



*ORTHOPAEDIC RESEARCH
AND EDUCATION FOUNDATION*

2013 Grants Awarded

“OREF is great about keeping the orthopaedic community informed of what grant recipients are working on in research and in translational medicine. OREF continues to bang the drum. WE NEED TO DO OUR PART TO HELP.”

Danielle S. W. Benoit, PhD

OREF RESEARCH GRANTS AND AWARDS FUNDED FOR 2013

OREF CAREER DEVELOPMENT GRANTS

Roger Cornwall, MD
Cincinnati Children's Hospital Medical Center
*The Role of Muscle Satellite Cells in Contracture
Formation Following Neonatal Brachial Plexus Injury*

Brian T. Feeley, MD
University of California, San Francisco
*The Molecular Pathophysiology of Muscle Atrophy and
Fatty Infiltration After Massive Rotator Cuff Tears*

OREF PROSPECTIVE CLINICAL RESEARCH GRANTS

Andrew C. Hecht, MD
Mount Sinai School of Medicine
*The Effect of Esomeprazole Magnesium on Incidence of Dysphagia
Following Anterior Cervical Spine Surgery: A Prospective, Randomized,
Double-Blinded, Placebo-Controlled Study*

Javad Parvizi, MD
Rothman Institute, Thomas Jefferson University
*Serum Molecular Markers: A Potential Guide for Re-implantation
After Resection Arthroplasty for Periprosthetic Joint Infections*

OREF CLINICAL RESEARCH AWARD

Robert F. LaPrade, MD, PhD
Steadman Philippon Research Institute
*Improving Outcomes for Posterolateral Knee Injuries—
Running Title: The Posterolateral Corner of the Knee*

OREF/MTF RESEARCH GRANT

Mark Lee, MD
University of California, Davis
*Bioengineering Implantable Bone Tissue Using Allogenic
and Autologous Mesenchymal Stem Cells*

OREF/GOLDBERG RESEARCH GRANT IN ARTHRITIS

Cristin M. Ferguson, MD
Wake Forest University Health Sciences
BMP Receptors and GDF5 in Osteoarthritis

**Funding made possible by the Dr. Victor and
Mrs. Harriet Goldberg Endowment Fund**

OREF/ASES/ROCKWOOD CLINICAL RESEARCH GRANT IN SHOULDER CARE

Joseph A. Abboud, MD
Rothman Institute, Thomas Jefferson University
The Effect of Elevated Synovial Cholesterol Levels in Rotator Cuff Tendon Injury

**Funding made possible by the
Dr. and Mrs. Charles Rockwood Family Endowment Fund**

RJOS/OREF/DEPUY RESEARCH GRANT IN WOMEN'S MUSCULOSKELETAL HEALTH

Lauren H. Redler, MD
Columbia Presbyterian Medical Center
*Intra- and Inter-Observer Reliability of the Video-Assisted Drop Vertical Jump
Screening Test for ACL Injury Risk*

AAHKS/OREF RESEARCH GRANT IN ADULT RECONSTRUCTION

Weiping Ren, MD
Wayne State University
A New Implant Surface with Doxycycline-Doped Nanofiber Coating

POSNA/OREF RESEARCH GRANTS IN PEDIATRIC ORTHOPAEDICS

Mininder S. Kocher, MD
Boston Children's Hospital
Development and Validation of a Pediatric Activity Scale

Katherine R. Saul, PhD
Wake Forest University Health Sciences
*Identifying Muscular Contributions to Bone Deformity of
the Shoulder Following Brachial Plexus Birth Palsy*

continued . . .

OREF RESEARCH GRANTS AND AWARDS FUNDED FOR 2013

OREF YOUNG INVESTIGATOR GRANTS

Samuel B. Adams, MD
Duke University Medical Center
Improving Osteoarthritis Pain and Function Through Intra-Articular Depot Delivery of Small Molecule Therapeutics

Funding made possible by the Mahendra Patel, MD Research Fund

Oke A. Anakwenze, MD
Columbia University
Effect of Nicotine on Rotator Cuff Structure and Healing

Nicholas M. Bernthal, MD
University of California, Los Angeles
Protecting Implants from Infection: Implant Coatings and Their Effects on Osteointegration

Funding made possible by Zimmer Holdings, Inc.

