

3rd INTERNATIONAL CADMIUM & TRACE ELEMENT CONFERENCE

**JUNE, 24-26
2026**



SASSARI, ITALY



Dear Friends and Colleagues,
It is a great pleasure to welcome you to the 3rd
International Cadmium and Trace Element Conference,
June 2026

The Conference, that will include a wide spectrum of presentation covering the main aspects of cadmium and trace elements biology as well as its clinical implications, is divided into six main sessions:

Cell Biology, Cancer, Other Diseases, Environment, Toxicity and Agriculture, botany and Veterinary.

Participants will have the opportunity to exchange ideas with worldwide experts in the field and highly distinguished international speakers from different scientific areas related to biology, medicine, toxicology, chemistry, and environmental sciences.

We hope that you will enjoy the Conference and have a wonderful stay in Sardinia.

Yours Sincerely
Roberto Madeddu
Chairman

3rd International Cadmium and Trace Elements Conference ICTEC 2026

Sassari, Sardinia, Italy | 24 - 26 June 2026

FULL PROGRAMME

Wednesday, 24 June 2026 - Morning

Aula Magna, Piazza Università 21

10:00

Registration Opening I - Aula Magna, Piazza Università 21

11:00 - 12:00

Opening Ceremony

- Institutional Greetings
- Greetings from Authorities
- Musical Performance by Maria Giovanna Cherchi
- Plenary Lecture: Cadmium and Human Health: Lessons from the Past, Challenges for the Future. Prof. Jin-Yong Lee - Aichi Gakuin University, Japan
- Performance by the University of Sassari Choir

12:00

Welcome Light Lunch

Wednesday, 24 June 2026 - Afternoon

Sala conferenze, Palazzo ERSU, Via Coppino 19

14:00

Registration Opening II

14:30 - 15:45 CELL BIOLOGY I

Co-Chairs Wing Kee Lee | Serenella Medici

14:30 - 14:45

Smoking Derived Trace Elements and Cardiovascular Diseases - Biological and Clinical Implications

Franziska Wittmann¹, Teresa Ruthmeier¹, Adrian Kirchhoff², David Bernhard^{3,4}, Clara Ganhör³, Daniel Zimpfer¹, Barbara Messner¹

¹Department of Cardiac and Thoracic Aortic Surgery, Medical University of Vienna, Austria; ²Evangelical Deaconess Hospital, Leipzig, Germany; ³Division of Pathophysiology, Institute of Physiology and Pathophysiology, Medical Faculty, Johannes Kepler University Linz, Austria; ⁴Clinical Research Institute for Cardiovascular and Metabolic Diseases, Medical Faculty, Johannes Kepler University Linz, Austria

14:45 - 15:00

Manganese homeostasis in the nervous system

Michael Aschner¹

1. Department of Molecular Pharmacology, Albert Einstein College of Medicine, Bronx, NY.

- 15:00 - 15:10** Cadmium Triggers Lysosomal Exocytosis via the Endo-/Lysosomal Ion Channel TRPML1 in Renal Pathophysiology
Kaya Elisa Witte¹, Moritz Spallek¹, Wing-Kee Lee¹
 1. *Physiology and Pathophysiology of Cells and Membranes, Medical School OWL, Bielefeld University*
- 15:10 - 15:20** The extreme C-terminus of PMS2 licenses MutL α mismatch repair activity and suppresses microsatellite instability
Aishwarya Prakash^{1,2,*}, Stefan Bourgeois^{1,2}, Edward A. Salter³, Andrzej Wierzbicki³, Megan Patterson^{1,2}.
¹*Mitchell Cancer Institute, University of South Alabama Health, 1660 Springhill Avenue; Mobile, AL 36604;* ²*Department of Biochemistry and Molecular Biology, University of South Alabama Whiddon College of Medicine; Mobile, AL 36688;* ³*Department of Chemistry, University of South Alabama, Mobile, AL, USA*
- 15:20 - 15:45** Discussion

15:45 - 17:00 ENVIRONMENT & FOOD I

Co-Chairs Agneta Åkesson | Marco Vinceti

- 15:45 - 16:00** Trace elements and challenges to global public health
Margherita Ferrante¹, Paola Rapisarda¹, Gea Oliveri Conti¹
 1. *Environmental and Food Hygiene Laboratory, University of Catania*
- 16:00 - 16:10** Identifying Drivers of Skeletal Deformities in Fish from Iron Ore Mine-Impacted Waters in Northern Sweden
Magnus Karlsson¹, Bo Dellings², Arvid Jonsson¹, Karin Pernold³, Tomas Viktor¹,
 1. *Swedish Environmental Research Institute;* 2. *Swedish Museum of Natural History;* 3. *Karolinska Institutet.*
- 16:10 - 16:20** Tracing elements in chick gulls: trophic and spatial patterns of contamination
Binkowski Ł.J.^{1,2}, Fort J.², Bustamante P.²
 1. *Institute of Biology and Earth Sciences, University of the National Education Commission, Krakow, Poland;* 2. *Littoral, Environnement et Sociétés (LIENSs), UMR 7266 CNRS - La Rochelle Université, La Rochelle, France*
- 16:20 - 16:30** Natural environment and health: how strong is the link?
Paolo Valera¹, Eleonora Loi², Ana Florencia Vega Benedetti², Silvia Cossu², Francesca Floris², Francesca Simbola², Alessia Pistis², Patrizia Zavattari²
 1. *Department of Civil-Environmental Engineering and Architecture, University of Cagliari. Italy* 2. *Department of Biomedical Sciences, Unit of Biology and Genetics, University of Cagliari. Italy*
- 16:30 - 16:40** Cadmium and Heavy Metal Exposure: Integrating Biomonitoring and Reproductive Toxicity in Young Adults
Rossella Tomaiuolo¹, Chiara Di Resta², Francesco Paleari², Floriana Iannace², Roberto Leone², Ivan Shashkin², Marco Fumagalli², Assunta Naderio³, Massimo Locatelli³, Paola M. V. Rancoita⁴, Giuseppe Banfi¹
 1. *Faculty of Medicine and Surgery, Vita-Salute San Raffaele University, Milan, Italy;* and *IRCCS Galeazzi-Sant' Ambrogio, 20157, Milan, Italy;* 2. *Faculty of Medicine and Surgery, Vita-Salute San Raffaele University, Milan, Italy;* 3. *Laboratory Medicine, IRCCS San Raffaele Scientific Institute, Milan, Italy;* 4. *Faculty of Medicine and Surgery, Vita-Salute San Raffaele University, Milan, Italy;* and *University Centre for Statistics in the Biomedical Sciences (CUSSB), Vita-Salute San Raffaele University, Milan, Italy.*

16:40 - 17:00

Discussion

17:00 - 17:30

Coffee Break

17:30 - 18:45 CANCER & OTHER DISEASES I

Co-Chairs Michael Aschner | Paolo Valera

17:30 - 17:45

Heavy metal accumulation in biological matrices of cancer patients

Serenella Medici¹

1 - Department of Chemical, Physical, Mathematical and Natural Sciences, University of Sassari, Sassari, Italy.

