

OREGON BIOENGINEERING SYMPOSIUM 2024: SEEING IS BELIEVING



NOVEMBER 15, 2024

Knight Cancer Research Building,
Oregon Health & Science University

OBS2024

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A special thank you to the 2024 OBS Planning Committee:

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Margaux Schwartz, OHSU	Joe Baio, OSU
Jackie Dingman, OHSU	Cheng Li, OSU
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Owen McCarty, OHSU	Jodi Myers, UO
Luiz Bertassoni, OHSU	Danielle Benoit, UO
Michael Henderson, OHSU	Khaila Carlstrom, UO
Ethan Oseas, OHSU	

LETTER FROM CONFERENCE ORGANIZERS

Welcome to the 6th Annual Oregon Bioengineering Symposium! The 2024 OBS planning committee is pleased to present a day of activities around this year's theme: Seeing is Believing. With the initial discovery of x-rays in 1895, the field of medical imaging has revolutionized the way that diseases are diagnosed, treated, and understood. Today, imaging accelerates research and innovation and has profoundly transformed the landscape of healthcare and clinical practice.

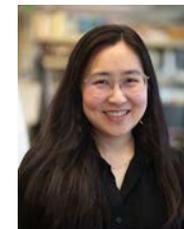
This symposium marks six years of collaboration between Oregon Health & Science University, Oregon State University, and the University of Oregon, bringing together scientists, clinicians, and industry partners from across the state to engage over research advancements in the field of bioengineering. We are grateful for this continued partnership and are looking forward to an exciting event that showcases the outstanding achievements and impact of bioengineering research in Oregon.

Our program features a keynote address by Dr. David Huang, a recipient of the National Medal of Technology and Innovation in 2023, awarded by President Biden for pioneering the field of optical coherence tomography (OCT). You can read more about Dr. Huang on page 13 of this program. We are also excited to highlight the cutting-edge technology of OHSU's Biofabrication hub through a tour led by Dr. Luiz Bertassoni, as well as introduce a new networking and career development opportunity through afternoon Thematic Working Groups. Finally, we conclude our day with a BMES reception and research roundtable led by our trainees to facilitate discussions on shared research interests and jumpstart new collaborative ventures in science and beyond.

We are honored to host the 6th Annual Oregon Bioengineering Symposium and look forward to an inspiring day of innovation, collaboration, and impactful discussions that advance the future of bioengineering.

On behalf of the 2024 OBS Organizing Committee,

Karina Nakayama, Ph.D.



Karina Nakayama, Ph.D.

Assistant Professor
Biomedical Engineering
Co-Director BME Graduate Program
Oregon Health & Science University

CONFERENCE SCHEDULE | MORNING SESSIONS

Time	Activity	Location
8:30-9:00am	Registration and Breakfast	P1 Registration Table In front of KCRB 1011
9:00-9:30am	Opening Ceremony	Auditorium, KCRB 1015 Lecture Hall, KCRB 1011
	<div style="border: 1px solid black; padding: 5px;"> <p>Welcome from OBS Chair Karina Nakayama</p> <p>Danielle Benoit, Ph.D., Lorry Lokey Department Chair and Professor, Department of Bioengineering, University of Oregon</p> <p>Elain Fu, Ph.D., Bioengineering Graduate Program Director; Professor in the School of Chemical, Biological, and Environmental Engineering, Oregon State University</p> <p>Owen McCarty, Ph.D., Gordon Moore Professor and Department Chair, Department of Biomedical Engineering, Oregon Health & Science University</p> </div>	
9:30am-10:30am	Morning Session: Scientific Session 1	Auditorium, KCRB 1015 Lecture Hall, KCRB 1011
12 min talk + 3 min Q&A	<div style="border: 1px solid black; padding: 5px;"> <p>Moderators: Lei Wang, OHSU and Natalia Shchotkina, UO</p> <p>Young Hwan Chang, Ph.D., "Staining by Numbers"</p> <p>Binata Joddar, Ph.D., "A pathway towards 3D bio/advanced-manufacturing, scale-up and benchmarking tools for in vitro engineered tissues"</p> <p>Raghu Parthasarathy, Ph.D., "Gut Microbes and their Physical Concerns"</p> <p>Summer Gibbs, Ph.D., "NIR Contrast Agents to Improve Clinical Medicine"</p> </div>	
10:30-11:15am	Break and Poster Session A	Lounge, Poster Annex, Poster Hall
	Poster Session located throughout the first floor.	
11:15am-12:00pm	Concurrent Session 1A	Auditorium, KCRB 1015
7 min talk + 3 min Q&A	<div style="border: 1px solid black; padding: 5px;"> <p>Abstract Session 1A: Moderators - Sha Cao, OHSU and Binata Joddar, OSU</p> <p>Kira Lynch, "A 3D Biofabricated Vascular Model for Elucidating Endothelial Cell Roles in Breast Cancer Progression Following Cardiovascular Disease"</p> <p>Adam Rauff, "Composite Microfiber-Hydrogel Scaffolds for Muscle Tissue Engineering Results in Structural Organization, and Mechanical Tailorability"</p> <p>Molly Jenne, "Replicating Endometriosis and Healthy Cellular Behavior with Engineered 3D In Vitro Hydrogel Model"</p> </div>	
5 min talk	<div style="border: 1px solid black; padding: 5px;"> <p>Lightning Talks 1A: Moderators - Sha Cao, OHSU and Binata Joddar, OSU for anti-seizure medication titration: electrochemical signal quantification in saliva using multivariate and machine learning methods"</p> <p>Rachel Thompson, "Cryopreservation of Intact Intervertebral Discs"</p> <p>Nikita Sehgal, "Ultrasound-responsive dendrimer-microbubble complexes as gene delivery vectors for precision cancer gene therapy"</p> </div>	

CONFERENCE SCHEDULE

Time	Activity	Location
11:15am-12:00pm	Concurrent Session 1B	Lecture Hall, KCRB 1011
7 min talk + 3 min Q&A	<div style="border: 1px solid black; padding: 5px;"> <p>Abstract Session 1B: Moderators - Sayandeep Gupta, UO and Hillary Le, OHSU</p> <p>Valeriia Stepanova, "Hippocampal Synaptic Changes in a Preclinical Mouse Model of Chronic Inflammatory Joint Pain"</p> <p>Austin Ricci, "Fatigue Reduces Passive Elastic Modulus In an Age and Sex-Dependent Manner"</p> <p>Samantha Moellmer, "Development and characterization of plasma prekallikrein monoclonal antibodies to study the role of contact activation in thromboinflammation"</p> </div>	
5 min talk	<div style="border: 1px solid black; padding: 5px;"> <p>Lightning Talks 1B: Moderators - Sayandeep Gupta, UO and Hillary Le, OHSU</p> <p>Lia Strait, "Systemic Immune Response Following BMP-2 Treated Bone Injury is Time and Dose Dependent"</p> <p>Valentina Roquemen-Echeverri, "A physiology-guided artificial intelligence digital twin framework for replicating glucose dynamics in type 2 diabetes"</p> <p>Ajay Ratty, "Effects of Incremental Scaphoid Proximal Pole Excision on Carpal Kinematics"</p> </div>	
11:50-12:10pm	Poster Change	KCRB 1 st Floor
12:00-2:00pm	Lunch and Poster Session B	Lunch: East Lobby Posters: Lounge, Poster Annex, Poster Hall
	Poster Session located throughout the floor. Boxed Lunches available for pick-up at the East Lobby.	
1:00-2:00pm	Biofabrication Hub Tour	KCRB 4 th Floor
	<p>Dr. Luiz Bertassoni will lead a tour of the Precision Biofabrication Hub. The tour will leave from the 1st floor elevator hall.</p> <p>The Precision Biofabrication Hub of the OHSU Knight Cancer Institute uses precision engineering and the tools of biofabrication (automated generation of 3D structurally organized and functional living tissues) to build complex models of cancer.</p>	
1:00-2:00pm	Thematic Working Groups	KCRB 1000, 1015, 1016, 1011
	<p>Paul Dalton: International Superstars: How to use your education to experience the world! (KCRB 1015)</p> <p>Karina Nakayama: Fellowships and Career Transitions (KCRB 1000)</p> <p>Clara Mosquera-Lopez & Neville Mehta: AI & Machine Learning (KCRB 1011)</p>	
2:00-3:00pm	Concurrent Session 2A	Auditorium, KCRB 1015
7 min talk + 3 min Q&A	<div style="border: 1px solid black; padding: 5px;"> <p>Abstract Session 2A: Moderators - Andre Lira Da Silva, OHSU and Calin Plesa, UO</p> <p>Xun Yu, "Skin Phototype Classification with Machine Learning based on Broadband Optical Measurements"</p> <p>Jade White, "Chemical Characterization of Nanoplastics Shed from Feminine Hygiene Products"</p> <p>Sarah Mitchell, "Immunofluorescent Quantification of Tumor-derived Cellular Material Isolated from Biological Fluids Using High Conductance Dielectrophoresis"</p> <p>Kelly Leguineche, "Longitudinal Immune Profiling in Patients with Severe Tibia Fracture"</p> </div>	

