



MutaGen 2021: Extending Connections to a Sustainable Planet

## PROGRAM:

### Friday, November 12, 2021

**03:00 PM - Council Meeting**

**06:30 PM - Opening Session**

MutaGen Award: Juliana da Silva -*ULBRA & UniLaSalle*

**07:00 PM - Opening Conference**

Chair: Leonardo Karam Teixeira - *Instituto Nacional de Câncer (INCA), Brazil*

**In every Scientist, a Diplomat: fostering the idea of a sustainable world**

Dra. Maria Augusta Arruda - *University of Nottingham - England*

**08:00 PM - Welcome Meeting**

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### Saturday, November 13, 2021

**08:00–09:00 AM: MutaGen School\***

**1 | Environmental Mutagenesis and Applied Toxicological Genetics**

Dra. Taynah Vicari – *UFPR/PR/Brazil*

**2 | Oncogenetics**

Dra. Roberta Losi Guembarovsk - *UEL/PR/Brazil*

**3 | Nutrigenetic/Nutrigenomics**

Dr. Diego Luis Ribeiro - FMRP/USP/Brazil

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## Conference 01

### 11:00 AM – 12:00 PM | “EcoToxChip Project”

Chair: Dr. Cesar Koppe Grisolia - *Universidade de Brasília (UNB), Brazil*

Dr. Markus Hecker - *School of Environment and Sustainability, University of Saskatchewan, Canada*

## Palestra Técnica UNISCIENCE

### 12:00 PM – 12:45 PM | “Desvendando o enigma dos genomas: Fragmentos longos de DNA em análise”

Msc, Thiago Peluzzo - *Assessor Científico na UNISCIENCE*

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### 12:00 – 13:00 PM | Lunch Break

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## Conference 02

### 01:00 PM – 02:00 PM | "PPARs as Key Nutritional and Environmental Sensors for Nutrigenomic Adaptations"

Chair: Dra. Silvia Regina Batistuzzo de Medeiros – *Universidade Federal do Rio Grande do Norte (UFRN), Brazil*

Dr. Walter Whali - *Center for Integrative Genomics, University of Lausanne, Switzerland*

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## Symposium 1

### 02:00 PM – 04:00 PM | Nutrigenetics/Nutrigenomics

Chair: Dra. Lucia Regina Ribeiro - *Universidade Estadual Paulista (UNESP), Brazil*

### Genotoxic and mutagenic effects of meat-based versus pesco-vegetarian diets: results from the MeatIC Study

Dra. Lisa Giovannelli - *Dept. Pharmacology, University of Florence, Italy*

**Green, or not to green, that is the question: does a vegetarian diet influence genomic stability and health-related biomarkers?**

Dr. Goran Gajski - *Institute for Medical Research and Occupational Health, Croatia*

**Genomic instability in short bowel syndrome patients: insights from genetic, biochemical and molecular biomarkers**

Dra. Raquel Alves dos Santos - *Universidade de Franca (UNIFRAN), Brazil*

**Phytochemicals as anticancer agents acting on the impairment of cell proliferation, migration, and invasion in breast cancer cells grown in 2D monolayer and 3D multicellular tumor spheroids**

Dra. Juliana Mara Serpeloni – *Universidade Estadual de Londrina (UEL), Brazil*

## Symposium 2

**02:00 PM – 04:00 PM | Applied Toxicological Genetics**

Chair: Dra. Juliana da Silva - *ULBRA & UniLaSalle, Brazil*

**DNA damage in circulating leukocytes may predict the risk of death and Cancer. Results from the hCOMET cohort on the Comet assay**

Dr. Stefano Bonassi - *Istituto di Ricovero e Cura a Carattere Scientifico San Raffaele Pisana, Italy*

**Occupational exposure and genotoxicity**

Dra. Juliana da Silva - *ULBRA & UniLaSalle, Brazil*

**Buccal micronucleus cytome assay: how explain the variability observed among healthy Brazilians evaluated in different laboratories?**

Dra. Paula Rohr – *Universidade Luterana do Brasil (ULBRA), Brazil*

**Can natural do any harm? Genotoxicity assessment of traditional medicinal plants**

Dr. Carlos Fernando Araújo Lima de Oliveira - *Universidade Estadual do Rio de Janeiro (UERJ), Brazil*

## Symposium 3

**02:00 PM – 04:00 PM | Carcinogenesis /Oncogenetics**

Chair: Dra. Jenifer Saffi - *Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSA)*