17:45 - 17:55

Long-term cadmium exposure and fractures, cardiovascular disease, and mortality in a prospective cohort of women

Agneta Åkesson¹

1-Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden

17:55 - 18:05

Hair zinc, copper, and Zn/Cu ratio in children with autism spectrum disorder: an exploratory case-control study

Maria Fiore³, Renata Rizzo¹, Tommaso Filippini², Eliana Pellegrino³, Andrea Moscato⁴, Margherita Ferrante³, Rita Barone¹.

1. *Child and Adolescent Neurology and Psychiatry, Department of Clinical and Experimental Medicine, University of Catania, Italy;* 2. *Department of Biomedical, Metabolic and Neural Sciences, University of Modena and Reggio Emilia, Modena, Italy;* 3. *Department of Medical, Surgical Sciences and Advanced Technologies "G.F. Ingrassia", University of Catania, Italy;* 4. *School of Medical Specialization in Hygiene and Preventive Medicine, Department "G.F. Ingrassia" of the University of Catania, Italy.*

18:05 - 18:15

Arsenic-induced atherosclerosis in a humanized Arsenic (3)

Methyltransferase hyperlipidemic mouse model

Koren K. Mann¹, Nivetha Subramaniam^{1,3}, Natascha Gagnon¹, Kelly Tran², Peter Hans Cable⁴, Miroslav Styblo⁴, Brandon Pearson⁵

1. *Lady Davis Institute for Medical Research, Montreal, Quebec, Canada;* 2. *Department of Pharmacology and Therapeutics, McGill University, Montreal, Quebec, Canada;* 3. *Division of Clinical and Translational Research, McGill University, Montreal, Quebec, Canada;* 4. *Department of Nutrition, University of North Carolina, Chapel Hill, North Carolina, United States;* 5. *Department of Environmental and Molecular Toxicology, Oregon State University, Oregon, United States*

18:15 - 18:45

Discussion

Thursday, 25 June 2026

09:00 - 10:15 TOXICOLOGY I

Co-Chairs Jin-Yong Lee | Margherita Ferrante

09:00 - 09:15

The safe range of selenium intake: lessons from experimental human studies

Marco Vinceti^{1,2}, Lauren Wise², Marcella Malavolti¹, Teresa Urbano¹, Tommaso Filippini^{1,3}

¹Section of Public Health, University of Modena and Reggio Emilia Medical School, Modena 41125, Italy; ²Department of Epidemiology, Boston University School of Public Health, Boston, Massachusetts, USA; ³School of Public Health, University of California Berkeley, Berkeley, California, USA.

- 09:15 - 09:30** From Safe Doses to Risky Mixtures: The Toxicity of Real-Life Metal Mixtures
Aleksandra Buha Đorđević¹
1. Department of Toxicology, University of Belgrade-Faculty of Pharmacy
- 09:30 - 09:40** Manganese: A neurotoxic compound with a 'soft' health-based guidance value
Thorhallur Ingi Halldorsson
Faculty of Food Science and Nutrition, University of Iceland
- 09:40 - 09:50** Toxicological Risk Assessment of Elemental Impurities in Pharmaceutical Products
Ahmet Aydin¹
1. Department of Pharmaceutical Toxicology, Faculty of Pharmacy, Yeditepe University, Istanbul, Turkey, ahmet.aydin@yeditepe.edu.tr
- 09:50 - 10:15** *Discussion*

10:15 - 11:30 CELL BIOLOGY II

Co-Chairs John Wise | Tommaso Filippini

- 10:15 - 10:30** Dependency of metal toxicity on its speciation: lessons from cadmium and hexavalent chromium in the kidney
Wing-Kee Lee¹, Johannes Fels², Faouzi Dahdouh², Bettina Scharner², Frank Thévenod^{1,2}
1. Physiology and Pathophysiology of Cells and Membranes, Medical School OWL, Bielefeld University, Bielefeld, Germany; 2. Department of Physiology and Pathophysiology, ZBAF, Witten/Herdecke University, Witten, Germany
- 10:30 - 10:40** The cadmium-induced renal toxicity regulated by the transcriptional pathway
Jin-Yong Lee¹, Maki Tokumoto¹, Masahiko Satoh¹
1. Laboratory of Public Health, School of Pharmacy, Aichi Gakuin University, Nagoya 464-8650, Japan.
- 10:40 - 10:50** Investigating the Effects of Cadmium Exposure on Prostate Cancer Cell Behaviour and Metastatic Signalling
Melissa Santos¹, Pinar Uysal -Onganer¹
¹ Cancer Mechanisms and Biomarkers Research Group, School of Life Sciences, University of Westminster, London W1W 6UW, UK; m.santos@westminster.ac.uk; P.onganer@westminster.ac.uk
- 10:50 - 11:00** Modulation of Gemcitabine Sensitivity by Chronic Cadmium Exposure in Pancreatic Cancer Cells
Federica Etzi¹, Ornella Sassu¹, Grazia Fenu², Simona Dedoni³, Daniela Virginia Frau¹, Tinuccia Dettori¹, Grazia Galleri², Andrea Pisano², Cristiano Farace², Angela Sabalic², Claudia Trignano², Paola Fadda³, Paola Caria¹ and Roberto Madeddu^{2,5,6}
¹Department of Biomedical Sciences, Unit of Biology and Genetics, University of Cagliari, 09142 Cagliari, Italy; ²Department of Biomedical Science, University of Sassari, 07100 Sassari, Italy; ³Department of Biomedical Sciences, Division of Neuroscience and Clinical Pharmacology, University of Cagliari, 09142 Cagliari, Italy; ⁵National Institute of Biostructures and Biosystems, 00136 Rome, Italy; ⁶International Society for Research on Cadmium and Trace Element Toxicity, 07100 Sassari, Italy;
- 11:00 - 11:10** Female reproductive toxicology of cadmium
Peter Massányi¹, Róbert Toman¹, Jiřina Zemanová¹, Roberto Madeddu², Robert Stawarz³, Norbert Lukáč¹
1-Slovak University of Agriculture in Nitra, Nitra, Slovak Republic; 2- Università degli Studi di Sassari, Sassari, Italy; 3 -University of the National Education Commission, Kraków, Poland

