



# GRANTS AWARDED

2024



# GRANT AND AWARD RECIPIENTS | 2024

## OREF CLINICAL RESEARCH AWARD

**PI: Christopher Evans, PhD, FAAOS**

Mayo Clinic

*Osteoarthritis Gene Therapy: A 30-year Journey from Concept to Clinical Trials*

**PI: Augustine Saiz Jr., MD**

The Regents of the University of California, Davis  
*Decellularized Skeletal Muscle Matrix for Open Fractures with Muscle Loss*

Funding made possible by the Hark Family in Memory of Dr. Fred Hark and Dr. William Hark

## OREF LIFETIME SERVICE AWARD

**Ramon L. Jimenez, MD**

## OREF/GOLDBERG ARTHRITIS RESEARCH GRANT

**PI: Zachary Lum, MD**

The Regents of the University of California, Davis  
*CHAT-OA: Conversations in Health-Literacy Using AI for Osteoarthritis Pts*

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

## ORS/OREF DISTINGUISHED INVESTIGATOR AWARD

**Timothy Wright, PhD**

Hospital for Special Surgery

## OREF/ASES/ROCKWOOD CLINICAL SHOULDER RESEARCH GRANT

**PI: Sophia Ulman, PhD**

**Co-PI: John Arvesen, MD**

Scottish Rite for Children

*Establishing an RTP Test Battery for Patients Post Shoulder Stabilization*

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

## RESEARCH GRANTS

### OREF CAREER DEVELOPMENT GRANT

**PI: Brian Chalmers, MD**

The Hospital for Special Surgery

*Objective TKA Laxity: Correlation with Patient Perceptions of Instability?*

Partially funded by the Dane and Mrs. Mary Louise Miller Endowment Fund

### OREF OSTEOARTHRITIS RESEARCH GRANT

**PI: Natalia Harasymowicz, PhD**

The University of Utah

*Synovial Lining Macrophages in OA: Defining Their Fate in Obesity*

Funding made possible by the American Arthritis Society

### OREF NEW INVESTIGATOR RESEARCH GRANTS

**PI: Claire Eliasberg, MD**

The Hospital for Special Surgery

*Characterizing the Effects of Corticosteroids in Rotator Cuff Tendinopathy*

Funding made possible by Thomas P. Sculco, MD and Mrs. Cynthia Sculco

### OREF/OTA TRAUMA RESEARCH GRANT

**PI: Emil Schemitsch, MD**

London Health Sciences Centre Research Inc. (Lawson Health Research Institute)

*Fixation for Fractures Around the Ankle in the Frail or Compromised Elderly*

Partially funded by Arthrex, Inc.

**OREF/MUSCULOSKELETAL  
TRANSPLANT FOUNDATION (MTF)  
BIOLOGICS RESEARCH GRANT**

**PI: Feini Qu, VMD, PhD**

University of Washington

*Microgel-Enhanced Allogeneic Stem Cell Transplantation for  
Composite Musculoskeletal Tissue Regeneration*

Funding made possible by the  
Musculoskeletal Transplant Foundation Biologics

**OREF AANA FOUNDATION MULTIMODAL  
MUSCULOSKELETAL PERIOPERATIVE  
PAIN MANAGEMENT GRANT**

**PI: Charles Hannon, MD**

**Co-PI: Erin E. Martin, CRNA, APRN, DNP**

Mayo Clinic, Rochester, MN

*How Many Dexamethasone Doses Should Be Given in TKA?  
A Prospective RT*

Funding made possible by the American Association of  
Nurse Anesthetists (AANA) Foundation