CONFERENCE SCHEDULE | AFTERNOON SESSIONS

Time	Activity	Location
5 min talk	<p>Lightning Talks 2A: Moderators - Andre Lira Da Silva, OHSU and Calin Plesa, UO</p> <p>Caleb Nejeily, "3D Printed Microneedle Arrays for Accessible Precision Health Applications"</p> <p>Johnathan Pang, "Development of A Rapid Laser Assisted Bioprinting Method to Pattern Cells of The Breast Tumor Microenvironment"</p> <p>Marina Nimmo, "Hemodynamic force analysis to quantify clinical outcomes in obstructive hypertrophic cardiomyopathy following treatment with myosin inhibitors"</p> <p>Sophie Biegel, "Nanoparticles co-loaded with siRNA and small molecule drugs for osteoarthritis therapeutic delivery"</p>	

2:00-3:00pm Concurrent Session 2B Lecture Hall, KCRB 1011

7 min talk + 3 min Q&A

Abstract Session 2B: Moderators - Jason Ware, OHSU and David Johnson, UO

Gobinath Chithiravelu, "Mapping the Proteomics Landscape of the Cardiac Extracellular Matrix: Unraveling Molecular Changes through Bottom-Up Proteomics in Type-II Diabetes."
Gourav Kumar, "Nerve-targeted near-infrared fluorophores for fluorescence-guided surgery"
Ander Switalla, "Multi-region Microelectrode Array for Studying Alterations in Neural Oscillatory Activity"
Michael Henderson, "Precise Control of Antibody Binding through Activatable Protein L-Linked Blocking Peptides"

5 min talk

Lightning Talks 2B: Moderators - Jason Ware, OHSU and David Johnson, UO

Ifra Ilyas Ansari, "Investigating In-Vitro Performance of Nafion as a Capping Layer on PEDOT:PSS for Thin-Film Microelectrode Array"
Karly Fear, "Orthogonal heterodimers for geometric assembly and interaction specificity"
Kenneth Riley, "Developing a Novel Label-free Technology for Epigenetic Landscape Reconstruction from Isolated Mononucleosomes"
Eve Elwood and Cassidy Ham, "Determining the Effects of Progesterone on the Barrier Integrity of an in vitro Vaginal Epithelial Model"

3:00-3:45pm Afternoon Session: Scientific Session 2 Auditorium, KCRB 1015
Lecture Hall, KCRB 1011

Moderators - Adam Higgins, OSU and Grace Privett, UO
Ryan Mehl, Ph.D., "Protein Engineering with GCE"
Chi Zhang, Ph.D., "Advancing Data Driven and AI empowered Systems Biology Approaches"
Jake Searcy, Ph.D., "Interpretable Attention in Multi-Instance Learning for Cancer Histopathology"

3:45-4:00pm Break with Small Bites In front of KCRB 1011

CONFERENCE SCHEDULE | AFTERNOON SESSIONS

Time	Activity	Location
4:00-5:30pm	<p>Keynote, Awards, and Closing Session</p> <p>Keynote Speech by Dr. David Huang, M.D., Ph.D. Yali Jia, Ph.D. - Introduction and Moderator</p> <p>Awards Announcement: OBS Chairs Siyu Chen and Clara Mosquera-Lopez</p> <p>Closing Remarks: Owen McCarty and Karina Nakayama</p>	Auditorium, KCRB 1015 Lecture Hall, KCRB 1011

5:30-7:00pm BMES Reception and Networking Social Lounge, KCRB 6120

Join us on the 6th Floor Terrace for a "Let's Taco Bout Science" networking social, hosted by our BMES student chapter. This event will feature a taco bar reception and two small-group discussion sessions where participants can join conversations facilitated by leaders from OHSU, the University of Oregon, and Oregon State University