12:00 - 13:30 FLASH TALK I - Cell Biology, Cancer & Other Diseases

Co-Chairs Biljana Antonijevic | Paola Caria

- P 1** *Tor1 Modulates Adaptive Responses to Cadmium: Enhanced Metabolic Plasticity Following Sub-Toxic Pre-Exposure*
Alica Navrátilová¹, Lucia Klongová², Marek Kovár³, Miroslava Požgajová²
 1-Institute of Nutrition and Genomics, SUA, Nitra, Tr. A. Hlinku 2, 949 76 Nitra, Slovakia; 2-AgroBioTech Research Center, SUA, Nitra, Tr. A. Hlinku 2, 949 76 Nitra, Slovakia ; 3-Institute of Plant and Environmental Sciences, SUA, Nitra, Tr. A. Hlinku 2, 949 76 Nitra, Slovakia
- P 2** *Human iPSC-Based Cardiac Platforms for Translational Cardiotoxicity Testing*
Verena Charwat^{1,2}, Sara Lugmayr¹, Brian Siemons¹, Eva Mair¹, Bence Harsanyi¹, David Bernhard^{1,2}
 1. Johannes Kepler University, Department of Pathophysiology, Linz, Austria; 2. Johannes Kepler University, Clinical Research Institute for Cardiovascular and Metabolic Diseases, Linz, Austria
- P 3** *Of Whales and Men, Translating How Chromosome Instability Drives Environmental Lung Carcinogenesis across Species and Biological Levels of Organization*
John Pierce Wise, Sr.¹, Haiyan Lu¹, Idoia Meaza¹, Aggie Williams¹, Sandra S. Wise¹, Rachel M. Wise¹
 1. Wise Laboratory of Environmental and Genetic Toxicology, Department of Pharmacology and Toxicology, University of Louisville, Louisville, Kentucky, USA
- P 4** *Results and troubleshooting in intracellular heavy metal-targeting of a fluorescent hydroxy naphthyl-methylbenzoxazole based dye*
Loris Zamai¹, Mariele Montanari¹, Daniele Lopez^{1,2}, Caterina Ciacci¹, Eleonora Macedi², Daniele Paderni², Ludovica Di Fabrizio¹, Daniele Gori³, Chiara Barattini³, Angela Volpe³, Alfredo Ventola³, Vieri Fusi² and Barbara Canonico¹.
 1- Department of Biomolecular Sciences (DISB), University of Urbino Carlo Bo, Italy; 2- Department of Pure and Applied Sciences (DISPeA), University of Urbino Carlo Bo, Italy; 3- AcZon srl, Monte San Pietro (BO), Italy.
- P 5** *The effect of ZnO nanoparticles on H295R cells in vitro*
Tomas Jambor¹, Hana Greifova, Anton Kovacik, Nikola Stefunkova, Norbert Lukac
 1. Institute of Applied Biology, Faculty of Biotechnology and Food Sciences, Slovak University of Agriculture in Nitra, Tr. A. Hlinku 2, 949 76, Nitra, Slovak Republic
- P 6** *Trace metal exposure and childhood leukemia risk: an Italian case-control study*
Marcella Malavolti¹, Teresa Urbano¹, Tommaso Filippini¹, Carlotta Malagoli¹, Giovanni Palazzi², Maria Caterina Putti³, Giovanna Russo⁴, Maria Fiore⁵, Margherita Ferrante⁵, Bernhard Michalke⁶, Marco Vinceti^{1,7}
 1. Department of Biomedical, Metabolic and Neural Sciences, University of Modena and Reggio Emilia, Modena, Italy; 2. Pediatric Onco-Hematology Unit, Azienda-Ospedaliero Universitaria di Modena, Modena, Italy; 3. Clinic of Pediatric Haematology Oncology, Department of Woman's and Child's Health, University Hospital of Padua, Padua, Italy; 4. Pediatric Onco-hematology Unit, Azienda Policlinico Rodolico San Marco, Department of Clinical and Experimental Medicine, University of Catania, Catania, Italy; 5. Department of Medical Sciences, Surgical and Advanced Technologies "G.F. Ingrassia", University of Catania, Catania, Italy; 6. Helmholtz Zentrum München, Ingolstädter Landstraße 1, 85764 Neuherberg, Germany; 7.

Department of Epidemiology, Boston University School of Public Health,
Boston, USA

P 7

Post Mortem Cerebrospinal Fluid for Trace Metal Analysis: A Pilot Study on Analytical Potential and Interpretative Pitfalls

Claudia Trignano¹, Giovanni Forte², Beatrice Bocca², Michele Treglia³, Raffaele La Russa⁴, Davide Tutedde¹, Roberto Madeddu¹

¹Department of Biomedical Sciences, University of Sassari, Sassari, Italy;

²Department of Environment and Health, Italian National Institute of Health (ISS), Rome, Italy; ³Section of Legal Medicine, Social Security and Forensic Toxicology, Department of Biomedicine and Prevention, University of Rome

"Tor Vergata", Italy; ⁴ Department of Life, Health and Environmental Sciences, University of L'Aquila, Italy.

10 min

Discussion

Co-Chairs Jamie Wise | Maria Fiore

P 8

Plasma Metallome Profiling by ICP-MS/MS in Bipolar Disorder and Major Depressive Disorder: A Chemometric Cross-Sectional Study

Giacomo Zencacqua¹, Donatella Coradduza^{1,2}, Stefania Sedda², Andrea Sanna³, Alessandra M. Nivoli⁴, Maria R. De Miglio⁴, Ciriaco Carru², Massimiliano Grosso⁵, Serenella Medici¹

¹Department of Chemical, Physical, Mathematical and Natural Sciences, University of Sassari, Italy; ²Department of Biomedical Sciences, University of Sassari, Italy; ³SC Chimica, Istituto Zooprofilattico Sperimentale della Sardegna, Italy; ⁴Department of Medicine, Surgery and Pharmacy, University of Sassari, Italy; ⁵Department of Mechanical, Chemical, and Materials Engineering, University of Cagliari, Italy

*Corresponding author: dcoradduza@uniss.it

P 9

Trace element exposure and risk of progression from mild cognitive impairment to dementia

Teresa Urbano¹, Tommaso Filippini^{1,2}, Annalisa Chiari³, Marcella Malavolti¹, Roberta Bedin^{1,3}, Giovanna Zamboni^{1,3}, Yoshiro Saito⁴, Marco Vinceti^{1,5}

¹University of Modena and Reggio Emilia, Department of Biomedical, Metabolic, and Neural Sciences, Modena, Italy; ²University of California Berkeley, School of Public Health, Berkeley, California, United States of America; ³University Hospital of Modena, Neurology Unit, Modena, Italy;

⁴Tohoku University, Laboratory of Molecular Biology and Metabolism, Graduate School of Pharmaceutical Sciences, Sendai, Japan; ⁵Boston University School of Public Health, Department of Epidemiology, Boston, Massachusetts, United States of America

P 10

Amyotrophic Lateral Sclerosis and Trace Elements: A Preliminary Case-Control Study in Sardinia, Italy

D. Tutedde^{1,2}, G. Forte^{2,3}, B. Bocca³, A. Pisano¹, C. Farace¹, M. Scarafuggi^{1,2}, A. Sabalic¹, P. Valera, P. Zavattari⁵, G. Borghero⁶, R. Madeddu^{1,2}

¹ Department of Biomedical Science, University of Sassari, Sassari 07100, Italy; ² International Society for Research on Cadmium and Trace Element Toxicity - ISRCT, Sassari 07100, Italy; ³ Department of Environment and Health, Italian National Institute of Health, Rome 00161, Italy; ⁴ Neurology Unit, AOU Cagliari, Hospital D. Casula Monserrato, Cagliari, Italy; ⁵

Department of Biomedical Sciences, Unit of Biology and Genetics, University of Cagliari, Cagliari, Italy; ⁶ National Research Council of Italy-Institute of Environmental Geology and Geoengineering (IGAG), Cagliari 09124, Italy.