**OREF SKELETAL METASTASES AND  
PATHOLOGICAL FRACTURE RESEARCH  
IN COLLABORATION WITH MSTs**

**PI: Jonathan Morris, MD**

Emory University

*Elucidating Cancer Resistance of Naked Mole Rats*

Funding made possible by Mr. Randy Goodwin

**OREF PREVENTION OF MUSCULOSKELETAL  
YOUTH SPORTS INJURIES RESEARCH GRANT IN  
HONOR OF JAMES R. ANDREWS, MD**

**PI: Ryan Roach, MD**

University of Florida, Gainesville

*Educational Tools for Injury Prevention Guidelines for  
Baseball Caregivers*

**MENTORED CLINICIAN SCIENTIST GRANTS**

**PI: David Brogan, MD**

Washington University School of Medicine in St. Louis

*Identification & Imaging of Skeletal Muscle Response to  
Graded Nerve Crush*

Funding made possible by the Ira A. Roschelle Family Foundation

**PI: Cecilia Pascual-Garrido, MD, PhD**

Washington University School of Medicine in St. Louis

*Mediators of the OA Cascade in the Pre-Arthritis Hip*

Funding made possible by the American Arthritis Society

**PI: Carmen Quatman, MD, PhD**

The Ohio State University College of Medicine

*Transformative Solutions for Reducing Frequent 911 Fall Calls  
in the Homes*

Funding made possible by the Ira A. Roschelle Family Foundation

**PI: Lauren Shapiro, MD**

The Regents of the University of California,  
San Francisco

*Addressing Cross-Cultural Adaptation of PROMs for  
Distal Radius Fractures*

Funding made possible by the Dr. Zachary B. and Mrs. Kathleen  
Friedenberg Endowment Fund

**RESIDENT CLINICIAN SCIENTIST  
TRAINING GRANTS**

**PI: Kyle N. Kunze MD**

The Hospital for Special Surgery

*Knee-Flexion Angle Effects on Joint Mechanics After  
Meniscus Root Repair*

Funding made possible by the John T. Hocker Charitable Foundation in  
Memory of John T. Hocker, MD

