Department of Orthopaedic Surgery
University of California, San Francisco

“The State of the Department”
orthosurg.ucsf.edu

Thomas Parker Vail, M.D.
Professor and Chairman
Department of Orthopaedic Surgery

LeRoy C. Abbott Professor
Robert B. Anderson, M.D.

Verne T. Inman Lecturer
Kyle F. Dickson, M.D.

Abbott Society Officers
Christopher Lehman, M.D.
President

Cris Strotz, M.D.
Secretary & Treasurer

Michael MacAvoy, M.D. and Todd Kim, M.D.
Program Chairs

Thomas Vail, M.D.
Professor and Chairman UCSF

Sponsors and Benefactors
Exhibitors
Acumed
Baxter Biosurgery
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Educational Grants
DePuy Synthes Mitek Sports Medicine
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Our Mission

The Department of Orthopaedic Surgery will provide the highest quality of patient care, conduct innovative clinical, basic science, and translational research, and train the next generation of global leaders in Orthopaedic surgery.

Clinical Programs

Arthroplasty
Kevin Bozic, M.D., MBA
Erik Easley, M.D.
Michael Ryan, M.D.
Thomas Vail, M.D.
Alfred Kuo, M.D., Ph.D.

Arthritis / Cartilage Injury
Hubert Kim, M.D., Ph.D.

Foot and Ankle
Kevin Goughlin, M.D.
Kristin Olson, M.D.
Lawrence Pfeiffinger, M.D.
Michael Goughlin, M.D.
Daniel Thuillier, M.D.

Hand
Scott Hansen, M.D.
Mathias Masem, M.D.
Samantha Piper, M.D.

Orthotics and Prosthetics
Matthew Gehrich, C.P.T.

Pediatrics
Ellina Dzigaite, M.D.
Mohammad Dahi, M.D.
Norte Fenza, M.D.
Coleen Sabaion, M.D.
Scott Kaiser, M.D.

Physical Medicine & Rehabilitation
Seth Elkins-Gray, M.D.
Marcos Nager, M.D.
Lisa Paskual, M.D.

Podiatric
Monara Dini, D.P.M.
Diana Werner, D.P.M.

Sports Medicine
Christina Allen, M.D.
W. Daniel Caspari, M.D.
Nicholas Cofoe, M.D.
Alan Dang, M.D., Ph.D.
Brian Foley, M.D.
Anthony Iker, M.D.
C. Benjamin Ah, M.D.
Catherine Summ, M.D.
Ake Zhang, M.D.

Trauma
Umbro Kaderan, M.D.
Maih Merzouk, M.D.
Amei Meiyinmi, M.D.
R. Turgut Geigel, M.D.
Nicholas Loe, M.D.
Eric Meinberg, M.D.
Mark Pimenta, M.D.
Theodore Molin, M.D.
Sam Morshed, M.D.
Nicole Strauss, M.D.

Skeletal Health
Aenor Sawyer, M.D.

Spine
Bobby K-B Tay, M.D.

Recruitment

- Daniel Thuillier, M.D.
  Foot and Ankle
- Scott Kaiser, M.D.
  Pediatrics
- Alan Zhang, M.D.
  Sports Medicine
- Samantha Piper, M.D.
  Hand
- Pediatrics 2014
- Stem Cell Scientist, 2015
- Arthroplasty 2015
Conferences/ Events

- 59th Annual LeRoy C. Abbott Lectureship
- 9th Annual Orthopaedic Trauma Course
- 9th Annual Spine Symposium
- UCSF Sports Injury and Rehabilitation Conference
- 4th Annual UCSF Techniques in Complex Spine Surgery
- Musculoskeletal Education Course for Primary Care Providers
- SIGN Flap Course
- Wednesday Morning Grand Rounds

Focus on Education

Education Committee

Hubert Kim, M.D.  
Nicole Schroeder, M.D.  
Brian Feeley, M.D.

