

12th International conference on One Carbon Metabolism, B Vitamins and Homocysteine

Hotel Termes Montbrió, Montbrió, Southern Catalonia, Spain

June 9th to 13th 2019

Preliminary Scientific Programme		
Sunday 09/06/2019		
15:00 – 19:00		Registration & hanging of posters session 1
		Mare Nostrum theatre
16.30-18:30		Inaugural session and Keynote lectures
		Chair Michelle Murphy, Universitat Rovira i Virgili, Spain
16:30 – 16:45		Opening address by the very honorable Rector of the Universitat Rovira i Virgili, Prof Maria José Figueras
16:45 – 17:20		Honorary presidential lecture Methionine Synthase: the beating heart in a complex system. Anne Molloy, (Dublin, Ireland)
17:20 – 17:45		How DNA methylation contributes to health and disease. Manel Esteller (Barcelona, Spain)
17:55 – 18:30		Metabolomics implicates amino acid metabolism as a key node in cardiometabolic disease pathogenesis. Chris Newgard (Durham, NC, USA).
18:30 – 20:00		Welcome reception Hotel Termes Montbrió
Monday 10/06/2019		
6:45 – 8:00		Breakfast
		Mare Nostrum theatre
08:15 – 08:25		Welcome Michelle Murphy
08:25 – 10:00		Plenary session 1 A multidisciplinary approach to understanding one carbon metabolism from the nucleus to the clinic Chair Patrick Stover (College Station TX, USA)
08:25 – 08:50		Nuclear one-carbon metabolism in embryonic development and disease. Patrick Stover (College Station TX , USA)
8:50-9:10		The role of perturbed B vitamin status in the development of pathogenic mechanisms: evidence from Animal studies. Amanda MacFarlane (Ottawa, Canada)
9:10-9:35		The role of B vitamins in health and disease: the snakes and ladders of evidence from human observational studies and trials. Paul Jacques (Boston MA, USA)
09:35 – 10:00		The Multidisciplinary Making of the <i>MTHFR</i> Story: Past, Present, and Future. Joshua Miller (New Brunswick NJ, USA)
10:00 – 10:30		Refreshment Break
		Mare Nostrum theatre
10:30 – 12:00		Plenary session 2 Pre-natal function/dysfunction of folate one-carbon metabolism

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		Chair Nicholas Greene (London, UK)
10:30 – 11:00		Folate, folic acid and neural tube defects. Nicholas Greene (London, UK).
11:00 – 11:25		Embryonic Consequences of Abnormal Folate Transport. Richard Finnell (Houston TX, USA)
11:25-11:45		One carbon metabolism: Linking nutritional biochemistry to epigenetic programming of lifetime development. Kevin Sinclair (Nottingham, UK).
11:45 - 12:00		Short talk (abstracts/ young scientist)
12:00 - 13:30		Lunch break
		Mare Nostrum theatre
		Hemicicle
13:30 - 15:00		Parallel sessions 1-2
		Chairs Joshua Miller (USA) and Mary Ward (Northern Ireland)
		Parallel session 1 Deficiencies and excesses in one carbon metabolism and cancer Chair Joshua Miller (New Brunswick NJ, USA)
13:30 - 14:00		Folic acid: too little or too much? Where do we draw the line for cancer risk? TBA
14:00 - 14:25		Methionine adenosyltransferases in liver cancer. José María Mato (Derio, Spain).
14:25 - 14:45		Methionine dependence and folate metabolism: an adaptive mechanism of cancer cells? Jean-Louis Guéant (Nancy, France).
14:45 - 15:00		Short talk (abstracts)
		<i>Take home message/ reporting postdoc</i>
		Parallel session 2 Genes, nutrients and interactions in the regulation of one carbon metabolism Chair Mary Ward (Coleraine, Northern Ireland)
13:30 - 14:00		Gene-nutrient interactions in folate metabolism: impact on several systems. Rima Rozen (Montreal, Canada).
14:00 - 14:25		The role of choline-micronutrient interactions in one carbon metabolism regulation TBA
14:25 - 14:45		New insights into formate production and utilisation. Margaret Brosnan (Saint John's, Canada)
14:45 - 15:00		Short talk (abstracts)
		<i>Take home message /reporting postdoc</i>
15:00 - 16:30		Poster session 1 and refreshment break
		Mare Nostrum theatre
16.30-18.00		Plenary session 3 The effects of nutrient and metabolite interactions with the microbiome on nutrient uptake and function
		Chair TBC

