

# SCIENTIFIC PROGRAMME

## Saturday 23<sup>rd</sup> March 2019

- 17.00 Registration and Poster Assembly
- 19.30 Welcome to Meeting / Welcome Buffet

### **Traditional Music and Dance from the Yucatàn**

## Sunday 24<sup>th</sup> March 2019

The Conference is Open!

### Session 1

#### Aluminium and the Environment

\*Denotes presentation by a student.

Chair: Charley Driscoll (*Syracuse University, New York, USA*)

08.55 Introduction by the Chair

9.00 Platform 1

#### **Silicic acid**

Chris Exley (*Keele University, United Kingdom*)

9.20 Discussion

9.30 Platform 2

#### **Interaction of aluminum and silica with anaerobic acidophiles: A geochemical perspective with emphasis on biomineralization**

Javier Sánchez-España (*Spanish Geological Survey, Spain*)

9.50 Discussion

10.00 Platform 3

**New evidence for the iron-aluminum hypothesis (Al could play an important role in the ocean carbon cycle and climate change)**

Linbin Zhou (*South China Sea Institute of Oceanology, China*)

10.20 Discussion

10.30 **COFFEE**

10.50 Platform 4

**The influence of soil vegetation cover and precipitation on soil aluminium pools**

Petra Vokurková (*Czech University of Life Sciences, Prague, Czech*)

11.10 Discussion

11.20 Platform 5\*

**Changes in low molecular weight organic acid production as indicators of fungal response to aluminium stress**

Filip Polák (*Comenius University in Bratislava, Slovakia*)

11.40 Discussion

11.50 Oral Poster 1\*

**Effect of aluminum on the growth, sporulation and virulence of *Pythium ultimum***

Normig Zoghbi-Rodríguez (*CICY, México*)

11.55 Discussion

12.00 Platform 6\*

**Aluminum exposure in honey bees: effects on forage, lifespan, and the cholinergic system**

Ana Chicas-Mosier (*Oklahoma State University, USA*)

12.20 Discussion

12.30 Platform 7

**The effect of river water acidity and aluminium on boreal fish assemblages and fish kills**

Tapio Sutela (*Natural Resources Institute, Finland*)

12.50 Discussion

13.00 **LUNCH**

## Session 2

### Aluminium and Plants

\*Denotes presentation by a student.

Chair: Ondřej Drábek (*Czech University of Life Sciences Prague, Czech*)

14.25 Introduction by the Chair

14.30 Platform 8

**Foliar aluminum concentration of Central America tree species**

Alfredo Alvarado-Hernández (*University of Costa Rica, San José, Costa Rica*)

14.50 Discussion

15.00 Platform 9

**Aluminium and phosphorus availability to tea plants (*Camellia sinensis*) influences leaf polyphenol patterns**

Charlotte Poschenrieder (*Universidad Autónoma de Barcelona, Spain*)

15.20 Discussion

15.30 Oral Poster 2\*

**Elucidating aluminum accumulation in plants by mapping techniques**

Angela Ku-González (*CICY, México*)

15.35 Discussion

15.40 Platform 10

**Studies on Al-tolerance mechanisms in seedlings of *Fagopyrum esculentum* Moench**

Rocío Cruz-Ortega (*Institute of Ecology, UNAM, México*)

16.10 Oral Poster 3\*

**Wild rice *Oryza glumaepatula* as a new source of aluminum tolerance genes for improving yields of cultivated *Oryza sativa* in acid soils**

Juan Montoya-Díaz (*Icesi University, Cali, Colombia*)

16.15 Discussion

16.20 **TEA**

16.50 Platform 11

**Study of aluminium toxicity effect on secondary metabolites production and signal transduction mechanisms in two suspension cells cultures**

Tere Hernández-Sotomayor (*CICY, México*)

17.10 Discussion

17.20 Oral Poster 4\*

**Aluminum modifies the protein binding of different molecular species of phosphatidic acid in suspension cells of Coffea arabica L.**

Roberto Pech-Kú (*CICY, México*)

17.25 Discussion

17.30 Platform 12\*

**Effect of the nitrogen source on aluminium toxicity in suspensions cells of Coffea arabica L.**

Jacqueline Cerdas-Solano (*University of Costa Rica, Guanacaste, Costa Rica*)

17.50 Discussion

18.00 Oral Poster 5\*

**Nitrate reductase-dependent nitric oxide production is involved in the response to aluminum stress in Coffea arabica L. suspension cells**

Laura Esquivel-Hernández (*CICY, México*)

18.05 Discussion

18.10 Oral Poster 6\*

**Role of salicylic acid induced phenylpropanoids in response to aluminum stress in Capsicum chinense cell cultures**

Ibis Vargas-Paredes (*CICY, México*)

18.15 Discussion

18.20 **END OF FIRST DAY**

20.15 **DINNER**

21.15 **Social Event including official Poster Session and Tequila Tasting!**

Monday 25<sup>th</sup> March 2019

Session 3

Human Exposure to Aluminium

\*Denotes presentation by a student.