**PI: Lisa Tamburini, MD**

**Co-PI: Caroline Dealy, PhD**

University of Connecticut Health Center

*Evaluation of Cartilage Integrative Healing in  
Osteochondral Allografts*

Funding made possible by Dr. Thomas P. and Mrs. Cynthia Sculco

**PI: Nathan Varady, MD, MBA**

**Co-PI: Scott Rodeo, MD**

The Hospital for Special Surgery

*Characterizing the Cellular Composition of Bone Marrow  
Aspirate Concentrate*

Funding made possible by Dr. Thomas P. and Mrs. Cynthia Sculco

## RESIDENT RESEARCH PROJECT GRANTS

**PI: Varun Arvind, MD**

**Co-PI: Alice Hung, PhD**

**Co-PI: Joshua Hyman, MD**

Columbia Presbyterian Medical Center

*Molecular Regulators of Tendon in Contracture Formation*

**PI: Wyatt David, MD**

**Co-PI: Alan Zhang, MD**

The Regents of the University of California,  
San Francisco

*Crosswalks Between Clinical Outcomes Metrics After  
Hip Arthroscopy*

Funding made in Honor of Bernard R. Bach Jr., MD

**PI: Michael Flores, MD**

**Co-PI: Theodore Miclau, MD**

The Regents of the University of California, San  
Francisco

*Quality-of-Life after Fracture-Related Infections in Latin America*

Funding made possible by the Western Orthopaedic Association/WOF

**PI: Dylan Greif, MD**

**Co-PI: Sandeep Mannava, MD**

**Co-PI: Whasil Lee, MD**

University of Rochester Medical Center

*Expression of PIEZO-1 Mechanotransduction after  
Rotator Cuff Injury*

Funding in Honor of Bernard R. Bach Jr., MD

**PI: Nicole Hung, MD**

**Co-PI: Lauren Wessel, MD**

**Co-PI: Nicholas Bernthal, MD**

The Regents of the University of California, Los Angeles

*Deep Learning: Predicting Upper Extremity Soft Tissue  
Sarcoma Recurrence*

Funding made possible by the Western Orthopaedic Association/WOF

**PI: Sara Kiani, MD**

**Co-PI: Ishaan Swarup, MD**

The Regents of the University of California,  
San Francisco

*Erector Spinae Plane Blocks for Pediatric Scoliosis Posterior  
Spinal Fusion*

Funding made possible by the Ira A. Roschelle Family Foundation

**PI: Matthew McIlrath, MD**

**Co-PI: Joseph Buckwalter, MD**

The University of Iowa

*Kinematic Changes After Distal Radius Fracture Repair*

Funding made possible by Kevin Plancher, MD

**PI: Daniel Santana, MD**

**Co-PI: Christopher Bayne, MD**

University of California, Davis

*Flexor Pulley Characterization in Recreational Climbers*

Funding made possible by the Western Orthopaedic Association/WOF

**PI: Lacey Smith, MD**

**Co-PI: David Shearer, MD**

The Regents of the University of California,  
San Francisco

*Quantifying the Burden of Musculoskeletal Disease in Tanzania*

Funding made possible by the Ira A. Roschelle Family Foundation

**PI: Isaac Talbert, MD**

**Co-PI: Bernard Hearon, MD**

University of Kansas Medical Center  
Research Institute, Inc.

*Prevention of Noise Induced Hearing Loss in  
Robot-Assisted Arthroplasty*

Funding made possible by The American Arthritis Society

**PI: Alexander White, MD**

**Co-PI: Anil Ranawat, MD**

The Hospital for Special Surgery

*Effect of Anterior Closing Wedge High Tibial Osteotomy  
on Joint Kinetics*

**PI: Allison Williams, MD**

**Co-PI: Amir Kachooei, MD**

**Co-PI: Daryl Osbahr, MD**

**Co-PI: Luke Oh, MD**

**Co-PI: Russell Huffman, MD**

**Co-PI: Kassem Ghayyad, MD**

Rothman Orthopaedics Florida at AdventHealth

*Impact of BFR Protocol: Evaluating Oxygenation & Elbow Range  
Post-Surgery*



## REGIONAL NEW INVESTIGATOR GRANTS

### SOUTHERN ORTHOPAEDIC ASSOCIATION OREF YOUNG INVESTIGATOR AWARDS

**PI: Haley McKissack, MD**

Emory University

*Arthroscopic-Assisted Lower Trapezius Transfer vs. Superior Capsular Reconstruction for Treatment of Massive Irreparable Rotator Cuff Tears*

**PI: Jesse Seilern und Aspang, MD**

Emory University School of Medicine

*Transepiphyseal ACL Reconstruction Using Quadriceps Tendon Autograft in the Skeletally Immature Athlete: Mid-Term Clinical Outcomes*

**PI: Sean Sequeira, BS**

Union Memorial Hospital

*Peroneal Tendon Repair with Retrofibular Groove Deepening is Associated with Decreased Rates of Revision Peroneal Tendon Repair Procedures Compared to Repair Without Groove Deepening: A Propensity-Matched Analysis*

## 2024 CURRENT CONCEPTS IN JOINT REPLACEMENT AWARDS

**Simarjeet Puri, MD**

Ascension Providence Hospital

*Assessment of 90-Day Outcomes Following Total Joint Arthroplasty in Ambulatory Surgery Centers, Hospital Outpatient Departments, and Hospitals: A Michigan Arthroplasty Registry Collaborative Quality Initiative Analysis*

**Hemant Reddy, MD**

NYU Langone Health

*Rates of Postoperative Heart Failure among Type 2 Diabetics with Use of NSAIDs for Total Knee Arthroplasty*

**Andrew Schneider, MD**

Indiana University School of Medicine

*Does Replicating the Native Hip Center, Femoral Offset and Leg Lengths Improve PROMs After THA?*

**Saad Tarabichi, MD**

Mayo Clinic Arizona

*Diagnostic Thresholds of Synovial Markers for Acute Periprosthetic Joint Infection: One Size Does Not Fit All*

**Jens Verhey, MD**

Mayo Clinic

*History of VTE is Not a Contraindication to Aspirin Prophylaxis in Primary THA Patients*

**JaeWon (Freddy) Yang, MD**

University of Washington

*Duloxetine Does Not Affect Opioid Use or Outcomes following Total Knee Arthroplasty: A Triple-Blinded Randomized Controlled Trial*

## 2024 RESIDENT RESEARCH SYMPOSIUM WINNERS

### NATIONAL RESIDENT RESEARCH SYMPOSIUM WINNERS

**2024 OREF National Resident Research  
Symposium Champion**

**Zaamin Hussain, MD**

Emory University

*Incision or Excision? What to do with the A1 Pulley for Trigger Finger: Results of a Multi-Surgeon Randomized Controlled Trial*