Samuel K. Cho, MD
Mount Sinai School of Medicine
Notochordal Cells Release Anti-Neural and Anti-Vascular Factors that can be used to Treat Discogenic Pain

Christopher J. Dy, MD
Hospital for Special Surgery
The Effect of Health Care Supply on Hip Fracture Treatment: A Population-Based Approach to Identify New Opportunities for Quality Improvement

Funding made possible by Zimmer Holdings, Inc.

Saadiq F. El-Amin, MD, PhD
Southern Illinois University
Evaluation of Tissue-Engineered Composites for Bone Regeneration Using Stem Cell Molecular and Gene Analysis

Funding made possible by Zimmer Holdings, Inc.

Patrick A. Holt, MD, PhD
University of Utah
Discovering Novel Small Molecules for Treating Synovial Sarcoma in the Orthopaedic Oncology Patient

Hyun-Min (Mike) Kim, MD
Pennsylvania State University
Biomechanical Assessment of a Novel Humeral Head Anterior-Offsetting Technique for Difficult Shoulder Arthroplasty with Posterior Instability

Funding made possible by Zimmer Holdings, Inc.

OREF/AAHKS RESIDENT CLINICIAN SCIENTIST TRAINING GRANT IN TOTAL JOINT ARTHROPLASTY

Steven M. Cherney, MD
Washington University
Randomized Trial of Postoperative Intravenous Acetaminophen in Geriatric Patients with Hip Fractures

Funding made possible by Zimmer Holdings, Inc.

OREF RESIDENT CLINICIAN SCIENTIST TRAINING GRANTS

Daniel N. Brace, MD
Wake Forest University Health Sciences
A Novel Xenograft-Derived Bone Scaffold for Improved Treatment of Critical Bone Defects

Recipient of the MTF/Charles H. Herndon Resident Clinician Scientist Training Grant

Funding made possible by the Musculoskeletal Transplant Foundation

Joshua Gordon, MD
University of Pennsylvania
The Effect of Early Mobilization After Surgical Repair of an Achilles Tendon Rupture in a Rat Model

Funding made possible by the Ira A. Roschelle Family Foundation

Natalie L. Leong, MD
University of California, Los Angeles
In Vivo Evaluation of Tissue-Engineered Constructs for Anterior Cruciate Ligament Reconstruction

Funding made possible by the Dr. Dane and Mrs. Mary Louise Miller Endowment Fund

Jose M. Mejia Oneto, MD, PhD
University of California, Davis
Covalent Targeting Delivery Project

Jesse E. Otero, MD, PhD
University of Iowa
The Role of Osteoclasts in the Growth and Metastasis of Chondrosarcoma: A Mammal Model

Recipient of the MTF/Charles H. Herndon Resident Clinician Scientist Training Grant

Funding made possible by the Musculoskeletal Transplant Foundation

Amanda T. Whitaker, MD
University of California, San Francisco
Smad4 Effects on Physis Morphogenesis and Chondrocyte Polarity
Funding made possible by the Ira A. Roschelle Family Foundation

Phillip Williams, MD
Hospital for Special Surgery
Scapular Kinematics of Healthy Controls and Individuals with Asymptomatic Rotator Cuff Tears

OREF RESIDENT RESEARCH PROJECT GRANTS

Samuel S. Abrams, MD
University of Wisconsin, Madison
Is Ossification Necessary to Transfer a Tendon to Bone? Implications in Anterior Tibialis Transfers in Clubfeet

David Muzykewicz, MD
University of California, San Diego
Novel Decellularization Process of Peripheral Nerve Allograft and Outcomes Following Implantation into a Rat Sciatic Nerve Injury Model

