

# PAST RESEARCH AWARDS AND GRANTS WINNERS

### Acorda Neurologic Rehabilitation Award

#### 2013

• **Stacy McCarty, MD** (Rehab Institute of Chicago), "The Outcomes and Cost of Day Rehabilitation in Malignant Brain Tumor Patients."

### Allergan Foundation Pain Management & Spine Care Research Grant

#### 2016

• **Ryan Mattie, MD**, Stanford University, "Comparing Patient Activity Measure Before and After Epidural Steroid Injection for Radicular Pain Using a Wearable Digital Activity Monitor"

#### 2015

• **Gustaf Van Acker III, MD, PhD** (MetroHealth), "Blockage of Peripheral Nerve Conduction Using Noninvasive Surface Stimulation"

# Aspen Spinal Bracing Research Grant

# 2015

- Thiru Annaswamy, MD, "Benefit of Lumbar Bracing for Chronic Low Back Pain due to Degenerative Disc Disease"
- 2014
  - Tadgh O'Gara, MD, Wake Forest University, "Continuous Monitoring of Pelvic Tilt and its Correlation to Adolescent Idiopathic Scoliosis"

# Justus Lehmann Research Grant

# 2017

• Jonathan Akins, Widener University, "Biomechanics of Turn-specific Functional Outcome Measures in Lower-limb Prosthesis Users"

2016

• **Francesco Travascio, PhD**, University of Miami, "Evaluation of Clinical and Biomechanical Outcomes of Hamstring ACL Reconstruction Augmented by an Injectable

Osteoconductive/Osteoinductive Compound Combined with an Accelerated Rehabilitation Period"

#### 2015

 Adam S. Tenford, MD (Stanford Human Performance Lab), "Prospective Evaluation of Influence of Dynamic Plantar Foot Loading Patterns in Development of Bone Stress Injuries in Runners"

### 2014

• **Prakash Jayabalan, MD** (University of Pittsburgh Medical Center), "The Effect of Walking Exercise Regimens on Joint Biomechanics and Serum Biomarker Profile in Patients with Knee Osteoarthritis"

### 2013

• Robert Streb, PT, PhD (SUNY-Stony Brook), "Measurement of Medial Collapse During Bilateral and Unilateral Squat."

# Mallinckrodt Acute Pain Management Research Grant

### 2016

• Patricia Z. Zheng, MD, Stanford University, "Utilizing Physical Activity Monitors to Characterize Free-Living Physical Activity Patterns in Individuals with Low Back Pain"

# 2015

• Zachary L. McCormick, RIC Center for Pain Management, "Prospective Trial of One vs. Two Diagnostic Genicular Nerve Blocks to Determine Clinical Outcomes after Radiofrequency Ablation for the Treatment of Painful Knee Osteoarthritis"

#### 2014

• Venu Akuthota, MD, University of Colorado Denver, "Correlation of PROMIS Short Form to Legacy Functional and Pain Outcome Measures in Individuals Undergoing Spinal Interventions for Acute Low Back Pain or Radicular Pain"

# **Richard Materson ERF New Investigator Awards**

# 2017

- Atira Kaplan, MD, Montefiore Medical Center, "The Effect of Footwear Generated Biomechanical Manipulation on Symptoms of Stress Urinary Incontinence: A Randomized Single Blinded Controlled Trial"
- Sean Smith, MD, University of Michigan, "Validating an Outcomes Metric for Cancer Rehabilitation Patients through Multi-center Collaboration"

# 2016

- Richard G. Chang, SUNY Downstate Medical Center, ""Ultrasound Guided Intra-articular Leukocyte Reduced Platelet-rich Plasma, Hyaluronic Acid or Corticosteroid Injections for Chronic, Unilateral Mild to Moderate Knee Osteoarthritis"
- Prakash S. Jayabalan, MD, Rehabilitation Institute of Chicago, "A Comparison of the Acute Effects of Walking an 18-hole Golf Course vs Using a Motorized Gold Cart in Subjects with Knee Osteoarthritis"

• Sujin Lee, MD, Long Beach VA Spinal Cord Injury Disorders Center, "Noninvasive Electrical Spinal Cord Stimulation to Improve Bladder Function in Chronic Spinal Cord Injury"