- P 11** *Levels of Toxic Metals in the Meconium of Newborns*
Durdica Marić¹, Natalija Leontijević¹, Miloš Krstić¹, Jovana Živanović¹, Evica Antonijević Miljaković¹, Marijana Čurčić¹, Danijela Đukić-Čosić¹, Zorica Bulat¹, Biljana Antonijević¹, Zoran Vilendečić^{2,3}, Aleksandra Buha Djordjević¹
 1. Department of Toxicology "Akademik Danilo Soldatović", University of Belgrade - Faculty of Pharmacy, Belgrade, Serbia; 2. Clinic for Gynecology and Obstetrics, University Clinical Center of Serbia, Belgrade, Serbia; 3. School of Medicine, University of Belgrade, Belgrade, Serbia.
- P 12** *Maternal copper levels in early pregnancy and risk of miscarriage*
Wioleta J. Omeljaniuk^{1*}, Anna Pryczynicz², Elżbieta Milewska¹, Wojciech Miltyk¹
¹ Department of Analysis and Bioanalysis of Medicines, Medical University of Białystok, A. Mickiewicza 2D, 15-222 Białystok, Poland; ² Department of General Pathomorphology, Medical University of Białystok, J. Waszyngtona 13, 15-269 Białystok, Poland *e-mail of corresponding author: wioleta.omeljaniuk@umb.edu.pl
- P 13** *Concentration of metals in follicular fluid of women undergoing assisted reproductive technology*
Giovanni Forte¹, Beatrice Bocca¹, Davide Tutedde^{2,3}, Matteo Scarafuggi^{2,3}, Patrizia Monti⁴, Angela Sabalic⁵, Giampiero Capobianco⁴, Roberto Madeddu^{2,3}.
¹ Italian National Institute for Health, Department of Environment and Health, Viale Regina Elena 299, 00161 Rome, Italy; ² Department of Biomedical Science, University of Sassari, Sassari 07100, Italy; ³ International Society for Research on Cadmium and Trace Element Toxicity - ISRCT, Sassari 07100, Italy; ⁴ Gynecologic and Obstetric Clinic, Department of Medical, Surgical and Experimental Sciences, University of Sassari, Sassari, Italy; ⁵ Oncology department – ASST Papa Giovanni XXIII, Bergamo, Italy.
- P 14** *Cadmium and lead in placentas: evidence from Croatia*
Ankica Sekovanić¹, Tatjana Orčić¹, Zorana Kljaković-Gašpić¹
¹Institute for Medical Research and Occupational Health, Zagreb, Croatia

10 min [Discussion](#)

13:30 - 14:30 Lunch with the "Coro Don Renato Loria di Muros" (traditional Sardinian choir)

14:30 - 15:45 **CANCER & OTHER DISEASES II**

Co-Chairs Thorhallur Ingi Halldorsson | Claudia Trignano

- 14:30 - 14:45** Trace elements as biomarkers in oral carcinogenesis: Where we stand in India!
Sunali Khanna¹
¹ Department of Oral Medicine and Radiology, Nair Hospital Dental College, Mumbai, India

14:45 - 15:00

Adipose tissue cadmium as a biomarker of long-term cadmium exposure and its cardiometabolic implications in the GraMo cohort

Juan P. Arrebola^{1,2,3}, Eduardo Linares-Ruiz¹, Francisco M. Pérez-Carrascosa^{1,2}, Celia Pérez-Díaz^{1,2}, Željka Fiket⁴, Petra Vrhovnik⁵, Inmaculada Salcedo-Bellido^{1,2,3}

1. Department of Preventive Medicine and Public Health, University of Granada, Granada, Spain; 2. Instituto de Investigación Biosanitaria ibs.GRANADA, Granada, Spain; 3. CIBER Epidemiology and Public Health (CIBERESP), Instituto de Salud Carlos III, Madrid, Spain; 4. Ruđer Bošković Institute, Division for Marine and Environmental Research, Zagreb, Croatia; 5. Institute SeMe: Environmental Awareness and Sustainable Development, Poljčane, Slovenia.

15:00 - 15:10

Plasma and Urinary Heavy Metal Profiles as Biomarkers for Prostate Disease Progression: A Multi-Metal ICP-MS Study

Donatella Coradduza¹

¹Department of Biomedical Sciences, University of Sassari, Italy

15:10 - 15:20

It's Complicated: How Sex, Diet and Metals Interact to Drive Liver Disease

Jamie L. Wise¹, Gabrielle C. Griffin¹, John Pierce Wise, Sr.², Lu Cai³, Matthew C. Cave⁴, John P. Wise, Jr.⁵

1-Wise Laboratory of Liver and Environmental Health, Department of Pharmacology and Toxicology, University of Louisville, Louisville, KY, USA; 2-Wise Laboratory of Environmental and Genetic Toxicology Department of Pharmacology and Toxicology, University of Louisville, Louisville, KY, USA; 3-Pediatric Research Institute, Department of Pediatrics, University of Louisville, Louisville, KY, USA; 4-Division of Gastroenterology, Hepatology and Nutrition, University of Louisville, Louisville, KY, USA; 5-NeuroWise Laboratory, Department of Pharmacology and Experimental Therapeutics, The University of Toledo, Toledo, OH, USA

15:20 - 15:45

Discussion

15:45 - 17:00 ENVIRONMENT & FOOD II

Co-Chairs Ahmet Aydin | Luisa Bogliolo

15:45 - 16:00

New insights into human biomonitoring of cadmium exposure

Silvia Fustinoni¹

¹Department of Clinical Sciences and Community Health, University of Milan, Italy.

16:00 - 16:10

Cadmium Burden and Disrupted Metal Homeostasis in Multiple Sclerosis Patients from a Volcanic Area: A Case-Control Study

Chiara Copat¹, Calogero Edoardo Cicero¹, Alfina Grasso¹, Carmen Sica¹, Maria Fiore¹, Alessandra Nicoletti¹, Margherita Ferrante¹

1. Department of Medical, Surgical Sciences and Advanced Technologies "G.F. Ingrassia", University of Catania, Italy

16:10 - 16:20

Density-dependent efficiency: the role of isidia and algal cells on mercury accumulation in lichens

Mazari Ait Kaci¹, Paolo Meroi¹, Enrico Boccato¹, Federico Floreani², Fabrizio Monaci³, Stefano Covelli² and Mauro Tretiach¹.

