smita Rao, PhD, PT
Co-Investigator(s): Benedict F. DiGiovanni, MD; Deborah Nawoczenski, PhD, PT
Project Title: Enhancing conservative management of patients with midfoot arthritis
Grant Amount: $10,000

Publications:
S Rao; Baumhauer JF; Tome J; Nawoczenski DA. Orthoses Alter In Vivo Segmental Foot Kinematics during Walking in Patients with Midfoot Arthritis. Archives of Physical Medicine and Rehabilitation, 91: 608-615, 2010.

Patel A; S Rao; Nawoczenski D; Flemister A; DiGiovanni BF; Baumhauer J. (Invited Review) Midfoot Arthritis: Nonoperative Options and Decision Making for Fusion. J Am Acad Orthop Surg, 18: 1-10, 2010.

S Rao; Baumhauer JF; Tome J; Nawoczenski DA. Comparison of in vivo segmental foot motion during walking and step descent in patients with midfoot arthritis and matched asymptomatic control subjects. J Biomech, 42: 1054-1060, 2009.

S Rao; Baumhauer JF; Becica L, Nawoczenski DA. Shoe inserts alter plantar loading and function in patients with midfoot arthritis. J Orthop Sports Phys Ther, 39: 522-53, 2009.

S Rao; Nawoczenski D; Baumhauer J. Midfoot arthritis: nonoperative options and decision making for fusions. Techniques in Foot & Ankle Surgery, September 73 (3): 188-95, 2008.

Rao S; Nawoczenski DA; Baumhauer JF. Midfoot Arthritis: Nonoperative Options and Decision Making for Fusions. Techniques in Foot and Ankle Surgery, 7 (3): 188-195, September 2008.

Presentations:
Rao S; Nawoczenski D; Baumhauer J. “Functional Metatarsal Length in Patients with Midfoot Arthritis.” (Podium Presentation) JEGM Miami, 2010 https://www.amrms.com/ssl/gcmas/2010/.

Chen Y; Baumhauer J; Nawoczenski D; Hillstrom H; Rao S. “Principal Components Analysis to assess Plantar Pressure Patterns in Individuals with Midfoot Arthritis compared to Control Subjects.” JEGM, Miami, 2010 https://www.amrms.com/ssl/gcmas/2010/.

Nawoczenski D; Rao S; Neville C; Houck J. “How do Orthotic/Bracing Interventions Really Work?” (Instructional Course) Combined Sections Meeting, American Physical Therapy Association, San Diego, CA, 2010.

Rao S; Baumhauer J; Nawoczenski D. “Barefoot plantar loading in patients with midfoot arthritis during walking.” Annual Meeting of the European Society of Movement Analysis for Adults and Children, London, UK, 2009.

Rao S. “Understanding Functional Movements in Patients with Arthritis (Study Group with D.” Stiskal, PT, PhD) American College of Rheumatology / Association of Rheumatology Health Professionals Annual Scientific Meeting, Philadelphia, PA, 2009.

Rao S; Baumhauer JF; Nawoczenski DA. "Shoe inserts alter in vivo segmental motion in patients with midfoot arthritis." (Invited poster) Orthopedic Research Society, Las Vegas, 2009.

Rao S; Baumhauer JF; Tome J; Nawoczenski DA. "Shoe Inserts alter Inter-Segmental Foot Motion and Provide Symptomatic Relief in Patients with Midfoot Arthritis." (Abstract) International Foot and Ankle Biomechanics Congress, Bologna, Italy, 2008

Rao S; Baumhauer J; Tome J; Nawoczenski D. “Comparison of In Vivo Segmental Foot Mobility during Walking and Step Descent in Patients with Midfoot Arthritis.” International Foot and Ankle Biomechanics Congress, Bologna, Italy, 2008.

Rao S; Baumhauer J; Nawoczenski D. “Factors contributing to Impairments in Self-Reported Outcomes in Patients with Midfoot Arthritis.” American College of Rheumatology, San Francisco, 2008.

Rao S; Nawoczenski DA; Houck J. "Optimizing Conservative Intervention for Patients with Midfoot Arthritis: Treatment Choices, Effects and Implications for Clinical Decision Making." (Instructional Course) Pedorthic Footwear Association, Nashville TN, 2008.

Rao S; Baumhauer JF; Nawoczenski DA. "Shoe inserts alter in vivo segmental motion in patients with midfoot arthritis." (Best e-poster award) AOFAS Annual Summer Meeting, Denver CO, 2008.

Rao S; Besica L; Baumhauer JF; Nawoczenski DA. "The Effect of Foot Orthoses on Three-Dimensional Segmental Kinematics of the Foot in Patients with Midfoot Arthritis." Annual Meeting, Gait and Clinical Movement Analysis Society, Richmond VA, 2008.

