**6th FESTEM Symposium on trace Elements and Minerals**

**26-28 May**

**Catania, Sicily Italy**

**Thursday 26th May**

**13:30 *Registration***

**14:45-15:00 *Welcome and opening remarks***

**15:00-15:30 *Keynote Lecture***

*Chairpersons: Paola Borella and Bernhard Michalke*

KL-00 **Dietary reference values and upper levels for trace element intakes revisited** *Jean Neve - Belgium*

**Trace Elements and human health**

*Chairpersons: Margherita Ferrante and Maria Teresa Llorente Ballesteros*

**15:30-16:00 *Invited Speakers***

I-01 **Cu, Fe, Zn metabolism derangement and impaired glucose metabolism in postmenopausal women** *Margarita Skalnaya - Russia*

I-02 **Serum trace elements and hormones during incremental exercise** *Jesus Escanero - Spain*

**16:30-18:00 *Free communications***

O-01 **Association between iron level during pregnancy, glucose impairment and increased DNA damage** *Isabelle Hininger - France*

O-02 **Metabolic adaptation to exercise and mineral loss in atheletes** *Michael Kalinski - USA*

O-03 **Italian adolescents cohort: an exposome approach** *Anna Pino - Italy*

O-04 **Trace elements in children living in conditions of increased anthropogenic burden** *Galina Kireeva - Russia*

O-05 **Metallic blood profile by ICP-MS-DRC in a healthy population of Cotonou (Benin)** *Brice Yedomon - France*

O-06 **Immune response and selenium level at the early phase of septic shock** *Alexandre Behouche - France*

**Trace Elements in the environment**

*Chairpersons: Paola Borella and Emilio Carpené*

**18:00:18:30 *Invited Speaker***

I-03 **Lux-based bacterial biosensors reveal toxic trace elements and evaluate anti-toxic effect of carbon-based nanomaterials** *Dmitriy Deryabin - Russia*

**18:30-19:00 *Free communications***

O-07 **Trace elements as biocides of marine antifouling paints: hygiene, ecology, toxicology** *Leonid Shafran - Ukraine*

O-08 **Bioremediation capacity of the marine sponge *Chondrilla nucula*** *Chiara Copat - Italy*

O-09 **Pathogenesis of metals in combustion-generated particulate matter: ex vivo study of mitochondrial impairment and apoptotic pathway vanadium-induced** *Bruno Cosenza - Italy*

**19:00 *End of sessions***

**19:30 *Welcome Cocktail***

**Friday 27th May**

**Trace Elements and biological mechanisms**

*Chairpersons: Josiane Arnaud - Montserrat Gonzáles Estecha*

**8:30-9:00 *Invited Speaker***

I-04 **Brain metals and dementia: friends and foes** *Stefano Sensi - Italy*

**9:00-10:30 *Free communications***

O-10 **Evaluation of exchangeable copper and relative exchangeable copper in ATP7B-/- mice** *Muriel Bost - France*

O-11 **Fe3+-induced oxidative stress and protective role of natural iron chelators** *Erika Barbagallo - Italy*

O-12 **The impact of zinc deficiency on vascular smooth muscle cells involves a zinc-regulated humoral factor** *John Beattie - UK*

O-13 **Increased zinc permeability of breast cancer cell TRPM7 channel confers an aggressive phenotype** *Irina Korichneva - France*

O-14 **In vitro evaluation of the effect of a continued exposure to inorganic arsenic upon intestinal epithelium** *Gabriela De Matuoka Chiocchetti - Spain*

O-15 **Dams’ exposure to cadmium in drinking water impacts glucose homeostasis of their offspring.** *Adeline Jacquet - France*

O-16 **Features of mammary gland copper metabolism during its cycle of development**

**(growth, differentiation, lactation and involution)** *Iurii Orlov - Russia*

**10:30-11:00 *Coffee Break and Poster session I (P-01 – P-45)***

**Trace Elements and human disease**

*Chairpersons: Christopher Exley and Margarita Skalnaya*

**11:00-11:30 *Invited Speaker***

I-05 **Manganese toxicity from occupational and environmental exposure through a lifetime approach** *Roberto Lucchini - Italy-USA*

**11:30-13:00 *Free communications***

O-17 **The level of trace elements and other biomarkers in autistic children** *Anatoly Skalny - Russia*

O-18 **Levels of aqueous humor trace elements in patients with open-angle glaucoma** *Andrew Chaudhri - Germany*

O-19 **Transition and heavy metals compared to cytosolic superoxide dismutase in deep vein thrombosis** *Margherita Ferrante - Italy*

O-20 **Selenium, magnesium, and copper intake and risk of esophageal cancer in Golestan cohort study** *Maryam Hashemian - Iran*

O-21 **Anticancer activity and pharmacokinetic properties of platinum (II) complexes with benzene-poly-carboxylic acids** *Nikolay Solovyev - Russia*

O-22 **Interest of the copper isotopes ratio for management of the Wilson’s disease applied to a rat model** *Benedicte Lelievre - France*

O-23 **Effect of venesectio on trace element metabolism in hemochromatosis** *Bjorn Bolann - Norway*

