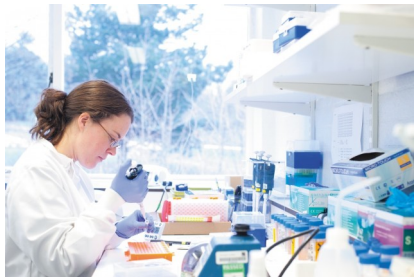
InterPregGen
Genetic studies of pre-eclampsia

The Importance of InterPregGen

Pre-eclampsia, one of the most dangerous cardiometabolic complications of pregnancy, claims the lives of 50,000 mothers and almost one million babies annually.



InterPregGen is the largest ever international research project into the genetics of pre-eclampsia. We will use genome-wide screening approaches to identify genetic variation which contributes to the disease, as well as providing genome sequencing data for Central Asian population groups. The study has been approved by the Research Ethics Committees in each of the participating countries.

More information can be found on our website:

www.interpreggen.org

Acknowledgments

InterPregGen would like to thank those women and their families who have participated in our pre-eclampsia research (past and present).

InterPregGen Centres include:

deCODE genetics
UNIVERSITY OF LEEDS
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SEVENTH FRAMEWORK PROGRAMME

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Genetic studies of pre-eclampsia in Central Asian and European populations

Part of the EU Seventh Framework Programme

InterPregGen: Genetic Studies of Pre-eclampsia

Pre-eclampsia

Pre-eclampsia and other hypertensive disorders of pregnancy remain the second most common cause of maternal death. Pre-eclampsia is characterised by hypertension and proteinuria which develops after 20 weeks gestation.

However, it is widely accepted that the underlying cause of disease is related to inadequate placentation early in pregnancy.

There is good evidence to suggest that the disease has a genetic component; a woman whose mother had pre-eclampsia has ~3-fold increase in risk of developing the condition herself. There is also evidence to suggest that the fetal genotype plays a role in susceptibility.

InterPregGen

InterPregGen is an international collaborative project aiming to identify DNA variants which predispose to pre-eclampsia. About 3% of pregnant women in Western Europe develop pre-eclampsia; this figure is over twice as high in Central Asia, suggesting that inter-population differences in genetic variants may be partly responsible for the variation in predisposition to the condition.

One aim of the InterPregGen consortium is to establish sustainable and productive collaborative links between research groups in Central Asia (Kazakhstan and Uzbekistan) and Europe (Finland, Iceland, Norway, UK).

Study Aims

We shall address the limited knowledge of genetic diversity in Central Asian populations by undertaking whole genome sequencing.

We will also establish the first pre-eclampsia biobanks of DNA and plasma samples in Kazakhstan and Uzbekistan.

Existing genome-wide screening data from previous work, and data generated as part of this project (a total of 10400 maternal cases and 7800 affected babies) will be used to identify pre-eclampsia susceptibility genes.

We will maximise the information available by conducting meta-analyses of maternal and fetal datasets, and examining maternal-fetal gene interaction.