Title: Detection and function of glycosaminoglycan subunits in pre-eclampsia.

Keywords: Glycosaminoglycan, placenta, preeclampsia, mass spectrometry, biomarker

Brief Description:
We have shown that long sugar polymers are important in various biological processes important for placental development (1). In other systems this activity depends on the structure of the disaccharide subunits from which these polymers are based (2). We have shown that levels of these sugars are decreased in preeclampsia: a common and debilitating disease of pregnancy (3). Currently, there is no biomarker to detect preeclampsia before clinical symptoms manifest (20 weeks gestation) and there is no treatment except for delivery of the baby. This project will utilise our mass spectrometry facility to quantify specific glycan components and determine whether these specific components affect the function of placental cells in vitro. This will underpin future clinical trials for the use of glycans for the treatment of preeclampsia. We have a well characterised tissue collection from collaborations (Imperial College London).

Relevant Publications:

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