

12th International Symposium on Selenium in Biology and Medicine
Coral Ballroom I, Hilton Hawaiian Village, Honolulu, Hawaii, USA
February 16-20, 2022

Wednesday, February 16

1:00-4:00 pm – Registration, outside of Coral I Ballroom

4:00-5:00 pm – Welcoming Presentations by Marla Berry and Peter Hoffmann

5:00-6:00 pm – Plenary Talk 1: Vadim Gladyshev, Brigham and Women's Hospital, Harvard Medical School, USA "Genomics of Selenium Utilization"

6:00-8:00 pm – Conference Opening Reception

Thursday, February 17

8:00-10:00 am – Speaker Session IA, Session Chair: Lutz Schomburg

8:00-8:20 Fenghua Qian “Gpr44 mediates the selenium-dependent anti-leukemic effect in acute myeloid leukemia”

8:20-8:40 Arun Sharma “Stage-specific inhibition of NNK-induced lung carcinogenesis by the organoselenium small molecule 1,4-phenylenebis(methylene)seleno-aspirin (*p*-XS-Asp)”

8:40-9:00 Tai-Jung (Reness) Lee “Investigating the role of selenoproteins in neutrophils during bacterial gut Infection”

9:00-9:20 Sarah White-Springer “Beyond antioxidants: Selenium in Mitochondrial Biology”

9:20-9:40 McKayla Nicol “Macrophage Selenoproteins Inhibit Autophagy and Restrict Intracellular Replication of *Francisella tularensis*”

9:40-10:00 Dohoon Kim “Toxicification and Detoxification of Selenium in Cancer Cells”

10:00-10:30 am - Michael Howard “Secis-specific functions and trans-acting factors that determine ribosome fate at UGA-Sec codons”

10:30-11:00 am - Coffee Break

11:00 am -12:20 pm - Speaker Session IB, Session Chair: Alan Diamond

11:00-11:20 Nicholas Ralston “Complementary and synergistic selenoenzyme inhibitors”

11:20-11:40 David Hughes “Can Selenium prevent Cancer? May depend on where not just whom you ask.”

11:40-12:00 Joel Caton “Maternal Selenium Supply and Offspring Developmental Outcomes”

12:00-12:20 Justin Jacobse “Selenoprotein-deficient T cells exhibit impaired thymopoiesis, increased oxidative stress, and apoptosis”

12:30-2:00 pm - Lunch/Poster viewing outside of Coral I Ballroom

2:00 pm -3:00 pm - Speaker Session IIC, Session Chair: Lucia Seale

2:00 pm – James Olzmann “Ferroptosis resistance in cancer: Lipid antioxidants and selenium Metabolism”

2:20 pm – Peter Nagy “Selenium dependence of Persulfidation-Mediated Protection and Control of Protein Functions”

2:40 pm – **Byeong Jae Lee “Selenophosphate synthetase 1, non-essential for selenophosphate synthesis, but essential for us”**

3:00 pm - Plenary Talk #4: Lenny Winkel, Institute for Biogeochemistry and Pollutant Dynamics, Switzerland

"Marine Biogenic Emissions as a Source of Terrestrial Selenium"

4:15 pm - Bus pick-up at Grand Islander Bus Loading Zone, Hilton Hawaiian Village Hotel

5:30-7:30 pm - Dinner/Whale Watching Cruise

Friday, February 18

8:00-10:00 am – Speaker Session IIA, Session Chair: Girish S. Kirimanjeshwara

8:00-8:20 Sarah Short “Glutathione peroxidase 1 loss protects against colitis and promotes intestinal proliferation and regeneration”

8:20-8:40 Sougat Misra “The role of selenoprotein W in redox metabolism and mitochondrial function in macrophages during experimental inflammation”

8:40-9:00 Daniel Torres “Selenium, steroids, sex, brains, and energy”

9:00-9:20 Ana Clara Baião Menezes “Feeding a Se-containing trace mineral supplement during pregnancy: effects on mitochondrial oxygen consumption in liver and small intestine of neonatal calves”

9:20-9:40 Irida Kastrati “SELENOF is a New Tumor Suppressor in Breast Cancer”

9:40-10:00 Alain Lescure “Characterization of SelenoN molecular structure and cellular landscape in the endoplasmic reticulum”

10:00-10:30 am - Elena Piskounova “Selenocysteine tRNA methylation regulates stress resistance in melanoma metastasis”

10:30-11:00 am - Coffee Break

11:00 am -12:20 pm - Speaker Session IIB, Session Chair: David Hughes

11:00-11:20 Alan Diamond “Loss of SELENOF contributes to prostate cancer progression and the health disparity experienced by African American men”

11:20-11:40 Sandeep Prabhu “The role of selenoproteins in stress erythropoiesis”

11:40-12:00 Gary Banuelos “Utilization of selenium- enriched waters as a biofortification strategy”

12:00-12:20 Larry Reynolds “Role of Selenium in Reproduction in Mammals”

12:30-2:00 pm - Lunch/Poster Presentations outside of Coral I Ballroom

2:00-4:20 pm - Speaker Session IC, Session Chair: Paul Copeland

2:00-2:20 Christopher Williams “A role for SelenoP in inflammatory bowel disease and colitis associated cancer”

2:20-2:40 **Peko Tsuji “Potential role of SelenoF in intestinal barrier integrity”**

2:40-3:00 Jasmin Rees “Ancient Loss of Selenocysteine in a Catalytic Site Spurs Compensatory and Convergent Evolution in a Mammalian Selenoprotein”

