Genetics of PCOS: A systematic bioinformatics approach to unveil the proteins responsible for PCOS

Polycystic ovary syndrome (PCOS) is a hormonal imbalance in women, which causes problems during menstrual cycle and in pregnancy that sometimes results in fatality. Though the genetics of PCOS is not fully understood, early diagnosis and treatment can prevent long-term effects. In this study, we have studied the proteins involved in PCOS and the structural aspects of the proteins that are taken into consideration using computational tools. The proteins involved are modeled using Modeller 9v14 and Ab-initio programs. All the 43 proteins responsible for PCOS were subjected to phylogenetic analysis to identify the relatedness of the proteins. Further, microarray data analysis of PCOS datasets was analyzed that was downloaded from GEO datasets to find the significant protein-coding genes responsible for PCOS, which is an addition to the reported protein-coding genes. Various statistical analyses were done using R programming to get an insight into the structural aspects of PCOS that can be used as drug targets to treat PCOS and other related reproductive diseases.

Biography
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