# 2015

- Alejandra Camacho-Soto, Washington University, "Early Psychological and Neurophysiological Predictors of Disability after Mild Traumatic Brain Injury"
- Ellen Casey, MD, Drexel University College of Medicine, "Influence of Race on the Female Athlete Triad: A Case Matched Control"
- Tae Hwan Chung, Johns Hopkins University Medical Center, "Effects of Chronic Inflammation on Aging Neuromuscular Function"

# 2014

- Jonathan S. Kirschner, MD, Icahn School of Medicine at Mount Sinai, "Effi cacy of Ultrasound-guided Glenohumeral Joint Injections of Platelet-rich Plasma (PRP) vs Hyaluronic Acid (HA) in the Treatment of Glenohumeral Osteoarthritis and Rotator Cuff Arthropathy: A Randomized, Single-blind Pilot Study"
- John-Ross Rizzo, Rusk Rehabilitation at NYULMC, "Objective Eye Movements during the King Devick Test in the Concussed Patient"
- **Patricia Z. Zheng, MD**, Stanford University, "Impact of Custom Mobile Device Application on Home Exercise Therapy Compliance and Its Associations to Improvements in Pain, Function and Quality of Life Outcomes in Patients with Chronic Low Back Pain"

# 2013

- "Impact of Custom Mobile Device Application on Home Exercise Therapy Compliance and Its Associations to Improvements in Pain, Function and Quality of Life Outcomes in Patients with Chronic Low Back Pain"
- Jason D. Tucker, MD, Virginia Commonwealth University •
- "Adjunctive Botulinum Therapy to Prevent Decreased ROM and Rotator Cuff Re-tear After Arthroscopic Rotate Cuff Repair", **Michael J. Burns, MD**, Stanford University

# 2012

- Alfred C. Gellhorn, MD (University of Washingon, Seattle), "Intense Focused Ultrasound for Localization of Pain in Rotator Cuff Tears and Tendinopathy"
- Jonathan S. Kirschner, MD (Mount Sinai School of Medicine, New York), "Efficacy of Ultrasound Guided Percutaneous Needle Tenotomy (PNT) vs Platelet-rich Plasma (PRP) with PNT in the Treatment of Chronic Tendinosis"
- **Monica Rho, MD** (Rehabilitation Institute of Chicago), "Preferential Load-bearing During Double-leg Squat in Cam-type Femoroacetabular Impingement"

# 2011

- **Brandon Goff, MD**, "Prescription opioid use and abuse risk mitigation: An investigation of screening methods and risk and resiliency factors"
- Jennifer Devine, MD, "Cardiovascular fitness, cognition, mood and function in community-dwelling people with traumatic brain injury (TBI)"
- **Daniel Herman, MD**, "A Comparison of Neuromuscular Characteristics between Athletes with Different Levels of Neurocognitive Performance"

2010

- Adam Tenforde, MD, "Identifying Modifiable Risk Factors for Stress Fractures in Young Distance Runners"
- **Daniel Herman, MD**, "Strength Training in Peri-adolescent Females: An Early Intervention Method for the Prevention of Anterior Cruciate Ligament Injury"

2009

- **Robynne M. Gravenhorst, PhD**, "Kinematic Analysis of Motor Recovery with Human Adult Bone Marrow Derived Stem Cell Treatment in a Rodent Model of Stroke"
- Nitin B. Jain, MD, MSPH, "Diagnostic Accuracy of Ultrasound and Physical Examination in Rotator Cuff Tears"

### 2008

- **Hima S. Doppalapudi, MD,** "The Value of Diagnosis of Lumbar Dorsal Ramus Syndrome in Chronic Back Pain Patients"
- Marlis Gonzalez-Fernandez, MD, "The Role of Cortical and Subcortical Structures in the Development of Swallowing Dysfunction After Stroke"

2007

- Dr. James T. Eckner, "Validating a Novel Clinical Measure of Reaction Time"
- **Dr. Michelle E. Brand,** "Comparison of Thermoregulation in Spinal Cord Injured Athletes and Able-bodied Athletes Exercising under High Ambient Temperature and the Efficacy of Various Cooling Modalities"

### 2006

- Yejia Zhang, MD, "Role of Human Umbilical Cord Blood-derived Mesenchymal Stem Cells in Intervertebral Disc Regeneration"
- Jerry Chuang, MD, "The Effects of Early and Daily Administration of Dilantin on Neuroprotection and Neuroplasticity in an Experimental Model of Traumatic Brain Injury"

