



ICAP/ICAN-2022, Chestnut Conference Center, Toronto, Canada
June 28-30, 2022

Conference Program

Day One

Tuesday June 28, 2022

- 8 – 9 am - Breakfast
- 9 – 9:15 - Welcome Remarks **Lakshmi Kotra and Barbara H. Zimmermann**
- Session 1. *Chairs: Emil Pai*
- 9:15 – 9:55 - Invited Talk 1 - **Ji-Long Liu (remote)**
The structure and function of cytoophidia
- 9:55 – 10:40 - Invited Talk 2 - **Masahiro Fujihashi (remote)**
Seeking for the origin of the distortion in ODCase catalysis
- 10:40 – 10:55 - Break
- 10:55 – 11:40 - Invited Talk 3 - **Bowen Li**
Design of next-generation self-adjuvanted mRNA vaccines
- 11:40 – 12:30 - Invited Talk 4 - **Bruce Palfey**
Surprises from the Mechanism of Flavin-dependent Thymidylate Synthase
- 12:30 – 1:30 - Lunch
- Session 2. *Chairs: Vicente Rubio*
- 1:30 – 2:15 - Invited Talk 5 - **Dasantila Golemi-Kotra**
Elucidation of the mechanism of action of a novel D-amino esterase enzyme of Staphylococcus aureus
- 2:15 – 2:45 - Oral Presentation 1 **Nicholas Ah Mew**
N-Carbamylglutamate augments ureagenesis in healthy adults
- 2:45 – 3:15 - Oral Presentation 2 **Peter Szlosarek**
Arginine deprivation as a novel anticancer therapy
- 3:15 – 3:30 - Break
- 3:30 – 4:15 - Invited Talk 6 - **Santiago Ramon-Maiques**
Portrait of a diseased protein: characterization of pathogenic mutations in the multienzymatic protein CAD
- 4:15 – 5:00 - Invited Talk 7 - **Hiroki Morizono**
Functional Evaluation of the Universe of Ornithine Transcarbamylase Variants
- 5:00 – 6:30 - **Poster Session and Reception**
- Poster Session. *Chairs: Melissa Lewis-Bakker and Torsten Mohlmann*
- Poster 1: **Vanessa Scherer**, *Chloroplast nucleotide homeostasis and interplay with photosynthesis during acclimation*
- Poster 2: **Francisco del Caño Ochoa**, *A crosslinking strategy to decipher the architecture of CAD, the megaenzyme leading pyrimidine biosynthesis*
- Poster 3: **Wenxia Luo**, *Changes in p16 expression and histone modifications by reduction of global DNA methylation using DNMT inhibitors on gastric cancer cell lines*

Poster 4: **Olufola Ige**, *A kinetic study of the lysine methyltransferase DOT1L shows variation in the formation of methylated products and substrate specificity.*

Poster 5: **Mohammad Ebrahimzadeh**, *Neuroprotective agents for the treatment of multiple sclerosis (MS): Immune-independent recovery in murine models*

Poster 6: **Erika Lozano**, TBA

Poster 7: **Bruce Palfey**, *FMN – Not Dihydroorotate – is Activated Thermodynamically by the Binding Energy of Dihydroorotate in the Reductive Half-Reaction of E. coli Dihydroorotate Dehydrogenase*

7:00 PM - ICAP/ICAN Organizing Committee Meeting

Day Two

Wednesday June 29, 2022

8 – 9 am - Breakfast

Session 3.

9:00 – 9:45 - Invited Talk 8 -

Chairs: Barbara H. Zimmermann

Suwen Zhao (Remote)

Discovery of Z genome biosynthetic pathway

9:45 – 10:30 - Invited Talk 9 -

Zee-Fen Chang (Remote)

Quantitation of Four Deoxynucleoside Triphosphates by the Combination of Rolling Circle Amplification and Quantitative Polymerase Chain Reaction

10:30 – 10:45 - Oral Presentation 3

Nan Cheng

Comparative analysis of ultra-sensitive DNA detection by PCR and DNA enzyme linked mass spectrometric assay

10:45 – 11:00 - Break

11:00 – 11:30 - Oral Presentation 4

Sakina Fatima

Molecular interactions driving RNA binding to hnRNPA1 implicated in neurodegeneration

11:30 – 12:15 - Invited Talk 10 -

Ted Lakowski

Metabolomic methods to quantify patterns of epigenetic modifications to histones and DNA in cancer cells

12:15 – 1:15 - Lunch

Session 4.

1:15 – 2:00 - Invited Talk 11 -

Chairs: Santiago Ramon-Maiques

Andreas Schulze

Peculiar function of the liver in guanidino compound metabolism

2:00 – 2:30 - Oral Presentation 5

Clara Marco Marin

Novel structure-function insights into carbamoyl phosphate synthetase 1 (CPS1)

2:30 – 3:00 - Oral Presentation 6

Torsten Mohlmann

Arabidopsis CTP Synthase 2 is essential for nucleotide balancing and chloroplast DNA synthesis

3:00 – 3:45 - Invited Talk 12 -

Ljubica Caldovic

N-Acetylglutamate synthase and carbamylphosphate synthetase at the intersection of arginine and pyrimidine metabolism in tumors

3:45 - Long break and personal time/shopping

Harbor Front for Cruise and Dinner (For Banquet Ticket Holders)

6:00 – 6:30 Assemble at Lower Simcoe Street Pier on Harbor Front (see the map at the conference)

6:30 PM Boarding Challenge Boat; Food served on the boat, with DJ music

9:30 PM Boat returns and disembark



Day Three

Thursday June 30, 2022

8 – 9 am - Breakfast

Session 5.

9:00 – 9:45 - Invited Talk 13 -

Chair: Hiroki Morizono

Luigi Agrofoglio (Remote)

Synthesis and preclinical development of LAVR-289, a broad spectrum antiviral acyclic nucleoside phosphonate

9:45 – 10:30 - Invited Talk 14 -

Emil F. Pai

Orotidine Monophosphate Decarboxylase - An Enzyme of Many Talents

10:30 – 10:45 - Break

10:45 – 11:30 - Invited Talk 15 -

Adam Frankel

Methylarginine efflux in nutrient-deprived yeast mitigates disruption of nitric oxide synthesis

11:30 – 12:15 - Invited Talk 16 -

Barbara H. Zimmermann

Protein-protein interactions of pyrimidine metabolic enzymes

12:15 – 1:15 - Lunch

Session 6.

1:15 – 2:00 - Invited Talk 17 -

Chair: Ljubica Caldovic

Vicente Rubio Zamora

Structural understanding of the initial enzymatic reaction of ornithine and proline synthesis in humans and its inborn errors

2:00 – 2:30 - Invited Talk 18 -

Lakshmi P. Kotra

Protein Arginine Deiminases and Drug Development

2:30 - Concluding Remarks

Ljubica Caldovic and Lakshmi Kotra



See you at ICAP/ICAN-2024