Alexander Theologis, MD
University of California, San Francisco
The Effect of Screening for Nasal Carriers of Staphylococcus Aureus and Treatment with Topical Mupirocin on Incidence of Surgical Site Infection After Operative Fracture Fixation

Justin Shu Yang, MD
Washington University
Evaluation of the Effects of Fatigue on Fastpitch Softball Players

OREF/DEPUY RESIDENT RESEARCH PROJECT GRANTS

Michael D. Hellman, MD
Rush University Medical Center
Three-Dimensional Characterization of Acetabular Pincer Lesions

Thomas R. Hickernell, MD
Columbia University Medical Center
Investigation of the Mechanism of Action and a Novel Therapeutic Application of a Caspase 1 Inhibitor in the Setting of Inflammatory Osteolysis

Michael J. Kneseck, MD
University of Michigan
Effect of Arm Elevation and Rotation on Strain in the Repaired Subscapularis Tendon: What Arc of Motion is Safe for Early Postoperative Rehabilitation?

Michal Kozanek, MD
Massachusetts General Hospital
Determination of Morphologically Similar Areas of Articular Cartilage in the Knee and Elbow Joint—Implications for OATS Procedure

Kyle W. Lacy, MD
Providence Hospital
PRP vs. Kenalog: An In Vitro Comparison of Gene Expression Changes in Osteoarthritic Human Chondrocytes

George F. Lebus, MD
Vanderbilt University Medical Center
Characterizing the Coagulation States of Patients with Isolated Femur Fractures Treated with Reamed Intramedullary Nailing Intraoperatively and Postoperatively Using a Novel Coagulation Assay

Gautam Malhotra, MD
University of Chicago
Effect of BMP-14 and IGF-1 Combination Gene Therapy on Tendon Healing

Christopher T. Martin, MD
University of Iowa
Acetabular Prosthesis Protrusion After Medial Acetabular Wall Breach in Total Hip Arthroplasty: A Cadaveric Biomechanical Study

Rachel E. Mednick, MD
Lurie Children's Hospital of Chicago
Northwestern University
Vitamin D and Fracture Risk in the Pediatric Population

Siddhant K. Mehta, MD
University of Mississippi Medical Center
Effect of P2Y12 Receptor Blockade Upon Function of ADP-Treated Osteoblasts

Amirhossein Misaghi, MD
University of California, San Diego
Three-Dimensional Analysis of the Growth Plate and Intervertebral Cellular Responses to Spinal Growth Modulation in the Fusionless Treatment of Scoliosis: A Pilot Study in an Immature Porcine Model

Jared A. Niska, MD
University of California, Los Angeles
Real-Time Detection of Infection in a Critical Bone Defect Model in Mice

Sohrab S. Virk, MD
Ohio State University, Wexner Medical Center
Adipokines in Spinal Fusion: Do They Play a Role?

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OREF RESEARCH GRANTS AND AWARDS FUNDED FOR 2013

Tyler P. Welch, MD
Boston University Medical Center
Effects of Continuous Femoral Nerve Blockade on Postoperative Pain Control and Knee Rehabilitation Following Operative Fixation of Tibial Plateau Fractures

Justin W. Zumsteg, MD
Vanderbilt University Medical Center
Typing Proficiency Following Carpal Tunnel Release

OREF/EXACTECH RESIDENT RESEARCH PROJECT GRANTS

Daniel E. Davis, MD
Rothman Institute, Thomas Jefferson University
Hyperlipidemia and Synovial Lipoproteins: Do They Have a Role in Rotator Cuff Disease?