Rao S; Besica L; Baumhauer JF; Nawoczenski DA. "Uncovering Mechanisms underlying the Effectiveness of Shoe Inserts in Patients with Midfoot Arthritis." Combined Sections Meeting, American Physical Therapy Association, Nashville TN, 2008.

Rao S. "The Effect of Foot Orthoses in Patients with Midfoot Arthritis." Foot Biomechanics Boot Camp, Melbourne, 2007.

Rao S; Nawoczenski DA; Baumhauer JF. "Uncovering the effects of shoe inserts on plantar loading in patients with midfoot arthritis." (E-poster) AOFAS Annual Summer Meeting, Toronto, Canada, 2007.

Rao S. "Segmental foot modeling in patients with diabetes and midfoot arthritis." Guest Lecture, Royal Children’s Hospital, Melbourne, 2007.

Further Grants / Awards:
Arthritis Foundation Chapter Grant (Nawoczenski DA; Rao S)

Arthritis Foundation Post-doctoral fellowship (Rao S)

Association of Rheumatology Health Professionals New Investigator Award (Rao S)

NIAMS New Investigator R03 (Rao S)

Year Funded: 2007
Principal Investigator: Stacie Ringleb, PhD
Co-Investigator(s): Claude D. Anderson, MD; Marlene DeMaio, MD
Project Title: Development of a method to quantify subtalar joint instability
Grant Amount: $10,000

Publications:

Ringleb SA; Dhakal A; Anderson CD; Bawab S; Paranjape R. Effects of Lateral Ligament Sectioning on the Stability of the Ankle and Subtalar Joint, Journal of Orthopaedic Research, 29: n/a. doi: 10.1002/jor.21407, 2011.

Presentations:
Choisne J; Ringleb SI; Bawab S. “Comparison of Two Methods to Calculate the Helical Axis Parameters in the Subtalar Joint,” 2nd Congress of the International Foot and Ankle Biomechanics Community, Seattle, WA, September 2010.

Choisne J; Ringleb SI; Samaan M; Bawab S; Naik D. “Understanding the Effects of Lateral Ligament Sectioning on the Stability of the Ankle and Subtalar Joint Using Euler Angles and the Rotation about a Helical Axis,” 23rd Annual Meeting of the American Society of Biomechanics, Providence, RI, August 2010.

Ringleb SI; Dhakal A; Anderson CD; Bawab S; Paranjape R; DeMaio M. “The Effects of Lateral Ligament Sectioning on the Stability of the Ankle and Subtalar Joint,” 2009 Annual Meeting of the American Society of Biomechanics, State College, PA, August 2009.

Poster presentation (1st place winner). Naval Medical Center Portsmouth, 2008

Poster presentation. Old Dominion University, 2008

Further Grants / Awards:
Naval Medical Center Portsmouth (Dept of Orthopaedic Surgery) $6,546

Investigators submitted a R15 to the NIH on this work in June 2010, which resulted in a score of a 22- funding decision is pending.

Year Funded: 2008
Principal Investigator: Nicholas Forsyth, PhD
Co-Investigator(s): Nicola Maffulli, MD
Project Title: Can human bone marrow-derived stem cells differentiate into tendon-forming cells?
Grant Amount: $9,830

Publications:
none

Presentations:
"Distinct responses of stem cells to BMP12 and BMP13 during in vitro tenogenesis." Tissue and Cell Engineering Society, Glasgow, 2009.

"Oxygen and Tissue Engineering." Cardiff, 2010.

"Distinct responses of human embryonic stem cells to BMP12 and BMP13 during in vitro tenogenesis." UK Stem Cell Network, Glasgow, 2011.

Further Grants / Awards:
North Staffordshire Medical institute - £5,000

British Orthopaedic Foot and Ankle Society - £5,000

EU FP7 - £350,000

Medical Research Council - £50,000

Year Funded: 2008
Principal Investigator: Timothy C. Beals, MD
Co-Investigator(s): Chris Pelt, MD
Project Title: A biomechanical analysis of a tensioned suture device in the fixation of a ligamentous Lisfranc injury
Grant Amount: $10,000

Publications:
Pelt C; Bachus K; Vance R; Beals T. A Biomechanical Analysis of a Tensioned Suture Device in the Fixation of the Ligamentous Lisfranc Injury. Foot & Ankle International. 32(4):422-431, 2011.