Chair: Tere Hernández-Sotomayor (*CICY, México*)

08.25 Introduction by the Chair

08.30 Platform 13

**Computational approach to aluminum biochemistry: How aluminum can alter the thermodynamics of redox reactions**

Xabier Lopez (*University of San Sebastian, Donostia, Euskadi, Spain*)

08.50 Discussion

09.00 Platform 14

**Speciation analysis of aluminium organic complexes, method development and application in food analysis**

Marcin Frankowski (*Adam Mickiewicz University, Poznań, Poland*)

09.20 Discussion

09.30 Platform 15

**Aluminium chloride triggers neuroinflammation in vitro on microglial cells: possible involvement of the purinergic system**

Maria Rosa Chitolina (*Federal University of Santa Maria, RS, Brazil*)

09.50 Discussion

10.00 Oral Poster 7\*

**Role of LncRNA BACE1-AS on regulating A $\beta$  in neuronal injury induced by aluminum exposure**

Bao-long Pan (*Shanxi Medical University, Taiyuan, China*)

10.05 Discussion

10.10 **COFFEE**

10.30 Platform 16

**Effect of MLL modified H3K4me3 on aluminum induced cognitive impairment—Both population and animal epigenetic studies**

Qiao Niu (*Shanxi Medical University, Taiyuan, China*)

10.50 Discussion

11.00 Oral Poster 8\*

**Role of mGluR1 regulating PKC and NMDAR1 in synaptic plasticity variation induced by aluminum treatment**

Ya-qin Li (*Shanxi Medical University, Taiyuan, China*)

11.05 Discussion

11.10 Platform 17

**Interrelationship between aluminium, silicon and elements associated with tissue metabolism in the degenerated intervertebral disc in patients treated surgically**

Anetta Ziola-Frankowska (*Adam Mickiewicz University in Poznan, Poland*)

11.30 Discussion

11.40 Platform 18

**Role of aluminium in human chronic poisoning by toxic metals**

Maria Elena Ferrero (*University of the Study of Milan, Italy*)

12.00 Discussion

12.10 Platform 19\*

**Urinary excretion of aluminium and silicon in newborn infants**

Isabel Rodriguez (*Keele University, United Kingdom*)

12.30 Discussion

12.40 Oral Poster 9\*

**Impact of aluminum on sperm DNA quality**

Mohamed Ghazi (*CHU de Saint-Etienne, France*)

12.45 Discussion

12.50 Oral Poster 10

**New type of cigarettes IQOS as a possible source of body burden by risk elements**

Ondřej Drábek (*Czech University of Life Sciences Prague, Czech*)

12.55 Discussion

13.00 Short Video

**Our daily aluminium**

Karin Iková (*Secondary Vocational School, Hlohovec, Slovakia*)

13.10 **LUNCH**

**FREE AFTERNOON**

**Excursion to Uxmal**

20.00 **DINNER**

**Tuesday 26<sup>th</sup> March 2019**

**Session 4**

**Aluminium and Neurological Disease**

\*Denotes presentation by a student.

Chair: Xabier Lopez (*University of San Sebastian, Donostia, Spain*)

8.25 Introduction by the Chair

8.30 Platform 20\*

**After the dust settles: A qualitative descriptive study of underground workers who received aluminum dust prophylaxis**

Danielle Aubin (*Laurentian University, Canada*)

08.50 Discussion

09.00 Platform 21

**Aluminum in neurological and neurodegenerative disease; a tribute to the work of the late DRC McLachlan**

Walter Lukiw (*LSU Health Sciences Center, New Orleans, USA*)

09.20 Discussion

09.30 Platform 22

**Aluminium in the pathogenesis of Parkinson's disease**

Sakae Yumoto (*Yumoto Institute of Neurology, Japan*)

09.50 Discussion

10.00 Platform 23

**Visualising aluminium in the human brain across complex neurological disorders**

Matthew Mold (*Keele University, United Kingdom*)

10.20 Discussion

10.30 **COFFEE**

Session 5

Aluminium Adjuvants, Vaccines and Adverse Events

\*Denotes presentation by a student.

#Denotes 15min. (10+5) Platform Presentation.

\$Denotes 20min. (15+5) Platform Presentation.