Ephraim Dickinson, MD
St. Mary's Medical Center, Taylor Collaboration Laboratories
The Effect of Unicompartamental Knee Arthroplasty on the Expression of Inflammatory Markers in Osteoarthritis

Rachel M. Frank, MD
Rush University Medical Center
Hamstring Activity in the ACL-Injured Patient: Injury Implications and Comparison to Quadriceps Activity

Mark Seeley, MD
University of Michigan
Incisional Vacuum-Assisted Closure Therapy After Posterior Spinal Fusion for Pediatric Neuromuscular Scoliosis

OREF/MAKO RESIDENT RESEARCH PROJECT GRANTS

Elizabeth W. Hubbard, MD
Duke University Hospital
The Effect of Computer-Assisted Surgery Training in the Placement of Iliosacral Screws

Brendan C. Mackinnon-Patterson, MD
University of North Carolina
Platelet-Rich Plasma vs. Corticosteroid Injection in the Treatment of Partial Thickness Rotator Cuff Tears: A Randomized, Prospective, Double-Blinded Trial

EDUCATIONAL GRANTS AND OREF PROGRAMS

American Academy of Orthopaedic Surgeons
Educational Grant for 2013 Programs

American Academy of Orthopaedic Surgeons
AAOS/OREF/ORS Clinician Scholar Development Program

American Orthopaedic Association
2013 AOA-OREF Resident Leadership Forum

ORS/OREF Annual Grant Writing Workshops
January and May 2013

ORS/OREF TRAVEL AWARDS IN ORTHOPAEDIC RESEARCH TRANSLATION

Michael B. Cross, MD
Hospital for Special Surgery

Tomoko Kanazawa, MD, PhD
Okayama University

ORS/OREF DISTINGUISHED INVESTIGATOR AWARD

Jorge O. Galante, MD
Midwest Orthopaedics at Rush University

**OREF/CURRENT CONCEPTS IN JOINT REPLACEMENT
CLINICAL PRACTICE AWARDS**

2012 AWARDS

Gregory G. Polkowski, MD
University of Connecticut
Pain and Dissatisfaction Following TKA Performed for Early Stage Osteoarthritis
(Spring 2012 Award)

Atul F. Kamath, MD
Mayo Clinic
Prospective Study of Unplanned Admission to the Intensive Care Unit After Total Hip Arthroplasty
(Winter 2012 Award)

2013 AWARDS

William G. Hamilton, MD
Anderson Orthopaedic Research Institute
*Patient-Specific Instrumentation Does Not Shorten Surgical Time:
A Prospective, Randomized Trial*
(Spring 2013 Award)

James A. Keeney, MD
Washington University
*Readmission Following Total Knee Arthroplasty: Venous Thromboembolism
as a "Never Event" is a Counterproductive Misnomer*
(Winter 2013 Award)

“Our OREF grant is
C R I T I C A L
in bringing our research to
THE NEXT LEVEL.”

Jonathan Schoenecker, MD, PhD

OREF EDUCATIONAL GRANTS FUNDED FOR 2013

OREF GME FELLOWSHIP GRANTS

OREF Clinician Development Program graduate medical education fellowship grants for 2013-2014 are made possible by pooled support provided by Biomet, Inc., DePuy Ortho, DePuy Spine, Medtronic and Stryker.

ADULT RECONSTRUCTION

Beaumont Health System
Brigham & Women's Hospital
Columbia University Medical Center
Emory University
Foundation for Orthopaedic Research and Education
Hospital for Special Surgery
Indiana University
Massachusetts General Hospital
Mayo Clinic, Florida
Mayo Clinic, Rochester
New England Baptist Hospital
NYU Hospital for Joint Diseases
OrthoCarolina/OrthoCarolina Research Institute
Rush University Medical Center
Stanford University School of Medicine
University of California, Davis
University of Colorado, Denver
University of Louisville
University of Utah
Vanderbilt University Medical Center
Washington University

FOOT AND ANKLE

Baylor Research Institute/Baylor University
Grand Rapids Medical Education & Research Center/
Michigan State University/Orthopaedic Associates
of Michigan

ONCOLOGY

Emory University
Massachusetts General Hospital
University of Florida, Gainesville

SHOULDER AND ELBOW

Brigham & Women's Hospital
Foundation for Orthopaedic Research and Education
Foundation for Orthopaedic Athletic
and Reconstructive Research
Mayo Clinic, Rochester
Mount Sinai School of Medicine
NYU Hospital for Joint Diseases
University of Florida, Gainesville
Washington University