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16:30 - 17:00		Microbiome modulation of response to pharmaceutical treatment in the management of disease, and to nutrients. Felipe Cabreiro (London, UK).
17:00 - 17:25		The microbiome: a boundary between the metabolome and the epigenome. Oscar Yanes (Tarragona, Spain).
17:25 - 17:45		Breast milk betaine content, early life gut microbiome, and long term metabolic health. Carles Lerin (Barcelona, Spain)
17:45 - 18:00		Short talk (abstracts)
Tuesday		
11/06/2019		
8:00 - 09:45		Mare Nostrum theatre
08:00 - 09:45		Plenary session 4 B vitamins, homocysteine and the metabolome
		Chair Per Ueland (Bergen, Norway)
08:00 - 08:30		Application of metabolomic techniques to study altered one-carbon metabolism and hyperhomocysteinemia. Teodoro Bottiglieri (Dallas TX, USA)
08:30 - 08:55		Vitamin B6, kynurenines and related biomarkers as predictors of disease. Arve Ulvik (Bergen, Norway)
08:55 - 09:15		TBA
09:15 - 09:30		Short talk (abstracts)
09:30 - 09:45		Short talk (abstracts)
9:45-10:15		Refreshment break
		Mare Nostrum theatre
		Hemicicle
10:15 - 12:00		Parallel sessions 3 & 4
		Chairs Irwin Rosenberg (USA) and Jean-Louis Guéant (France)
		Parallel session 3 B-vitamin deficiency, vascular pathogenic mechanisms and prevention of adverse health outcomes
		Irwin Rosenberg (Boston, USA)
10:15 - 10:45		Homocysteine Modification in Protein Structure/Function and Human Disease. Hieronim Jakubowski (Poznań, Poland)
10:45 - 11:10		Lessons learned in the mouse model, Sanjana Dayal (Iowa, USA)
11:10 - 11:30		B vitamins in stroke prevention TBA
11:30 - 11:45		Short talk (abstracts)
11.45 - 12:00		Short talk (abstracts)
		<i>Take home message/ reporting postdoc</i>
		Parallel session 4 One carbon metabolism genes and inborn errors of metabolism
		Chair Jean-Louis Guéant (Nancy, France)
10:15 - 10:45		Cobalamin C Deficiency: Clinical Phenotypes, Animal Models and New Therapies. Charles Venditti (Bethesda MA, USA).
10:45-11:10		Transsulfuration and further downstream catabolism of H2S.