1. Department of Life Sciences, University of Trieste, Via Giorgieri 10, Trieste 34127, Italy; 2. Department of Mathematics, Informatics and Geosciences, University of

Trieste, Via Weiss 8, Trieste 34128, Italy; 3. Department of Life Sciences, University of Siena, Via Mattioli 4, Siena 53100, Italy.

16:20 - 16:30 Importance of chemical speciation in understanding the cycling of mercury in the environment

Julia Lu¹

¹Toronto Metropolitan University, Canada

16:30 - 17:00 *Discussion*

17:00 - 17:30 **Coffee Break**

17:30 - 19:15 **FLASH TALK II** - *Environment, Agriculture & Veterinary*

Co-Chairs Koren K Mann | Massimiliano F. Peana

17:30 - 17:45 Opening address - Scientific journal presentation **Toxics**

P 15 *Elevated Temperature Potentiates Cadmium Toxicity during In Vitro Maturation of Oocytes and Early Embryonic Development in the Ovine model*

Andrea Podda¹, Chiara Cosseddu¹, Daniela Bebbere¹, Federica Ariu¹, Giovanni Giuseppe Leoni², Luisa Bogliolo¹.

1. Department of Veterinary Medicine, University of Sassari, Sassari, Italy;

2. Department of Biomedical Science, University of Sassari, Sassari, Italy.

P 16 *Comparative analysis of cadmium profiles in liver, kidney, and muscle of bovines, equines, and cervids*

Stefania Squadrone¹, Alessandra Griglione¹, Paolo Palmegiano¹, Leo Costa¹, Diana Giuffrida¹, Chiara Marchese¹, Maria Cesarina Abete¹

1. Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta, Turin (Italy)

P 17 *Differential association of trace elements with homocysteine and oxidative stress markers in freshwater fish in situ*

Anton Kovacik¹, Marek Helczman¹, Eva Tvrda^{2,3}, Marian Tomka³, Eva Kovacikova⁴, Tomas Jambor¹, Peter Massanyi¹

1. Institute of Applied Biology, Faculty of Biotechnology and Food Sciences, Slovak University of Agriculture in Nitra, Slovakia; 2. Chair of Animal Breeding and Biotechnology, Institute of Veterinary Medicine and Animal Sciences, Estonian University of Life Sciences, Tartu, Estonia; 3. Institute of Biotechnology, Faculty of Biotechnology and Food Sciences, Slovak University of Agriculture in Nitra, Slovakia; 4. Institute of Nutrition and Genomics, Faculty of Agrobiological and Food Resources, Slovak University of Agriculture in Nitra, Slovakia

P 18 *Heavy Metals in Blue Crab (*Callinectes sapidus*) from Sardinia: Preliminary Food Safety Assessment*

Sanna A.¹, Cossu M.¹

¹Istituto Zooprofilattico Sperimentale della Sardegna, Laboratorio di Chimica Ambientale e Tossicologia, Via Vienna 2, Sassari, Italy.

- P 19** *Analysis of mercury concentration in selected types of loose-leaf teas*
Barbara Brodziak-Dopierala¹, Julia Świerkot¹, Agnieszka Fischer¹
¹Department of Toxicology, Toxicological Analysis and Bioanalysis, Faculty of Pharmaceutical Science, Medical University of Silesia, Poland
- P 20** *Influence of drip irrigation on the mobility and accumulation of As, Cd, and Ni in a commercial hybrid rice variety*
G. Garau¹, M. Zanda¹, L. Canu¹, L. Piseddu¹, S. Diquattro¹, G. Sanna², A. Mara², M. Garau¹, P. Castaldi¹
1. Dipartimento di Agraria, University of Sassari, Sassari, Italy; 2. Dipartimento di Scienze Chimiche, Fisiche, Matematiche e Naturali, University of Sassari, Sassari, Italy.
- P 21** *Role of humic acids in shaping trace element content in maize cultivated on iron-supplemented soil*
Mirosław Wyszkowski¹, Natalia Kordala¹
¹Department of Agricultural and Environmental Chemistry, University of Warmia and Mazury in Olsztyn, Poland.

10 min *Discussion*

Co-Chairs Miroslava Požgajová | Giovanni Garau

- P 22** *Cadmium Distribution in Soils and Iron Oxyhydroxides: Implications for Environmental Mobility*
Bronislava Lalinská-Voleková¹, Ivona Kautmanová¹, Eliška Gbúrová Štubňová¹, Viktória Krajanová¹, Tomáš Faragó²
1 Slovak National Museum-Natural History Museum, Vajanského náb. 2, P.O.BOX 13, 810 06, Bratislava, Slovakia; 2 Department of Geochemistry, Faculty of Natural Sciences, Comenius University in Bratislava, Illkovičova 6, 842 15 Bratislava, Slovakia.
- P 23** *Legacy Cadmium in Abandoned Mining Waste Deposition Areas*
Catarina Mansilha^{1,2}, Armindo Melo^{1,2}, Joana Ribeiro³, Aracelis Narayan⁴, Patrícia Santos⁴, Jorge Espinha Marques⁴
1-National Institute of Health Dr. Ricardo Jorge, Departm. of Environmental Health, R. Alexandre Herculano 321, 4000-055 Porto, Portugal; 2 - LAQV/REQUIMTE, University of Porto, Praça do Coronel Pacheco, 15, 4050-453 Porto, Portugal; 3- University of Coimbra, Department of Earth Sciences, Rua Sílvio Lima, 3030-790 Coimbra, Portugal; 4- Institute of Earth Sciences, Department of Geosciences, Environment and Spatial Planning, Faculty of Sciences, University of Porto, Rua do Campo Alegre, s/n, 4169-007 Porto, Portugal;
- P 24** *Cadmium accumulation in plants and fungi growing on historically contaminated mining sites*

Eliška Gbúrová Štubňová¹, Ivona Kautmanová¹, Bronislava Lalinská-Voleková¹, Viktória Krajanová¹

1 Slovak National Museum-Natural History Museum, Vajanského náb. 2, P.O.BOX 13, 810 06, Bratislava, Slovakia

P 25

D-3-Hydroxybutyrate in fish: seasonal dynamics and associations with selected trace elements in situ

Marian Tomka¹, Anton Kovacik², Marek Helczman², Eva Kovacikova³, Tomas Jambor², Peter Massanyi²

1. Institute of Biotechnology, Faculty of Biotechnology and Food Sciences, Slovak University of Agriculture in Nitra, Slovakia; 2. Institute of Applied Biology, Faculty of Biotechnology and Food Sciences, Slovak University of Agriculture in Nitra, Slovakia; 3. Institute of Nutrition and Genomics, Faculty of Agrobiological and Food Resources, Slovak University of Agriculture in Nitra, Slovakia

P 26

A Sustainable Strategy for Metal Remediation: Sequestration and Speciation of trans-Aconitic Acid with Divalent Cations

