

Carlos SALOMON - CV

Professor Salomon is the Director of the UQ Centre for Extracellular Vesicle Nanomedicine, Head of the Translational Extracellular Vesicles (EV) in Obstetrics and Gynae-Oncology Group, NHMRC Investigator Fellow (EL2) and a worldwide authority on EV biomarkers for complications of pregnancies and ovarian cancer (>190 publications, H index 55, i10-index = 131). In the last 10 years, Professor Salomon's primary research and commercialisation activities have focused on the identification and validation of biomarkers, and development of In Vitro Multivariate Index Assays for clinically relevant complications (including ovarian cancers, and obstetrical syndromes) and their translation into clinical applications. He is a pioneer on investigation the release of extracellular vesicles (EVs) by the placenta and tumour cells and their utility as a biomarker for a wide range of pregnancy complications and ovarian cancer (OC). Prior to his research program, the field had little understanding of the changes in circulating EVs and their content across gestation and in OC progression. In pioneering this research, his program recruited, and collected biological samples, from over 20,000 participants in multiples studies in the USA, India, Chile, UK, and Australia in the last 10 years. He has optimised methods to isolate total and placenta and tumour-derived EVs present in circulation, and profiled their content by quantitative proteomic analysis, and miRNA sequencing; identifying for the first time, molecules within EVs associated with different complications of pregnancies, and at early stages of oncogenic transformation in OC. One of the most significant contributions of his research program has been the development of a test for early detection of ovarian cancer, OCRF-7, that displayed a classification efficiency of 98%. These outcomes of the research program provide a novel conceptual basis, and evidence for translation, resulting in changes in clinical practice and management.