#### 2005

- Neil A. Segal, MD, "Functional Effects of a Laterally Wedged Insole with Subtalar Strapping for Medial Compartment Knee Osteoarthritis"
- Preeti Raghavan, MD, "Rehabilitation of Grasp and Release After Stroke"

2004

- Howard Choi, MD, "Amelioration of Respiratory Dysfunction Following Spinal Cord Injury via Activation of Serotonin IA Receptors"
- Leslie Morse, DO, "Assay of Known Modulators of Bone Metabolism and Their Relation to Bone Mineral Density Following Acute Spinal Cord Injury"

2003

• Pablo A. Celnik, M.D., "Influence of Age on Use-Dependent Plasticity in Stroke"

2002

• **Gary G. Wang, M.D.,** "Study on Heat Shock Protein Gene Therapy to Protect Damaged Spinal Cord from Secondary Injury"

### **Midcareer Investigator Award**

### 2016-17

• Ellen Casey, University of Pennsylvania, "An In Vivo Longitudinal Evaluation of the Impact of Oral Contraceptives on Connective Tissue and Neuromuscular Control"

#### 2015

• Heather K. Vincent, MD, University of Florida, "Patient-centered Transformative Coaching Approach to Improve Participation in Rehabilitation and Functional Quality of Life after Orthopedic Trauma"

#### 2014

• James T. Eckner, MD, University of Michigan, "Evaluation of a Supervised Neck Strengthening Program in Young Athletes: A Potential Intervention to Reduce the Risk of Sport-related Concussion"

### 2013

 "Enhancing Emotional Regulation after Traumatic Brain Injury: Probing Neural Circuitry with Transcranial Direct Current Stimulation", Preeti Raghavan, MD, Rusk Institute of Rehabilitation Medicine, New York

#### 2012

• **Cory L. Christiansen, PT, PhD** (University of Colorado Denver), "Early Physical Function During Rehabilitation Following Dysvascular Transtibial Amputation"

### Milbank Spinal Cord Injury Rehabilitation Research Grant

#### 2016-17

• Michelle Trbovich, South Texas Veterans Health Care System, "Capsaicin 8% Patch for Spinal Cord Injury Focal Neuropathic Pain"

# Milbank Traumatic Brain Injury Rehabilitation Research Grant

#### 2016-17

• Shirley Shih, Spaulding Rehabilitation Hospital, "Brain-derived Neurotrophic Factor and Age-related Functional Recovery after TBI"

# Milbank Foundation Chronic Pain Management Research Grant

#### 2015

• Xiaogang Jiang (Eastern Virginia Medical School), "Relationship Between Chronic Pain and Sexual Dysfunction"

#### Milbank Foundation Pain Management Research Grant

#### 2015

• **Neil S. Segal, MD** (Kansas University Medical Center), "Determining Efficacy of the Combined Application of Electrical Stimulation and Volitional Contractions for Knee Pain

Inhibition and Physical Function Improvement in Men and Women with Knee Osteoarthritis"

# Milbank Foundation Injured Soldiers Research Grant

# 2016

• Krista Kutina, DPT, University of Pittsburgh, "Real Time Mobile Visual Feedback on Gait Retraining in the Amputee Population: A Pilot Study"

# 2015

• Eric Altschuler, MD, PhD, Walter Reed National Military Medical Center, "A Pilot Study of Mirror Therapy for Complex Orthopedic and Peripheral Nerve Injuries in Soldiers"

# Gabriella Molnar-Swafford Pediatric PM&R Research Grant

# 2017

• Stacy Suskauer, MD, Hugo Moser Research Institute at Kennedy Krieger, "Evaluation of an Outcome Battery for Children with Disorders of Consciousness after Acquired Brain Injury"

# 2016

• Yuxi Chen, MD, Montefiore Medical Center, "Assessing the Efficacy of Virtual Reality Analgesia (VRA) in Pediatric Patients for Pain Control During Botulinum Toxin Injections (BTI) for Spasticity Management"

# 2015

• Gerald H. Clayton, PhD, Children's Hospital Colorado, "Quantitative Encephalography as a Tool for Evaluation of Adolescent Concussions"

# 2014

• Hadiya Green Guerrero, PT, DPT, Mayo Clinic, "Effectiveness and Effi cacy of Kinesio Taping Method in Children Who Toe Walk"

# 2013

• "Outcomes in Adults who had a Selective Dorsal Rhizotomy as a Child: A Case-Control Study", **Alecia K. Daunter, MD**, University of Michigan, Ann Arbor

