Analysis of protein interactions of pre-eclampsia

S.M. Vidanagamachchi

Department of Computer Science, Faculty of Science, University of Ruhuna, Matara, Sri Lanka

Pre-eclampsia is a pregnancy complication caused by high-blood pressure and protein in the urine in pregnancy. This disease can affect both the mother and the fetus and increase the mother's risk of dying of cardiovascular disease. This can be seen among the Sri Lankan women and it is a major pregnancy problem of them. Several researchers have found several types of genes that involve cause of pre-eclampsia in humans. It is proved that this cannot be seen in other organisms and it was further analyzed by a group of Sri Lankan researchers. According to previous studies, the major family of genes was Epidermal Growth Factor receptor and its associated genes. These genes include EGF, TGFA, AR, HB-EGF, Epigen, BTC and EPR. However, recently more genes excluding EGFR family were detected such as SIAE, a genetic variant of AGT2R and HLA-DQB1. There are several interactions exist between proteins (protein-protein/ ligand-receptor) that affect pre-eclampsia. The objective of this research is to analyze the genes and their protein-protein interaction networks that have been proved or suspected as a cause for pre-eclampsia.

Key words: Pre-eclampsia, protein-protein Interactions

*smv@dcs.ruh.ac.lk