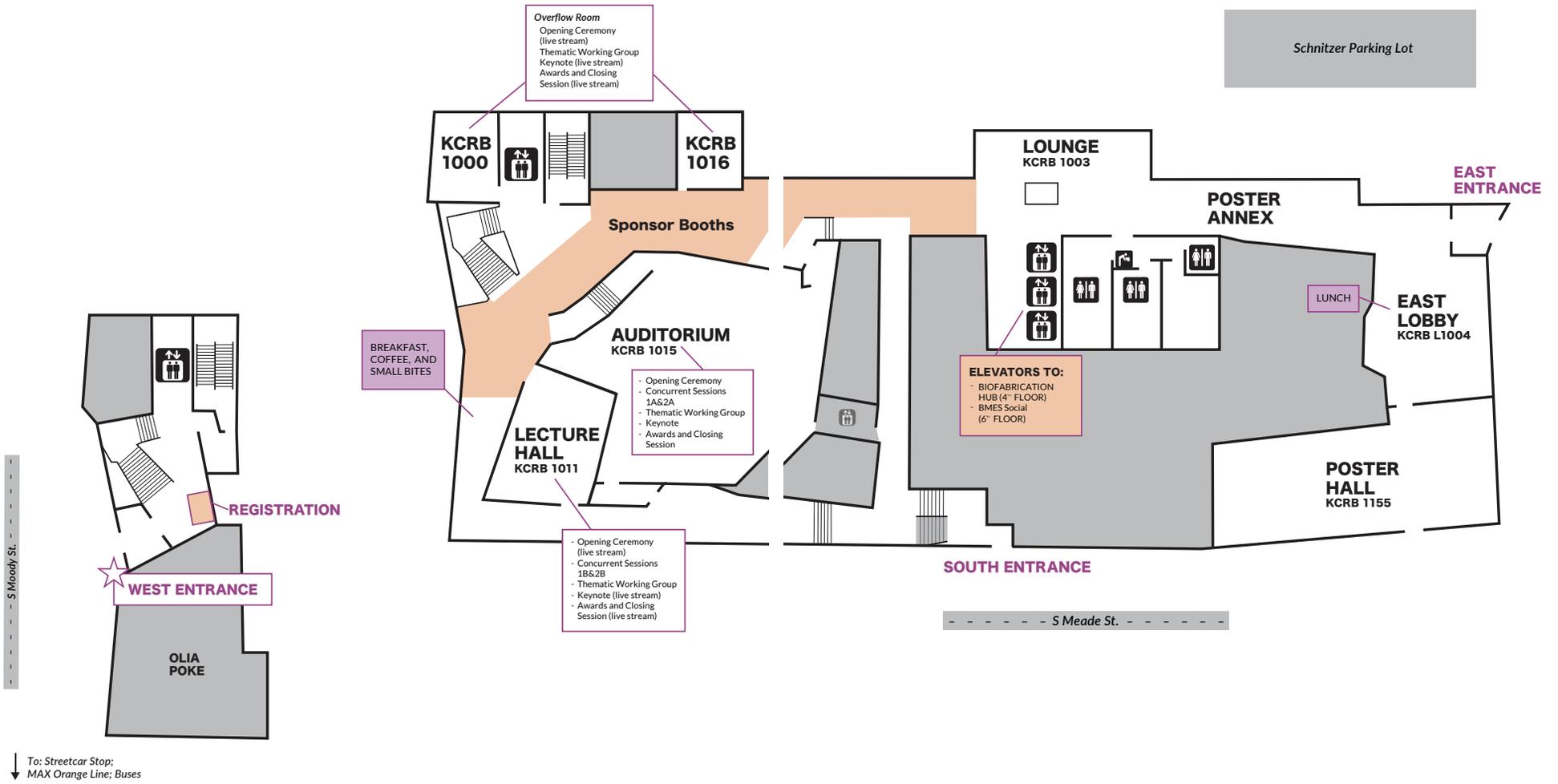
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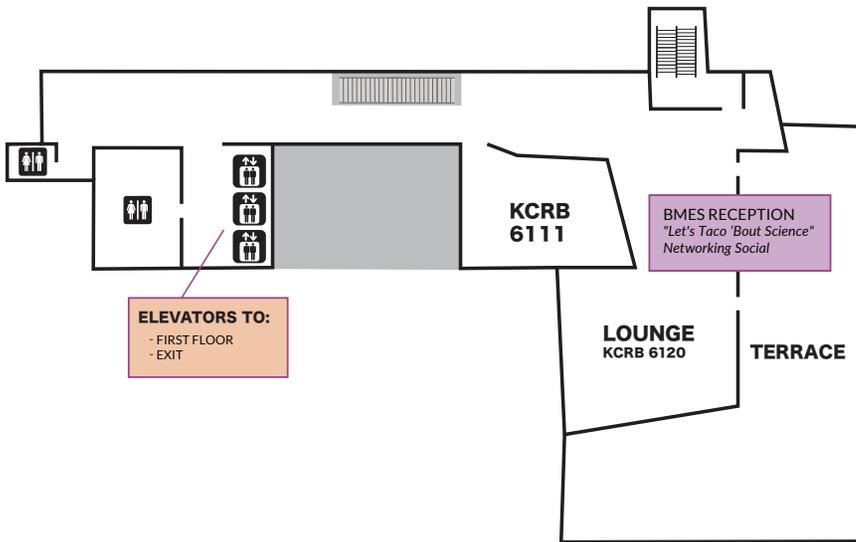
OBS2024

P1 & First Floor



OBS2024

Sixth Floor



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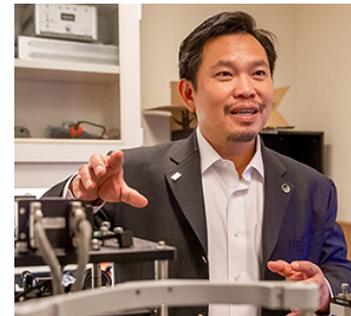


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KEYNOTE SPEAKER

David Huang, M.D., Ph.D.,

Associate Director and Director of Research of Casey Eye Institute, the Wold Family Endowed Chair in Ophthalmic Imaging, and Professor of Ophthalmology and Biomedical Engineering at the Oregon Health & Science University



The Oregon Bioengineering Symposium is pleased to welcome Dr. David Huang, M.D., Ph.D., Wold Family Endowed Chair in Ophthalmic Imaging and Professor of Biomedical Engineering at OHSU, as the 2024 keynote speaker.

Dr. Huang was awarded the United States' highest honor for technological achievement, the National Medal of Technology and Innovation, in 2023 by President Biden along with two collaborators for inventing optical coherence tomography (OCT), which routinely helps prevent blindness. He is Associate Director and Director of Research at Casey Eye Institute at OHSU and leads the Center for Ophthalmic Optics and Lasers centered at Casey Eye.

The keynote address will be held at 4:00 p.m. in the Auditorium and Live-Streamed to the Lecture Hall and Classrooms 1000 and 1016. Audience Q & A will follow, moderated by Yoli Jia, Professor of Ophthalmology and Biomedical Engineering, Jennie P. Weeks Professor of Ophthalmology, and associate director of the Center for Ophthalmic Optics & Lasers at Oregon Health & Science University and co-founder of International Ocular Circulation Society.



College of Engineering

Learn About Oregon State Bioengineering!

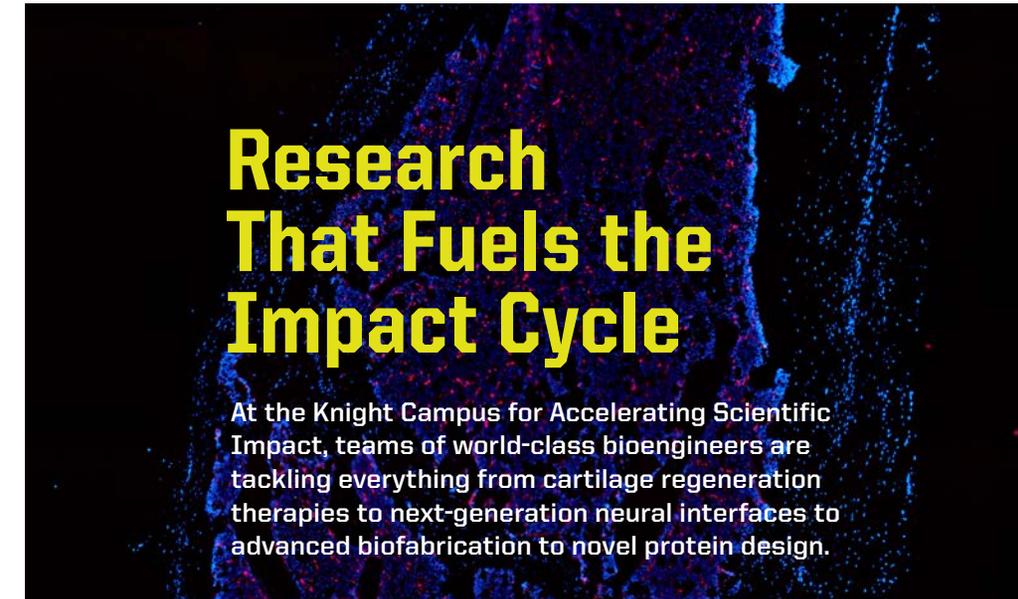


Our joint Ph.D. and M.S. bioengineering program combines the world-class resources of Oregon State University (OSU) and the University of Oregon (UO). The highly collaborative program is student-centric, enabling students to tailor their coursework to their individual research focus and career path, and has a unique emphasis on innovative research, industry partnerships, and professional ethics to achieve scientific and societal impact.