Residents 2013-2014

PGY-4

MICHAEL FELDSTEIN  
Hospital Medical Chief  
YING YIN KAO  
University of California San Francisco

ROBERT LUCAS  
University of California San Francisco  
LIONEL METZ  
University of California San Francisco  
DAVID SHEARER  
University of California San Francisco  
ERIN TAMBARES  
University of California San Francisco  
PAUL TOOGOOD  
University of California San Francisco  
AMANDA TENCZA  
University of California San Francisco

PGY-5

ANTHONY DRIG  
Columbia University  
HARRY NEFF  
University of California San Francisco  
HENRY KRAUS  
Harvard University  
ERIK LANDFORD  
University of California San Francisco  
REED MACLEAN  
University of California San Francisco  
FRANK VALONE II  
Cornell University  
DEREK WARD  
University of California San Francisco

PGY-2

JEFFREY BARRY  
University of California San Francisco  
DEBBIE DANG  
University of Rochester  
CHRISTOPHER LANGHAMMER  
University of Medicine & Dentistry of New Jersey  
MICAH NAIMARK  
Oregon Health & Science University  
JEREMY SHAW  
Case Western Reserve University  
ZACHARY THIELEN  
University of Hawaii  
KURT YUSI  
Jefferson Medical College

PGY-3

JONATHAN BERLINER  
New York University  
NEIL BARUCHA  
New York University  
LAUREN CURTIS  
University of California San Francisco  
LAUREN HACKNEY  
Yale University  
LINDSEY SHEFFLER  
University of California, Davis  
MIA SMUCNY  
University of California, San Francisco  
ALEXANDER THEOLOGIS  
University of California, San Francisco

Outgoing Class 2014

Paul Toogood, M.D.  
Trauma Fellowship, Harborview Medical Center, Seattle, WA

Julia Kao, M.D.  
Arthroplasty Fellowship, Hospital for Special Surgery, New York, NY

Robert Lucas, M.D.  
University of Washington, Seattle, WA

David Shearer, M.D.  
Trauma Fellowship, Harborview Medical Center, Seattle, WA

Ehsan Tabarjee, M.D.  
Rush University, Chicago, IL

Michael Feldstein, M.D.  
Biodesign Fellowship, Stanford University, CA

Lionel Metz, M.D.  
Spine Fellowship, Washington University, St. Louis, MO
Incoming Class 2014

Jessica Bryant, M.D.
University of Michigan

Trevor Grace, M.D.
University of Hawaii, John A. Burns School of Medicine

Krishn Khanna, M.D.
Columbia University College of Physicians and Surgeons

Joseph Patterson, M.D.
Yale University of Medicine

Austin Pitcher, M.D.
Columbia University College of Physicians and Surgeons

Paul Yi, M.D.
Boston University School of Medicine

Stephanie Wong, M.D.
University of California Davis School of Medicine

Clinical Fellows 2013-2014

Pinak Shukla, M.D., Arthroplasty Fellow
Tufts New England Medical Center, MA

Sam Chen, M.D., Hand Fellow
Kaan Medical Clinic, HI

Kanwarpaul Grewal, M.D., Spine Fellow
North Shore Plainview, NY

Fred Nicholls, M.D., Spine Fellow
University of Toronto, Canada

Andrew Tarleton, M.D., Spine Fellow
Tulane Medical Center, New Orleans

Alan Zhang, M.D., Sports Fellow
University of California, Los Angeles

Mary Herzog, M.D., Trauma Fellow
Grand Rapids Medical Education Partners, MI

Michael Kuhne, M.D., Trauma Fellow
Oregan Health and Science University, OR

Medical Students

Opportunities for Medical Students Interested in Orthopaedics

- 160.01 Introduction to Clinical Orthopaedics course in the Fall
- Musculoskeletal examination practicum in the Fall and Winter
- Research project with an attending orthopaedic surgeon in the summer between 1st and 2nd years
- Attend the bi-annual medical student meeting with the Chairman and Residents of the Orthopaedic Department

Awards and Achievements

Lisa Lattanza, M.D.
Bay Area Jefferson Community Service Award for her work with The Perry Initiative
Inspiring young women to explore careers in orthopaedics and engineering