Chair: Claire Dwoskin (*CMSRI, Washington DC, USA*)

10.55 Introduction by the chair

11.00 Platform 24

**Aluminium is toxic!**

Christopher Exley (*Keele University, United Kingdom*)

11.20 Discussion

11.30 Platform 25

**Early life injection of whole vaccines vs the aluminum adjuvant leads to differential behavioral outcomes in mice**

Housam Eidi (*University of British Columbia, Vancouver, Canada*)

11.50 Discussion

12.00 Platform 26\*#

**Presence of small ruminant lentiviruses in aluminium-induced, post-vaccination granulomas in sheep**

Ricardo de Miguel (*Department of Animal Pathology, University of Zaragoza, Spain*)

12.10 Discussion

12.15 Platform 27\*#

**Presence of aluminium in central nervous system of sheep repetitively inoculated with aluminium-adjuvants**

Javier Asín (*Department of Animal Pathology, University of Zaragoza, Spain*)



12.25 Discussion

12.30 Platform 28

**Aluminium adjuvant disease in sheep (ovine ASIA syndrome): Implications for human vaccination**

Lluís Luján (*Department of Animal Pathology, University of Zaragoza, Spain*)

12.50 Discussion

13.00 **LUNCH**

14.20 Platform 29

**Assessment of the long-term survival rate of differentiated macrophages exposed to aluminium adjuvants *in vitro*.**

Emma Shardlow (*Keele University, United Kingdom*)

14.40 Discussion

14.50 Platform 30

**Contribution of 18F-FDG PET brain functional imaging for diagnosing aluminium hydroxide-induced macrophagic myofasciitis**

Jérôme Authier (*Paris Est Creteil University, Creteil, France*)

15.10 Discussion

15.20 Platform 31\$

**Aluminum adjuvants may cause neurological disorders by inducing chronic cytokine expression in the brain**

Dan Steinberg (*Blogger at VaccinePapers.org*)

15.35 Discussion

15.40 Platform 32\$

**The association between HPV vaccine and lowered fertility**

Gayle DeLong (*City University of New York, New York, USA*)

15.55 Discussion

16.00 Platform 33\$

**HPV: A personal perspective**

Sesilje Bondo Petersen (*Bispebjerg Hospital, Copenhagen, Denmark*)

16.15 Discussion

16.20 Platform 34\$

**From *The HPV Vaccine on Trial*: concerns regarding aluminium-based adjuvants in human papillomavirus vaccines**

Kim Mack Rosenberg, Esq. (*Bouer Law, LLC, New York, New York, USA*)

16.35 Discussion

16.40 Platform 35

**Global vaccine safety and policy shortcomings**

Del Bigtree (*Informed Consent Action Network*)

17.00 Discussion

17.10 Platform 36# (Film)

**Under the skin – The sheep experiment: Outtake of an upcoming documentary film**

Bert Ehgartner (*Vienna, Austria*)

17.20 Discussion

17.25 **TEA**

Final Session Chair

Christopher Exley (*Keele University, United Kingdom*)

**JD Birchall Lecture**

Charles T. Driscoll (*Syracuse University, New York, USA*)

17.45 **Introduction by Chair**

**Effects of acid deposition on the biogeochemistry and toxicity of aluminum and its recovery**

18.45 Discussion

18.55 **CONCLUSION OF MEETING**

*20.00 Conference Dinner  
Announcements and Prizes!*

## **List of Additional Posters**

\*Denotes presentation by a student.

Poster 1

**The influence of land-use on tropical soil chemical characteristics with emphasis to aluminium**

Ondřej Drábek (*Czech University of Life Sciences, Prague, Czech*)

Poster 2\*

**Effect of salicylic acid in response to aluminum toxicity in cellular suspensions of *Capsicum chinense* Jacq.**

Yahaira Cab-Guillén (*CICY, Mexico*)

Poster 3

**Relationship between phospholipases C in *Coffea arabica* phosphoinositide pathways under aluminum stress**

Armando Muñoz Sanchez (*CICY, Mexico*)

Poster 4\*

**Aluminum at acidic pH induces the resistance of *Capsicum chinense* to *Pythium ultimum***

Normig Zoghbi-Rodríguez (*CICY, Mexico*)

Poster 5

**Aluminum induces deficits in the expression of multiple essential cytoskeletal and synaptic elements in human neuronal-gial (HNG) cells primary co-culture**

Walter Lukiw (*LSU Neuroscience Center, New Orleans, USA*)

Poster 6

**Effects of aluminum chloride on proliferation and neurogliogenesis of neural progenitor cells**

Vera Morsch (*Federal University Santa Maria, Brazil*)

Poster 7\*

**Our daily aluminium**

Karin Iková (*Secondary Vocational School, Hlohovec, Slovakia*)

Poster 8\*

**Observation of potential genotoxic properties of aluminium ions**

Dominik Juračka (*Comenius University in Bratislava, Slovakia*)