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		Viktor Kozich (Prague, Czech Republic)
11:10 - 11:30		The evolving field of human vitamin B6-dependent disorders. Philippa Mills (London, UK).
11.30 - 11:45		Short talk (abstracts)
11:45 - 12:00		Short talk (abstracts)
		<i>Take home message /reporting postdoc</i>
12:00		Free afternoon for networking / remove posters session 1 and hang posters session 2 by evening
Wednesday 12/06/2019		
		Mare Nostrum theatre
08:15 - 10:00		Plenary session 5 The role of one carbon metabolism in the <i>in utero</i> programming of early development and health Chair Pere Cavallé-Busquets (Reus, Spain)
08:15 - 8:45		The placenta-yolk sac partnership in embryonic folate delivery. Jocelyn Glazier (Manchester, UK).
08:45 - 09:10		Periconception one carbon metabolism and embryonic and placental health. Regine Steegers-Theunissen (Rotterdam, The Netherlands).
09:10 - 09:30		Foetal programming of Folate/B12 and Aortic remodeling during ageing. Britany Ballint (Nancy, France).
09:30 - 09:45		Folic acid intake from supplements and folate status during pregnancy: how much and for how long? Michelle Murphy (Reus, Spain).
09:45 - 10:00		Short talk (abstracts)
10:00 - 10:30		Refreshment break
10:30 - 12:15		Mare Nostrum theatre
		Plenary session 6 One carbon metabolism and the epigenome Chair Larry Brody (Bethesda, USA)
10:30 - 11:00		TBC
11:00-11:25		Larry Brody (Bethesda, USA) Title to be confirmed
11:25 - 11:45		Associations between maternal and paternal dietary methyl-donor intake and neural function in the offspring. Dan Ehninger (Bonn, Germany).
11:45 - 12:00		Short talk abstracts
12:00 - 12:15		Short talk abstracts
12:15 - 13:45		Lunch Break
13:45 - 15:15		Mare Nostrum theatre
		Plenary session 7 Synthetic as compared to natural B-vitamins in health and disease Chair Anne Molloy (Dublin, Ireland).

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13:45 - 14:15		Revisiting prevention and treatment of vitamin B12 deficiency. Ebba Nexø (Aarhus, Denmark).
14:15 - 14:40		Achieving Optimal Folate Status for Health (in European Populations): natural food folates versus folic acid. Helene McNulty (Coleraine, Northern Ireland).
14:40 - 15:00		The PREDIMED study. Focus on B vitamins in the Mediterranean diet. Emilio Ros (Barcelona, Spain)
15:00 - 15:15		Short talk (abstracts)
15:15 - 16:30		Poster session 2 and refreshment break
		Mare Nostrum theatre
16:30 - 18:00		Plenary session 8 The links between early status in key 1C micronutrients and child health and development Chair Lindsay Allen (Davis, USA)
16:30 - 17:00		Prenatal nutrition: relations with perinatal epigenetics and later obesity and metabolic risk. Keith Godfrey (Southampton, UK)
17:00 - 17:25		Maternal vitamin B12 status and lactation: observations and interventions. Lindsay Allen (Davis CA, USA)
17:25 - 17:45		Choline intake during early life and neurodevelopment and cognition. Steve Zeisel (Kannapolis NC, USA).
17:45 - 18:00		Short talk (abstracts)
20:00		Gala Supper
Thursday <i>13/06/2019</i>		
6:45 - 9:15		Breakfast and checkout, luggage storage
		Mare Nostrum theatre
9:15 - 10:45		Plenary session 9 B vitamins and chronic diseases: pathogenic mechanisms and prevention Chair Ralph Green (Davis, USA)
9:15 - 9:45		Homocysteine: from disease marker to disease prevention. David Smith (Oxford, UK)
9:45 - 10:10		Associations between maternal and paternal dietary methyl-donor intake and neural function in the offspring. Dan Ehninger (Bonn, Germany).
10:10 - 10:30		Hyperhomocysteinaemia and hearing loss. Gregorio Varela (Madrid, Spain)
10:30 - 10:45		Short talk (abstracts)
10:45 - 11:15		Refreshment break
		Mare Nostrum theatre
11:15 - 12:30		Plenary session 10

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		Summary and closing remarks
		Chair / co-chair Postdocs TBA
11:15 - 11.25		Summary parallel session 1
11:25 - 11.35		Summary parallel session 2
11:35 - 11:45		Summary parallel session 3
11:45 - 11:55		Summary parallel session 4
11:55 - 12.30		Next conference & prize giving
12:30		Lunch
13:45 -14:15		Optional Plenary session 11 To be decided

*This is a working draft of the programme and subject to minor modifications