Brian Feeley, M.D.
2014 Kappa Delta Young Investigator Award for his pioneering research into the molecular pathways that govern muscle atrophy and fatty infiltration (FI) in rotator cuff tears (RCTs)

Saam Movahed, M.D.
Peer Review Orthopaedic Research Program (PRORP) Idea Development Award for “Prosthetic Fit Assessment in Transtibial Amputees Secondary to Trauma (ProFit)”

Tamara Alliston, Ph.D.
Peer Review Orthopaedic Research Program (PRORP) Idea Development Award for “Preventing Cartilage Degeneration in Warfighters by Elucidating Novel Mechanisms Regulating Osteocyte-Mediated Periocular Bone Remodeling”

Benjamin Ma, M.D.
Best Paper Award Shoulder Program
12th International Congress for Shoulder and Elbow Surgery, Nagoya, Japan
**Teaching Awards**

Nicole Schroeder, M.D.
2013 Excellence in Teaching Award. The Haile T. Debas Academy of Medical Educators, UCSF

Lisa Lattanza, M.D.
2013 James Morris Compassionate Physician Award

Michael Ries, M.D.
2013 James O Johnston Teaching Award

**Research Faculty**

Biomechanics (UCSF)
Jeffrey Lotz, Ph.D.

Molecular and Cell Biology (UCSF)
Tamara Alliston, Ph.D.
Richard Schneider, Ph.D.

Molecular Biology (SFGH)
Ralph Marcucio, Ph.D.
Theodore Miclau, M.D.

Cartilage Injury (VA)
Hubert Kim, M.D., Ph.D.
Alfred Kuo, M.D., Ph.D.
Xuhui Liu, M.D.

**Research**

Total Department Research Dollars: 5.9 million

**NIH Awards**

<table>
<thead>
<tr>
<th>PI Name</th>
<th>Award Title</th>
<th>Total Years</th>
<th>Total Expected Annual</th>
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<td>Bahney, Chelsea S.</td>
<td>Tissue engineering application of endochondral ossificat (F32AR062469)</td>
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<td>$31,782.00</td>
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<td>Feeley, Brian T.</td>
<td>Molecular pathophysiology of massive rotator cuff tears (R03AR060871)</td>
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<td>Structural co-culture of stem cells and chondrocytes for (R21AR063357)</td>
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<td>The Mechanistic Control of Bone Matrix Material Properties (R01AR063705)</td>
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<td>Fish, Jennifer L.</td>
<td>Cell Biological Determinants of Jaw Size (F32DE021929)</td>
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<td>Marcucio, Ralph S.</td>
<td>The role of continuous phenotypic variation in structure (R01DE019638)</td>
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<td>Developmental mechanisms underlying genotype-phenotype c (R01DE021706)</td>
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<td>Mesenchymal Regulation of Osteogenesis (R01DE016402)</td>
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<td>Predoctoral Training in Developmental Biology (T32HD007470)</td>
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<td>Marcucio, Ralph S.</td>
<td>Effects of Aging on Macrophages and Bone Regeneration (R01AG046282)</td>
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NIH Research Rankings

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<th>Year</th>
<th>Awards</th>
<th>Total NIH Award</th>
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<td>2013</td>
<td>13</td>
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</table>

Current Ranking: No 4

New Research Grants

- New 5-year R01 at the end of 2013
  Title: Phenotypes of pathologic vertebral endplate degeneration
- NIH P30 for Core Center for Musculoskeletal Biology and Medicine
- NSF Tech Innovation Grant

