TUESDAY 29th AUGUST

8:30 Registration

Session 1: Welcome and key notes
Chair: Amaya Azqueta (University of Navarra, Spain)

9:00  Welcome
Adela López de Cerain, Dean of the Faculty of Pharmacy and Nutrition of the University of Navarra (Spain).

9:15  Key note: Recent perspectives on the regulatory use of the comet assay
David Kirkland (Kirkland Consulting, UK)

10:10 hCOMET: a COST Action dedicated to the comet assay in human biomonitoring
Andrew Collins (University of Oslo, Norway)

10:30  Coffe break

Session 2: Regulatory issues, genotoxicity testing & nanotox
Chairs: David Kirkland (Kirkland Consulting, UK) and Gudrun Koppen (Flemish Institute for Technological Research, VITO, Belgium)

11:00  The comet assay in the evaluation of the genotoxicity of inhaled compounds
Desmond Cave (BioReliance, USA)

11:20  3D Skin Comet assay: Genotoxicity assessment addressing the dermal route of exposure
Kerstin Reisinger (Henkel AG & Co, Germany)

11:40  Application of comet assay in the assessment of nanoparticle induced genotoxicity and DNA methylation
Anita Mukherjee (University of Calcutta, India)

12:00  Silver nanoparticle-mediated cellular responses in isolated Sertoli cells in vitro
Diana Anderson (University of Bradford, UK)

12:15  Comparative toxicity of silver and titanium dioxide nanoparticles, their binary mixture and silver-doped titanium dioxide nanoparticles to mammalian cells
Marcin Kruszewski (Institute of Rural Health, Poland)

12:30 *In vitro and in vivo comparison of nano aluminum, aluminum oxide and aluminum chloride genotoxicity*

Pegah Jalili* (French Agency for Food, Environmental and Occupational Health Safety, ANSES, France)

12:40 *Human renal proximal tubule epithelial cell line TH1 as a promising in vitro kidney model to predict the genotoxicity of xenobiotics and nanoparticles*

Monika Sramkova (Cancer Research Institute, Slovakia)

12:50 *Differentiated and exponentially growing HL-60 cells exhibit different sensitivity for genotoxic agents in the comet-assay*

Helga Stopper (University of Würzburg, Germany)

13:00 Lunch

**Poster session 1**

14:30 Pitch poster presentation

Chairs: Ariane Vettorazzi (University of Navarra, Spain) and Bertrand Pourrut (ISA-Lille, France)

- P1: *DNA damage in enzymatic decolorization of Congo red*, Barbara Janovic** (Institute of Chemistry, Technology and Metallurgy, Serbia)

- P8: *Toxicity of binary mixtures of metal(oxide) nanoparticles and quantum dots in two human cell lines HepG2 And A549*, Lucyna Kapka-Skrzypczak** (Institute of Rural Health and University of Information Technology and Management, Poland)

- P12: *Oxidatively damaged DNA in SHSY-5Y neuronal cells exposed to nicotine and cotinine*, Ana LH García** (Lutheran University of Brazil, Brazil)

- P13: *Combinations of genotoxic tests for the evaluation of group 1 IARC carcinogens*, Jacky Bhagat** (Goa University, India)

- P14: *Cellular uptake and toxicity of positively and negatively charged silica nanoparticles*, Elisabeth Elje** (Norwegian institute for air research, NILU, Norway)

- P16: *Tolerance of Carpobrotus acinaciformis L. halophyte plants exposed to high level of NaCl stress*, Sema Karakas** (Harran University, Turkey)

- P22: *Genotoxic effects produced by Vinclozolin on the aquatic insect Chironomus riparius (Diptera)*, Monica Aquilino** (National University of Distance Education, Spain)

- P26: *DNA damage response and biomarkers correlation following occupational exposure to pesticides mixtures*. Fernanda Rabaioli da Silva** (La Salle University, Brazil) on behalf of Vivian Kahl (Lutheran University of Brazil, Brazil)
- P35: Freezing procedure optimization of two human cell lines for comet assay analysis, Sónia Fragã** (National Institute of Health Dr. Ricardo Jorge, Portugal)

- P39: Moss Physcomitrella patens as a model system for study of DNA damage repair by comet assay, Radka Vágnerová** (Institute of Experimental Botany, Czech Republic)

