## Contents

**CHAPTER 1**  
Introduction and outline  

**CHAPTER 2**  
Reproducibility of three-dimensional ultrasound measurements of fetal and placental volume at gestational ages of 11-18 weeks  

**CHAPTER 3**  
Clinical use of three-dimensional ultrasound fetal and placental volumes  

**CHAPTER 4**  
Longitudinal Doppler measurements of spiral artery blood flow in relation to uterine artery blood flow  

**CHAPTER 5**  
Color Doppler ultrasound of spiral artery blood flow for prediction of hypertensive disorders and intra uterine growth restriction: a longitudinal study  

**CHAPTER 6**  
ADAM12s and PP13 as first trimester screening markers for adverse pregnancy outcome  

**CHAPTER 7**  
Decreased plasma levels of metastin in early pregnancy are associated with small for gestational age neonates  

**CHAPTER 8**  
General discussion, conclusions and future prospects  

**CHAPTER 9**  
Summary  
Samenvatting  

List of co-authors  
List of publications  
Dankwoord