### **Top Scoring Residents**

**Benjamin Averkamp, MD**

Carolinas Medical Center/OrthoCarolina

*Repair Technique and Fellowship Training Background Predict Major and Minor Complications after Achilles Tendon Repair*

**Tristan J. Elias, MD**

University of Texas Medical Branch

*Osteochondral Allograft Reaming Significantly Affects Chondrocyte Viability*

**Kyleen Jan, MD**

Rush University Medical Center

*THA-10 Score Predicts Conversion to Total Hip Arthroplasty After Hip Arthroscopy for Femoroacetabular Impingement Syndrome at Minimum 10-Year Follow-Up*

**Brian Shear, MD**

University of Maryland

*Your iPhone Knows How You Will Recover from Your Fracture*

### **Presenters' Choice**

**Wade Karam, MD**

UTHealth Houston, McGovern Medical School

*Rapid Sequence MRI vs CT Capsular Width Sign for Detection of Occult Femoral Neck Fractures Associated with Femoral Shaft Fractures*

## MIDWEST REGION RESIDENT RESEARCH SYMPOSIUM WINNERS

### First Place

**Kyleen Jan, MD**

Rush University Medical Center

*THA-10 Score Predicts Conversion to Total Hip Arthroplasty After Hip Arthroscopy for Femoroacetabular Impingement Syndrome at Minimum 10-Year Follow-Up*

### Second Place

**Jonathan A. Ledesma, MD**

University of Illinois at Chicago

*A Prospective, Randomized Clinical Trial of Pedicle Lengthening Osteotomy Versus Open Decompression with Transforaminal Lumbar Interbody Fusion for Lumbar Degenerative Spondylolisthesis with Stenosis*

**Madeline Tiew, MD**

Loyola University Medical Center

*Sagittal Deformity of Garden Type I and II Geriatric Femoral Neck Fractures is Frequently Misclassified by Lateral Radiographs*

### Third Place

**Myles A. Atkins, MD**

Rush University Medical Center

*Risk Factors of Subchondral Insufficiency Fracture of the Knee in the Setting of Medical Meniscus Posterior Root Tears*

**Jordan Serotte, MD**

University of Chicago

*Time to Union in Ballistic vs. Blunt Pertrochanteric, Extra-Capsular Femur Fractures*

**Joseph Tanenbaum MD**

Northwestern McGaw Medical Center

*The Natural History of Ulnar Collateral Ligament Injuries in Professional Baseball*

### Presenters' Choice

**Lohith Vatti, MD**

University of Chicago

*The Effect of Perioperative Dexamethasone on Functional Outcomes of Lower Extremity Long Bone Fracture Fixation*

**Luke Zabawa, MD**

University of Illinois at Chicago

*Knee Arthroplasty Reimbursement Dynamics: Inflation-Adjusted Analysis from 2006-2022*

## MID-ATLANTIC REGION RESIDENT RESEARCH SYMPOSIUM WINNERS

### First Place

**Brian Shear, MD**

University of Maryland Medical Center

*Your iPhone Knows How You Will Recover from Your Fracture*

### Second Place

**Alex Gu, MD**

George Washington University

*Can Hip and Knee Arthroplasty Surgeons Help Address the Osteoporosis Epidemic?*

**Denver Burton Kraft, MD**

Medstar Georgetown University Hospital

*Minimally Displaced Lateral Humeral Condyle Fractures: Optimizing Follow-up and Minimizing Cost*

### Third Place

**William Johns, MD**

Thomas Jefferson University Hospital/Rothman Institute

*Lower Opioid Prescription Quantity Does Not Negatively Impact Pain Control or Patient Satisfaction Following ACL Reconstruction: A Randomized, Prospective Trial*

**Matthew Kolevar, MD**

University of Maryland Medical Center

*Development of a Patient-Specific Cartilage Graft Using Magnetic Resonance Imaging and 3D Printing*

**Matthew B. Weber, MD**

Virginia Commonwealth University

*Evaluation of Peripheral Nerve Perfusion in Tensioned Repairs*

### Presenters' Choice

**Micheal Raad, MD**

Johns Hopkins Medicine

*A New Morphologic Classification of Proximal Junctional Kyphosis Following Lower Thoracic to Pelvis Fusion in Adult Spinal Deformity Predicts Revision Surgery and Neurologic Complications*

