MARIANNE ALLBRAND received her nursing degree in 1979 and her Postgraduate Diploma in Midwifery in 1985 and completed a degree of Master of Science, with the main field in Chemistry, in 2009. The aim of the master thesis was to give a survey over gene expression of placent al inflammatory markers contributing to the cytokine cascade associated with preterm labour. A pilot study was performed using cDNA microarray technique. The collection of placental tissue and cord blood samples in the research related to preterm birth was performed at the Department of Obstetrics & Gynaecology, Örebro University Hospital, where she is currently working as a midwife. In 2013 she was registered as a PhD student at School of Health and Medicine, Örebro University.

Maternal obesity influences pregnancy and the growing foetus from, or maybe even before, conception until delivery. Since the prevalence of obesity among world populations is rising, the current focus has shifted from earlier foetal undernutrition and infants with low birth weight to over nutrition and potential influences of maternal obesity on the foetus. Maternal obesity in pregnancy is associated with increased risk of maternal as well as foetal and neonatal morbidity and mortality; however, the mechanisms underlying these effects are not fully understood. The aims of this thesis were to investigate possible associations between maternal obesity and gene expression of inflammatory markers and growth factors in the placenta, as well as offspring birth weight and postnatal growth. Case-control and cohort studies were performed on severely obese nonsmoking women without pregnancy complications, with an uncomplicated, vaginal delivery and a healthy newborn infant.