
MARIE S. CURIE 2020 - EXPRESSION OF INTEREST

PRINCIPAL INVESTIGATOR: Dr. Michelle Murphy

DEPARTMENT: Unit of Preventive Medicine & Public Health, Universitat Rovira i Virgili (URV)

INSTITUTION: Pere Virgili Health Research Institute – Reus Campus

We are looking for a postdoc, interested in applying for the Marie Curie Individual Fellowships (MSCA-IF) 2020 call (*deadline September 2020*), to join our team. Selected candidates will receive dedicated support from the Institute to write a successful proposal.

Our research team has an established line of investigation in the role of one carbon metabolism in very early development, from pregnancy to early childhood. Undetected biological lesions that start to develop *in utero* may eventually lead to chronic diseases in adult life. The Reus-Tarragona Birth Cohort study aims to investigate the contribution of maternal and paternal gene-nutrient interactions to the *in utero* programming of health and development in the offspring. Lifestyle, environmental, clinical, physiological data and blood samples from mothers are collected from the first trimester throughout pregnancy. See list of selected publications for more details on our work.

We are looking for a Postdoc researcher to address the epigenetic factors that connect the transgenerational parental one carbon metabolism component with development and health in the offspring. Our Group has established national and international collaborations and the successful candidate will be expected to spend at least a year with one of our international collaborators.

Candidates with a track record in epigenetic methods and research, excellent team and communication skills and experience in scientific report writing are encouraged to apply. Leadership in previous peer-reviewed publications is highly evaluated. Candidates must have an excellent level of English and a sufficient level of Spanish to interact with study participants. Candidates must have not lived in Spain for more than 12 months in the 36 months leading up to September 9th 2020.

How to apply:

Informal enquiries are strongly encouraged.

Interested candidates should send a CV, motivation letter explaining your research interests at michelle.murphy@urv.cat (E-mail Subject: "IISPV - MSCA Dr. Murphy") by **30 April 2020**.

Selection of related references:

- Ornosa-Martín G, Fernandez-Ballart JD, Ceruelo C, Ríos Lúdia, Ueland PM, Meyer K, Murphy MM. Homocysteine, the MTHFR 677C>T polymorphism and hypertension: effect modifiers by lifestyle factors and population subgroups. *Br J Nutr* 2020; In Press eISSN:1475-2662.
- Cavallé-Busquets P, Inglés-Puig M, Fernandez-Ballart JD, Haro-Barceló J, Rojas-Gómez A, Ramos-Rodríguez C, Ballesteros M, Meyer K, Ueland PM, Murphy MM. Moderately elevated first trimester fasting plasma total homocysteine is associated with increased probability of miscarriage. The Reus-Tarragona Birth Cohort Study. *Biochimie* 2020. eISSN:1638-6183.
- Roigé J, Murphy MM, Fernandez-Ballart JD, Canals J. Moderately elevated preconception homocysteine is a risk factor for psychological problems in childhood. *Pub Health Nutr* 2019;14,1-9.
- Solé-Navais P, Salat-Batlle J, Cavallé-Busquets P, Fernandez-Ballart JD, Ueland PM, Ballesteros M, Ornosa-Martín G, Inglés-Puig M, Colomina JM, Murphy MM. Early pregnancy folate-cobalamin interactions and their effects on cobalamin status and hematological parameters throughout pregnancy. *Am J Clin Nutr* 2018;107, 173-182.
- Obeid R, Murphy M, Sole-Navais P, Yajnik CS. Cobalamin status from pregnancy to early childhood: lessons from global experience. *Advances in Nutrition* 2017; 8, 971-979.
- Murphy MM, Fernandez-Ballart JD, Molloy AM, Canals J. Moderately elevated maternal homocysteine at preconception is inversely associated with cognitive performance in children 4 months and 6 years after birth. *Mat Child Nutr* 2017; 13, e12289.
- Colomina JM, Cavalle-Busquets P, Fernandez-Roig S, Sole-Navais P, Fernandez-Ballart JD, Ballesteros M, Ueland PM, Meyer K, Murphy MM. Maternal Folate Status and the BHMT c.716G>A Polymorphism Affect the Betaine Dimethylglycine Pathway during Pregnancy. *Nutrients* 2016;8.
- Fernandez-Roig S, Cavalle-Busquets P, Fernandez-Ballart JD, Ballesteros M, Berrocal-Zaragoza MI, Salat-Batlle J, Ueland PM, Murphy MM. Low folate status enhances pregnancy changes in plasma betaine and dimethylglycine concentrations and the association between betaine and homocysteine. *Am J Clin Nutr* 2013;97:1252-9.
- Murphy MM, Scott JM, Arijia V, Molloy AM, Fernandez-Ballart JD. Maternal homocysteine before conception and throughout pregnancy predicts fetal homocysteine and birth weight. *Clin Chem* 2004;50:1406-12.