

**Message from the Acting Chair**

Dear UW Orthopaedics Community:

This issue of our departmental newsletter reflects a time of change and renewal in our department. We have had several transitions this year. Several incredible stalwarts of the department have retired from clinical practice this year. These much beloved members of our department include **Carol Teitz** (fortunately Carol will remain at the UW as the Associate Dean for Admissions for the School of Medicine), **Theodore "Ted" Greenlee** and **John Sack**. This represents over 100 years of "institutional knowledge" and experience leaving our department.

Drs. Teitz, Greenlee and Sack represent the principles of what has made our department such a force in teaching, clinical care and research. Dr. Teitz was a pioneer in sports medicine in particular and orthopaedics in general, as a female surgeon at a time when that was very unusual. She also helped develop the musculoskeletal core curriculum at the UW School of Medicine. Dr. Greenlee was an extramurally funded academic surgeon and is the only member of our department to have a manuscript published in the journal *Science*. Of course he has also won his share of clinical teaching awards. Dr. Sack was a pioneering community hand surgeon in Seattle and somehow maintained a busy private practice while helping out at Harborview and the VA. He also has his fair share of teaching awards. Each in their own way, Drs. Teitz, Greenlee and Sack were also iconoclasts who challenged accepted wisdom throughout their careers, to the benefits of their patients, trainees and to orthopaedics.

In addition to these departures, **Dr. Michael Lee** will be leaving to take a position as Chief of Spine Surgery at the University of Chicago. We all, and particularly his patients, will miss Mike but this represents a wonderful opportunity for him and his family. We will keep Dr. Lee on our mailing list and expect him to return frequently to update us on his career and lecture the residents.

The traditions established by these departing faculty members will be carried forth and enhanced by our newest generation of talented surgeons and scientists. The department's scientific and clinical future is certainly secure as reflected by the contributions of our newest faculty members - **Drs. Navin Fernando, Conor Kleweno, Ron Kwon, Albert Gee, and Reza Firoozabadi**. We expect each of these surgeons and scientists to respect the great traditions of our department while also challenging conventional wisdom. They represent the best chance that we have to advance the scientific, educational and clinical realms of Orthopaedics to meet the evolving needs of society, orthopaedic residents and most importantly patients.

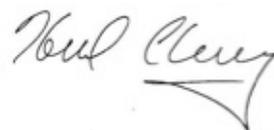
Our graduating class of residents – **Sid Baucom, Nathan Coleman, Jacques Hacquebord, Nicholas Iannuzzi, Paul Kim, Ted Sousa, Nicholas Wegner, David Zeltser** – will be greatly missed. Their goals of achieving the knowledge and skills necessary to take care of the injured and those in need of musculoskeletal care has reached a pivotal point. They are all now capable of practicing general orthopaedic surgery at a very high level. However, all of them will pursue fellowship training to further refine their skills in the various orthopaedic subspecialties. They will be greatly missed. We wish them the best and hope to hear from them as their careers unfold.

Our incoming class of residents – **Kariline Bringe, Romie Gibly, David Ibrahim, Colin Kennedy, Lauren Meyer, Stuart Michnick, Adam Sangeorzan, and Alan Swenson** - can look forward to a great opportunity to learn from our faculty, fellows, and other residents. While closely supervised, each of our residents is given graduated responsibility throughout their training in our Department. Our goal is to train residents that are dedicated to caring for patients with a fairly wide range of challenging orthopaedic problems. We look forward to seeing them grow into outstanding members of our orthopaedic community over the next five years.

Overall, our Department remains a busy center for tertiary and quaternary orthopaedic care. We have robust programs in spine, upper extremity, sports, tumor and adult reconstruction. In each of these programs the focus is on complex cases that are best handled in an academic center. In fact, our orthopaedic case mix index, a national measure of complexity of care, has continued to increase. We have one of the highest measures of complexity in the University Health Systems Consortium, a group consisting of the nation's premier academic medical centers. Despite this high case mix index our infection and mortality rates remain lower than expected.

Let me take this moment to thank you all for your interest, continued support, and active partnership in the Department of Orthopaedics and Sports Medicine. We appreciate your support of our mission to educate future orthopaedic leaders and surgeons and to advance the art and science of orthopaedic surgery.