- P44: Aerobic exercise reduces DNA damage possibly by increase neurotrophic signaling in hippocampus of old rats, Thais Vilela** (University of Southern Santa Catarina, Brazil)

15:30  Poster session while coffee is served – Authors of the odd number posters should be present in order to present their posters

17:00  Social programme: visit to the Otazu viniery (Coaches will be provided)

(*) In the running for the best young oral presentation

(**) In the running for best pitch poster presentation
Session 3: Environmental and human biomonitoring

Chairs: Anita Mukherjee (University of Calcutta, India) and Roger Godschalk (Maastricht University, The Netherlands)

8:30  *Live and born in a polluted area; mother-newborn relationship*
   Emilio Rojas (National Autonomus University of Mexico, Mexico)

8:50  *Comet assay in salivary leukocytes for the evaluation of early biological effects of air pollution exposure in children*
   Massimo Moretti (University of Perugia, Italy)

9:10  *Application of the comet assay to detect metal-induced DNA strand breaks in cultures of the marine sponge* 
      *Hymeniacidon perleve and Amorphinopsis sp*
   Rachael Ununuma Akpiri (University of Birmingham, UK)

9:30  *Acute exposures to the plasticizers di (2-ethylhexyl) phthalate (DEHP) and butyl benzyl phthalate (BBP) induce genotoxic damage in the aquatic larvae of the model species* 
      *Chironomus riparius (Diptera)*
   Mónica Aquilino* (National University of Distance Education, Spain)

9:45  *Use of sperm samples in the detection of DNA damage in boron-exposed workers*
   Nürşen Başaran (Hacettepe University, Turkey)

10:00 *Genotoxic effects of 3T static magnetic field on in vitro human peripheral blood lymphocytes*
   Carina Ladeira (Lisbon School of Health Technology, Portugal)

10:15 Cytogenetic markers and DNA damage in workers exposed to a known carcinogen
   Solange Costa* (National Institute of Health and University of Porto, Portugal, Portugal)

10:30 Coffee break

Open discussion session: case study - Storing and processing of blood samples in human biomonitoring

Chairs: Emilio Rojas (National Autonomus University of Mexico, Mexico) and Lisa Giovannelli (University of Florence, Italy)
11:00 5 min pitch presentations to introduce the session:

- P19: *Use of whole blood to measure DNA damage in a group of wildland firefighters, Solange Costa on behalf of Armanda Teixeira** (National Institute of Health and Instituto de Saúde Pública da Universidade do Porto)

- P29: *The comet assay in human biomonitoring: cryopreservation of whole blood and comparison with isolated mononuclear cells, Gudrun Koppen (Flemish Institute for Technological Research, VITO, Belgium)*

- P31: *Comparison of DNA damage level with alkaline comet assay on peripheral blood mononuclear cells and peripheral whole blood that can be used in human biomonitoring studies, Zsuzsanna Nemeth (National Public Health Institute, Hungary)*

- P32: *Comparison of the alkaline comet assay results on fresh and one year frozen whole blood, Mirta Milic (Institute for Medical Research and Occupational Health, Croatia)*

- P33: *The impact of cryoprotectant use and washing steps on DNA damage levels assessed by comet assay, Ana Inês Silva** (University of Trás-os-Montes and Alto Douro, Portugal)

11:25 Open discussion

12:30  Lunch

**Poster session 2**

14:00  Poster session – Authors of the even number posters should be present in order to present their posters

**Session 4: Assay design and data processing**

Chairs: Stefano Bonassi (Scientific Institute for Research, Hospitalization and Health Care San Raffaele Pisana, IRCCS San Raffaele Pisana, Italy) and Kristine Gutzkow (Norwegian Institute of Public Health, Norway)

15:00  Searching for assay controls for the Fpg- and hOGG1-modified comet assay

Peter Moller (University of Copenhagen, Denmark)

15:20  *Calibration of the comet assay using x-rays*

Gunnar Brunborg (Norwegian Institute of Public Health, Norway)

15:40  Genome size and sensitivity to X-rays – plant comets tell the story

John Einset (University of Oslo, Norway)

16:00  Coffee break
16:30 Validation of high throughput alkaline and FPG modified comet assay using a linear mixed model
Eisa Boutet-Robinet (University of Toulouse/INRA, France)

