

# The 24<sup>th</sup> International Conference on Arginine and Pyrimidines

## July 16 – 19, 2014

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Wednesday, July 16<sup>th</sup>

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*On-site registration will take place at the Foyer B of Ruth Deech Building.*

*The seminars will be at Tsuzuki Lecture Theatre.*

**10:30– 11:00 Tea, Coffee and Biscuits**

**11:00– 12:00 On-site Registration**

**12:30 – 14:00 Lunch**

**14:00 – 14:15 Welcoming Remarks**

14:00 Welcome by Ji-Long Liu, Chair, ICAP2014 Organising Committee

**14:15 – 17:15 Session 1: Pyrimidines (I)**

**Chair: Barbara Zimmermann**

14:15 **1A:**

**Elizabeth Carrey, University College London, UK**

*Early Steps in Pyrimidine Biosynthesis: Looking back, going forward.*

14:40 **1B:**

**Barbara Zimmermann, Universidad de los Andes, Colombia**

*Pyrimidine biosynthesis in *Toxoplasma gondii*.*

15:05 **1C:**

**Zee-Fen Chang, National Yang-Ming University, Taiwan, ROC**

*Ribonucleotide reductase promotes genomic instability and tumor heterogeneity via increasing dUTP misincorporation.*

**15:30-16:00 Tea, Coffee and Biscuits**

16:00 **1D:**

**Patricia Kuwabara, University of Bristol, UK**

*Pyrimidines, metabolism and DNA repair in *C. elegans**

16:25 **1E:**

**Lola Gonzalez, Instituto de Parasitología y Biomedicina, Spain**

*Role of dUTPase in the occurrence of uracil-containing DNA in *Trypanosoma brucei*.*

16:50 1F:

**Torsten Möhlmann, University Kaiserslautern, Germany**

*Transport and catabolism of pyrimidine metabolites in plants.*

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Thursday, July 17<sup>th</sup>

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8:00 – 9:00 Breakfast

**9:00 – 12:25 Session 2: Pyrimidines (II) – CTP Synthase and the Cytoophidium**

Chair: **Ömür Y. Tastan**

9:00 2A:

**Ömür Y. Tastan, University of Oxford, UK**

*Potential role for CTP synthase in Drosophila optic lobe development.*

9:25 2B:

**Li-Mei Pai, Chang Gung University, Taiwan, ROC**

*Cbl regulates endoreplication by controlling cytoophidium.*

9:50 2C:

**Gabriel Aughey**

*Determining the mechanisms of cytoophidium formation in Drosophila.*

10:15 2D:

**Li-Ying Sung, National Taiwan University, Taiwan, ROC**

*Both CTP synthase 1 and 2 form the cytoophidia in mammalian cells.*

**10:40– 11:10 Tea, Coffee and Biscuits**

11:10 2E:

**Gerson D. Keppeke,**

*CTPS inhibition induces formation of IMPDH2-based and CTPS1-based independent RR structures*

11:35 2F:

**Jun Yan, Chinese Academy Of Sciences, China**

*Purine metabolism, cell cycle and circadian clock.*

12:00 2G:

**Lydia Hulme, University of Oxford, UK**

*CTP synthase and cytoophidium in S. Pombe.*

12:30 – 14:00 Lunch

**14:00 – 17:00 Session 3: Arginine and Urea Cycle (I)**

**Chair: Hiroki Morizono**

14:00 **3A:**

**Hiroki Morizono, Children's National Medical Center, USA**

*NAGS and its changing role through evolution.*

14:25 **3B:**

**Vicente Rubio, Instituto de Biomedicina de Valencia, Spain**

Nitrogen control beyond arginine biosynthesis: following the NAGK-Pil-PipX-NtcA story in cyanobacteria

14:50 **3C:**

**Paloma Liras Padin, University of León, Spain**

*ArgR, a versatil regulator affecting primary and secondary metabolism on Streptomyces coelicolor.*

15:15 **3D:**

**Staffan Svärd, Uppsala University, Sweden**

*The role of arginine during infections by the intestinal parasite Giardia intestinalis*

**15:40-16:10 Tea, Coffee and Biscuits**

16:10 **3E**

**Daniel Charlier, Vrije Universiteit Brussel, Belgium**

*Regulation of the E. coli carAB operon by RutR and PepA.*

16:35 **3F:**

**Peter Szlosarek, Barts Cancer Institute, Queen Mary University of London, UK**

*Targeting arginine in human cancers: from the lab to the clinic.*

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**Friday, July 18<sup>th</sup>**

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**8:00 – 9:00 Breakfast**

**9:00 – 9:50 Session 5: Discussion - Does ICAP need a society?**

**Chair: Ji-Long Liu**

**9:50 – 12:25 Session 6: Arginine and Urea Cycle (II)**

**Chair: Lakshmi Kotra**

9:50 **4C:**

**Ljubica Caldovic, Children's National Medical Center, USA**

*The evolution of NAGS and urea cycle, NAGS deficiency in humans.*

10:15 **4D:**

**Lakshmi Kotra, University of Toronto, Canada**

*Peptidyl arginine hypermodification and potential for the development of disease modifying agents.*

**10:40– 11:10 Tea, Coffee and Biscuits**

11:10 5A:

**Richard Christopherson, University of Sydney, Australia**

*The mechanisms of action of purine analogues such as fludarabine on B-lymphoproliferative disorders*

11:35 5B:

**Andriy Sibirny, Institute of Cell Biology, NAS of Ukraine**

*Construction of the recombinant producers of bacterial arginine deiminase and human arginase and their use for arginine deprivation.*

12.00 5C:

**Adrian Harris, University of Oxford, UK**

*Hypoxia effects on metabolism as targets for synthetic lethality.*

**12:30 – 14:00 Lunch**

**14:00 – 17:00 Oxford walking tour/Bus Tour (free of charge)**

**16:00-18.00 Tea, Coffee and Biscuits/ Discussion Session for future of ICAPs**

**17:00- 19:00 Poster Session**

**19.00 Gala Dinner (free of charge)**

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Saturday, July 19<sup>th</sup>

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**8:00 – 9:00 Breakfast**

**9:00 – 12:15 Session 7: Pyrimidines (III)**

**Chair: Santiago Ramón-Maiques**

9:00 6A:

**Santiago Ramón-Maiques, Spanish National Cancer Research Center (CNIO), Spain**

*Towards deciphering the architecture of CAD: structure of human ATCase and DHOase.*

9:25 6B:

**Wolfgang Knecht, Lund University, Sweden**

*Deoxyribonucleoside kinases – biodiversity and practical use.*

9:50 6C:

**Sergio de Cima, Instituto de Biomedicina de Valencia, Spain**

*Human carbamoyl phosphate synthetase: structure, function and pathology.*

10:15 6D:

**Monika Loeffler, Philipps-University Marburg, Germany**

*Orotic acid: not merely an intermediate of pyrimidine synthesis.*

**10:40-11:10 Tea, Coffee and Biscuits**

**11:10 6E:**

**Carmen Díez-Fernández, Instituto de Biomedicina de Valencia, Spain Sergio de Cima**

*In vitro carbamoyl phosphate synthetase 1 (CPS1) expression deciphers CPS1 domain function and clarifies disease-causation in CPS1 deficiency*

**11:35 6F:**

**David Evans, Wayne State University, USA**

*Novel Peptide Inhibitors of Multifunctional Aspartate Transcarbamoylase.*

**12:00 6G:**

**Aziz Aboobaker, University of Oxford, UK**

*Using flatworms as a model system for stem cell biology and regeneration.*

**12.25 Closing remarks**

**12:30-14:00 Lunch**

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