Thank you,



Howard Chansky, MD  
Professor and Acting Chair

## Spotlight: Staff Appreciation Event

The annual Department of Orthopaedics & Sports Medicine Staff Appreciation Event was held on Friday, June 6th, in the Games Area in the HUB. Administrative staff members and researchers from Montlake, Roosevelt, and Harborview spent the afternoon mingling over food, bowling, and having all-around fun! This was a particularly exciting year as nearly everyone won a prize from the raffle at the end of the celebrations!



(Clockwise) **Montlake Manager Calina Garcia** presents **HMC Office Assistant 3 Christine Pallasigui** with a trophy for being the best bowler; **Program Support Supervisor 2 Janet Grant** shows off her jellybean winnings; **Acting Instructor David Hudson** celebrates winning a free night at Hotel Deca; **Administrative Assistant Theresa Jones** is overjoyed to win a gift certificate to Ray's Boathouse.

The Department of Orthopaedics & Sports Medicine would like to thank the following businesses for their donations to this year's Staff Appreciation Event:

University Seafood & Poultry  
Burgermaster  
The Silver Cloud Inn  
Hotel Deca

Melrose Florist  
Ray's Boathouse  
Big Time Brewing Co.  
Seattle Art Museum

Samurai Noodle  
Pacific Science Center  
The EMP  
Super Jock N' Jill

Williams-Sonoma  
UW Book Store  
The Jelly Bean Factory  
Costa's Restaurant

## Department News

### BJC Patient Satisfaction Award

Congratulations to the patient-care providers at our Bone & Joint Center. In Fall 2013 91% of patients seen answered that they would definitely recom-

mend the clinic to others. This recognition of commitment to patient care will be listed in the clinic lobby with the other Patients Are First plaques.

**Congratulations!**

**Bone & Joint**

Your department earned the Patient Satisfaction Excellence (PSE) Award for Fall Quarter 2013 (Q2 FY2014)!



93.10% of your patients responded with "Yes, definitely," on their willingness to recommend you.

### Upcoming Events

- **July 25-26, 2014**- Summit in Seattle: Focus on Shoulder Disorders
- **August 26, 2014**- Garrick Lecture  
Dr. Lars Engebretsen, PhD  
University of Oslo

## Department News

### The John Sack Lectureship

The 1st John Sack Lectureship was held on May 2nd as we recognized and celebrated **Dr. John Sack's** incredible career as a hand surgeon in the Pacific Northwest. Dr. Sack has been amazing, balancing a full private practice at Seattle Hand Surgery while taking care of complex trauma patients at Harborview Medical Center, and providing great care to our veterans at the Puget Sound VA Hospital. He has been a great role model and educator for Hand Fellows and residents here at the University of Washington. Dr. Sack is retiring on July 1st. The lectureship will be an annual event.



*As President of the Lake Washington Rowing Club, Dr. Sack was presented with a replica oar on behalf of the department.*



### UW Hand Course 2014

The 2014 Hand Course, Rules of Thumb, took place on Saturday, May 3rd at Hogness Auditorium. The course attracts over 200 therapists from the Pacific Northwest, including physical, occupational, and certified hand therapists. We were very honored to have Dr. Peter Stern as one of our featured speakers this year. Dr. Stern is the Hill Professor and Chairman of the Department of Orthopaedic Surgery at the University of Cincinnati and is a past President of the American Society for Surgery of the Hand. Rebecca von der Heyde, PhD, MS, was our other featured speaker. Dr. Von der Heyde is the Occupational Therapy Department Chair and Program Director at Concordia University in Wisconsin. In addition to Dr. Stern and Dr. Von der Heyde, our Hand Faculty and Fellows presented lectures on thumb arthritis, rehabilitation for thumb CMC Arthritis, and performed live anatomy surgical demonstrations.



*Drs. Vedder, Huang, and Stern*

### Houston 2014- The Final Expedition

In April, the Computational, Robotics & Experimental biomechanics (CoRE) lab was invited to Johnson Space Center in Houston, TX for another set of parabolic flights. The team members from (or affiliated with) UW consisted of **Dr. Peter Cavanagh, Andrea Hansen, Mike Lewis, Andrea Rice, Molly Glauberman, and Arien Cheronos**. The team had twice previously traveled to Johnson Space Center for parabolic flights to study bone loss in space. This set of flights, however, almost did not get off the ground. The zero G plane had mechanical issues, causing it to roll in flight. The CoRE lab treadmill from the University of Oregon wasn't functioning correctly either. In the end, the plane's mechanical issues were resolved and the treadmill was fixed. The flight schedule was initially intended to span four days, with one flight per day, but in the end it came to span two days, with two flights per day. The team nonetheless captured some great data, which is still being analyzed. The conclusion of the trip was bittersweet as this was the last set of flights to be conducted for the study.



