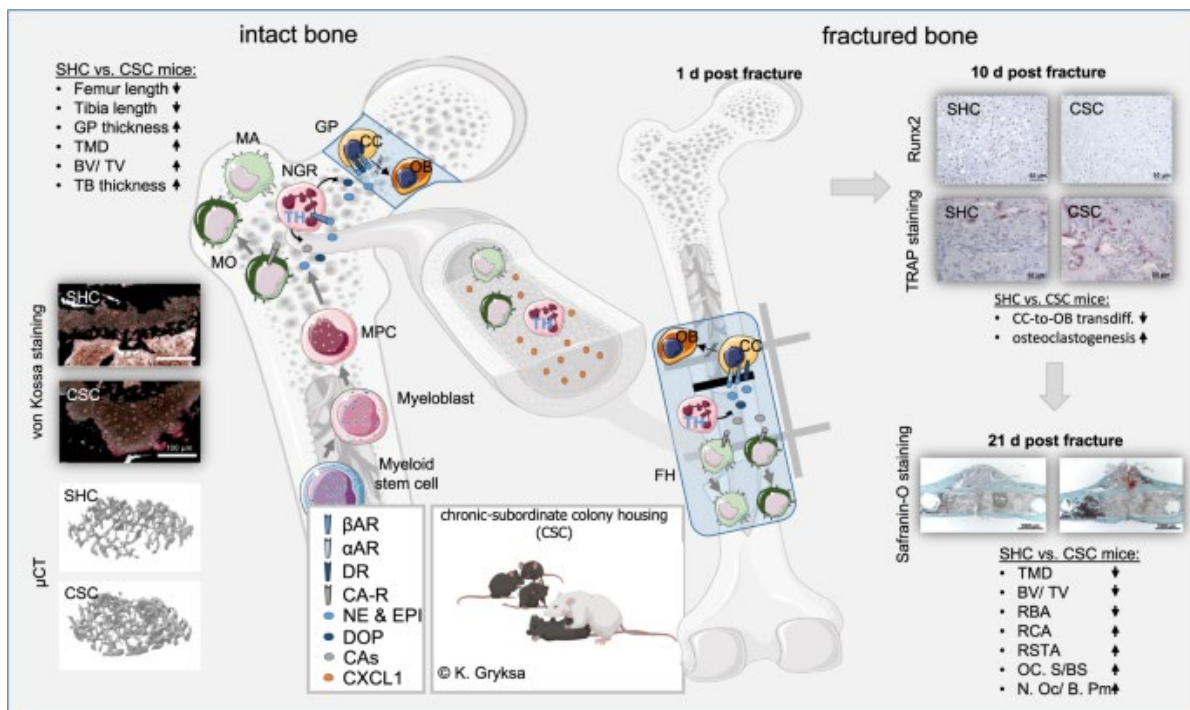


Breakthroughs ORS ISFR Newsletter



November 2023

The Osteoimmunology Edition with Drs. Stuart Goodman and Miriam Tschaffon-Müller



Caption: Graphical Abstract from Tschaffon-Müller et al. Nat Commun. 2023 on how Neutrophil-derived catecholamines mediate negative stress effects on bone.

Inside the November Breakthroughs Issue:

You voted, and we listened! The theme for the 2024 ISFR Section Meeting is *Osteoimmunology in Bone Healing*. In this issue, we reveal the agenda and invited speakers for the ISFR Section Meeting Program in Long Beach, California, on February 3 from 1:30 pm - 3:30 pm PST. Additionally, we highlight the latest osteoimmunology-related fracture research by **Stuart Goodman** and **Miriam Tschaffon-Müller**. The ISFR Communications Committee also recaps the ORS-ISFR crossover events during the American Society for Bone and Mineral Research (ASBMR) and Orthopedic Trauma Association (OTA) meetings last month. Finally, take a peek at all the great fracture healing related literature from ISFR members and beyond in the *Journal of Orthopedic Research* this past summer and fall.