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FEATURED SPEAKERS

Owen McCarty

Chair of the Biomedical Engineering Department, School of Medicine, Oregon Health & Science University

Owen McCarty's research focuses on developing narrow mechanism-specific agents targeting the intrinsic pathway of coagulation and demonstrated that experimental thrombosis and platelet production in primates is interrupted by selective inhibition of activation of coagulation factor (F)XI by FXIIa. His current studies are focused on defining the role of the endothelium in inactivating FXI, as well as studies on whether inhibiting FXI is beneficial in a non-human primate model of sepsis. He received a Ph.D. in Chemical Engineering from Johns Hopkins University and is a fellow of the American Heart Association.

Owen McCarty's talk will be during the Opening Session from 9:00-9:30am in the Auditorium, and live-streamed to the Lecture Hall (KCRB 1011) and classrooms 1000 and 1016.

Danielle Benoit

Lorry Lokey Chair of the Department of Bioengineering, University of Oregon

Danielle Benoit's research specializes in the rational design of polymeric materials for regenerative medicine and drug delivery applications. Her work has provided insights into the translation of tissue engineering strategies for bone allograft repair, development of pH-responsive nanoparticles for nucleic acid and small molecule delivery, and novel targeting strategies for bone-specific delivery of therapeutics. An award-winning researcher, teacher, and mentor, she is a fellow of the National Academy of Inventors, American Institute of Medical and Biological Engineering, and the Biomedical Engineering Society, as well as an Associate Editor for Science Advances and the Journal of Biomedical Materials Research Part B.

Danielle Benoit's talk will be during the Opening Session from 9:00-9:30am in the Auditorium (KCRB 1015), and live-streamed to the Lecture Hall (KCRB 1011) and classrooms 1000 and 1016.

Elain Fu

Professor in Bioengineering, Warwick Family Faculty Scholar, Director of the Bioengineering Graduate Program, Oregon State University

Her lab develops field-use sensors with the aim of empowering patients in their healthcare via personalized biomarker monitoring.

Elain Fu's talk will be during the Opening Session from 9:00-9:30am in the Auditorium, and live-streamed to the Lecture Hall (KCRB 1011) and classrooms 1000 and 1016.

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FEATURED SPEAKERS



Young Hwan Chang

Associate Professor of Biomedical Engineering and Computational Biology and Co-Leader of the Quantitative Oncology Program, Oregon Health & Science University

Young Hwan Chang, Ph.D, earned his Ph.D. in Mechanical Engineering and completed postdoctoral training in EECS at UC Berkeley. His research focuses on developing algorithms and deep learning models for multiplex tissue imaging (MTI) and investigating how tumor immune microenvironments impact therapeutic outcomes.

Through the integration of computational and data-driven approaches, Dr. Chang advances cancer research and precision medicine, emphasizing quantitative image analysis, multi-modal integration, and computational modeling to better understand the tumor ecosystem.

Young Hwan Chang's talk will be during the Morning Scientific Session 1 from 9:30-9:45am in the Auditorium (KCRB 1015), and live-streamed to the Lecture Hall (KCRB 1011) and classrooms 1000 and 1016.



Summer Gibbs

Douglas Strain Endowed Professor of Biomedical Engineering, School of Medicine, Oregon Health & Science University

Dr. Summer Gibbs has more than 20 years of experience in the field of in vivo fluorescence imaging with expertise in fluorescent contrast agent development and its clinical translation. She completed my Ph.D. in Biomedical Engineering under the direction of Brian Pogue, Ph.D. at the Thayer School of Engineering at Dartmouth College in 2008. She joined Dr. John Frangioni's

Laboratory for her postdoctoral training where she completed three years of postdoctoral training and was promoted to Instructor in Medicine. She joined the faculty in the Biomedical Engineering Department at Oregon Health

and Science University (OHSU) as an Assistant Professor in June 2012 and was promoted to Professor in July 2022, where she is currently the Douglas Strain Endowed Professor. The current focus of her laboratory is on the development of novel fluorescent probes to improved macroscopic and microscopic patient-specific imaging. Over the past ten years she has worked towards the development of a near infrared (NIR) nerve-specific contrast agent for clinical translation to guide surgical procedures. She and her group have successfully developed first-in-class NIR nerve-specific small molecule contrast agents that are being clinically translated to aid in nerve identification and visualization during surgery. This technology has also been spun out of her laboratory into a startup company, Trace Biosciences, which is solely focused on clinical translation of this novel intraoperative imaging technique.

Summer Gibbs' talk will be during the Morning Scientific Session 1 from 10:15-10:30am in the Auditorium (KCRB 1015), and live-streamed to the Lecture Hall (KCRB 1011) and classrooms 1000 and 1016.



Binata Joddar

Associate Professor in Chemical, Biological, and Environmental Engineering at Oregon State University.

Dr. Binata Joddar earned her Ph.D. from a joint Bioengineering program at Clemson University and the Medical University of South Carolina. After completing post-doctoral research in cardiovascular biology at Ohio State University, where she received the Distinguished Post-Doctoral Researcher Award, Dr. Joddar advanced her expertise with

a Foreign Post-Doctoral Fellowship at RIKEN, Japan, focusing on stem cells and regenerative medicine. Before joining Oregon State University, Dr. Joddar spent 10 years as an assistant and associate professor of biomedical engineering at the University of Texas at El Paso (UTEP). Binata Joddar's research spans biomaterials, stem-cell-based tissue engineering, and tissue regeneration. Notable projects include 3D-printed microelectrode arrays for studying neuronal networks in microgravity, bioprinted cardiac models, and advanced tissue engineering techniques. Dr. Joddar has received grants from NIH, NSF, and NASA and holds patents for innovations such as photoreactive

FEATURED SPEAKERS

collagen-like peptides and electrospun scaffolds for cardiac tissue modeling. She serves as an Associate Editor for Biofabrication and is active in grant and journal review panels for NIH, NSF and the AHA. Passionate about mentoring underrepresented minority students, Dr. Joddar has guided numerous graduate and undergraduate students towards successful careers in STEM fields.

Binata Joddar's talk will be during the Morning Scientific Session 1 from 9:45-10:00am in the Auditorium (KCRB 1015), and live-streamed to the Lecture Hall (KCRB 1011) and classrooms 1000 and 1016.



Ryan Mehl

Professor, Department of Biochemistry & Biophysics, Director of the GCE4All Research Center, Oregon State University

Dr. Ryan Mehl's research for the last 20 years has focused on developing Genetic Code Expansion (GCE) tools to study protein structure and function and develop new protein-based technologies. Dr. Mehl received organic synthesis and mechanistic enzymology training under Tadhg Begley and chemical biology/protein engineering training under Peter Schultz. For 10 years he led an undergraduate-

based research lab at Franklin and Marshall College where he used GCE to study the structural and catalytic properties of proteins, and developed useful GCE spectroscopic probes and bioorthogonal ligation tools. In 2011, Dr. Mehl relocated to Oregon State University (OSU) to expand his research program and – based on his conviction of the importance of getting GCE out to the many researchers for whom it could make a difference – created an “Unnatural Protein (UP) Facility” dedicated to facilitating the use of GCE methods. In 2022, he, along with his team at OSU, were funded as the Genetic Code expansion for all (GCE4All) Biomedical Technology Optimization and Dissemination Center. The GCE4All Center builds upon the foundation of leadership, expertise and accomplishments generated in the UP Facility and will allow biomedical researchers around the world to have access to better scientific tools for using GCE technologies, enabling scientific breakthroughs worldwide.