*Top photo: CoRE lab researchers testing Earth's gravity; Bottom photo: floating in zero gravity*

## Resident Graduation 2014



(L to R) Drs. Paul Kim, David Zeltser, Sid Baucom, Nicholas Wegner, Doug Hanel, Nicholas Iannuzzi, Ted Sousa, Jacques Hacquebord, and Nathan Coleman.



Dr. Howard Chansky addressing those in attendance.



Orthopaedic Resident Class of 2040?



Congratulations to this year's graduating class of residents! On June 27, 2014, we bid farewell to our R5s and wished them luck as they move on to the next chapter of their careers.

Resident research presentations were held in the R&T Building at Harborview along with guest speaker Dr. Charles L. Saltzman (left), Chairman of Orthopaedics and L.S. Peery Presidential Endowed Professor at the University of Utah. That evening, residents and their families joined faculty and other invited guests at the Columbia Tower for the presentation of diplomas.

Please join the Department in wishing the utmost success to **Drs. Sid Baucom** - Hand and Upper Extremity Fellowship at Vanderbilt University in Nashville, TN; **Nathan Coleman** - Sports Medicine Fellowship at Hospital for Special Surgery in New York City; **Jacques Hacquebord** - Hand and Microvascular Fellowship at University of California-Irvine; **Nick Iannuzzi** - Hand Surgery Fellowship at the Curtis National Hand Center in Baltimore, MD; **Paul Kim** - Foot and Ankle Orthopaedics Fellowship at Hospital for Special Surgery in New York; **Ted Sousa** - Pediatric Orthopedics Fellowship at Children's Hospital Los Angeles; **Nick Wegner** - Foot and Ankle Surgery Fellowship at the University of Utah; **Dave Zeltser** - Hand Surgery Fellowship at Columbia University in New York City.

## Department News

# Meet the new R1s!

## Zahab Ahsan, R1

**Hometown:** West Lafayette, Indiana

**College:** Purdue University

**Medical School:** Indiana University School of Medicine

**Areas of Interest:** Sports Medicine, Hand & Upper Extremity, Trauma, Biomechanics

**Activities:** Football, basketball, soccer, golf, great food, and exploring the outdoors.

**Fun Fact:** I was born outside of the US.



## Matthew Baron, R1

**Hometown:** Naples, Florida

**College:** Duke University

**Medical School:** University of Pennsylvania

**Areas of Interest:** Spine, Trauma care, Biomedical engineering & device design, Smoking cessation efforts for orthopaedic patients

**Activities:** Exploring Seattle, lacrosse, running, biking, and the great outdoors

**Fun Fact:** My middle name is also my middle initial.



## Claudia Christman-Skieller, R1

**Hometown:** Redwood, CA

**College:** Stanford University

**Medical School:** University of Illinois at Chicago

**Areas of Interest:** Hand, Sports Medicine, Pediatrics

**Activities:** Yoga, playing and watching sports (soccer and volleyball, and football and basketball, respectively), skiing, hiking, rooting for Bay Area sports teams, trying new craft beer

**Fun Fact:** I have rafted on and bungee jumped over the Nile.



## Mary Kate (Grady), Thayer R1

**Hometown:** Mukilteo, WA

**College:** University of Washington

**Medical School:** Saint Louis University

**Areas of Interest:** Trauma, Hand, Sports

**Activities:** Running, hiking, traveling, cooking, and cheering for the Huskies

**Fun Fact:** I have summited Mt. Kilimanjaro.



## Jonathan Kark, R1

**Hometown:** Denver, CO

**College:** University of Colorado

**Medical School:** University of Colorado School of Medicine

**Areas of Interest:** Trauma

**Activities:** Canyoneering in the Utah desert, although now that I've got a daughter, my favorite activity is spending time with her and my beautiful wife.