Massimiliano Peana², Anna Irto¹, Rosita Cappai², Alessandro Amadeo^{1,4}, Giuseppe Cassone³, Concetta De Stefano¹, Clemente Bretti¹

¹ Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, 98166 Messina, Italy; ² Department of Chemical, Physical, Mathematical and Natural Sciences (DISCI), University of Sassari, 07100 Sassari, Italy; ³ Institute for Chemical-Physical Processes, National Research Council of Italy (CNR-IPCF), 98158 Messina, Italy; ⁴ Department of Chemistry, Biology and Biotechnologies, University of Perugia, 06123 Perugia, Italy

P 27

Review of Heavy Metals Associated with Airborne Particulate Matter in Africa

Julia Lu¹, Jomanah Hafez¹, Amina Sekaly²

¹Department of Chemistry and Biology, Toronto Metropolitan University, Canada; ²Applied Chemistry Department Faculty of Science Somali National University, Somalia

P 28

Municipal waste burning: an important source of atmospheric cadmium

Nora Kováts¹, Bettina Eck-Varanka¹, Katalin Hubai¹, András Hoffer²

1. Centre of Natural Sciences, University of Pannonia, Egyetem Str. 10, 8200 Veszprém, Hungary; 2. HUN-REN-PE Air Chemistry Research Group, University of Pannonia, Egyetem Str. 10, 8200 Veszprém, Hungary

P 29

Raman spectroscopy of cadmium oxalate: Implication for bioremediation

Viktória Krajanová¹, Bronislava Lalinská-Voleková¹, Ivona Kautmanová¹, Eliška Gbúrová Štubňová¹

¹ Slovak National Museum-Natural History Museum, Vajanského nábr. 2, P.O.BOX 13, 810 06, Bratislava, Slovakia

10 min

Discussion

Friday, 26 June 2026

09:00 - 10:15 TOXICOLOGY II

Co-Chairs Aleksandra Buha Djordjevic | Rossella Tomaiuolo

- 09:00 - 09:15** Cadmium and cardio-metabolic risk: epidemiological evidence
Tommaso Filippini¹, Marco Vinceti²
1. Department of Biomedical, Metabolic and Neural Sciences, University of Modena and Reggio Emilia, Italy; 2. School of Public Health, University of California Berkeley, CA, USA; 3. Boston University School of Public Health, Boston, MA, USA
- 09:15 - 09:30** Early-life cadmium exposure and child health and development: two decades of insights
Maria Kippler¹, Marie Vahter¹, Mohammad Redwanul Islam¹, Maria Kampouri¹, Klara Gustin Mossegård¹
1. Karolinska Institutet, Institute of Environmental Medicine, Stockholm, Sweden
- 09:30 - 09:40** Environmental mixtures with cadmium: a multi-contaminant perspective
Bijana Antonijević¹
¹Department of Toxicology, University of Belgrade, Serbia
- 09:40 - 09:50** Single-cell mass cytometry for immune profiling and trace-element detection: from nanomaterials to cadmium at the cellular level
Lucia Gemma Delogu^{1,2}, Linda Giro^{2,1}
*1. Department of Biological Sciences, Khalifa University
2. Dipartimento di Scienze Biomediche*
- 09:50 - 10:15** Discussion

10:15 - 11:30 AGRICULTURE & VETERINARY I

Co-Chairs Juan Pedro Arrebola Moreno | Maria Grazia Cappai

- 10:15 - 10:30** In Vitro Assessment of Heavy Metal-Induced Toxicity on Mammalian Female Gametes
Luisa Bogliolo¹
¹ Department of veterinary Medicine, University of Sassari, Italy
- 10:30 - 10:40** Mitigating cadmium in multi-contaminated mining soils: long-term field evidence for biochar-assisted phytostabilization
Stefania Diquattro^{1,2}, Maria Vittoria Pinna¹, Giovanni Garau^{1,2}, Matteo Garau^{1,2}, Giacomo Patteri¹, Vittoria Giannini^{3,4}, Simonetta Bagella⁵, Pier Paolo Roggero^{1,2}, Paola Castaldi^{1,2}

1-Dipartimento di Agraria, University of Sassari, Viale Italia 39, 07100, Sassari, Italy; 2-Nucleo Ricerca Desertificazione, University of Sassari, Sassari, Italy; 3-Dipartimento di Agronomia, Animali, Alimenti, Risorse Naturali e Ambiente (DAFNAE), University of Padua, Viale dell'Università `16, 35020, Legnara, PD, Italy; 4-Dipartimento del Territorio e Sistemi Agro-Forestali (TESAF), University of Padua, Viale dell'Università `16, 35020, Legnara, PD, Italy; 5-Dipartimento di Scienze Chimiche, Fisiche, Matematiche e Naturali, University of Sassari, Via Piandanna 4, 07100, Sassari, Italy.

10:40 - 10:50

Concentrations of biogenic and risk elements in semen of various animals and their correlations

Peter Massányi^{1,2}, Marko Halo¹, Filip Tirpák¹, Tomáš Slanina¹, Martin Massányi¹, Radovan Reisenauer¹, Peter Ivanič², Lukasz Binkowski³, Norbert Lukáč¹.

1- Slovak University of Agriculture in Nitra, Nitra, Slovak Republic; 2- Slovak Biological Services, Ltd., Nitra, Slovak Republic; 3- University of the National Education Commission, Kraków, Poland

10:50 - 11:00

Nickel-Triggered Toxicity Disrupts Antioxidant Capacity and Cell Cycle Regulation in Fission Yeast Through Altered Tor and MAPK Signaling

Miroslava Požgajová¹, Alica Navrátilová², Lucia Klongová¹, Marek Kovár³

1-AgroBioTech Research Center, SUA, Nitra, Tr. A. Hlinku 2, 949 76 Nitra, Slovakia; 2-Institute of Nutrition and Genomics Affiliation SUA, Nitra, Tr. A. Hlinku 2, 949 76 Nitra, Slovakia; 3-Institute of Plant and Environmental Sciences, SUA, Nitra, Tr. A. Hlinku 2, 949 76 Nitra, Slovakia.

11:00 - 11:10

Circulating elements in the bloodstream of growing foals: focus on heavy metals and bone remodeling across growth stages

Hulitka D.¹, Coradduza D.², Sanna A.³, Biggio G.⁴, Taras A.⁴, Podda A.¹

, Carboni E.¹, Senes A.¹, Cannas A.⁵, Carru C.², Medici S.⁶, Cherchi R.⁴, Cappai M.G.^{1*}

1 Chair of Animal Nutrition, Department of Veterinary Medicine, University of Sassari – via Vienna 2, 07100 – Sassari, Italy; 2 Department of Biomedical Sciences, University of Sassari, 07100 Sassari, Italy

11:10 - 11:30

Discussion

11:30 - 12:00

Coffee Break

12:00 - 13:15 CELL BIOLOGY III

Co-Chairs | Aishwarya Prakash | Loris Zamai

12:00 - 12:15

Cadmium-Induced Non-Coding RNA Reprogramming and Phenotypic Plasticity in Aggressive Epithelial Cancers

Pinar Uysal-Onganer¹

¹Cancer Mechanisms and Biomarkers Research Group, University of Westminster, London, United Kingdom

12:15 - 12:25

Cadmium complexation with glutathione: new insights into cellular uptake mechanisms

Nadiya Romanova¹, Daniel Hebrok¹, Andreas Mix², Travis Issler³, Elmar J.