Ryan Mehl's talk will be during the Afternoon Scientific Session 2 from 3:00-3:15pm in the Auditorium (KCRB 1015), and live-streamed to the Lecture Hall (KCRB 1011) and classrooms 1000 and 1016.



Raghu Parthasarathy

Professor of Physics, Oregon State University

Raghuveer Parthasarathy has been a Physics professor at the University of Oregon since 2006. His research focuses on bacterial communities, especially the structure and dynamics of the gut microbiome, which his group explores using zebrafish as a model organism, live imaging via light sheet fluorescence microscopy, and computational image analysis. His teaching interests mostly involve courses and writing for non-science majors and the general public.

Ragu Parthasarathy's talk will be during the Morning Scientific Session 1 from 10:30-10:15am in the Auditorium (KCRB 1015), and live-streamed to the Lecture Hall (KCRB 1011) and classrooms 1000 and 1016.



Jake Searcy

Assistant Professor in the Department of Data Science at the University of Oregon

Dr. Jake Searcy is an Assistant Professor in the Department of Data Science at the University of Oregon. His work focuses on overcoming barriers to implementing cutting-edge AI tools in domain-specific settings, particularly issues related to interpretability and limited domain-specific data. Prior to joining the University of Oregon, he developed novel AI methodologies at Ford Motor

Company after beginning his data science career as a particle physicist applying machine learning to data from CERN's Large Hadron Collider. Dr. Searcy received his Ph.D. in Physics from the University of Oregon in 2012.

Jake Searcy's talk will be during the Afternoon Scientific Session from 3:30-3:45pm in the Auditorium (KCRB 1015), and live-streamed to the Lecture Hall (KCRB 1011) and classrooms 1000 and 1016.

FEATURED SPEAKERS

Chi Zhang

Associate Professor of Biomedical Engineering and a member of the Center for Biomedical Data Science, Brenden-Colson Center for Pancreatic Care and Knight Cancer Institute at Oregon Health & Science University



Dr. Chi Zhang received his bachelor's degree in mathematics from Peking University in 2010 and Ph.D. in Bioinformatics from the University of Georgia with a minor in Statistics in 2015. He joined Indiana University School of Medicine (IUSM) as an assistant professor in 2016, was promoted to a tenured associate professor in 2022, associate director of the Center for Computational Biology and Bioinformatics in 2023, and then joined OHSU in 2024. His research focuses on studying the mathematical representations of biological processes, relations, and functions in omics data; developing new systems biology models and AI methods to enable in silico simulation and perturbation

analysis of disease systems; understanding biochemical and metabolic variations in the microenvironment of different diseases; and developing explainable and fair AI models for biomedical data. Dr. Zhang received the NIH NIGMS Maximizing Investigators' Research Award (MIRA) (R35), NSF career award, and American Cancer Society Research Scholar Award, and multiple R01s. Dr. Zhang also leads the bioinformatics and biostatistics analysis in the NCI Pancreatic Ductal Adenocarcinoma Stromal Reprogramming Consortium.

Chi Zhang's talk will be during the Afternoon Scientific Session from 3:15-3:30pm in the Auditorium (KCRB 1015), and live-streamed to the Lecture Hall (KCRB 1011) and classrooms 1000 and 1016.

Thank you to our Scientific Session moderators, Lei Wang (OHSU), Nataliia Shchotkina (UO), Adam Higgins (OSU) and Grace Privett (UO).

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BIOENGINEERING TALKS SELECTED FROM ABSTRACTS

A judging panel will select the award winner based on their presentations, which will be announced during the closing session.

In addition to the Excellence in Research Award, prizes will be awarded to students or trainees for the best lightning talk presentation and best poster presentations. All awards will be announced during the closing session.

Concurrent Session 1

Abstract Session 1A, 11:15-11:45, Auditorium (KCRB 1015)

Moderators: Sha Cao, OHSU and Binata Joddar, OSU

Kira Lynch, Graduate Student at Oregon Health & Science University
"A 3D Biofabricated Vascular Model for Elucidating Endothelial Cell Roles in Breast Cancer Progression Following Cardiovascular Disease"

Adam Rauff, Postdoctoral Scholar at University of Oregon
"Composite Microfiber-Hydrogel Scaffolds for Muscle Tissue Engineering Results in Structural Organization, and Mechanical Tailorability"

Molly Jenne, Undergraduate Student at Oregon State University
"Replicating Endometriosis Cellular Behavior with Engineered 3D In Vitro Hydrogel Model"

Abstract Session 1B, 11:15-11:45, Lecture Hall (KCRB 1011)

Moderators: Sayandeep Gupta, UO and Hillary Le, OHSU

Valeriia Stepanova, Graduate Student at Oregon State University
"Hippocampal Synaptic Changes in a Preclinical Mouse Model of Chronic Inflammatory Joint Pain"

Austin Ricci, Graduate Student at University of Oregon
"Fatigue Reduces Passive Elastic Modulus In an Age and Sex-Dependent Manner"

Samantha Moellmer, Graduate Student at Oregon Health & Science University
"Development and characterization of plasma prekallikrein monoclonal antibodies to study the role of contact activation in thromboinflammation"

Concurrent Session 2

Abstract Session 2A, 2:00-2:40, Auditorium (KCRB 1015)

Moderators: Andre Lira Da Silva, OHSU and Calin Plesa, UO

Xun Yu, Graduate Student at University of Oregon
"Skin Phototype Classification with Machine Learning based on Broadband Optical Measurements"

Jade White, Graduate Student at Oregon State University
"Chemical Characterization of Nanoplastics Shed from Feminine Hygiene Products"

Sarah Mitchell, Graduate Student at Oregon Health & Science University
"Immunofluorescent Quantification of Tumor-derived Cellular Material Isolated from Biological Fluids Using High Conductance Dielectrophoresis"

Kelly Leguineche, Graduate Student at University of Oregon
"Longitudinal Immune Profiling in Patients with Severe Tibia Fracture"

Abstract Session 2B, 2:00-2:40, Lecture Hall (KCRB 1011)

Moderators: Jason Ware, OHSU and David Johnson, UO

Gobinath Chithiravelu, Graduate Student at Oregon State University
"Mapping the Proteomics Landscape of the Cardiac Extracellular Matrix: Unraveling Molecular Changes through Bottom-Up Proteomics in Type-II Diabetes."

Gourav Kumar, Postdoctoral Scholar at Oregon Health & Science University
"Nerve-targeted near-infrared fluorophores for fluorescence-guided surgery"

Ander Switalla, Graduate Student at University of Oregon
"Multi-region Microelectrode Array for Studying Alterations in Neural Oscillatory Activity"

Michael Henderson, Graduate Student at Oregon Health & Science University
"Precise Control of Antibody Binding through Activatable Protein L-Linked Blocking Peptides"

LIGHTNING TALKS SELECTED FROM ABSTRACTS

Concurrent Session 1

Lightning Talks 1A, 11:15-11:45, Auditorium (KCRB 1015)

11:45-11:50 Sangam Buddhacharya, OSU

11:50-11:55 Rachel Thompson, OSU

11:55-12:00 Nikita Sehgal, OHSU

Lightning Talks 1B, 11:15-11:45, Lecture Hall (KCRB 1011)

11:45-11:50 Lia Strait, UO

11:50-11:55 Valentina Roquemen-Echeverri, OHSU

11:55-12:00 Ajay Ratty, OSU

Sangam Buddhacharya - OSU, Graduate Student

Progress in the development of a point-of-care device for anti-seizure medication titration: electrochemical signal quantification in saliva using multivariate and machine learning methods