**SOUTHEAST REGION RESIDENT  
RESEARCH SYMPOSIUM WINNERS**

**First Place**

**Zaamin Hussain, MD**

Emory University

*Incision or Excision? What to do with the A1 Pulley for Trigger Finger: Results of A Multi-Surgeon Randomized Controlled Trial*

**Second Place**

**Benjamin Averkamp, MD**

Carolinas Medical Center/OrthoCarolina

*Repair Technique and Fellowship Training Background Predict Major and Minor Complications after Achilles Tendon Repair*

**John T. Wilson, MD**

University of South Florida/Florida Orthopedic Institute

*Conventional versus Robotic-Arm Assisted Medial Uni-compartmental Knee Arthroplasty: A-20-Year Analysis of Radiographic and Clinical Outcomes*

**Third Place**

**Bradley Alexander, MD**

University of Mississippi Medical Center

*Comparison of Recent Trends in Medicare Utilization and Reimbursement for Cervical Spine Discectomy and Fusion Procedures Versus Cervical Disc Arthroplasty*

**Raahil Patel, MD**

University of South Florida/Florida Orthopedic Institute

*Early Success in Anterior Compartment Sparing Tibial Tubercle Osteotomy Utilizing Back-Cut Technique*

**Brittany Raymond, MD**

University of Florida

*Clinical Outcomes of Operative Management for Radial Tunnel Syndrome According to Surgical Approach: A Systematic Review*

**Presenters' Choice**

**Aseel Dib, MD**

Carolinas Medical Center/OrthoCarolina

*Implant Selection in Distal Femur Fractures: An Analysis of Alignment and Outcomes*

**SOUTHWEST REGION RESIDENT  
RESEARCH SYMPOSIUM WINNERS**

**First Place**

**J. Matthew Helm, MD**

UTHealth Houston McGovern Medical School

*The Effect of Anterior Closing Wedge Slope Reducing Osteotomy on Coronal Alignment - Considerations with Regards to Osteotomy Technique and Degree of Slope Correction*

**Second Place**

**Tristan J. Elias, MD**

University of Texas Medical Branch

*Osteochondral Allograft Reaming Significantly Affects Chondrocyte Viability*

**Wade Karam, MD**

UTHealth Houston McGovern Medical School

*Rapid Sequence MRI vs CT Capsular Width Sign for Detection of Occult Femoral Neck Fractures Associated with Femoral Shaft Fractures*

**Third Place**

**Hayden Anz, MD**

UTHealth Houston McGovern Medical School

*Biomechanical Analysis of Contact Pressures in Scaphotrapeziotrapezoid Arthritis*

**Kenneth Ford, MD**

UTHealth Houston McGovern Medical School

*Vascular Injury in Tibial Plateau Fractures: Incidence and Risk Factors*

**Guillermo R. Pechero Jr., MD**

UTHealth Houston McGovern Medical School

*Does Reduction Technique for Hip Fractures Matter? A Comparison of Closed, Open and Percutaneous Reduction Techniques in the Treatment of Intertrochanteric Femur Fractures*

**Presenters' Choice**

**Ayane Rossano, MD**

Dell Medical School at the University of Texas at Austin

*Social Work Interventions Improve Outcomes in Total Joint Arthroplasty: An Effort to Improve Equity at an Urban Musculoskeletal Integrated Practice Unit*

WESTERN REGION RESIDENT  
RESEARCH SYMPOSIUM WINNERS

**First Place**

**Seth Ahlquist, MD**

University of California, Los Angeles (UCLA)

*A Comparison of Total Knee Arthroplasty Outcomes Between Hemodialysis and Renal Transplant Patients*

**Second Place**

**Molly A. Hulbert, MD**

University of California, San Diego

*A Community-Based Outreach Program Can Change Underrepresented Minority Student Perception of Orthopaedic Profession Fit and Attainability: Lessons from BONE Academy*

**Thomas E. Olson, MD**

University of California, Los Angeles (UCLA)

*Correction of Fixed Knee Flexion Deformity in Patients with Cerebral Palsy Using Suture Anchors for Anterior Distal Femur Hemi-Epiphysiodesis*

