

Breakthroughs ORS ISFR Newsletter



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Do you or know someone have recent achievements you would like highlighted in this newsletter?

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ORS ISFR 3-Minute Research Pitch Competition



3-Minute RESEARCH PITCH COMPETITION **WINNER**

Victoria Duke, BS

Steadman Philippon Research Institute

***Fast-Tracking Aged Fracture Repair
Research with a Progeria Mouse Model***

HONORABLE MENTION



Jiatong Liu, MS

University of Rochester Medical Center

***Age-associated callus senescent cells produce TGF
beta1 that inhibits fracture healing in aged mice***



Eight finalists had three minutes to present their work using one slide about what they are working on and why it is important to the field of research of bone regeneration, fracture repair, trauma or related. The competition took place live over Zoom.

Congratulations to Victoria (Torie) Duke, BS, winner of this year's 3-Minute Research Pitch Competition!

Her research aims to advance the translation of age-specific fracture treatments by allowing her team and other researchers to screen their own novel bone regeneration technologies in an accelerated aging mouse model, all at a fraction of the time and cost of using traditionally aged mice. Torie is excited to continue musculoskeletal research at Oregon Health and Science University through a PhD beginning Fall of 2022.

Congratulations to Jiatong Liu, MS of the University of Rochester Medical Center for her Honorable Mention award.

Excellent work by all presenters! Thank you to the presenters, judges, and attendees for making this another great virtual session! [Learn more.](#)

[Watch the Competition](#)



The 17th Biennial [Meeting](#) of the ORS ISFR will foster growth and innovation in the field of fracture repair with an emphasis on the synergy and cooperation between basic scientists and clinicians.

Submit Your Abstract!

ORS ISFR Travel Grants Awarded for the following categories

- Student Awards
- Podium Awards
- Best Poster
- Diversity Award

Abstract Submission Deadline: May 20, 2022

[Submit Your Abstract](#)

[Register to Attend](#)

**ORS ISFR Interdisciplinary Academic
Exchange Grant**
Now accepting applications through July 15!



\$5,000 for one ORS ISFR (Section) member to visit a research lab for the purpose of collaboration and knowledge [exchange](#).

[Submit Your Application!](#)



Research Section Member Spotlight

This issue features **Katherine Hixon, PhD, Dartmouth College. Dr. Hixon currently serves as the Section Education Committee Chair.**

[Get to Know Dr. Hixon.](#)



Featured Journal Article Review

[Journal of Orthopaedic Research®](#)
Early View

[Amniotic membrane attenuates heterotopic ossification following high-dose bone morphogenetic protein-2 treatment of segmental bone defects](#)

Lauren B. Priddy, Laxminarayanan Krishnan, **Marian H. Hettiaratchi**, Sukhita Karthikeyakannan, Nikhil Gupte, **Robert E. Guldberg**

Recombinant, human bone morphogenetic protein-2 (rhBMP-2) is used clinically to promote bone healing. Treatments of large bone defects often include the administration of high, supraphysiological doses of rhBMP-2 that cause adverse side effects and raise costs while providing only incremental benefit.

[Continue Reading](#)



[Journal of Orthopaedic Research®](#)
[Articles Related to Bone Trauma and](#)



Regeneration

[Fracture risk assessment and evaluation of femoroplasty in metastatic proximal femurs. An in vivo CT-based finite element study.](#)

Amelie Sas, Esther Tanck, Hazem Wafa, Yvette van der Linden, An Sermon, G. **Harry van Lenthe**

Journal of Orthopaedic Research®Early View

First published: 02 April 2022

[Review of immunological plasma markers for longitudinal analysis of inflammation and infection in rat models](#)

Malley A. Gautreaux, **Luke J. Tucker**, Xavier J. Person, Haley K. Zetterholm, **Lauren B. Priddy**

Journal of Orthopaedic Research®Early View

First published: 21 March 2022

[Cellular activation status in femoral shaft fracture hematoma following different reaming techniques – A large animal model](#)

Michel Paul Johan Teuben, Sascha Halvachizadeh, Yannik Kalbas, Zhi Qiao, Nikola Cesarovic, Miriam Weisskopf, Henrik Teuber, **Miriam Kalbitz**, Paolo Cinelli, Roman Pfeifer, Hans-Christoph Pape, TREAT Research Group

Journal of Orthopaedic Research®Early View

First published: 17 March 2022

[Assessment of regional sacral bone quality: A step towards patient-specific fracture fixation](#)

Simran Mand, **Scott Telfer**, Shamele Battan, Christina L. Brunnuquell, Ken F. Linnau, David Zamora, Conor P. Kleweno

Journal of Orthopaedic Research®Early View

First published: 17 March 2022

[Pharmacokinetics and local tissue response to local instillation of vocacapsaicin, a novel capsaicin prodrug, in rat and rabbit osteotomy models](#)

Tarra Knotts, Kirsten Mease, Lakshmi Sangameswaran, Melanie Felx, Susan Kramer, John Donovan

First published: 06 February 2022

[*The role of Meteorin-like in skeletal development and bone fracture healing*](#)

Rong Huang, Abhinav R. Balu, Kristin H. Molitoris, James P. White, **Alexander G. Robling**, Ugur M. Ayturk, Gurpreet S. Baht

Journal of Orthopaedic Research®Early View

First published: 25 January 2022

[The intersection of fracture healing and infection: Orthopaedic Research Society workshop 2021](#)

Justin E. Hellwinkel, **Zachary M Working**, Laura Certain, Andrés J. García, Joseph C. Wenke, **Chelsea S. Bahney**

Journal of Orthopaedic Research®
Volume 40, Issue 3

First published: 25 January 2022

[Animal models of impaired long bone healing and tissue engineering- and cell-based in vivo interventions](#)

Katherine R. Hixon, Anna N. Miller

Journal of Orthopaedic Research®
Volume 40, Issue 4

First published: 24 January 2022



Invite your network to join the Section!

Do you have a student, post-graduate trainee, or colleague who is working in fracture repair or bone regeneration and is not a [member](#) of ORS ISFR yet?

Be sure to share this newsletter and tell them about the many benefits of ORS ISFR [membership](#).

Our Section members have exclusive opportunities to compete for Section Member-only awards, get their work featured in our Newsletter, and participate in our many scientific and social events throughout the year at discounted rates.

[Join the ORS ISFR!](#)

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