ORS Hot Topics and Member Spotlights: Osteoimmunology in Bone Development/ Regeneration



Stuart B. Goodman, BSc MD MSC PhD FRCSC FACS FBSE FIOR FORS

*Professor, Department of Orthopaedic Surgery and Bioengineering,
Stanford University*

"We knew that T lymphocytes (memory T cells) and macrophages (trained immunity) have memory, i.e. they respond to stimuli based on their previous exposure to the same or similar stimuli. In our lab, Dennis Lin showed for the first time that Mesenchymal Stem Cells (MSCs) have not only immunomodulatory properties, but they also have memory..."

[Read More](#)

Stay Connected and Up to Date with Dr. Stuart Goodman

[The Stuart Goodman Lab](#) | [ResearchGate](#)



Miriam Tschaffon-Müller, PhD rer. nat.

*Post-Doctoral Position, Institute of Orthopaedic Research and
Biomechanics, Ulm University Medical Center*

"In this project, we investigated the role of catecholamines in fracture healing. More specifically, the role of catecholamines produced by myeloid cells, as opposed to systemic catecholamines produced in the

adrenal gland, and the subsequent effects of chronic psychosocial stress on bone homeostasis and fracture healing."

[Read More](#)

Stay Connected and Up to Date with Dr. Miriam Tschaffon-Müller
[Personal Twitter](#) | [Lab Twitter](#) | [ResearchGate](#)

ISFR Section Meeting Preview

The 2024 ISFR Section Meeting

Saturday, February 3, 1:30 pm - 3:30 pm PST
Long Beach, California



Drs. Allison Pettit, Hans-Christoph Pape, and Georg Duda (Left to Right) will be this year's invited speakers to discuss fracture healing research in Osteoimmunology at the ISFR 2024 Section Meeting

The Plenary Session

This session will feature three talks that span basic, translational, and clinical considerations of how osteoimmunology impacts fracture repair. **Dr. Allison Pettit** from *Mater Research* and *Mater Research Institute-University of Queensland* will share Basic Science insights. **Dr. Hans-Christoph Pape** from the *University Hospital Zürich* will discuss Clinical considerations. **Dr. Georg Duda** from *Berlin Institute of Health at Charité* will present from the Translational vantage.



Augustine Saiz, Madhura Nijsure, and Evan Buettmann (Left to Right) will be this year's ISFR Rising Stars and will present their research at the 2024 ISFR Section Meeting

ISFR Rising Stars

Young Investigators who have previously received an ORS ISFR award are eligible to be selected as ISFR Rising Stars. The 2024 ISFR Rising Stars are **Augustine Mark Saiz**, (Assistant Professor) from the *University of California Davis*, **Madhura Nijsure** (Graduate Student in Boerckel Lab) from the *University of Pennsylvania*, **Evan Buettmann** (Postdoctoral Fellow in Donahue Lab) from *Virginia Commonwealth University*.



ISFR Lifetime Achievement Award Presentation

Peter Augat, PhD

Professor of Biomechanics, Paracelsus Medical University, Salzburg, Austria; Director Institute of Biomechanics, Trauma Center Murnau, Germany

Congratulations to Dr. Peter Augat, the 2024 recipient of the ISFR Lifetime Achievement Award. Dr. Augat has served as a Past President of the International Society for Fracture Repair (ISFR), Past President of the German Society of Biomechanics (DGfB), and Member of several societies in the area of musculoskeletal research including ESB, ORS and IBMS. He is on the editorial board of several orthopaedic journals, including *Biomedical Engineering*, *AOTS*, *JOT*, *EJTS* and also a reviewer for most major musculoskeletal journals. Dr. Augat's research is focused on biomechanics of fracture repair and on the clinical translation of orthopaedic research. With a prolific output, he has published over 200 scientific articles and supervised more than 80 doctoral theses.

Recent Meetings with ISFR Members in Attendance

ORS ISFR Crossover Recap During OTA Meeting

The OTA 2023 Annual Meeting was held this past month in Seattle, WA from October 18, 2023 - October 21, 2023, and was attended by orthopaedic trauma surgeons and researchers from around the globe. The meeting kicked off with the Basic Science Focus Forum, a program directed towards orthopaedic surgeons with an interest in the basic science of orthopaedic trauma and how it relates to or impacts their practice. Basic science researchers also obtained valuable knowledge about translational opportunities and how their research has the potential to change orthopaedic care. This course involved symposia specifically designed to "bridge the gap" between basic science and clinical practice, in addition to approximately 30 original research papers from the cutting edge of basic science research.