Rachel Thompson - OSU, Graduate Student

Cryopreservation of Intact Intervertebral Discs

Nikita Sehgal - OHSU, Graduate Student

Ultrasound-responsive dendrimer-microbubble complexes as gene delivery vectors for precision cancer gene therapy

Lia Strait - UO, Graduate Student

Systemic Immune Response Following BMP-2 Treated Bone Injury is Time and Dose Dependent

Valentina Roquemen-Echeverri - OHSU, Graduate Student

A physiology-guided artificial intelligence digital twin framework for replicating glucose dynamics in type 2 diabetes

Ajay Ratty - OSU, Graduate Student

Effects of Incremental Scaphoid Proximal Pole Excision on Carpal Kinematics

Concurrent Session 2

Lightning Talks 2A, 2:00-2:40, Auditorium (KCRB 1015)

2:40-2:45 Caleb Nejely, OSU

2:45-2:50 Johnathan Pang, Lewis & Clark University

2:50-2:55 Marina Nimmo, OHSU

2:55-3:00 Sophie Biegel, UO

Lightning Talks 2B, 2:00-2:40, Lecture Hall (KCRB 1011)

2:40-2:45 Ifra Ilyas Ansari, UO

2:45-2:50 Karly Fear, UO

2:50-2:55 Kenneth Riley, OHSU

2:55-3:00 Eve Elwood and Cassidy Harn, OSU

Caleb Nejely - OSU, Undergraduate Student

3D Printed Microneedle Arrays for Accessible Precision Health Applications

Johnathan Pang - OHSU, Undergraduate Student

Development of A Rapid Laser Assisted Bioprinting Method to Pattern Cells of The Breast Tumor Microenvironment

Marina Nimmo - OHSU, Graduate Student

Hemodynamic force analysis to quantify clinical outcomes in obstructive hypertrophic cardiomyopathy following treatment with myosin inhibitors

Sophie Biegel - UO, Undergraduate Student

Nanoparticles co-loaded with siRNA and small molecule drugs for osteoarthritis therapeutic delivery

Ifra Ilyas Ansari - UO, Graduate Student

Investigating In-Vitro Performance of Nafion as a Capping Layer on PEDOT:PSS for Thin-Film Microelectrode Array

Karly Fear - UO, Graduate Student

Orthogonal heterodimers for geometric assembly and interaction specificity

Kenneth Riley - OHSU, Graduate Student

Developing a Novel Label-free Technology for Epigenetic Landscape Reconstruction from Isolated Mononucleosomes

Eve Elwood and Cassidy Harn - OSU, Undergraduate Student

Determining the Effects of Progesterone on the Barrier Integrity of an in vitro Vaginal Epithelial Model

POSTER SESSION A

- 1 **Ashkan Abbasi - OHSU, Postdoctoral Scholar**
Evaluating Long-Term Visual Field Test Prediction from Limited Input Using Neural Networks
- 2 **Mahjabeen Tamanna Abed - Washington State University, Graduate Student**
Towards Long-Term At-Home Cardiac Monitoring: A Multimodal Sensing and Learning Framework
- 3 **Megan Adamec - UO, Undergraduate Student**
Impedimetric Sensor for Continuous Monitoring of Adherent L929 Cell Growth
- 4 **Iman Adem - OHSU, Graduate Student**
Delivery of TLR 7/8 Agonist via a Cancer-Targeting Peptide for Enhanced Immunotherapy
- 5 **Alexandra Aeschliman - UO, Undergraduate Student**
Leveraging biomimetic peptide structure to increase accumulation of nanoparticle drug delivery systems at fracture sites
- 6 **Nima Ahmadkhani - OSU, Graduate Student**
Optimizing Cryopreservation with High-Throughput Screening: Discovering Effective Cryoprotectant Mixtures at Varied Temperatures
- 7 **Cynthia Alcazar - OHSU, Research Associate**
Functional repair and regenerative engineering of composite bone-muscle injury in mouse lower extremity trauma
- 8 **May Anny Alves Fraga - OHSU, Graduate Student**
An organ on-a-chip model of the early oral squamous cell carcinoma interactions with the mineralized bone matrix
- 9 **Liam Aranda-Michel - University of Pittsburgh and Lake Oswego High School, High School Student**
An Open-Source Pressure Myograph and Cardiac Flow Simulator for Analysis of Native and FRESH 3D-Bioprinted Vasculature
- 10 **Alireza Asgharpour Masouleh - OSU, Graduate Student**
Time Scale Analysis as a Design Tool for Alzheimer's Disease Therapeutic Devices
- 11 **Avathamsa Athirasala - OHSU, Postdoctoral Scholar**
Circulating Tumor Cells in a Vascularized Bone-on-a-Chip Model Links Matrix Mineralization and Nuclear Damage as Novel Drivers of Prostate Cancer Progression

POSTER SESSION A

- 12 **Cole baker - OHSU, Graduate Student**
Assessing magnesium alloys anti-thrombogenicity mechanism using in vitro biochemical assays
- 13 **Sangam Buddhacharya - OSU, Graduate Student**
Progress in the development of a point-of-care device for anti-seizure medication titration: electrochemical signal quantification in saliva using multivariate and machine learning methods
- 14 **Nicholas Calistri - OHSU, Graduate Student**
Differential myofibroblast populations stratify PARPi response in murine model of Triple Negative Breast Cancer
- 15 **Canping Chen - OHSU, Graduate Student**
Elevated MHC-II Expression in Pancreatic Ductal Adenocarcinoma is Associated with Immune Activation and Enhanced Treatment Outcomes
- 16 **DeShea Chasko - UO, Graduate Student**
Engineering 3D biofabricated models that contain nonlinear stiffness gradients to probe bone marrow niche stem cell migration and phenotype
- 17 **Amanda Clark - OSU, Graduate Student**
Characterization of tertiary lymphoid structures in inflammatory bowel disease
- 18 **Jameson Cosgrove - OHSU, Research Engineer**
Development of a microfluidic platform to investigate innervated and vascularized prostate cancer spheroids
- 19 **Brock Cottle - UO, Undergraduate Student**
Tailoring Hydrogel Mechanical Properties: The Role of Functional Groups in Gelatin Bioinks
- 20 **Lily Crow - OHSU, High School**
High-throughput fabrication and assembly of geometrically controlled 3D printed jammed microgels to instruct cell infiltration and response in regenerative scaffolds
- 21 **Pengtao Dang - OHSU, Computational Biologist**
Physics Informed Constrained Learning of Dynamics from Static Data
- 22 **Holly Day - OHSU, Graduate Student**
Development of a 3D-printed microfluidic model to investigate endothelial crosstalk in breast cancer progression