**Revealing Temozolomide Resistance Mechanisms via Genome-Wide CRISPR Libraries**

Dra. Clarissa Ribeiro Reily Rocha - *Universidade Federal de São Paulo (UNIFESP), Brazil*

**DNA damage response impairment in hereditary cancer: a portrait of syndromes in Brazil**

Dra. Tirzah Braz Petta - *Universidade Federal do Rio Grande do Norte (UFRN), Brazil*

**Targeting NRF2, regulator of antioxidant system, to sensitize glioblastoma neurosphere cells to radiation-induced oxidative stress**

Dr. Paulo D Áuria - *CELLINK Life Sciences, Sweden*

**Organoids and patient-derived xenograft models for the identification of new therapy strategies in metaplastic breast cancer**

Dra. Hellen Kuasne - *McGill University, Canada*

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**04:00 PM – 04:15 PM | Coffee Break**

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**04:15 PM | Oral Presentation I**

Chair: Dr. Diego Luis Ribeiro- FMRP/USP/Brazil

**04:15 PM | Open Session - YouTube\***

**Women in Science**

Chair: Dra. Catarina Takahashi – USP/Brazil

**Science and me: Challenges and achievements**

Dra. Juliana da Silva - *ULBRA & UniLaSalle, Brazil*

**In Every Scientist, a Diplomat**

Dra. Maria Augusta Arruda - *University of Nottingham, England*

**Parentalidade na ciência brasileira**

Dra. Rossana Soletti - *UFRGS, Brazil*

**04:15 PM | Open Session – YouTube\***

**Science x Art x Education**

Chair: Gisela De Aragão Umbuzeiro – *Universidade Estadual de Campinas (UNICAMP), Brazil*

**Rompendo paradigmas desde a infância**

Israel Felzenszwalb – *Universidade Estadual do Rio de Janeiro (UERJ), Brazil*

**Um retrato dos Biomas Brasileiros**

Antônio Carlos de Freitas - *Universidade Estadual do Rio de Janeiro (UERJ), Brazil*

**Ouse sempre pisar no chão**

Giovana Umbuzeiro – *Epifania livros, São Paulo, Brazil*

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**06:00 PM – 8:00 PM | Poster Session**

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**Sunday, November 14, 2021**

**08:00–09:00 AM: MutaGen School\***

**4 | Epigenetics/Epigenomics**

Dra. Natália Yumi Noronha – FMRP/Brazil

**5 | DNA Repair**

Dra. Giovana da Silva Leandro - ICB-USP/Brazil

**6 | Occupational Risk Assessment**

Dra. Emilene Arusievicz Nunes - Lab. GEnInTox/UNIFESP/Brazil

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**Conference 03**

**11:00 AM – 12:00 PM | “The (R)evolution of Toxicology”**

Chair: Dra. Lusânia Maria Gregg Antunes – *Universidade de São Paulo (USP), Brazil*

Dr. Thomas Hartung - *Johns Hopkins Center for Alternative to Animal Testing (CAAT), Baltimore, US, and CAAT-Europe, University of Konstanz, Germany*

**Palestra Técnica UNISCIENCE**

**12:00 PM – 12:45 PM | “Análise Espacial High-Plex (RNA E PROTEÍNAS): Entendendo a heterogeneidade dos tecidos”**

Msc, Flávia Frias - *Coordenadora da Assessoria Científica na UNISCIENCE*

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**12:00 – 13:00 PM | Lunch Break**

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**Conference 04**

**01:00 PM – 02:00 PM | “Environmental Toxicant Induced Epigenetic Transgenerational Inheritance of Disease: Generational Toxicology”**

Chair: Dra. Deborah Arnsdorff Roubicek – *Companhia Ambiental do Estado de São Paulo (CETESB), Brazil*

Dr. Michael K Skinner - *School of Biological Sciences at Washington State University, USA*

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## Symposium 4

### 02:00 PM – 04:00 PM | Epigenetics/Epigenomics

Chair: Dra. Ilce Mara de Syllos Cólus - *Universidade Estadual de Londrina, Brazil*

#### **Appropriate concentrations of histone deacetylase inhibitors sensitize mammalian cells to clastogenic agents**

Dr. Wilner Martinez-Lopez - *Clemente Estable Biological Research Institute, Uruguay*