**Third Place**

**Reinaldo E. Colon-Morillo, MD**

Naval Medical Center San Diego

*Proximal Pole Scaphoid Fracture Nonunion Treated with Ipsilateral Hamate Transfer*

**Abhinav Sharma, MD**

University of California, Irvine

*Laminectomy with Fusion for Cervical Spondylotic Myelopathy is Associated with Higher Early Morbidity and Risk of Perioperative Complications Compared to Laminectomy Alone*

**Jonathan Yu, MD**

University of California, Los Angeles (UCLA)

*How Have Total Joint Arthroplasty Implant Prices Changed Compared to Overall Costs and Reimbursements?*

**Presenters' Choice**

**Rishi Trikha, MD**

University of California, Los Angeles (UCLA)

*From the Lab to the Clinic Angiotensin Converting Enzyme Inhibition May Incur Infectious Risk*

CALIFORNIA ORTHOPAEDIC ASSOCIATION  
OREF RESIDENT AWARD WINNER

**Emily Mills, MD**

Keck School of Medicine University of Southern California

*Preoperative Radiographic Findings Associated with Postoperative Spinopelvic Risk Factors for Instability Following Total Hip Arthroplasty*

OREF EDWARD C. MCELFRISH AWARDS  
FOR BEST RESIDENT ABSTRACTS

**OREF Resident Award Winners**

**Nicholas Reiners, MD**

University of Minnesota

*Outcomes of Geriatric Hip Fracture Patients with Associated Proximal Humerus Fractures. Does Surgical Treatment of the Proximal Humerus Lead to Improved Mobility?*

**Austen Thompson, MD, PhD**

Mayo Clinic

*Impact of Intraoperative Periprosthetic Fractures During Cemented Hemiarthroplasty for Femoral Neck Fractures*





## 2025 GRANT AND AWARD RECIPIENTS

### OREF CLINICAL RESEARCH AWARD

**Brian J. Cole, MD**

Midwest Orthopaedics at Rush

*Optimizing Patient Outcomes Following Osteochondral Allograft Transplantation – The Impact of 25 Years of Translational and Clinical Research*

### OREF LIFETIME SERVICE AWARDS

**Richard D. Coutts, MD**

**William C. McMaster, MD**

### CAREER DEVELOPMENT GRANT

**Nicholas Bedard, MD**

Mayo Clinic, Rochester

*Evaluation on Phage Dosing for Periprosthetic Joint Infection Treatment*

### NEW INVESTIGATOR GRANT

**Laura Moore, MD, PhD**

The Hospital for Special Surgery

*The Role of Cellular Senescence in Joint Stiffness*

### RUTH JACKSON ORTHOPAEDIC DIVERSITY, EQUITY, INCLUSION AND DISPARITIES IN ORTHOPAEDIC HEALTH CARE RESEARCH GRANT

**Jaysson Brooks, MD**

Scottish Rite for Children

*Understanding Factors Influencing Attrition in Orthopedic Surgical Training*

Funding provided by The Zimmer Biomet Foundation

## OREF FUNDING OPPORTUNITIES

Visit [www.oref.org/grants](http://www.oref.org/grants) for deadlines and details\*

### UPCOMING GRANTS Opening March 19, 2025

OREF Mentored Clinician Scientist Grant: **\$20,000**

OREF/AAOS Clinical Gaps Research Grant: **\$100,000**

OREF Resident Clinician Scientist Training Grant:  
**\$20,000** (four available)

OREF Resident Research Project Grant: **\$5,000**  
(seven available)

\*Opportunities printed at press time are subject to change.