Presentations:
none

Further Grants / Awards:
none

Year Funded: 2008
Principal Investigator: Tricia Hubbard, PhD, ATC
Co-Investigator(s): Robert B. Anderson, MD
Project Title: Lower extremity kinetics and kinematics during stair climbing in patients with ankle osteoarthritis
Grant Amount: $8,669

Publications:
none

Presentations:
none

Further Grants / Awards:
none

Status Report: Data collection is now complete, investigators are currently writing up manuscripts. 6/21/10

Year Funded: 2008
Principal Investigator: Victor Valderrabano, MD, PhD
Co-Investigator(s): Olaf Buettner, MD
Project Title: Stiffness and histology analysis of the ankle joint cartilage
Grant Amount: $7,200

Publications:
Submitted to Foot & Ankle International, under review: Buettner O; Valderrabano V; Leumann A; Mueller-Gerbl M. Histological morphometry and biomechanical mapping of the human ankle.

Presentations:

Buettner O; Valderrabano V; Leumann A; Mueller-Gerbl M. "Histological morphometry and biomechanical mapping of the human ankle." AOFAS 27th Annual Summer Meeting, Keystone, CO, July 2011.

Buettner O; Leumann A; Mueller-Gerbl M; Valderrabano V. "Anatomical mapping of the human ankle joint, Part 1: Talar side." Poster Presentation, AOFAS 26th Annual Summer Meeting, National Harbor, MD, July 2010.

Further Grants / Awards:
none

Year Funded: 2008
Principal Investigator: Wayne S. Berberian, MD
Co-Investigator(s): Frank Liporace, MD
Project Title: Early surgical treatment of displaced intra-articular calcaneus fractures through a combined medial and lateral approach
Grant Amount: $9,000

Publications:
none

Presentations:
Berberian W. "Displacement of the Sustentacular Fragment in Intraarticular Calcaneus Fractures." Eastern Orthopaedic Association Annual Meeting, Lake Las Vegas, Nevada, October 22-25, 2008.

Berberian W. "Displacement of the Sustentacular Fragment in Intraarticular Calcaneus Fractures." Orthopaedic Trauma Association Annual Meeting, Denver, Colorado, October 15-18, 2008.

Further Grants / Awards:
none

Year Funded: 2009
Principal Investigator: Amar Patel, MD
Co-Investigator(s): Judith F. Baumhauer, MD; Deborah Nawoczenski, PhD, PT
Project Title: Effectiveness of Morton's extension carbon foot plate in the non-operative treatment of hallux rigidus
Grant Amount: $19,550

Publications:
none

Presentations:
Morris KK; Tome JM; Patel A; Baumhauer JF; Nawoczenski DA. "The Effects of Morton's Extension Inserts On Plantar Loading Patterns, Pain, And Function In Individuals With Hallux Rigidus." American Society of Biomechanics meeting, State College, PA, August 2009.

Kane G; Campbell E; Gorecki K; Morris K. "Effect of the Morton's Extension Carbon Footplate on Pain, Function, and Plantar Loading Patterns in Patients with HalluxRigidus." Poster presentation, Combined Sections Meeting of the American Physical Therapy Association, San Diego, CA, Feb 2010.

Nawoczenski DA; Patel A; Mann L; Baumhauer JF. "Improvement in Foot Function Following a Six Week Non-Operative Intervention in Patients with Hallux Rigidus." AOFAS 26th Annual Summer Meeting, National Harbor, MD, July, 2010.

Baumhauer JF; Patel A; Tome J; Nawoczenski DA. "Dynamic Assessment of the Morton's Extension Carbon Footplate on Pain, Function and Plantar Loading Patterns in Patients with Hallux Rigidus." E-poster presentation, AOFAS Summer Meeting, Washington, DC, July, 2010.

Further Grants / Awards:
none

Year Funded: 2009
Principal Investigator: Fabian Krause, MD
Co-Investigator(s): Karsten Schwieger, PhD
Project Title: Ankle joint pressure in pes cavus after common hindfoot osteotomies
Grant Amount: $20,000

Publications:
Krause FB; Sutter D; Waehnert D; Windolf M; Schwieger K; Weber M. Ankle Joint Pressure Changes in a Pes Cavovarus Model After Lateralizing Calcaneal Osteotomies. Foot & Ankle International. 31(9): 741-746, 2010.

Presentations:
Krause F. "Ankle joint pressure in pes cavovarus after common hindfoot osteotomies." AOFAS 26th Annual Summer Meeting, National Harbor, MD, July, 2010. (IFFAS Award for Excellence winner)

Best paper, EFAS, 2010.

Further Grants / Awards:
IFFAS Award for Excellence, AOFAS 26th Annual Summer Meeting, National Harbor, MD, July 2010.