#### **Circulating cell free miRNA biomarkers as liquid biopsy for diagnosis and prognosis in prostate cancer patients**

Dra. Ilce Mara de Syllos Cólus - *Universidade Estadual de Londrina, Brazil*

#### **Analyses of total methylation and hydroxymethylation in DNA in the assessment of mechanisms of toxicity**

Dra. Ana Paula Loureiro – *Universidade de São Paulo, Brazil*

#### **DNA methylation-based biomarker in thyroid câncer**

Dra. Mariana Bisarro dos Reis – *Hospital de Amor de Barretos, Brazil*

## Symposium 5

### 02:00 PM – 04:00 PM | hComet Working Group

Chair: Dra. Vanessa Moraes de Andrade - *Universidade do Extremo Sul Catarinense (UNESC)*

#### **The comet assay as a human biomonitoring tool (hCOMET)**

Dr. Andrew R Collins - *University of Oslo, Norway*

#### **An optimised comet -based in vitro DNA repair assay to assess base and nucleotide excision repair activity**

Dra. Sabine Langie - *Maastricht University, Belgium*

#### **The enzyme-modified comet assay**

Dra. Amaya Azqueta - *University of Navarra, Spain*

#### **Suitability of salivary leucocytes as biomatrix for the comet assay in human biomonitoring, and applicability in nanogenotoxicity testing**

Dra. Vanessa Valdiglesias Garcia - *Universidade da Coruña, Spain*

#### **Collection and storage of human white blood cells for analysis of DNA damage and repair activity using the comet assay in molecular epidemiology studies**

Dr. Peter Møller - *University of Copenhagen, Denmark*

## Symposium 6

### 02:00 PM – 04:00 PM | Environmental Mutagenesis

Chair: Dr. Israel Felzenszwalb – *Universidade Federal de São Paulo (UNIFESP), Brazil*

### **Adverse Outcome Pathways in Support of Environmental Genetic Toxicology**

Dr. Jason O Brien - *National Wildlife Research Centre, Canada*

### **Air Pollution and Mutagenesis**

Dr. Israel Felzenszwalb - *Universidade do Estado do Rio de Janeiro (UERJ), Brazil*

### **Aerobiology in a global perspective**

Dr. Heitor Evangelista - *Universidade do Estado do Rio de Janeiro (UERJ), Brazil*

### **Genetic effects on zebrafish exposed at very low concentrations of aquatic emerging contaminants**

Dr. Cesar Koppe Grisolia – *Universidade de Brasília (UNB), Brazil*

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## **04:00 PM – 04:15 PM | Coffee Break**

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## **04:15 PM | Oral Presentation II**

Chair: Dr. Carlos Fernando Araújo Lima- UERJ/ Brazil

## **04:15 PM | Open Session - YouTube\***

### **Regulatory Framework Regarding Genotoxicity in Brazil**

Chair: Dra. Gisela De Aragão Umbuzeiro – *Universidade Estadual de Campinas (UNICAMP), Brazil*

### **Regulatory requirements for the evaluation of mutagenicity, carcinogenicity and reproductive toxicity results for the registration of pesticides in Brazil**

Dr. Caio Augusto de Almeida - *ANVISA*

### **Brazilian regulatory requirements for evaluating the genotoxicity of chemical products intended for different uses**

Dr. Fabio Kummrow – *Universidade Federal de São Paulo (UNIFESP), Brazil*

### **The relevance of the mutagenic assessment to the Pharmaceutical Industry**

Dra. Mariah Ultramari - *Spektra*

## **Symposium 7**

### **04:15 PM – PM | DNA Repair**

Chair: Carlos Frederico Martins Menck – *Universidade de São Paulo (USP), Brazil*

### **Consequences of DNA damage - Cardiovascular Aging**

Dra. Ingrid van der Pluijm - *Erasmus MC, Netherlands*

### **Integrated actions of photobiology and environmental mutagenesis to assess**

### **amphibian decline**

Dr. André Passaglia Schuch – *Universidade Federal de Santa Maria, Brazil*

### **Would Nek1 be an interesting target in cancer?**

Dra. Dinara Jaqueline Moura – *Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSPA), Brazil*

### **The key role of UVA-light induced deleterious effects and mutagenesis in human Xeroderma Pigmentosum Variant cells**

Dra. Natalia Cestari Moreno - *Universidade de São Paulo, Brazil*

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## **06:00 PM – 8:00 PM | Poster Session**

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## **Monday, November 15, 2021**

### **08:00–09:00 AM: MutaGen School\***

#### **7 | Systematic Review and Meta-Analysis in Mutagenesis**

Dra. Mariana Gobbo Braz – *Universidade Estadual Paulista (UNESP), Brazil*

Dr. Leandro Gobbo Braz - *Universidade Estadual Paulista (UNESP), Brazil*

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### **08:00–09:00 AM: Empreender Mutagen\***