Resident Research Awards

- Drew Lansdown, M.D.
  AOSSM Smith-Kayton Clinical Outcomes Research Grant
  Title: An analysis of the effects of rotator cuff tear size on the progression of fatty infiltration with a novel quantitative MR imaging technique.
  PI: Benjamin Ma, M.D.
- Alexander Theologis, M.D.
  OREF Resident Clinician Scientist Training Grant
  Title: The Effect of the Endocrine Disrupting Chemical Bisphenol A (BPA) on Endochondral Ossification in Fracture Repair
  PI: Ralph Monheim, Ph.D.
- Elizabeth Inkellis, M.D.
  OREF Resident Research Project Grant
  Title: Epidemiology of severe forearm fractures within the Major Extremity Trauma Research Consortium
  PI: Sam Morshed, M.D.
- Lindsey Sheffler, M.D.
  OREF Resident Research Project Grant and UCSF CTSI Resident Research Funding Award
  Title: Radiation exposure to breast tissue in female orthopaedic surgeons
  PI: Michelle James, M.D. and Lisa Lattanza, M.D.
- Brian Lau, M.D.
  OREF Resident Research Project Grant
  Title: Preoperative MRI (T1R1) findings to predict early post-ACL reconstruction outcomes
  PI: Benjamin Ma, M.D.

Resident Grants

1. Orthopaedic Research and Education Foundation Grant for “Does Diabetes Mellitus Predispose the Intervertebral Dis”
   PI: Lionel Metz, M.D.
2. Orthopaedic Research and Education Foundation Grant for “Kinematic MR imaging evaluation of ACL reconstructions u (12-034)”
   PI: Drew Lansdown, M.D.
3. Orthopaedic Research and Education Foundation Grant for “Intramadillary Nailing Versus Plates for Femoral Shaft F”
   PI: David Shearer, M.D.
4. Orthopaedic Trauma Association Grant for Intramedullary Nailing Versus Plates for Femoral Shaft F (20)
   PI: David Shearer, M.D.
5. Orthopaedic Research and Education Foundation Grant for “Smad4 effects on physis morphogenesis, chondrocyte polar (13-024)”
   PI: Amanda Whitaker, M.D.
6. Orthopaedic Research and Education Foundation Grant for “The effect of screening for nasal carriers of Staphylococcus”
   PI: Alexander Theologis, M.D.
Faculty Grants and Awards

1. AOSNARC Fellowship Award
   PI: Bobby Tay, M.D.

2. Musculoskeletal Transplant Foundation Grant for “Mechanisms of Articular-Cartilage Simulated Chondrogenesis”
   PI: Alfred Kuo, M.D.

   PI: Benjamin Ma, M.D.

4. Orthopaedic Research and Education Foundation Grant for “Quantitative MR Imaging Evaluation of Articular Cartilage”
   PI: Christina Allen, M.D.

5. OMeGA Medical Grants Association Fellowship Award
   PI: Sigurd Berven, M.D.

   PI: Jeffrey Lotz, Ph.D.

7. National Science Foundation Grant for “Planning Grant: I/UCRC for technology innovation for nov”
   PI: Jeffrey Lotz, M.D.

8. Orthopaedic Research and Education Foundation Grant for “OREF Residency Enhancement”
   PI: Hubert Kim, M.D., Ph.D.

9. NuVasive Inc. Fellowship Award
   PI: Bobby Tay, M.D.

10. Orthopaedic Research and Education Foundation Grant for “The molecular pathophysiology of muscle atrophy, fibrosis”
    PI: Brian Feeley, M.D.

11. UC Office of the President Grant for “Physical function assessment using the Microsoft Kinect”
    PI: Jeffrey Lotz, M.D.

12. UC Ctr for Health Quality and Innovation Grant for “Episode of Care Bundled Payments for Total Joint Arthroplasty”
    PI: Kevin Bozic, M.D., MBA

Orthopaedic Institute Accomplishments

- Over 28,000 patient visits, addition of a 4th OR room on selected days
- Surgery turn-over <20 minutes met between 70-100% each month
- Flash sterilization <0.001% ensuring that instruments are sterilized and ready for cases
- Transfer to higher level of care <0.002% due to excellent screening, patient selection and care

Press Ganey Trophy Presentations

- Likelihood to Recommend
  - PG July 2013 Score 97.7%
    Hand and Upper Extremity
  - PG August 2013 Score 94.2%
    Foot and Ankle
  - PG December 2013 Score 95.1%
    Sports
  - PG January 2014 Score 96.0%
    Arthroplasty
**Runsafe Program:**
- More than 1800 runners in database
- Dr. Luke and team participated in UCSF Entrepreneurship Lean Launched program Fall 2013
- Mention in Runner’s World as one of the first Runner’s prevention programs nationally
- Plans to expand to 20 centers to create a research network like the MOON group