**Fun Fact:** Before I decided to go to medical school, I was a firefighter for the city of Colorado Springs.



## Kate (Liddle) Bellevue, R1

**Hometown:** Lafayette, CA

**College:** UC Berkely

**Medical School:** UC San Francisco

**Areas of Interest:** Hand, Upper extremity, Pediatrics, Sports

**Activities:** Climbing, biking, lifting, pullups, travelling, camping

**Fun Fact:** My family dog Otis weighs as much as me.



## Erik Magnusson, R1

**Hometown:** Wyoming, MN

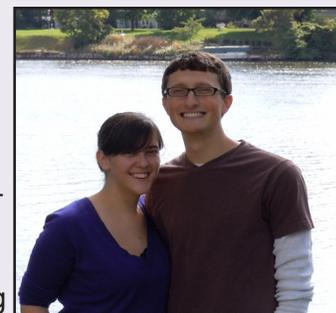
**College:** Loyola University Maryland

**Medical School:** University of Minnesota

**Areas of Interest:** Hand, Pediatrics, Trauma

**Activities:** Bar trivia, live comedy, college lacrosse, exploring new places, running, non-fiction, playing the cello and spending time with my fiancée, Carly.

**Fun Fact:** I survived several typhoons and earthquakes while living on the island of Guam.



## Adam O'Brien, R1

**Hometown:** Crosbyton, TX

**College:** Baylor University

**Medical School:** University of Texas Medical Branch, Galveston

**Areas of Interest:** Sports Medicine, Trauma

**Activities:** Skiing, fly fishing, watching college sports, playing sports, playing with my dog Baylee, watching movies, and two-stepping.

**Fun Fact:** My graduating class in HS was 40 people.



Department News



**Open for Business!**

Did you know that there is now a fully functioning departmental administration office up and running at Northwest Hospital? **Administrative Assistant Leslie Meyer** is staffing the office located in the Medical Arts Building on the hospital campus in Suite 108. The suite seats up to five staff and has Wi-Fi, fax and color printing capabilities. One of the best features of the suite is a well-appointed conference room that seats six comfortably. This room can be booked through Leslie.



If you're in the neighborhood, come by and have a cup of coffee. The pot's always on!



**Discoveries 2014**



From research on the persistence of infection in the skin despite surgical preparation to the newly described ligament of the knee to the fundamentals of reading clinical research, our annual research report, Discoveries 2014, covers the breadth of our department's research. Copies are available online under the [research section](#) of our website.

**Final Journal Club of the Spring**



June 9th marked the final Spine Journal Club of the spring. This one was especially memorable as it was the final meeting before **Dr. Michael Lee's** departure for Chicago in September. The articles presented were written by Drs. Lee and Sethi (Group Health) and pertained to complications after spine surgery. The Spine Journal Club is a monthly occurrence, typically on the first Monday, and has been hosted at the home of **Dr. Wagner** for more than 30 years. Many evenings have been spent making new friends and engaging in conversations over pizza, beer, and wine. The Spine Journal Club will resume in the fall.



(L to R) Drs. Dana Adkins, Viral Patel, Dan Baker, Max Berdichevsky, Ted Wagner, Mike Lee, Rajiv Sethi, Carlo Bellabarba, Josh Shatsky, and Jacques Leveque

## Department News

### New Grant for OSL

In April, the Orthopaedic Science Lab (OSL) was awarded a new 5 year NIH grant titled, 'Muscle Atrophy and Bone Anabolism' from NIAMS. A group of OSL researchers collaboratively performed a series of pilot studies over the course of nearly three years, funded primarily by the Sigvard T. Hansen, Jr. Endowed Chair, in order to generate the provocative preliminary data that enabled the grant to be successful. The project will focus on exploring a potential mechanism that underlies their surprising observation that bone formation induced by mechanical loading is greatly enhanced when superimposed with transient muscle paralysis. These data are provocative in that they directly challenge a dominant theory within musculoskeletal biology that muscle and bone invariably atrophy or hypertrophy in unison. Given the multi-disciplinary approach that will be implemented, four OSL faculty members will collaborate as investigators on the project (**Steve D. Bain, Ph.D., Edith M. Gardiner, Ph.D., Ted S. Gross, Ph.D., and Ron Y. Kwon, Ph.D.**).

### Seattle's Top Doctors

The 14th Annual Top Doctors listing in *Seattle* magazine has been released. Congratulations to the following doctors for receiving this honor: **Drs. Carlo Bellabarba, Mark Dales, Doug Hanel, Jerry Huang, Bruce Sangeorzan, and Klane White.** The final list is the result of a survey process which allowed all physicians in the local area to nominate their peers.