This year's forum was curated by the OTA Basic Science Committee: Justin Haller, MD (Chair); Andrew R. Evans, MD, FACS; Michael W. Hast, PhD; Brian (Vu) Le, MD; Christopher Lee, MD; Saam Morshed, MD, PhD; John J. Wixted, MD. This included four specific breakout symposia with invited talks with leading researchers in the respective fields, as outlined below.

Symposium I - Biomechanics - The Expanding Role of Additive Manufacturing in Orthopaedic Traumatology (Moderated by Michael Hast, PhD and Brian (Vu) Le, MD)

- The Use of 3D Printed Implants for Foot and Ankle Trauma and Deformity Correction - Sam Adams Jr., MD
- 3D Printing in Orthopaedic Trauma Education and Surgical Planning - Samir Mehta, MD
- Patient Specific Implants: The Future of Orthopedic Implant Design and Fabrication - Jessee Hunt, CEO of 4WEB
- What is All the Fuss about Additive Manufacturing (AM) and Hybrid Manufacturing? Challenges and Opportunities to Address Critical Orthopaedic Needs - Guha Manogharan, PhD

Symposium II - Infection (Moderated by Jack Wixted, MD and Chris Lee, MD)

- Applying Antimicrobial Photodynamic Therapy to Orthopaedic Wounds - Leah Gitajn, MD
- Bacteriophages: What Are They and How Can They Help? - Kyle Schweser, MD
- Single State Treatment of Chronic Osteomyelitis - Martin McNally, MD
- Local versus Systemic Antibiotics New Trends - Edward McPherson, MD FACS

Symposium III - SRI - New Paradigms in Pain Management After Skeletal Trauma (Moderated by Saam Morshed, MD, PhD and Chelsea S. Bahney, PhD)

- Preclinical Models to Measure Pain - Anne Marie Malfait, MD, PhD
- Molecular Mechanisms of Pain - Alan Basbaum, PhD
- Measuring Pain: From Biometrics to PROs – What Is Useful; What Is Not - Thomas Higgins, MD
- New Pain Management Concepts (Cannabis, Education Prior to Procedures, New Data on What Inhibits FX Repair) - Joseph Hsu, MD

Symposium IV - Muscular Injury in Orthopaedic Trauma (Moderated by Andrew Evans, MD and Justin Haller, MD)

- Implementation of VML in a Large Animal Model of Segmental Bone Defect - Roman Natoli, MD, PhD
- The Muscle Paracrine Effect for Fracture Healing - Augustine Saiz Jr., MD
- Cellular and Molecular Influences from Skeletal Muscle on Fracture Healing - Joseph Wenke, PhD
- Animal Models in Compartment Syndrome Research: Trends and Future Directions - Dillon O'Neill, MD

The Basic Science Focus Forum continues to be a highlight of the OTA Annual Meeting, as it provides the opportunity for clinicians and mechanistic researchers (many ORS and ISFR members) to meet and discuss translational science for the day. The symposiums provide knowledge updates on the most recent work happening and how this relates to patient clinical care.

Next year, the **ISFR Biennial Meeting** from November 21 to November 23, 2024, will be further enhanced via a scheduled overlap with the OTA Basic Science Focus Forum on November 23, 2024, in Montreal, Canada, including exciting bridge symposiums and abstract presentations! **The deadline for abstract submissions is March 8th, 2024** (Look for the announcement regarding the submission portal opening).

ASBMR-ORS Symposium: *What's New in Fracture Healing?*

The American Society of Bone and Mineral Research (ASBMR) Annual Meeting took place in Vancouver this year, featuring the ASBMR-ORS Symposium on "*What's New in Fracture Healing?*". Moderated by incoming ASBMR and current ORS presidents Dr. Laura Calvi and Dr. Kurt Hankenson, the symposium showcased insightful presentations by **Chelsea Bahney, PhD, Melanie Haffner-Luntzer, PhD, Reyad Elbarbary, PhD, and Prism Schneider, PhD.**

Dr. Bahney shared her research on the molecular mechanisms contributing to poor healing during aging, expanding upon her lab's groundbreaking work on circulating collagen X as a serum biomarker for healing prediction. She also discussed insights from their progeria mouse model research.