Year Funded: 2009
Principal Investigator: John G. Kennedy, MD
Co-Investigator(s): Carl W. Imhauser, PhD; Padhraig F. O'Loughlin, MD
Project Title: The biomechanics of cartilage damage and repair at the ankle joint
Grant Amount: $18,920

Publications:
Submitted to American Journal of Sports Medicine, In Review

Presentations:
none

Further Grants / Awards:
none

Status Report: Substantial progress made toward completion of project. Final report in late 2010.

Year Funded: 2009
Principal Investigator: Jonathan T. Deland, MD

Co-Investigator(s): Irvin Oh, MD
Project Title: Plantar pressure analysis in forefoot after different amount of lateral column lengthening: A biomechanical study
Grant Amount: $20,000

Publications:
none

Presentations:
Oh I; Choi D; Williams B; Imhauser C; Ellis S; Deland J. "The Sensitivity of Plantar Pressure and Talonavicular Alignment to Lateral Column Lengthening." International Foot and Ankle Biomechanics Congress, September, 2010.

Oh I; Choi D; Imhauser C; Williams B; Ellis S; Deland J. "Plantar Pressure Analysis in the Forefoot after Different Amounts of Lateral Column Lengthening." AAOS, February, 2011.

Further Grants / Awards:
none

Year Funded: 2010
Principal Investigator: Brad Blankenhorn, MD
Co-Investigator(s): Christopher W. DiGiovanni, MD
Project Title: Three-dimensional non-invasive kenematic analysis of the transverse tarsal joint and determination of the role of the plantar fascia on the transverse tarsal locking mechanism
Grant Amount: $19,925

Publications:
no report due

Presentations:
no report due

Further Grants / Awards:
no report due

Year Funded: 2010
Principal Investigator: John G. Anderson, MD
Co-Investigator(s): Donald R. Bohay, MD; Nathan J. Kiewiet, MD; Scott M. Holthusen, MD
Project Title: Gastrocnemius recession versus Achilles tendon debridement with flexor hallucis longus transfer for chronic noninsertional Achilles tendinopathy: A prospective randomized controlled trial
Grant Amount: $20,000

Publications:
no report due

Presentations:
no report due

Further Grants / Awards:
no report due

Year Funded: 2010
Principal Investigator: Lorenzo Gamez, MD
Co-Investigator(s): Brian Silvia, MD
Project Title: Investigation into genome-wide differential expression between diabetic and non-diabetic patients in healing of ankle fractures
Grant Amount: $20,000

Publications:
no report due

Presentations:
no report due

Further Grants / Awards:
no report due

Year Funded: 2010
Principal Investigator: Samuel B. Adams, MD
Co-Investigator(s): Lew C. Schon, MD
Project Title: Metabolic profiling and cytokine analysis of synovial fluid in healthy and end-stage post-traumatic ankle joints
Grant Amount: $20,000

Publications:
no report due

Presentations:
no report due

Further Grants / Awards:
no report due

Year Funded: 2010
Principal Investigator: Scott J. Ellis, MD
Co-Investigator(s): Howard Hillstrom, PhD
Project Title: In-vivo comparison of plantar pressures in pes rectus, pes planus, and the adult acquired flatfoot using supine, vertical posture, and gait measurements
Grant Amount: $20,000

Publications:
no report due

Presentations:
no report due

Further Grants / Awards:
no report due

Year Funded: 2011
Principal Investigator: Deborah Nawoczenski, PhD, PT
Co-Investigator(s): Benedict F. DiGiovanni, MD
Project Title: Biomechanical factors impacting foot function and muscle performance following gastrocnemius recession
Grant Amount: $18,111

Publications:
no report due

Presentations:
no report due

Further Grants / Awards:
no report due

Year Funded: 2011
Principal Investigator: Gregory Gutierrez, PhD
Co-Investigator(s): Kenneth J. Mroczek, MD
Project Title: Proprioception and neuromuscular control following ankle instability surgery
Grant Amount: $20,000

Publications:
no report due

Presentations:
no report due

Further Grants / Awards:
no report due

Year Funded: 2011
Principal Investigator: Kevin L. Kirk, DO
Co-Investigator(s): James R. Ficke, MD
Project Title: Early vs delayed weight-bearing after microfracture for osteochondral lesions of the talus
Grant Amount: $7,000

Publications:
no report due

Presentations:
no report due

Further Grants / Awards:
no report due

Year Funded: 2011
Principal Investigator: Paul T. Fortin, MD

Co-Investigator(s): Kevin Baker, MS
Project Title: The effect of a bisphosphonate pretreatment on the enhancement of osseous incorporation and chondrocyte viability of fresh osteochondral allografts
Grant Amount: $20,000

Publications:
no report due

Presentations:
no report due

Further Grants / Awards:
no report due