

ICM Research Seminar

Wednesday 17th January

Guy Taylor

(Dr Daniel West, Prof Emma Stevenson)

C-Peptide and exercise in people with Type 1 Diabetes - A study update

Remaining beta cell function appears to improve glycaemic control and reduce rates of complications in individuals with type 1 diabetes (T1D). One possible reason for this increased risk of microvascular damage in T1D is reduced number of circulating endothelial progenitor cells (EPCs). These studies aim to examine the relationship between exogenous insulin production and physical activity on free living glycaemic control, and examine the impact an acute bout of exercise has upon circulating EPCs.

Dr Dorin-Mirel Popescu

(Prof Muzlifah Haniffa)

The Human Development Cell Atlas

The Human Developmental Cell Atlas (HDCA) is an integral part of the Human Cell Atlas that aims to describe all cell types and states in the developing human body. The need for the HDCA is justified by the expectation that unravelling the pathways for development through the study of molecular patterns at the cellular level will translate to new clinical approaches in cancer, regenerative medicine and other fields. I will present the HDCA, its objectives and applications alongside current progress.

Stella Breininger

(Prof John Mathers, Dr Laura Greaves, Prof Jelena Mann)

Effect of weight loss on mitochondrial defects in the ageing human colon

Colorectal cancer is initiated in colonocytes and, with advancing age, colonocytes accumulate mitochondrial mutations which contribute to age-related dysfunction and to increased cancer risk. The prevalence of complex 4 and mitochondrial mass deficiency was significantly greater in older (>48y) compared with younger (≤48y) individuals. Obese individuals had significantly more complex 1 depleted crypts (9.2%) compared with Controls (0%). In addition, the obese had significantly fewer crypts with normal complex 4 (96.9%) and mitochondrial mass (93.8%), and more crypts with complex 4 (3.1%) and mitochondrial mass (6.2%) deficiency compared with Controls (100%, 99.9%, 0% and 0.04% respectively).

Chair: Nicola Maney

Dental Lecture Theatre F, Medical School

1pm - 2pm