POSTER SESSION A

- 23 **Camilla Der - UO, Undergraduate Student**
Tracheostomy Tube Sensor Attachment to Detect Emergency Airway Events in Pediatric Patients
- 24 **Aiden Dillon - UO, Graduate Student**
Evolution of Retinal Neuron Fractality When Interfacing with Carbon Nanotube Electrodes
- 25 **Victoria Duke - OHSU, Graduate Student**
Anemia Dysregulates the Systemic Inflammatory Response and Impedes Bone Healing after Fracture
- 26 **Liliana Escobedo - UO, Undergraduate Student**
Comparative Analysis of Protein Expression in Normal and Keratoconus Cornea Cells: Insights from Western Blotting
- 27 **Cora Ferguson - UO, Graduate Student**
Differences in cartilage matrix deposition between human primary cells sourced from damaged and preserved regions of osteoarthritis affected joints
- 28 **Jarod Forer - UO, Graduate Student**
Microcirculation clearance pathways are altered in a preclinical model of Achilles tendon rupture and repair
- 29 **Nathaniel Fox - UO, Research Assistant**
Investigating the Effect of Charged Nanoparticles on Macrophage Polarization
- 30 **Cristiane Franca - OHSU, Faculty**
Microengineering the oral carcinoma environment to understand the role of hybrid cells on tumor progression
- 31 **Connor Frankston - OHSU, Graduate Student**
Chromatin Marker Enrichment Analysis of Topologically Associating Domain Boundaries Suggests Heterogeneous Mechanisms of TAD Formation
- 32 **Esmee Fuller - UO, Undergraduate Student**
Cryopreservation of 3D Chondrocyte Constructs for Accelerating Osteoarthritis Research: Evaluation of Cryoprotectant Efficacy and Cartilage Health
- 33 **Tina Ghodsi Asnaashari - OHSU, Graduate Student**
Precision Subtyping of Breast Cancer using Single-cell Spatial Omics: Integrating Machine Learning and Comparative Analysis
- 34 **Alec Gosiak - OHSU, Graduate Student**
3D Printing of tissue models using dissolvable photo-poly(N-isopropylacrylamide) as sacrificial templates

POSTER SESSION A

- 35 **Sowjanya Gowrisankaran - OHSU, Postdoctoral Scholar**
Retinal Nerve Fiber Layer Thickness Peak Normalization: Effect on normative variability and abnormality detection.
- 36 **William Greer - OHSU, Graduate Student**
Probing the biomolecular target of nerve-specific fluorophores for utility in Fluorescence Guided Surgery
- 37 **Sayandeep Gupta - UO, Postdoctoral Scholar**
Large scale expression of human proteome antigen libraries in E. coli
- 38 **Tyler Guyer - UO, Graduate Student**
All-Trans Retinoic Acid Modulates Systemic Immune Cells in a Rat Model of Musculoskeletal Trauma
- 39 **Krista Habing - OHSU, Graduate Student**
Age-Associated Efficacy of Downhill Exercise Rehabilitation for Functional Recovery Following Musculoskeletal Trauma
- 40 **Auveen Hajarizadeh - UO, Undergraduate Student**
The Role of Intermittent Rest in Enhancing Bone Regeneration and Immune Modulation During Rehabilitation
- 41 **Patrick Hall - UO, Graduate Student**
High Resolution Tomographic Volumetric Printing with Low-Cost, Mechanically-Tunable, Synthetic Hydrogels
- 42 **Phillip Hernandez - UO, Graduate Student**
Tunable nanoparticle properties impact siRNA delivery to chondrogenic cells
- 43 **Andrew Holston - UO, Graduate Student**
Precision engineering of fusion phase variants to optimize chimeric histidine kinase functionality
- 44 **Mahshid Hosseini - OHSU, Graduate Student**
A Nanoscale Mineralized 3D Osteosarcoma Model
- 45 **Cindy Huang - OHSU, Undergraduate Student**
AXL and PD-L1 inhibitors co-delivered via nanoparticle in triple-negative breast cancer
- 46 **Rose Hulsey-Vincent - UO, Graduate Student**
Basal ganglia lesions induce stuttering in adult canaries.

POSTER SESSION A

- 47 **Emma Jacobs - UO, Graduate Student**
Development of a 128-Channel Bidirectional Neural Headstage for Investigating Depression-Relevant Circuits
- 48 **Tanner Jefferson - OSU, Graduate Student**
Digital Microfluidics Platform Performs Synthesis of Transcription Factors and Assesses Binding Capabilities to Target DNA Sequence
- 49 **Maya Kasteleiner - UO, Graduate Student**
Exploring Neuronal Cell Culture Systems based on 3D printed Microfibers
- 50 **Khadijeh Khederlou - OSU, Graduate Student**
Nafion antifouling coatings on stencil-printed electrodes for sensitive electrochemical detection of the epilepsy therapy drug carbamazepine from human saliva
- 51 **Hillary Le - OHSU, Graduate Student**
The effects of cannabinoids on endothelial dysfunction
- 52 **Jee Min Lee - OHSU, Graduate Student**
MC4R as a potential prognostic biomarker for cancer progression and treatment response.
- 53 **Noel Lefevre - OSU, Graduate Student**
Hippocampal Hyperexcitability in a Mouse Model of Chronic Knee Pain
- 54 **Charlotte Lippa - UO, Undergraduate Student**
Composite Microfiber-Hydrogel Scaffolds Improve Cellular Viability and Seeding in Muscle Constructs
- 55 **Luca Lippert - UO, Undergraduate Student**
Engineering and characterizing chimeric DcuS/EnvZ histidine kinases against novel ligands
- 56 **Haley Mae Lohf - UO, Undergraduate Student**
Accelerated Long-term Chemical Stability Evaluation of Multichannel Thin-film Implants

POSTER SESSION B

- 57 **Fabiana Lopez-Ruiz - Willamette University, Undergraduate Student**
The Use of Dielectrophoresis to Analyze Cancer-Derived Nanoparticles in Pancreatic Juice
- 58 **Mary Lowrey - OHSU, Graduate Student**
3D Bioprinting Ultrasound-Responsive Tissue Constructs for Remote-Controlled Genetic Manipulation of Cells and Spheroids
- 59 **Cassidy Mahan and Dara Coon - OSU, Undergraduate Students**
Characterizing the Influence of pH on an in vitro Model of the Vaginal Epithelium
- 60 **Charles Mainwaring - OSU, Graduate Student**
Developing a Structured Approach to Healing a Circadian-Based Phenotype of Major Depression with Bright Light Therapy using Simulations.
- 61 **Rawan Makkawi - OHSU, Graduate Student**
Investigating spatiotemporal heterogeneity of osteosarcoma cells using a live-cell tissue explant model of lung metastasis
- 62 **Gauri Malankar - OHSU, Postdoctoral Scholar**
Development of Prostate Cancer-Targeted NIR Fluorescent Probes for Improved Surgical Outcomes
- 63 **Mary McDonnell - OHSU, Graduate Student**
Identification of Etiological Differences between EO CRC and LO CRC from Evolutionary Force Reconstructions
- 64 **Ian McLean - OHSU, Graduate Student**
Integrative Analysis of EGF, OSM, and TGF β Signaling Pathways Reveals Synergistic Mechanisms Driving Cell Motility Through CXCR2 Chemotactic Signaling and CREB Activation
- 65 **Kailin Mooney - OHSU, Research Engineer**
Lipoprotein hitchhiking peptide amphiphiles for fluorescent imaging of glioblastoma
- 66 **Cameron Moore - UO, Graduate Student**
Antioxidant nanoparticles comprised of polyphenolic amphiphilic diblock copolymers to overcome age-related fracture healing dysregulation
- 67 **Vaibhav Murthy - OHSU, Graduate Student**
Single-cell signaling dynamics governing cellular adaptation in TNBC to lung ex-vivo tissue model
- 68 **Jonathan Nguyen - OHSU, Graduate Student**
Injectable Bone-like Microgels for Regeneration of Bone Defects.