**PlaySafe Program:**
- Provide services to 20 High Schools / (approx.) 20,000 students

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**PlaySafe Cardiac Physicals**

**EVENT HISTORY**
- Sixth year of this event
- May 3rd 2014
- Open to high school athletes of the SFUSD and other PlaySafe affiliated schools
- Goal is to reach full registration of 500 athletes
- **FREE** to attend

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**Outreach**

**PlaySafe Program Impact**
- **6200+** Athlete injuries evaluated
- **26,500+** Athletes received treatment or care

**Cardiac Screening**
- **1950+** Athletes Screened / **25+** HS Attended
- **Sports Physical + Free EKG + ECHO On-Site**

**Sports Physicals**
- **2780+** Athletes Screened for Sports PPEs

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**Marathon Support**
- UCSF Sports Medicine leads large volunteer medical teams for 7 Bay Area races including the San Francisco Marathon, the Rock and Roll ½ Marathon (San Francisco and San Jose), US ½ Marathon and Escape from Alcatraz.

**Human Performance Center**
- Over 600 biomechanical research analyses to date. Offers human performance testing (Vo2 max, lactate threshold) weekly
- NIH P50 Core (Knee OA, ACL, Hip FAI/OA) in 3rd year
- Recharge Center working with start ups (BASIS) and other UCSF departments (Epidemiology, physical therapy)
Orthopaedic Trauma Institute

Contracts & Grants
Grants $1,651,973
Contracts $777,230

8th Annual Trauma Course
- 516 Attendees
- 33 States represented
- 14 Countries represented

Surgical Training Facility
- 2013 statistics: 127 courses & 1,633 surgeons/industry attendees.
- Approximately 30 resident courses/sessions per year.
- Academic Courses: AAOS satellite broadcast symposium, IGOT-SIGN Flap, Microvascular surgery training, Summer Resident Anatomy, Surgical Skills Core Curriculum
- OTI Jr. Academy: Volunteer based outreach mission to expand student’s knowledge of healthcare professions.
- 2013 statistics: 20 Bay Area high school and college students; 9 week program

IGOT’s Success
- Partners: ACGME Accredited 4 Resident Global Rotation Sites
- Fundraising: Over $650,000 to date
- Global Research: Average 1-2 publications a month (62 to Date) and 9 ongoing Research Projects
- Knowledge Exchange: 75 IGOT Ambassadors & Scholars to and from our partner institutions

IGOT’s Impact
- IGOT Bay Area Global Health Film Festival
- IGOT Summit front page of “SF Chronicle”
- West African College of Surgeons (Kumasi, Ghana)
  - 3 collaborative research projects
  - MOI Tanzania Trauma Course June 13 and May 14
  - Addition of plastic FLAP Curriculum

Philanthropic Support
2013/2014 Highlights
- Morgan and Madison McLellan Endowed Fellowship, Kushal Patel, selected as the 2013/14 fellow
- Impact Newsletter continued twice yearly publication
- Sherrilyn & Kenneth Fisher and Mary Ann & Steven Read (new UCSF Foundation Board Member) directed major gifts to support Orthopaedic Surgery’s greatest funding needs.
- Dr. and Mrs. James O. Johnston continue to provide wisdom and support for our Department: Brian Feeley’s Research, IGOT and the JOJ Endowed Chair to name a few
- Osteonecrosis research project—piloted thanks to individual donors—continues to receive recognition

Endowed Chairs
- Kevin Bozic, MD, MBA, holder of the William R. Murray, MD, Endowed Chair
- Hubert Kim, MD, PhD, holder of the James O. Johnston, MD, Endowed Chair
- Mohammad Dhib, MD, holder of the Debas Academy Chair of Orthopaedic Surgery
- David S. Bradford, MD, Endowed Chair