### LeCocq Lecture 2014

The 50th annual LeCocq lecture, held this year on April 16-17, was another great success for the department. This year featured guest lecturer Dr. Reinhold Ganz, Professor Emeritus from the University of Bern. Dr. Ganz's lectures were followed by case presentations from several Orthopaedics & Sports Medicine Residents. Attendees of the LeCocq dinner also had the opportunity to hear about Dr. LeCocq's legacy and meet with members of the LeCocq family. Everyone involved with this year's events should be pleased with the results while looking ahead to next year's lecture.



*Dr. Reinhold Ganz*

*Case presentation by a Resident*



*Amanda Roof (R4) and Dr. Ganz*

## Faculty & Staff News

HMC staff members (L to R) **Jennifer Crewell**, **Jen McEwen**, **Janet Grant**, and **Christine Pallasigui** participated in The Whole U Scavenger Hunt in April. Everyone contributed unique skills throughout the course of the scavenger hunt, all the while enjoying a beautiful day on UW's picturesque campus. Way to represent ladies!



The HMC Admin office is participating in the 12 Week Challenge by The Whole U. Above is a picture from their Summer of FUNction kickoff potluck.

Harborview orthopaedic surgeon **Dr. Daphne Beingsner** was interviewed by KOMO News after performing surgery on a victim of the Oso mudslide. The full article can be found [here](#).

The Council of Orthopaedic Residency Directors (CORD) Conference occurred at the AOA/COA Meeting in Montreal, and **Dayne Mickelson (R3)** and **Kenny Gundle (R4)** presented two posters, and gave a podium talk. These presentations promoted the iPad-based Digital Curriculum Initiative, and the departmental solution to tracking the new ACGME residency Milestones (known as eMTRCS - see [eMTRCS.com](#) for further details).



**Dr. Joseph Fiorito** (far right) lectured at the Pacific Northwest Endovascular Conference, held at the Seattle Convention Center on May 22.

On May 17, **Dr. Michael Goldberg** received the Special Recognition Award in Orthopaedics for Outstanding Achievement and Contributions to Medicine from the Alumni Association of the College of Medicine at the State University of New York-Downstate Medical Center. Congratulations Dr. Goldberg!

**Kenny Gundle (R4)** attended the Resident Leadership Forum at the American Orthopaedic Association Annual Meeting in late June. "This was a fantastic opportunity to meet other chiefs-to-be from around the country, and benefit from the AOA's experience in promoting resident leadership and education." The two-day course, selected by nomination, is also a pathway to the AOA Emerging Leaders Program.

**Dr. Sigvard Hansen** received the Distinguished Contributions Award at the AOA/COA meeting in June. Please join the department in congratulating Dr. Hansen on this honor!

Announcing Aria Miriam Michnick, daughter of **Stuart Michnick (R2)** and Amberly Michnick. Aria was born on



April 26 at 12:59 AM and weighs 7 lbs. 4 oz. She is healthy and all are doing well!



Congratulations to Rebecca and **Mark Miller, MD (Class of 2013)** on the birth of their son Zachary Boyd Miller! Zach was born on May 24, 2014 weighing 7 lbs, 15 oz and measuring 22 inches long. Rebecca and Zach are now at home and doing well!

## Faculty & Staff News

**Dr. Vincent Mosca** was a guest speaker at the Annual Midwest Podiatry Conference in Chicago in April and at the Children's Hospital of Shanghai Pediatric Orthopaedic Conference in May.



**Amanda Roof (R4)** (pictured above left) traveled with **Dr. Greg Schmale** (above right) to Nicaragua with the group Cooperative Orthopaedics between Nicaragua and America (COAN) in April 2014. They visited HEODORA Hospital Leon & Hospital Fernando Velez Paiz in Managua, Nicaragua where they evaluated 35+ pediatric patients, performed 11 surgeries while teaching/learning from Nicaraguan residents and attendings for 1 week.



Congratulations to **Program Coordinator Amanda Schwanz** on the birth of her daughter Hanna Louise! Hanna was born on March 29th at 12:50pm. She is precious and Adeline loves being a big sister (for now). Everyone is doing well!



Say hello to Ara Lou Wegner, daughter of **Nicholas Wegner (R5)**. Ara (air-ah) arrived on March 25, 2014 at 6:01 PM. While she looks more like mom, she got dad's size, weighing 8 lbs, 9 oz measuring 20.5 inches. Everyone is happy and healthy!

