ORTHOPAEDIC IMPLANTS

ORS ORTHOPAEDIC **IMPLANTS** Orthopaedic Research Society

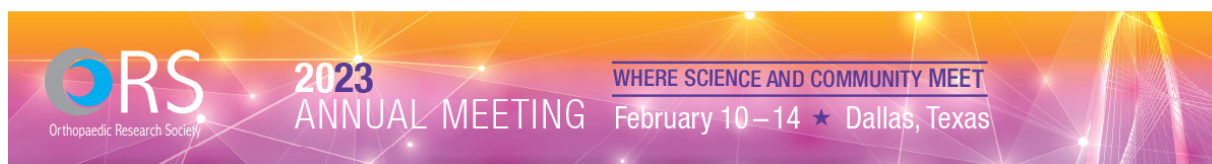**Quarterly Newsletter**

January 2023

Share with us!

If you have suggestions for Section Member Spotlight interviews, featured *JOR®* publications, contributions to our conference reports section, or any other potential contribution to our quarterly e-newsletter, please contact **Alexander Christ, MD, Section Membership Chair** at **achrist@mednet.ucla.edu**.

Message from the ORS Orthopaedic Implants Section Chair

On behalf of the ORS Orthopaedic Implants Research Section, I hope you have had a good fall semester (or a good 3rd/4th quarter, depending on how you look at the calendar year!). Along with all of ORS, the Implants Section is gearing up for the **2023 ORS Annual Meeting** (AM) in February; in this newsletter, we will highlight some of the section activities that will be held at the AM. Further, the section is hosting one further Virtual Scientific Session (VSS), a primer on AI/ML, which is a good prelude to one of the AM activities that you will read below.

We look forward to seeing you in Dallas in February 2023!

Jeff Bischoff, PhD, ORS Orthopaedic Implants Research Section Chair

ORS Orthopaedic Research Society | **2023** ANNUAL MEETING | WHERE SCIENCE AND COMMUNITY MEET February 10–14 ★ Dallas, Texas

2023 ORS Orthopaedic Implants Section Annual Meeting Activities

The 2023 ORS Annual Meeting is scheduled to take place February 10-14 in Dallas, Texas at the Hilton Anatole. The Late Breaking Abstract deadline was **Monday, November 14th.** More information can be found **[here](#).**

The Implant Section scientific meeting is scheduled for **Saturday, February 11th.** The Implant Section members-only portion of the meeting will be from 12:30pm-1:45pm, followed by an open section for all meeting attendees from 2:00pm-3:15pm. We encourage both Implant Section members and non-members to stay tuned regarding the Implant Section meeting offerings.

Be sure you are registered for the section meeting, otherwise you will not be able to get in to the session!

<div align="center">

Register

</div>

Closed Session Meeting

Ensuring Clinical Relevance of Pre-Clinical Models
ORS 2023 Annual Meeting, Saturday, February 11, 2023, 12:30-1:45pm

Organizers: **Trey Crisco, PhD**, **Michael Hast, PhD**, and **Jeff Bischoff, PhD.**

Pre-clinical models are increasingly important in predicting the clinical efficacy of implants and devices in a safe and cost-effective manner. The purpose of this session is to provide an overview of animal, bench-top, and computational models, and to discuss the advantages and potential pitfalls of each approach. The session will include talks from industry, clinical, academic, and government experts with experience in pre-clinical modeling who can provide insight on how to effectively design and use models that will be relevant to clinical medicine.

Presenters:
John Goode
FDA

Heidi-Lynn Ploeg, PhD
Queens University

Bob Hastings
Hastings & Associates, LLC

Tom Schaer
University of Pennsylvania

Open Session Meeting

Metal Allergies and Hypersensitivities
ORS 2023 Annual Meeting, Saturday, February 11, 2023, 2:00-3:15pm

Organizers: **William Mihalko, MD, PhD**, **Alexander Christ, MD**, and **Jonathan Gustafson, PhD**

Adverse tissue reaction related to cobalt and chromium corrosion and wear is a well-known clinical problem. However, the relative biocompatibility of these materials and their potential to cause allergic/hypersensitivity reactions is less well understood. The purpose of this session is to discuss the clinical relevance of metal hypersensitivity, current methods of evaluation, and available technologies to avoid/treat metal allergy.