Prenner³, Wing-Keo Lee¹

1. Physiology and Pathophysiology of Cells and Membranes, Medical School OWL, Bielefeld University, Bielefeld, Germany; 2. Faculty of Chemistry, Inorganic Chemistry and Structural Chemistry, Bielefeld University, Bielefeld, Germany; 3. Department of Biological Sciences, University of Calgary, Calgary, Alberta, T2N 1N4, Canada

12:25 - 12:35

Co-exposure to arsenic and cadmium enhances DNA damage and apoptosis in 3T3 fibroblast cells

Gulsah ARMUT¹, Iremnur SARIALIOGLU¹, Aleyna AGALAR¹, Oyku KUMBUL¹, Banu ORTA-YILMAZ², Yasemin AYDIN^{2,*}

1. Institute of Graduate Studies in Science and Engineering, Department of Biology, Istanbul University, Istanbul, Turkey; 2. Department of Biology, Faculty of Science, Istanbul University, Istanbul, Turkey

12:35 - 12:45

Kupffer Cells as Key Targets of Hepatic Cadmium Handling: Putative Uptake Mechanisms of Free and Protein-Bound Cadmium

Nicole Mangazeev¹, Allein Plain Reyes¹, Annika Kiel², Angela Kralemann-Köhler², Teresa Kern¹, Marie Bergmeier¹, Jan Schulte am Esch^{2,3}, Wing-Keel Lee¹

1. Physiology & Pathophysiology of Cells and Membranes, Medical School OWL, University Bielefeld, Germany; 2. Department of General and Visceral Surgery, Medical School OWL, University Bielefeld, Germany; 3. Department of General and Visceral Surgery, Protestant Hospital of Bethel Foundation, University Hospital OWL of the Bielefeld University, Germany

12:45 - 13:00

Discussion

13:00 - 14:00

Lunch

14:00 - 15:30 **FLASH TALK III** - Toxicology

Co-Chairs Sunali Khanna | Lucia Gemma Delogu

P 30

Cadmium contamination in seafood: RASFF trends and ICP-MS monitoring results

Stefania Squadrone¹, Alessandra Griglione¹, Paolo Palmegiano¹, Anna Riva¹, Stefania Gavinelli¹, Marcello Gigliotti¹, Maria Cesarina Abete¹

1. Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta, Turin (Italy).

P 31

Blood arsenic, mercury, and selenium as biomarkers of seafood intake: association with children's cognitive abilities

Marie Vahter¹, Mariza Kampouri¹, Eric Zander², Klara Gustin¹, Anna Sandin³, Ann-Sofie Sandberg⁴, Maria Kippler¹

¹Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden; ²Center of

Neurodevelopmental Disorders (KIND), Department of Women's and Children's Health,

Karolinska Institutet, Stockholm, Sweden; ³Department of Clinical Science, Pediatrics, Sunderby Research Unit, Umeå University, Sweden; ⁴Department of Life Sciences, Food and Nutrition Science, Chalmers University of Technology, Gothenburg, Sweden.

- P 32** *Potential protective molecular mechanisms of magnesium against cadmium toxicity: a toxicogenomic analysis*
Živanović Jovana¹, Marić Đurđica¹, Baralić Katarina¹, Buha Đorđević Aleksandra¹, Čurčić Marijana¹, Antonijević Miljković Evica¹, Bulat Zorica¹, Antonijević Biljana¹, Đukić-Čosić Danijela¹
¹ Department of Toxicology “Akademik Danilo Soldatović”, Faculty of Pharmacy, University of Belgrade, Vojvode Stepe 450, 11000 Belgrade, Serbia
- P 33** *E-cigarette aerosols as a source of inhaled metal exposure and pulmonary metal deposition*
Vincenza Caruana^{1,2,3}, Kevin J. Wilkinson⁴, Carolyn J Baglole^{1,2}, Koren K Mann^{1,3}
 1. Department of Pharmacology and Therapeutics, McGill University, Quebec, Canada; 2. Research Institute of the McGill University Health Centre, Quebec, Canada; 3. Lady Davis Institute for Medical Research, McGill University, Quebec, Canada; 4. Department of Chemistry, University of Montreal, Quebec, Canada
- P 34** *Risk assessment of titanium dioxide (E171) intake in an Italian population before 2021 ban by the European Union*
Tommaso Filippini^{1,5}, Teresa Urbano¹, Susan Fairweather-Tait², Marcella Malavolti¹, Carlotta Malagoli¹, Luciano Vescovi¹, Claudia Baraldi³, Marco Vinceti^{1,4}
 1. Environmental, Genetic and Nutritional Epidemiology Research Center (CREAGEN), Section of Public Health, Department of Biomedical, Metabolic and Neural Sciences, University of Modena and Reggio Emilia, Modena, Italy; 2. Norwich Medical School, University of East Anglia, Norwich, UK; 3. Department of Biomedical, Metabolic and Neural Sciences, University of Modena and Reggio Emilia, Modena, Italy; 4. Department of Epidemiology, Boston University School of Public Health, Boston, MA, USA; 5. School of Public Health, University of California Berkeley, Berkeley, CA, USA
- P 35** *Analysis of mercury concentration in various honeys available on the Polish market*
Agnieszka Fischer¹, Weronika Gorzka¹, Barbara Brodziaik-Dopierała¹
¹ Department of Toxicology, Toxicological Analysis and Bioanalysis, Faculty of Pharmaceutical Science, Medical University of Silesia, Poland
- P 36** *Cadmium levels in complete feed: a 14 year monitoring study in Northwestern Italy*
Stefania Squadrone¹, Stefania Gavinelli¹, Alessandra Griglione¹, Paolo Palmegiano¹, Anna Riva¹, Maria Cesarina Abete¹
¹ Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta, Turin (Italy), C.Re.A.A. National Reference Center for Surveillance and Monitoring animal feed.