# OREF GRANT PROGRAM VOLUNTEERS

## RESEARCH GRANTS COMMITTEE

Francis Y. Lee, MD, PhD, <i>Chair</i>	Christopher J. Dy, MD, MPH FACS	Andrew N. Pollak, MD	Brian Snyder, MD
Nicholas M. Bernthal, MD, <i>Vice Chair</i>	Joshua J. Jacobs, MD	Jonathan G. Schoenecker, MD, PhD	Timothy Wright, PhD
	Marci D. Jones, MD	Thomas P. Sculco, MD	
	Philipp Leucht, MD, PhD	Matthew J. Silva, PhD	

## GRANT PROGRAM DIRECTORS

Theodore Blaine, MD	Stuart B. Goodman, MD, PhD	Francis Y. Lee, MD, PhD	Lori Schirle, PhD, CRNA
Thomas L. Clemens, MD	Bang H. Hoang, MD	Elena Losina, PhD	Jonathan Schoenecker, MD
Jason Dragoo, MD	Mary Lloyd Ireland, MD	Andrew Pollak, MD	Brian Snyder, MD, PhD
Christopher J. Dy, MD, MPH	Marci D. Jones, MD	David Ring, MD	

## PEER REVIEWERS

Adam Abraham, PhD	Nikolas G. Garbis, MD	X. Lucas Lu, PhD	Marc Rothermich, MD
Jessica Aidlen, MD	Hassan M.K. Ghomrawi, PhD, MPH	Benjamin Ma, MD	Lori Schirle, PhD, CRNA
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Pallavi Bhattaram, PhD	George Grammatopoulos, MD	Robert L. Mauck, PhD	Yusuke Shiozawa, MD, PhD
David Brokaw, MD	Andrew Green, MD	Amy McNulty, PhD	Alexandra Sideris, PhD
Robert Brophy, MD	Sharon L. Hame, MD	Addisu Mesfin, MD	Ryan W. Simovitch, MD
Cathy Carlson, DVM, PhD, DACVP	Matt Harkey, PhD, ATC	Lyle J. Micheli, MD	Joanna Smeeton, PhD
Emily Carmody, MD	Dominik R. Haudenschild, PhD	Andrew Hill Milby, MD	Lynn Snyder-Mackler, PT
Qian Chen, PhD	Shayne Hauglum, PhD, CRNA, ARNP	Katherine J. Motyl, PhD	Nelson F. Soohoo, MD
Carl M. Cirino, MD	Roberto C. Hernandez Irizarry, MD	Volker Musahl, MD	Sheila Sprague, PhD
Rhima Coleman, PhD	Carlos A. Higuera-Rueda, MD, FAAOS	Gregory D. Myer, PhD	Brett Steineman, PhD
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Glenn S. Fleisig, PhD	Martin Lotz, MD	Carmen Quatman, MD, PhD	Elizabeth Yanik, PhD
Jeanne Franzone, MD		Kristen Renner, PhD	Adam Yanke, MD, PhD
Leesa Galatz, MD		David Ring, MD, PhD	Xiaojun Yu, PhD



Celebrating  
**70**  
YEARS  
1955-2025

# Making an IMPACT on Clinical Orthopaedics

*Driving innovation and excellence in  
musculoskeletal research for 70 years.*

## 1955

OREF is founded by orthopaedic surgeons to help their colleagues investigate research questions important to the field.

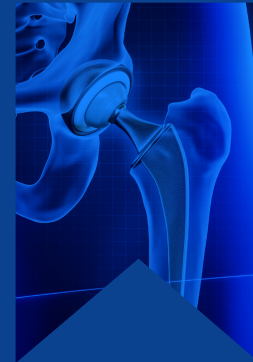
## 1957

**William F. Enneking, MD** receives an OREF research grant. His work established **principles for modern day bone banks.**

## 1963

With funding from OREF, **Marshall Urist, MD** discovers and advances **bone morphogenetic proteins (BMPs)** that stimulate bone growth and healing.

Visit the **OREF Booth in the Sails Pavilion** to learn more about OREF's history of supporting research that leads to improvements in clinical practice.



ORTHOPAEDIC RESEARCH AND EDUCATION FOUNDATION

The Orthopaedic Research and Education Foundation (OREF) is an independent 501(c)(3) non-profit organization committed to improving clinical practice and patient outcomes by funding outstanding research and mentoring new investigators to improve the lives of patients with musculoskeletal conditions.

Since its founding, OREF has provided nearly \$150 million in orthopaedic research grants and awards. Our active grant portfolio totals 110 research grants with a value of \$8.1 million. Current funding opportunities and a list of awarded grants may be accessed at [www.oref.org/grants](http://www.oref.org/grants).



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