# 2012

• Marcie Ward, MD (Gillette Children's Hospital, St. Paul, MN), "Assessing the Reliability of Anaerobic and Aerobic Fitness Testing in Children and Adolescents with Cerebral Palsy"

# Gabriella Molnar-Swafford Pediatric Transitional Care Research Grant

# 2014

• **Kimberly M. Karrat, MD**, University of North Carolina, "Toward Transition and Self Management: Assessing the Needs of Individuals with Cerebral Palsy in North Carolina"

### Scott Nadler PASSOR Musculoskeletal Research Grant

#### 2017

• Alex Scott, PhD, University of British Columbia, "Topical Diclofenac as an adjunct to rehabilitation of chronic Achilles tendinopathy: a randomized controlled trial"

### 2016

• Daniel C. Herman, MD, University of Florida, "Secondary Musculoskeletal Injury Risk after Concussion: A New Paradigm for Musculoskeletal Injury Risk Evaluation, Prevention and Rehabilitation"

### 2015

• Michael Fredericson, MD, Stanford University, "Prevention of Bone Stress Injuries Through Nutritional Intervention in Male and Female Distance Runners"

# 2014

• **Gwendolyn A. Sowa, MD**, University of Pittsburgh Medical Center, "Genetic Variants of Pain and Inflammation: Association with Lumbar Spinal Stenosis Clinical Characteristics and Response to Treatment"

### 2013

- "Efficacy of Ultrasound Guided Posterior Sacroiliac Ligament Corticosteroid Injection in Pregnancy-related Pelvic Girdle Pain: A Randomized Controlled Trial", Colleen M. Fitzgerald, MD, Loyola University Chicago
- Allen Heinemann, PhD (Rehabilitation Institute of Chicago), "Developing Outcomes Data Management and Reporting

#### 2012

• **Neil Segal, MD** (University of Iowa), "Enhancing Women's Health Through Assessing Means of Attenuating Arch Collapse with Pregnancy"

#### 2011

• Akuthota Venugopal, MD, Clinical Couse of Patients with Lumbar Radiculopathy with Motor Deficit

# 2010

• **Heidi Prather, MD,** Hip-Spine Syndrome: Prospective Descriptive Study of Clinical Presentation and Diagnostic Tests for Patients with Coexisting Hip and Spine Disorders

#### 2009

- Mathew J. Abraham, MD, Double Blind Placebo Controlled Trial to Evaluate Preservation of Bone Mineral Density by Bisphosphonate Therapy (Fosamax) Following Spinal Cord Injury: A Pilot Study"
- Kevin R. Vincent, MD, PhD, FAAPMR, An Exploratory Study of Resistance Exercise Prehabilitation Effects on Physical Function, Psychosocial Distress and Quality of Life Outcomes in Patients Undergoing Treatment for Soft Tissue Sarcoma

#### 2008

• **Gwendolyn A. Sowa, MD PhD,** Investigation into the utility of serum biomarkers to assess intervertebral disc degeneration

# 2007

• Michael C. Hsu, MD, The Efficacy of an Affective Self-Awareness Treatment Program for Fibromyalgia

• **Devyani Hunt, MD,** Clinical Outcomes Analysis of Treatment for Early Intra-Articular Hip Disease

2006

• Yejia Zhang, MD, PhD, The role of Fibronectin and Its Fragments in the Degenerating Human Intervertebral Disc

2005

• Neil A. Segal, MD, Immediate Effects of an Insole and Subtalar Strapping on Lower Limb Alignment and Gait Biomechanics

2004

• Jay Smith, MD, Electromyographic Activity in the Immobilized Shoulder Girdle Musculature during Ipsilateral and Contralateral Upper Limb Motions

2003

• Julie Lin, MD, Functional Impact of the Posture Training Support in Elderly Osteoporotic Patients

2002

• Michael Fredericson, MD, The Effect of Running on Bone Density and Bone Structure in Elite Athletes

2001

• Heidi Prather, DO, Vertebral Compression Fractures Related to Cancer Patients and Treatment with Vertebroplasty

2000

- Anne Z. Hoch, DO PT, Does Athletic Amenorrhea Induce Cardiovascular Changes? 1999
  - **Gregory E. Lutz, MD,** The Biomechanical and Histological Analysis of Intradisc Electrothermal Therapy on Interventional Discs

1998

• **Thierry H.M. Dahan, MD,** Double blind randomized clinical trial examining the efficacy of modified Bupivacaine suprascapular nerve blocks in the treatment of chronic refractory painful subacromial impingement syndrome

# **Ossur Prosthetic/Orthotic Research Grant**

2013

• **Neil Segal, MD** (University of Iowa), "Discovering the Effect of a Realigning Brace on Tibiofemoral Contact Stress."

