

An early stage screening tool for distinguishing pregnant women having an increased risk of developing preeclampsia (Ramot)

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Preeclampsia is one of the most dangerous pregnancy complications occurs in the second or third trimester, affecting 3-8% of pregnancies; it is the leading cause of maternal and perinatal mortality and morbidity.

Preeclampsia cannot reliably be predicted as no tests available in early pregnancy.

OUR INNOVATION

The invention is based in part on the finding that plasma samples taken at a pre-symptomatic stage (at the end of the first trimester) from pregnant women that developed preeclampsia show altered levels of a set of ncRNAs compared to the levels of these ncRNAs in plasma samples of pregnant women that did not develop preeclampsia during their pregnancy. These ncRNAs were found to include a subset of molecules characterized by increased expression levels in samples from women that developed preeclampsia, and another subset of molecules characterized by decreased expression levels in samples from women that developed preeclampsia.

The present invention are particularly advantageous as they provide minimally-invasive means for early detection of preeclampsia risk and useful for determining whether a pregnant woman is in need of early preventive medical treatment and/or of monitoring for development of preeclampsia.

STATUS

The classifying method was tested in a cross validation manner and obtained around 85% accuracy.

INTELLECTUAL PROPERTY

Ramot filed a patent application titled: "Methods for identifying and monitoring pregnant women at risk of preeclampsia"

Currently in national phase

REFERENCES

Yoffe L, Gilam A, Yaron O, Polsky A, Farberov L, Syngelaki A, et al. Early detection of preeclampsia using circulating small non-coding RNA. Sci Rep. (2018) 8:3401.

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