Dr. Elbarbary discussed the use of cannabidiol (CBD) and Cannabigerol (CBG) in pain management during fracture repair. These non-psychotropic cannabinoids demonstrated promising results in mouse models.

Dr. Haffner-Luntzer delved into the impact of psychosocial stress on fracture healing outcomes in mice, using the Chronic Subordinate Colony Housing model to induce stress, sparking engaging discussions among attendees.

Finally, **Dr. Prism Schneider** addressed the challenges in fracture repair and emphasized the importance of interdisciplinary collaboration between clinical and basic science to tackle these issues.

This collaborative symposium by ORS and ASBMR brought together experts from the bone biology and fracture repair community. The event was a big success, and we look forward to hosting more such gatherings in the future. Stay tuned for exciting updates!

Recent Publications by ORS ISFR Members in *JOR*



We are happy to share the recent work from ISFR members published in the *Journal of Orthopaedic Research (JOR)*. Congratulations to all contributors on their recent research publications!

[Publication List](#)

Follow the *Journal of Orthopaedic Research* on [Twitter \(X\)](#).



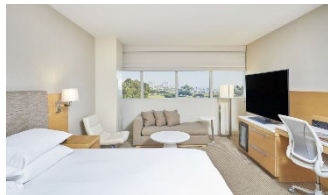
Prepare for the 2024 Annual Meeting

Be a part of history when ORS celebrates *70 Years of Advancing Research to Keep the World Moving* at the 2024 ORS Annual Meeting, February 2-6 in Long Beach, CA. The meeting brings the

orthopaedic community together for five days of workshops, learning sessions, networking, and advocacy. Attendees from many disciplines and career levels will network and learn from industry partners about the latest innovations in orthopaedics. **Annual Meeting registration is now open.** Be sure to register today to secure your spot for February.

Abstract Submissions

All abstract submissions are now closed. Notifications went out on November 8 for the original call, and will go out on November 29 for late breaking. We look forward to seeing everyone in February to hear more about your exciting research.



Hotel Reservations

Hotel reservations are now being accepted. Reserve your room today to make sure you secure the right room for you. Each option is located near the event site. The deadline for hotel reservations is Friday, January 19, 2024, and rooms are subject to availability.

Please Note: Some members have reported receiving spam emails from sources unrelated to our hotel block or related partners. Please disregard these emails and make sure to only book your hotel using our preferred partners at Passkey via the link below. If there is any doubt about the hotel information you are receiving, please contact us at ors@ors.org before booking.

[Reserve Your Hotel](#)

Welcome New ORS ISFR Members

We are thrilled to extend a warm welcome to our newest members who have joined the ISFR since August 1st, 2023. Welcome to the ORS ISFR community!

- Calista Adler
- Alireza Ariyanfar
- Mehran Bahrami
- Ken Chen
- Leyi Chen
- Ana Ferreira Ruble, PhD
- Kylie Frew
- Kavin Kathir
- Emma Kerimo
- Oliver Kueppers
- Xinyi Ma
- Annika Nikhar
- Hyun-Sook Park, PhD
- Gareth Ryan, BSc., MD
- Maham Tanveer
- Xin Xing
- Robert Zeller

Become an ORS ISFR Member

Be sure to join the ISFR membership to be:

- Automatically eligible for section member awards and grants including **10 ORS ISFR Podium and Poster Awards** at the [ORS Annual Meeting](#)
- Get your research highlighted in our newsletter and via ORS social media and [ORS ISFR Twitter](#)
- Networking and collaborating at Section Scientific Meetings, social sessions, [Virtual Scientific Sessions](#) and more
- Diverse programming designed by our members, with our members' research in mind
- Opportunities to gain leadership experience by volunteering with our Section



Section Membership



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