POSTER SESSION B

- 69 **Shelby Nicholas - OHSU, Undergraduate Student**
Dielectrophoresis Isolation and Electrochemical Analysis of Biomarkers from Complex Mixtures
- 70 **Kelly O'Neill - UO, Graduate Student**
Harnessing Nano- and Micro-fiber Alignment for Enhanced Peripheral Nerve Growth
- 71 **Julissa Ortiz-Delatorre - UO, Graduate Student**
Alterations to Skeletal Muscle Passive Mechanics Influence the Development of Adolescent-Onset Planar Curves in a Urotensin II-Mutated Pre-Clinical Model
- 72 **Ethan Oseas - OHSU, Graduate Student**
Postoperative Outcomes in Transgender Patients Receiving Estrogen-Based Hormone Therapy.
- 73 **Yan Carlos Pacheco - UO, Graduate Student**
Protein conjugation onto hyaluronic acid polymers for regenerative medicine applications
- 74 **Nicholas Pancheri - UO, Graduate Student**
Low intensity physical rehabilitation modestly attenuates tibial osteophytes and pain sensitization in a preclinical anterior cruciate ligament rupture model
- 75 **Makena Phillips - OHSU, Graduate Student**
Disruptions in Second Heart Field Cells During Early Heart Development Induces Blood Flow and Structural Changes in the Developing Heart of the Chicken Embryo
- 76 **Frank Pittman - UO, Graduate Student**
Local biomaterial delivery of exogenous specialized pro-resolving lipid mediators improves functional outcomes after Volumetric Muscle Loss
- 77 **Vignesh Rangasami - UO, Postdoctoral Scholar**
Bone-targeted nanoparticles for accelerating non-union fracture healing
- 78 **Kenneth Riley - OHSU, Graduate Student**
Developing a Novel Label-free Technology for Epigenetic Landscape Reconstruction from Isolated Mononucleosomes

POSTER SESSION B

- 79 **Guilherme Rocha - UO, Postdoctoral Scholar**
Reproducible 3D bioprinting of Streptococcus mutans to create a novel oral biofilm model in vitro.
- 80 **Christian Ross - OHSU, Graduate Student**
On-Chip DNA Isolation via DEP and PCR Amplification from Unaltered Plasma
- 81 **Daniela Roth - OHSU, Postdoctoral Scholar**
Spatial transcriptomic profiling of an engineered on-chip tumor model
- 82 **Shelby Santos - OHSU, Graduate Student**
Evaluation of Cooperative Behavior of the Protein Hub LC8 with IDPs via Molecular Dynamics Simulations
- 83 **Mehrzad Sasanpour Yazdi - OHSU, Postdoctoral Scholar**
Development of an Internal Standard Protocol to Enhance the Reproducibility of Cancer Biomarker Detection Using Dielectrophoresis-Based Recovery of Nanoparticles from Plasma Samples
- 84 **Kevin Schilling - OHSU, Research Engineer**
High-Resolution Mapping of Oxygen Tension in Engineered 3D Tumor Microenvironments with Ruthenium-complex Nanomicelle Optical Sensors
- 85 **Sidharth Sengupta - OHSU, Graduate Student**
Radiomic texture analysis of benign thyroid nodules and response to radiofrequency thyroid ablation
- 86 **Selim Sevim - OHSU, Staff Scientist**
A Human-in-the-loop Deep Learning Driven Annotation Framework for Multiplexed Digital Pathology
- 87 **Natalia Shchotkina - UO, Graduate Student**
In Vitro Models of Osteoarthritis: Understanding Immune Microenvironment Dynamics in Cartilage Degradation
- 88 **Delaney Shea - OHSU, Graduate Student**
Engineering probiotic bacteria as antibiotic and anti-biofilm therapeutic delivery vehicles
- 89 **Mauricio Sousa - OHSU, Postdoctoral Scholar**
Biomimetic regulation of osteoclastogenesis in an engineered bone on a chip
- 90 **Kathleen Specht - Willamette University, Undergraduate Student**
FRET Pair Placement Impact on Quadruplex Biosensor Binding and Stability

POSTER SESSION B

- 91 **Ella Stimson - OHSU, Graduate Student**
Detection of High-Grade Serous Carcinoma Using Protease Activity Level as a Blood-Based Biomarker
- 92 **Cameron Sugden - OSU, Graduate Student**
High Throughput Method to Assess Vitrification Capabilities of Cryoprotective Agents
- 93 **Emily Sverdrup - UO, Undergraduate Student**
In vivo and in vitro screening of pro-resolving lipid mediator to attenuate joint inflammation and osteoarthritis pathology
- 94 **Paveethran Swaminathan - OHSU, Graduate Student**
Benchmarking Imputation Quality to Identify Reliable Spatial Gene Predictions from Histology Images and Integrating scGPT for Expanding gene expression Profiles
- 95 **Anthony Tahayeri - OHSU, Research Assistant**
Fabrication of millimeter scale tissue guides for 3D bioprinting of multiple cell types.
- 96 **Max Tenenbaum - UO, Research Assistant**
High-Density Indium Microbump Interconnection for Thin-Film Neural Interfaces
- 97 **Riya Thakkar - OSU, Undergraduate Student**
Using Immunohistochemistry to Determine the Composition of Cervical Dysplasia Tissue Samples
- 98 **Alexandra Tihomirov Bukchin - OHSU, Postdoctoral Scholar**
Size-isolated Microparticles for Selective Ultrasound-Activated Gene Delivery in Tissue-Engineered Constructs
- 99 **Joshua Vanderpool - OHSU, Graduate Student**
Development of a 3D-Printed Internal Fixation Plate for Tibial Stabilization in a Composite Injury Mouse Model
- 100 **George Vengrovski - UO, Graduate Student**
TweetyBERT: Unsupervised Representation Learning for Canary Song Segmentation and Clustering
- 101 **Sofia Vignolo - OHSU, Graduate Student**
An engineered model to elucidate molecular clutch mechanisms of mechanotransduction during bone nanoscale mineralization
- 102 **Natanya Villegas - UO, Graduate Student**
Barcoded Assisted Retrieval – CRISPR Activated Targeting (BAR-CAT) Is a Novel Tool for Enriching Synthetic Genes at Scale

POSTER SESSION B

- 103 **Jason Ware - OHSU, Graduate Student**
Distinguishing Pancreatic Ductal Adenocarcinoma from Benign Pancreatic Disease via Electrokinetic Isolation and Electrochemical Analysis of Extracellular Vesicles
- 104 **Yuhui Wei - OHSU, Graduate Student**
Computational Methods for Central and Lipid Metabolism Networks Analysis to Reveals Flux Change in PDAC
- 105 **Tim Wheeler - UO, Postdoctoral Scholar**
A Material-Agnostic Method For Optimizing Volumetric Bioprinting Shape Fidelity Using Machine Learning
- 106 **Waverly Wilson - UO, Undergraduate Student**
Computational Design of Protein Pathway Inhibitors
- 107 **Alister Wong - UO, Undergraduate Student**
Evaluating the Impact of 3D-printed Bioresins on Angiogenesis In Vitro
- 108 **Lillian Wu - OHSU, Research Assistant**
eDentin: a Bioengineered Membrane for Dental Pulp Capping
- 109 **Li Xiang - OHSU, Postdoctoral Scholar**
Ultrasound Responsive Injectable Hydrogels for On-Demand Drug Delivery
- 110 **Rubiya Yasmin - UO, Graduate Student**
Computational Modeling of Mechanical Strain in Brain Tissue Induced by Microelectrode Array Implantation
- 111 **Sarah Young - UO, Undergraduate Student**
Measuring Gene Expression from a 3D Model of Post-Traumatic Osteoarthritis
- 112 **Yujia Zhang - OHSU, Graduate Student**
Multiplexed super-resolution imaging of cells and clinical tissue sections from nanometer to millimeter scales

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