Implant Section Workshops for the 2023 Annual Meeting

Temporal Implants in Orthopaedics: Current Concepts, Limitations, and Future Directions
ORS 2023 Annual Meeting, Sunday, February 12, 2023, 2:00-3:30pm

Organizers: **Michael Hast, PhD**, and **Markus Wimmer, PhD**

Orthopaedic implants are currently undergoing a transformation from permanent, life-long devices towards transient, biodegradable tools that are engineered to disappear over time. Applications of biodegradable implants are diverse and evolving. The purpose of this symposium is to (1) provide an update on state-of-the-art biodegradable implants, (2) identify the shortcomings of current technologies, and (3) predict the short- and long-term future for implants in this realm. The symposium will consist of three speakers with extensive expertise in biodegradable implant design and application who will speak for 20 minutes each, followed by 30 minutes of Q&A with the audience.

Speakers:

Increasing the Resolution Limits of 3D Printing for Complex, Biodegradable Implants
Paul Dalton, PhD
University of Oregon

Scaffoldless Tissue Engineering Strategies for Rotator Cuff Repair in an Ovine Model
Lisa Larkin, PhD
University of Michigan

A Case Study in the Role of Alloy Design in Biodegradable Metallic Implant Development
Michele Manuel, PhD
University of Florida

Artificial Intelligence and Machine Learning Workshop
ORS 2023 Annual Meeting, Friday February 10, 2023, 1:00-6:00pm

Organizers: **Cheryl Liu, PhD**, and **Joshua Roth, PhD**

This session will build upon basic concepts presented in the Virtual Scientific Session taking place in August. Leaders from industry, academia, and clinical practice will present and discuss the current state of AI/ML in orthopaedics, and where they predict it to affect our practice in the future. Following the panel discussion, ample time will be left for Q&A with the faculty and attendees.

Spotlight Speaker: Former Implants

Section Chair William M. Mihalko, MD, PhD

Wiiliam M. Mihalko, MD, PhD, will be a spotlight speaker for the upcoming 2023 Annual Meeting. His talk is titled *"The Possible Role of Cobalt Chromium and Biologic Corrosion in TKA Outcomes."*

ORS 2023 Annual Meeting, Saturday February 11, 2023, 3:30-4:30pm.

Virtual Scientific Sessions

Catch up on the session that took place in January!

Primer on Artificial Intelligence / Machine Learning

Organizers: **Jonathan Gustafson, PhD**, and **Kenneth Urish, PhD**

This session will give a basic overview and insights regarding artificial intelligence and machine learning and serve as a primer for the Artificial Intelligence / Machine Learning Workshop that will be held during the 2023 Annual Meeting.

Access the Recording

Implants Section leadership for the 2022-2023 year:

- **Section Chair:** Jeff Bischoff, PhD (Zimmer Biomet, Inc.)
- **Section Chair Elect:** Trey Crisco, PhD (Brown University/Rhode Island Hospital)
- **Section Past Chair:** William Mihalko, MD, PhD (Campbell Clinic Orthopaedics/University of Tennessee Health Science Center)
- **Section Research & Education Chair:** Jonathan Gustafson, PhD (Rush University Medical Center)
- **Section Treasurer:** Michael Hast, PhD (University of Pennsylvania)
- **Section Secretary:** Kenneth Urish, MD, PhD (University of Pittsburgh)
- **Section Membership Chair**: Alexander Christ, MD (University of Southern California, Dept. of Orthopaedic Surgery)
- **Section Members-at-Large:**
  - Emanuele Chisari, MD (Rothman Orthopaedic Institute/University of Groningen)

- Cheryl Lui, PhD (Stryker, Inc.)
- Joshua Roth, PhD (University of Wisconsin Madison)

Upcoming Implant Related Meeting/Events

AAOS Annual Meeting
March 7-11, 2023
Las Vegas, NV

Recruit the most talented faculty/employees in the field of musculoskeletal research

ORS
Orthopaedic Research Society

ORS Career Center
careers.ors.org

Advancing musculoskeletal research worldwide

ORS Career Center

Check out the latest opportunities available via the ORS Career Center.

Connect with Us:

Facebook   @ORSSociety   LinkedIn