10 min Discussion

Co-Chairs Jurgen Gailer | Donatella Coraduzza

- P 37** *S-Drive Artificial Intelligence for Heavy Metal Screening*
Grazia Fenu Pintori¹, Benedetta Pische¹ Giorgio Terziani²
¹ Department of Biomedical Sciences - University of Sassari ² Saint George School - Brescia

- P 38** *Synthetic Mn-Peptide Antioxidant Systems Inspired by Deinococcus radiodurans: Applications in Radioprotection and Biotechnology*
Massimiliano F. Peana¹
¹Department of Chemical, Physical, Mathematical and Natural Sciences, University of Sassari, Italy
- P 39** *The impact of metal mixtures on red blood cell and thrombocyte parameters in male and female Wistar rats*
Jovana Jakovljević Uzelac¹, Tatjana Đukić², Baralić Katarina³, Đurđica Marić³, Jovana Živanović³, Danijela Đukić-Čosić³, Zorica Bulat³, Biljana Antonijević³, Aleksandra Buha Đorđević³.
1. Institute of Medical Physiology "Richard Burian", Faculty of Medicine, University of Belgrade, Visegradska 26, 11000 Belgrade, Serbia; 2. Institute of Medical and Clinical Biochemistry, Faculty of Medicine, University of Belgrade, Pasterova 2, 11000 Belgrade, Serbia; 3. Department of Toxicology "Akademik Danilo Soldatović", Faculty of Pharmacy, University of Belgrade, Vojvode Stepe 450, 11221 Belgrade, Serbia
- P 40** *The impact of metal mixtures on white blood cell differential in male and female Wistar rats*
Tatjana Đukić¹, Jovana Jakovljević Uzelac², Baralić Katarina³, Đurđica Marić³, Jovana Živanović³, Danijela Đukić-Čosić³, Zorica Bulat³, Biljana Antonijević³, Aleksandra Buha Đorđević³
1. Institute of Medical and Clinical Biochemistry, Faculty of Medicine, University of Belgrade, Pasterova 2, 11000 Belgrade, Serbia; 2. Institute of Medical Physiology "Richard Burian", Faculty of Medicine, University of Belgrade, Visegradska 26, 11000 Belgrade, Serbia; 3. Department of Toxicology "Akademik Danilo Soldatović", Faculty of Pharmacy, University of Belgrade, Vojvode Stepe 450, 11221 Belgrade, Serbia
- P 41** *The effect of mercury on rat kidneys in vivo*
Klaudia Jaszczca¹, Róbert Toman², Jiřina Zemanová², Robert Stawarz³, Norbert Lukáč², Peter Massányi^{2,3}
1. University of Agriculture in Kraków, Poland; 2. Slovak University of Agriculture in Nitra, Nitra, Slovak Republic; 3. University of the National Education Commission, Kraków, Poland
- P 42** *Association between Selenium species and brain volume in subjects with mild cognitive impairment*
Asia Sarti^{1,3}, Marcella Malavolti¹, Teresa Urbano¹, Erica Balboni², Tommaso Filippini^{1,3}, Bernhard Michalke⁴, Marco Vinceti^{1,5}
1. CREAGEN Research Center of Environmental, Genetic and Nutritional Epidemiology, Department of Biomedical, Metabolic and Neural Sciences, University of Modena and Reggio Emilia, Modena, Italy; 2. Health Physics Unit, University Hospital of Modena, Modena, Italy; 3. School of Public Health, University of California Berkeley, Berkeley, CA, USA; 4. Research Unit Analytical BioGeoChemistry, German Research Center for Environmental Health, Helmholtz center Munich, Neuherberg, Germany; 5. Department of Epidemiology, Boston University School of Public Health, Boston, MA, USA
- P 43** *Beyond the Number: Biological Limits, Cut-Offs and Interpretative Challenges in Trace Metal Exposure*
Claudia Trignano¹, Antonello Serra²
¹Department of Biomedical Sciences, University of Sassari, Sassari, Italy; Unit of Legal Medicine, AOU Sassari, Italy
²Occupational Medicine Unit, AOU Sassari, Sassari, Italy

- 15:30 - 15:45** Tackling the effects of chronic human lifetime exposure to toxic metal(loid)s: can results from advanced LC studies contribute to predict disease onset?
Jürgen Gailer¹, Yemna Badar¹, Mathew Sara¹, Nathania de Kluyver¹, Nicolas Riquelme Bravo¹
¹Department of Chemistry, University of Calgary, 2500 University Drive NW, Calgary, AB, T2N 1N4, Canada
- 15:45 - 15:55** Cadmium is not just Cd²⁺: the overlooked role of hydrolysis in environmental speciation and remediation
Rosita Cappai¹
 1. Department of Chemical, Physical, Mathematical and Natural Sciences, University of Sassari, via Vienna 2, 07100 Sassari, Italy
- 15:55 - 16:05** Vascular effects of exposure to accidental doses of cadmium in female rats - Protective effect of Red Quinoa Hydrolysate Hydrolysate: a plant-based therapeutic alternative
Samia Hassan Husein Kanaan¹, Iasmim Cândido da Cruz¹, Paola Zambelli Moraes¹, Katye Yasmin de Souza de Oliveira¹, Gabriela Costa Trofino¹, Nathalia Silva de Oliveira da Silva¹, Franck Maciel Peçanha¹, Dalton Valentim Vassalo², Marta Miguel-Castro³, Giulia Alessandra Wiggers¹
¹Laboratory of Cardiovascular Physiology / Multicentric Graduate Program in Physiological Sciences, Federal University of Pampa (Unipampa), Brazil-RS. ²Laboratory of Electrophysiology and Vascular Reactivity, Federal University of Espírito Santo, Brazil-ES. ³Instituto de Ciencia y Tecnología de Alimentos y Nutrición, ICTAN/CSIC, Madrid, Spain
- 16:05 - 16:15** Imaging-based fish cell micronucleus assay for trace metal genotoxicity: toward animal-reduced, high-throughput evaluation
Verena Charwat¹, Magdalena Kainberger¹, Eva Mair¹, Petra Stahlschmidt-Allner², David Bernhard¹
 1. Johannes Kepler University, Department of Pathophysiology, Linz, Austria; 2. Gobio GmbH, Aarbergen, Germany
- 16:15 - 16:45** Discussion

16:45 - 17:00 Best Talks & Flash Talks Abstract Awards
17:00 Closing remarks

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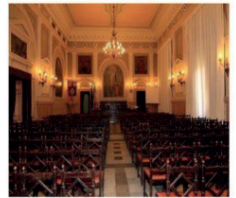
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The International Society for Research on Cadmium and Trace Elements Toxicity (ISRCT), founded in 2015, is a non-profit association that aims to promote and spread knowledge of Cadmium and Trace Metals.

The society was founded by a group of researchers from different fields, from medicine to biology, from genetics to botany, from veterinary to agriculture, all connected for the interest of the study and knowledge of Cadmium and Trace Elements.

The aim of the Society is to promote research and to disseminate information about multiple roles of cadmium present in the environment and its impact on health.

A major role of the Society is to promote exchange between members of the research community working on these questions.

Particular attention is directed toward young scientists in an effort to advance their professional education.

Another important role is the organization of conferences, courses, seminars, both in presence and online.

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The Italian Association for the study of Trace Elements in living organism (A.I.S.E.T.O.V.) is a non-profit scientific association founded in 1991 by a group of researchers from various disciplines, active in research fields related to the study of trace elements.

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