## Tech Talk

# We've Got Your Backup!

The departure of our graduating Residents and Fellows and the arrival of our new Residents and Fellows provides the ideal backdrop to discuss backing up our technology. After all, when was the last time you backed up your mobile device? You might ask, "Why do I need to if the Cloud has me covered?" In reality though the Cloud is imperfect. It doesn't always save your application settings or files and if an error were to occur these could be lost forever. Don't be alarmed; it's simple to perform a full backup via your computer. To backup your iPads and iPhones, plug your device into your computer, launch iTunes, right click your device listed in the sidebar, and choose Backup Now.

Additionally, let us take this opportunity to remind the new members of our department that the University offers many free and heavily discounted software packages for your personal use. Please check with the Computer Support Group (CSG) before purchasing software from your local retailer.

If you have any question or concerns, please email Arien Cheronas at [acherone@uw.edu](mailto:acherone@uw.edu) or call (206) 685-4350.

## Publications

### Books:

**Mosca VS:** Principles and Management of Pediatric Foot and Ankle Deformities and Malformations. Philadelphia, PA: Wolters Kluwer, Lippincott Williams & Wilkins, 2014

### Posters:

Digital Curriculum Initiative - Developing a Tablet-based Platform for Orthopaedic Surgery Resident Education. **Kenneth Gundle, Dayne Mickelson, Doug Hanel.**

## Publications

eMTRCS - an electronic Milestone Tracking and Resident Competency System. **Dayne Mickelson, Kenneth Gundle, Arien Cheronos, Doug Hanel.**

### Presentations:

University of Washington 2014 GME Research Day. Podium Presentation of: **Roof AC, Recidoro AM, Ausk BJ, Srinivasan S, Gross TS, Gardiner EM, Bain SD, Allan CH, Kwon RY.** Chemical and Mechanical Nerve Impairment Inhibit Joint Specification and Bone Formation in the Regenerating Zebrafish Fin.

Orthopaedic Research Society Annual Meeting. March 2014. Podium presentation of: **Roof AC, Recidoro AM, Ausk BJ, Srinivasan S, Gross TS, Gardiner EM, Bain SD, Allan CH, Kwon RY.** Chemical and Mechanical Nerve Impairment Inhibit Joint Specification and Bone Formation in the Regenerating Zebrafish Fin.

### Publications:

**Alton T, Firoozabadi R.** "Management of Geriatric Pelvic Ring Injuries". Accepted Current Geriatrics Report. April 2014.

**Alton T, Gee A.** Classifications in Brief: Young and Burgess Classification of Pelvic Ring Injuries. Clin Orthop Relat Res. 2014 May 28. [Epub ahead of print] No abstract available. PMID: 24867452 [PubMed - as supplied by publisher]

**Alton T, Patel A, Lee M, Chapman J.** Pediatric cervical spondylolysis and American football. Spine J. 2014 Jun 1;14(6):e1-5. doi: 10.1016/j.spinee.2013.09.037. Epub 2013 Oct 18. PMID: 24345471 [PubMed - in process]

**Gupta A, Barei D, Khwaja A, Beingessner D.** Single-staged Treatment Using a Standardized Protocol Results in Functional Motion in the Majority of Patients With a Terrible Triad Elbow Injury. Clin Orthop Relat Res. 2014 Jul;472(7):2075-83. doi: 10.1007/s11999-014-3475-3.

Louie PK, **Sangeorzan BJ**, Fassbind MJ, Ledoux WR. Talonavicular joint coverage and bone morphology between different foot types. J Orthop Res. 2014 Jul;32(7):958-66. doi: 10.1002/jor.22612. Epub 2014 Apr 9.

**Recidoro A, Roof A, Schmitt M**, Petrie T, Strand N, **Ausk B, Srinivasan S, Gardiner E**, Kaminsky W, **Bain S, Allan C, Gross T, Kwon R.** Botulinum Toxin Induces Muscle Paralysis and Inhibits Bone Regeneration in Zebrafish. Journal of Bone and Mineral Research.- Accepted May 2014, pending publication.

Trask D, Ledoux W, Whittaker E, Roush G, **Sangeorzan B:** Second Metatarsal Osteotomies for Metatarsalgia: A Robotic Cadaveric Study of the Effect of Osteotomy Plane and Metatarsal Shortening on Plantar Pressure. J Orthop Res 32(3):385-393, 2014.