**13:00-14:30 *Lunch***

**Trace Elements: selenium, human health and disease**

*Chairpersons: Tanja Schwerdtle and Marco Vinceti*

**14:30-15:00 *Invited Speaker***

I-06 **Role of selenium in cardiometabolic health: an update of recent observation and trial data** *Saverio Stranges - Luxembourg*

**15:00-16:40 *Free communications***

O-24 **Selenium content in food of rural areas of Kabinda in the Democratic Republic of Congo and of Meghalaya State in India** *Fiorenzo Piccioli-Cappelli - Italy*

O-25 **Do the chickens have any thing to gain by addition of organic Se in the diet?** *Anicke Brandt-Kjelsen - Norway*

O-26 **Yeast genome-wide analyses provide insights into the mechanisms of selenium toxicity** *Myriam Lazard - France*

O-27 **Serum selenium concentrations in patients receiving long-term selenium supplementation** *Jeannette Molnar - Hungary*

O-28 **Sodium selenite decreased HDAC activity and invasion potential in a new long-term established and characterized glial cell line from a metastatic glioblastoma** *Florence Puch - France*

O-29 **Evaluation of age impact on the protective effect of selenium against UVA irradiation in primary human keratinocytes** *Walid Rachidi - France*

**16:30-17:00 *Coffee break and Poster session II (P-45 – P-85)***

**Trace Elements and methodological issues**

*Chairpersons: Isabelle Hininger and Bernhard Michalke*

**17:00-17:30 *Invited Speaker***

I-07 **Novel methods for element specific bio-imaging at the micro and nanoscale** *Dirk Schaumlöffel - France*

**17:30-18:30 *Free communications***

O-30 **Combined speciation techniques proof changes in the metallome and metabolome as a cause for Mn and Fe related neurodegeneration** *Bernhard Michalke - Germany*

O-31 **An assessment of clinical laboratory performance for the determination of manganese in blood and urine** *Josiane Arnaud - France*

O-32 **Selenium speciation in paired serum and cerebrospinal fluid samples in sheep** *Esther Humann-Ziehank - Germany*

O-33 **Elemental impurities in pharmaceutical products - the time for implementation of ICH guideline Q3D has come** *Agostinho Almeida - Portugal*

O-34 **Determination of mercury in hair: comparison between gold amalgamation-atomic absorption spectrometry and mass spectrometry** *Francesco Domanico - Italy*

O-35 **Omics technologies in the diagnosis and prevention of microelementoses** *Daulet Sharipov - Kazakhstan*

**18:30-19:30 *General Assembly of FESTEM Board***

**19:30 *Transfer to ‘I Giardini di Villa Fago’ for social dinner***

**Saturday 28th May**

**Trace Elements in animal health and disease**

*Chairpersons: Dmitriy Deryabin and Jean Neve*

**8:30-9:00 *Invited Speaker***

I-08 **Forty years of trace elements in unconventional animals: from oysters to bats** *Emilio Carpené - Italy*

**9:00-9:30 *Free communications***

O-36 **Trace elements in the bat *Myotis myotis* (Borkhausen, 1797) from two caves of South-East Sicily** *Alfina Grasso - Italy*

O-37 **Zinc deficiency and metallothionein dysfunction as a common signs of stress in aquatic animals: examples of freshwater bivalve, fish and amphibian** *Oksana Stoliar - Ukraine*

O-38 **Effects of different boron compounds on the teeth and bone in rabbits fed high protein and energy diet** *Sema Hakki - Turkey*

**Trace Elements and toxicology**

*Chairpersons: Dirk Schaumlöffel and Anatoly Skalny*

**9:30-10:00 *Invited Speaker***

I-09 **Aluminum adjuvants and adverse events in vaccination and immunotherapy** *Christopher Exley - UK*

**10:00-10:50 *Free communications***

O-39 **Toxic modes of action of organic arsenic and mercury species: recent insights** *Tanja Schwerdtle - Germany*

O-40 **The role of the catalyst iron in toxicity of carbon nanotubes (CNTS)** *Alessio Facciolà - Italy*

O-41 **Egg white hydrolysates as functional food ingredients to control the cardiometabolic complications associated to oxidative stress induced by heavy metals exposure** *Marta Miguel - Spain*

O-42 **An in vitro control study to test the ability of bioremediation of three filamentous fungi for their possible application in phytoremediation processes** *Cristina Restuccia - Italy*

**10:50-11:10 *Coffee break***

**11:10-12:10 *Free communications***

O-43 **Arsenolipids: in vitro characterisation of their neurotoxic potential** *Barbara Witt - Germany*

O-44 **Genotoxicity of bioavailable airborne transition metals** *Giovanni Campanella - Italy*

O-45 **The use of probiotics for reducing mercury bioaccessibility** *Carlos Jadan Piedra - Spain*

O-46 **Changes of gene expression profiles of boron stressed *Puccinella distans*** *Fatma Akin - Turkey*

O-47 **Effects of nitric oxide on glutamine synthetase gene expression of boron- tolerant and boron-susceptible barley genoypes under boron-toxic conditions** *Can Hasan - Turkey*

**12:10-12:30 Awards and Closing Ceremony**

**Gabriel Bertrand Award**

I-10 **Effects of trace elements on human health: overview since 1975**

*Gianfranco Vivoli - Italy*

**Poster Awards**

**12:30 *Close of Symposium***