SPINE

Beaumont Health System
Boston Medical Center
Brigham & Women's Hospital
Cedars-Sinai Medical Center
Children's Hospital of Los Angeles
Children's Orthopaedic Surgery Foundation, Boston University
Cleveland Clinic Center for Spine Health
Emory University
Foundation for Orthopaedic Research and Education
Moffitt Cancer Center/University of South Florida
Foundation for Orthopaedic Athletic and
Reconstructive Research/Texas Medical Center
Johns Hopkins University—Adult Spine Division
Johns Hopkins University—Pediatric Spine Division
Massachusetts General Hospital
Mayo Clinic, Rochester
New England Baptist Hospital
Northwestern University
Orlando Regional Healthcare/Orlando Health, Inc.
Orthopaedic Research Foundation/OrthoIndy
Rady Children's Hospital, UC San Diego,
Children's Specialists Foundation

San Diego Center for Spinal Disorders/
Scripps Clinic/San Diego Spine Foundation
Shriners Hospitals for Children, Philadelphia
Shriners Hospitals for Children, Northern California/
UC Davis Medical Center
Texas Back Institute Research Foundation
Texas Scottish Rite Hospital for Children
University of California, Davis
University of California, San Diego
University of California, San Francisco
University of Colorado, Denver
University of Washington–Harborview Medical Center
Vanderbilt University Medical Center
Washington University

SPORTS MEDICINE

Barton Lake Tahoe
Brigham & Women's Hospital
Northwestern University
SUNY at Buffalo/University Orthopaedic Services
University of California, Davis

TRAUMA

Foundation for Orthopaedic Research and Education/
Florida Orthopaedic Institute
Massachusetts General Hospital
University of Minnesota

OREF RESIDENCY ENHANCEMENT GRANTS

OREF Clinician Development Program residency enhancement grants for 2013-2014 are made possible by pooled support provided by Biomet, Inc. and the American Board of Orthopaedic Surgery.

GUEST SPEAKER GRANT

Banner Good Samaritan Medical Center
Eisenhower Army Medical Center
Genesys Regional Medical Center
Georgetown University
Indiana University
Maimonides Medical Center
Marshall University
Medical University of South Carolina
Montefiore Medical Center
Ochsner Clinic Foundation
Ohio State University
Riverside County Regional Medical Center
Rush University Medical Center
St. Luke's Roosevelt Hospital Center
Southern Illinois University
Texas Tech University Health Sciences Center
Tripler Army Medical Center
Tulane University
Union Memorial Hospital
University of California, Los Angeles
University of California, San Francisco
University of California, San Francisco-Fresno
University of Florida, Gainesville
University of Hawaii
University of Kansas, Wichita
University of Kentucky
University of Maryland
University of Missouri, Columbia
University of Pennsylvania
University of Southern California
University of Tennessee–Campbell Clinic
University of Vermont
University of Washington
Vanderbilt University Medical Center

“A foundation such as OREF is the only way we can
KEEP RESEARCH
by clinician scientists within the orthopaedic realm at a
HIGH LEVEL.”

Wellington K. Hsu, MD

The Orthopaedic Research and Education Foundation (OREF) was founded in 1955 to ensure an expanding base of knowledge and effective, evidence-based treatment protocols for orthopaedic surgeons to continually improve patient care. Since 1955, OREF has awarded more than \$120 million in research and educational grants and awards that benefit all of orthopaedics. A not-for-profit 501(c)(3) organization, OREF welcomes contributions from individuals and organizations; gifts are tax-deductible to the extent allowed by law.

For more information please visit www.oref.org or <http://on.oref.org/grantinfo>

For information on how to apply for OREF Grants and Awards, please access <http://on.oref.org/grantinfo>, or call or email:

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Mary Marino,
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Grants Administrator
(847) 384-4362
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“There’s nothing more satisfying than identifying a problem, taking it back to the lab, and **FINDING AN ANSWER** that may improve patient care, but I couldn’t embark on this dual career path without OREF support.”

Jaimo Ahn, MD, PhD



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