16:50 4DLifetest: A highly accurate high throughput comet assay platform
Juan Carlos Cassano (Empa-Swiss Laboratories for Material Science and Technology, Switzerland)

17:05 A comparison of different statistical strategies to analyze comet data
Tug Timur* (Technical University of Dortmund, Germany)

17:20 Report from the Short-Term Scientific Mission (STSM) in Rome on joint work for adjusting database and making the Masterfile and performing first statistical analysis, discussion of the results and preparation for writing the scientific paper
Mirta Milic (Institute for Medical Research and Occupational Health, Croatia)

17:30 A pre-validation study of comet assay on plants
Priscilla Boccia (Italian Workers Compensation Authority, INAIL, Italy)

17:40 Medium throughput plant Comet Assay optimisation and development of an automated scoring system
Julien Dubus* (ISA-Lille, France)

17:50 Performing the comet assay in combination with different human and bacterial repair enzymes in order to increase its sensitivity
José Manuel Enciso (University of Navarra, Spain)

19:00 Social programme: guided tour in the old part of Pamplona

20:00 Conference dinner: ‘El Colegio’ restaurant
Awards ceremony: best poster, poster pitch presentation and oral communication

(*) In the running for the best young oral presentation
(**) In the running for best pitch poster presentation
THURSDAY 31st AUGUST

Session 5: DNA repair

Chairs: John Einset (University of Oslo, Norway) and Sabine Langie (Flemish Institute for Technological Research, VITO, Belgium)

9:00  Identification of knowledge gaps and opportunities in the validation of comet assay based DNA repair phenotyping in human biomonitoring studies
Roger Godschalk (Maastricht University, The Netherlands)

9:20  Mobile phone specific electromagnetic fields induce DNA damage and nucleotide excision repair in human glioblastoma cells
Siegfried Knasmueller (Medical University of Vienna, Austria)

9:40  Kinetics of DNA double-strand breaks repair in moss Physcomitrella patens
Marcela Holá* (Institute of Experimental Botany, Czech Republic)

10:00 DNA damage and repair capacity in mother and newborns from the Spanish cohort (Newgeneris study)
Naouale El Yamani (Norwegian Institute for Aire Research, Norway)

10:15 The effect of DNA repair in target tissue on response to treatment, disease progression and long-term survival in colon cancer patients
Sona Vodenkova* (Institute of Experimental Medicine, The Czech Academy of Sciences, Czech Republic)

10:30 Coffee break

Session 6: Nutritional and clinical aspects

Chairs: Andrew Collins (University of Oslo, Norway) and Solange Costa (National Institute of Health and Instituto de Saúde Pública da Universidade do Porto)

11:00 DNA damage among Inflammatory Bowel Disease patients
Cristiana Costa-Pereira (National Institute of Health, Portugal)

11:20 An attempt to modify DNA single-strand breaks in diabetes mellitus patients and in rat models of the disease by 1,4-dihydropyridien derivatives
Nikolajs Sjakste (University of Latvia, Latvia)
11:35  *Modulation of genomic instability in patients with type 2 diabetes mellitus treated with vitamin D*
Vanessa Moraes de Andrade (University of Southern Santa Catarina, Brazil)

11:50  *Comet Assay in evaluation of individual DNA-damage of blood leukocytes in breast cancer patients undergone chemotherapy with doxorubicin-containing regimens*
Nikolay Sirota (Institute of Theoretical & Experimental Biophysics, Russian Academy of Sciences, Russia)

12:05  *The comet assay as a means to monitoring nutritional effects on DNA integrity in humans*
Tamara Bakuradze (University of Kaiserslautern, Germany)

12:20  *Antigenotoxic potential of dry olive leaf extract against DNA damage induced by estradiol and diethylstilbestrol on human peripheral blood leucocytes in comet assay*
Lada Zivkovic (Belgrade University, Serbia)

**Closing ceremony**

12:30  Closing ICAW 2017 by the co-chairs:
- Amaya Azqueta (University of Navarra, Spain)
- Sabine Langie (Flemish Institute for Technological Research, VITO, Belgium)
- Bertrand Pourrut (ISA-Lille, France)

12:45  ICAW 2019 announcement
Nikolay Sirota (Institute of Theoretical & Experimental Biophysics, Russian Academy of Sciences, Russia)

13:00/13:30  Lunch

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