2012

• James J. Hill, III MD (University of North Carolina at Chapel Hill), "Normative Physical Fitness Standards for High-functioning Below Knee Amputees"

#### 2011

• **Gopi Kasturi, MD**, "Use of lightweight spine braces in the treatment of osteoporotic fractures to help reduce pain and improve quality of life"

# ERF Best Research Paper (Discontinued in 2009)

### 2008

- Leslie Morse, DO, et al (New Investigator), "Age and Motor Score Predict Osteoprotegerin Level in Chronic Spinal Cord Injury," *J Musculoskelet Neuronal Interact*. 2008 Jan-Mar;8(1):50-7.
- Victoria A. Brander, MD (Established Investigator), "Pain and Depression Influence Outcome 5 Years after Knee Replacement Surgery," *Clin Orthop Relat Res.* 2007; 464:21-6

# 2007

- Dr. Andrew Haig et al (Established Investigator), "Electromyographic and Magnetic Resonance Imaging to Predict Lumbar Stenosis, Low Back Pain and No Back Symptoms," *J Bone Joint Surg* 2007; 89: 358-66
- Dr. Leonid Shinchuk et al (New Investigator), "Vitamin D Deficiency and Osteoporosis in Rehabilitation Inpatients," Arch Phys Med Rehabil 2006; 87: 904-08

### 2006

- Preeti Raghavan, MD (New Investigator), "Impaired Anticipatory Control of Fingertip Forces in Patients with a Pure Motor or Sensorimotor Lacunar Syndrome," *Brain*, in April, 2006.
- Robert Werner, MD et al (Established Investigator), "Randomized Controlled Trial of Nocturnal Splinting for Active Workers with Symptoms of Carpal Tunnel Syndrome," *Archives Phys Med Rehabil* 2005; 86: 1-7.

### 2005

- Kevin M. Means, MD, "Balance, Mobility, and Falls Among Community-Dwelling Elderly Persons: Effects of a Rehabilitation Exercise Program," *Am J Phys Med Rehabil* 2005; 84: 238-50
- Christina V. Oleson, MD, "Prognostic Value of Pinprick Preservation in Motor Complete, Sensory Incomplete Spinal Cord Injury," *Arch Phys Med Rehabil* 2005; 86: 988-92

# 2004

- David E. Fish, MD, "Optimal Resistance Training: Comparison of DeLorme vs. Oxford Techniques," Am J Phys Med Rehabil December 2003
- David T. Yu, MD, "Intramuscular Neuromuscular Electric Stimulation for Post-Stroke Shoulder Pain: A Randomized Clinical Trial," *Arch Phys Med Rehabil*, May 2004

# 2003

- Anne Zeni Hoch, DO, "Is There an Association between Athletic Amenorrhea and Endothelial Cell Dysfunction?" *Medicine & Science in Sports & Exercise*, March 2003
- Amy K. Wagner, MD, "Intervention with Environmental Enrichment after Experimental Brain Trauma Enhances Cognitive Recovery in Male But Not Female Rats," *Neuroscience Letters*, December 2002

# 2002

- Qing Tai, MD, PhD, "Gabapentin in the Treatment of Neuropathic Pain After Spinal Cord Injury: A Prospective, Randomized, Double-Blind, Crossover Trial," J Spinal Cord Med, Summer 2002
- Marca L. Sipski, MD, "Sexual Arousal and Orgasm in Women: Effects of Spinal Cord Injury," *Annals Neurology*, January 2001

#### ERF Scholarship to attend the

# AAMC Early-Career Women Faculty Professional Development Seminar (*Discontinued in 2008*)

2007

Dr. Seema Khurana (University of Miami School of Medicine) **2005** Anne F. Ambrose, MD (Mount Sinai Rehabilitation Center, New York) **2004** Amy O. Bowles, MD (University of Texas Health Science Center at San Antonio) **2003** Amy K. Wagner, MD (University of Pittsbugh) **2002** 

Lisa P. Fugate, MD, MS (The Ohio State University)