#### **Empreender Mutagen - Principais aspectos sobre a prestação de serviços em toxicologia no Brasil**

Dra. Izabel Villela – *InnVitro Pesquisa & Desenvolvimento, Brazil*

#### **Da universidade ao mercado: um case de uma empresa de suporte científico**

Dra. Miriana Machado - *InnVitro Pesquisa & Desenvolvimento, Brazil*

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### **10:30 AM: Book Release**

#### **“From Toxicogenetics to Toxicogenomics” \***

Dra. Daisy Maria Favero Salvadori - *Universidade Estadual Paulista (UNESP), Brazil*

Dra. Catarina Satie Takahashi – *Universidade de São Paulo (USP), Brazil*

Dr. Cesar Koppe Grisolia – *Universidade de Brasília (UNB), Brazil*

Dra. Raquel Alves dos Santos – *Universidade de Franca (UNIFRAN), Brazil*



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**12:00 – 13:00 PM | Lunch Break**

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## **Conference 05**

**01:00 PM – 12:00 PM | “DNA Damage Response & Genomic Instability”**

Chair: Dr. Nicolas Carlos Hoch - *Universidade de São Paulo (USP), Brazil*

**Charting the landscape of the DNA damage response with functional genomics**

Dr. Daniel Durocher - *The Lunenfeld -Tanenbaum Research Institute, Toronto, Canada*

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## **Symposium 8**

**02:00 PM – 04:00 PM | Genomic Instability**

Chair: Dr. Francisco Meirelles Bastos de Oliveira – *Universidade Federal do Rio de Janeiro (UFRJ), Brazil*

**Chromosome instability: inevitable or evitable collateral effect of cancer treatment?**

Dra. Vanesa Gottifredi - *Fundación Instituto Leloir, Argentina*

**Single-stranded DNA gaps in replication stress response**

Dra. Annabel Quinet - *Washington University School of Medicine in Saint Louis, USA*

**The diverged dynamics of the DNA replication program in Leishmania parasites**

Dr. Jeziel Dener Damasceno - *University of Glasgow, Scotland*

**Telomere biology in head and neck cancers (HNC) as a biomarker for early diagnosis**

Dra. Vivian Kahl - *The University of Queensland Diamantina Institute, The University of Queensland (UQ), Australia*

## **Symposium 9**

**02:00 PM – 04:00 PM | Occupational Risk Assessment and Public Health**

Chair: Dra. Viviane Souza do Amaral – *Universidade Federal do Rio Grande do Norte (UFRN), Brazil*

**A new model for assessing cancer risks associated with air pollution mixtures**

Dr. Kristian Dreij – *Karolinska Institutet, Sweden*

**Human Exposure to Occupational Contaminants and Its Health Implications: the case of formaldehyde a known carcinogen**

Dr. João Paulo Teixeira – *Universidade do Porto, Portugal*

**Interaction between polymorphism and epigenetic status of MT2A gene is able to modulate Pb body burden and metal-induced toxicity, in exposed workers**

Dr. Gustavo Barcelos – *Universidade Federal de São Paulo (UNIFESP), Brazil*

**Occupational exposure to inhalational anesthetics: and overview on toxicity impact**

Dra. Mariana Gobbo Braz – *Universidade Estadual Paulista (UNESP), Brazil*

## **Symposium 10**

**02:00 PM – 04:00 PM | Toxicogenetics/Toxicogenomics and Bioinformatics**

Chair: Dra. Elza Tiemi Sakamoto Hojo - *Universidade de São Paulo (USP), Brazil*

**Tumor derived organoids to evaluate response to treatment in câncer**

Dra. Silvia Regina Rogatto - *University of Southern, Denmark*

**Toxicogenomic activity of environmental contaminants: a risk for human health**

Dra. Daisy Maria Favero Salvadori - *Universidade Estadual Paulista (UNESP), Brazil*

**A genomic view of DNA repair mechanisms in different industrial yeast species**

Dr. Diego Bonatto – *Universidade Federal do Rio Grande do Sul (UFRGS), Brazil*

**Transcriptional changes of single cells in response to anti-cancer therapies**

Dr. Alexandre Ferro Aissa - *University of Illinois, EUA*

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**04:00 PM – 04:30 PM | Coffee Break**

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**04:30 PM | Closing Ceremony/Awards Session**

**05:00 PM | MutaGen-Brasil General Assembly**

*\*in Portuguese*