3:00-3:20 Jean Hall “Supranutritional Se supplementation of beef calves at weaning improves nasal microbial diversity, whereas supplementation of beef cows during pregnancy results in higher whole blood Se concentrations in their calves at weaning, but not enough to improve nasal microbial diversity”

3:20-3:40 Wen-Hsing Cheng “Optimized Selenium Status, Gut Microbiota, and diabetes”

3:40-4:00 Lucia Seale “Selenium in brown adipose tissue adaptive thermogenesis”

4:00-4:20 Markus Dagnell “Regulation of PTP1B activity by the Thioredoxin and Glutaredoxin/Glutathione systems”

4:30-5:30 pm - Plenary Talk 2: Margaret Rayman, University of Surrey, UK "The relevance of selenium to viral disease with special reference to SARS-CoV-2 and COVID-19"

5:30-6:30 pm - Plenary Talk 3: Roger Sunde, University of Wisconsin, USA "Fifty years of selenium biochemistry, transcriptomics, and metabolism"

6:30 pm - Free Evening

Saturday, February 19

8:00-10:00 am – Speaker Session IIIA, Session Chair: Wen-Hsing Cheng

8:00-8:20 Didac Santesmasses "Tolerance to selenoprotein loss differs between human and mouse"

8:20-8:40 Katherine Restori "Selenium and selenoproteins are essential for pathogen fitness and influence enteric bacterial infection"

8:40-9:00 Matt Pitts "Oxidative Stress, Selenium, and GABAergic Inhibition"

9:00-9:20 Wellison Da Silva Diniz "Maternal Selenium Supplementation During Different Trimesters of Pregnancy: Effects on Offspring Muscle Transcriptome"

9:20-9:40 Andre Seale "The involvement of deiodinases and thyroid hormones during freshwater acclimation in an euryhaline fish"

9:40-10:00 Pauline Beziat "The selenometabolome of marine phytoplankton – optimization of extraction and analytical techniques for algal intracellular Se speciation"

10:00-10:30 am – Paul Copeland "Deciphering a SECISBP2L-dependent selenoprotein rescue pathway in zebrafish"

10:30-11:00 am - Coffee Break

11:00 am - 12:20 pm - Speaker Session IIIB, Session Chair: Joel Caton

11:00-11:20 Elias Arner "Probing the impact of selenoproteins in control of cellular fate"

11:20-11:40 Ulrich Schweitzer "Re-coding at the UGA with and without SECISBP2 probed by ribosomal profiling"

11:40-12:00 Xingen Lei "Developmental regulation and novel functions of selenogenome in avian species"

12:00-12:20 Carrie Hammer "Evaluation of maternal selenium supplementation and plane of nutrition on the neonatal Fc receptor (FcRn) in ewe mammary tissue"

12:30-2:00 pm - Lunch/Poster viewing outside of Coral I Ballroom

2-4 pm - Speaker Session IIIC, Session Chair: Gary Banuelos

2:00-2:20 Chi Ma "Roles for Selenoprotein I and Ethanolamine Phospholipid Synthesis in T Cell Proliferation and Differentiation"

2:20-2:40 Natalie Krahn "Cysteine-to-selenocysteine replacement in a [NiFe]-hydrogenase confers extreme oxygen tolerance"

2:40-3:00 Jennifer Pilat "Selenoprotein P (SELENOP) binds LRP5/6 to modulate WNT signaling activity"

3:00-3:20 Maria Schwarz "Crosstalk of selenium with other trace elements"

3:20-3:40 James Matthews "Sensitivity of pituitary and hepatic selenoprotein transcriptomes to consumption of ergot alkaloids in growing cattle"

3:40-4:00 Juliana Ranches "Differences in selenium and copper markers between Angus and Brahman cattle"

4:30-5:30 pm – Plenary Talk 5: Lutz Schomberg, Charité-Universitätsmedizin Berlin, Germany "The Role of Selenoprotein P in Human Health and Disease"

5:30-7:00 pm – Ballroom setup for banquet

7:00-10:00 pm - Dinner Banquet

Sunday, February 20

8-10 am – Speaker Session IVA, Session Chair: Sandeep Prabhu

8:00-8:20 **Jeyoung Bang** “Identification of Signaling Pathways for Early Embryonic Lethality and Developmental Retardation in *Sephs1*^{-/-} Mice”

8:20-8:40 Sarah Sumner “Regulation of peripheral B cell homeostasis by selenoproteins”

8:40-9:00 Christina Chung “Engineering selenocysteine-specific reporters using inteins”

9:00-9:20 Girish Kirimanjeswara “Regulation of B cell development by Selenoproteins”

9:20-9:40 Carl Dahlen “Selenium Transfer from Dam to Fetus: Movement and Mechanisms”

9:40-10:00 Alexandru Sasuclark “The influence of selenium on perineuronal net and neural network development”

10:00-10:30 am – Marco Mariotti “Comparative genomics of selenocysteine in eukaryotic lineages”

10:30-11:00 am - Coffee Break

11:00 am -Noon – Speaker Session IVB, Session Chair: Matthew Pitts

11:00-11:20 Shaneice Nettleford “The effect of selenoprotein W in inflammatory bowel disease”

11:20-11:40 Gijis Du Laing “Course and survival of COVID-19 patients with comorbidities in relation to selenium and zinc status at hospital admission”

11:40-Noon – Sharon Rozovsky “Human Selenoprotein S interactions with the SARS-CoV-2 replication complex”

Noon-12:30 pm – Business Meeting

12:30-1:00 pm – Closing Session

Note: Talks listed in red will be presented as pre-recorded videos