

Effect of Glucocorticoids on Transcriptional Status of HLA-G in Human Trophoblast Cells from Full Term PlacentaAriz Akhter¹, Vinita Das¹, Amita Pandey¹ and Suraksha Agrawal^{2*}¹*Department of Obstetrics and Gynecology CSM Medical University, Lucknow, Uttar Pradesh, India*²*Department of Medical Genetics, SGPGIMS, Lucknow, Uttar Pradesh, India***KEYWORDS** HLA-G. Glucocorticoids. Dexamethasone. Hydrocortisone. Trophoblast. JEG-3

ABSTRACT There are evidences which suggest that HLA-G molecule plays an important role in immune tolerance, protecting the potentially allogenic fetus from maternal immune attack. Regulation of HLA-G expression is not well characterized; however, studies suggest a possible role of glucocorticoids in modulation of HLA-G gene expression. Therefore, we tested this hypothesis by inducing the HLA-G expression levels in full term placenta using two glucocorticoids -Dexamethasone and Hydrocortisone, JEG-3 and JAR cell lines were used as a positive and negative controls. Cultured trophoblast cells were treated with Dexamethasone and hydrocortisone. HLA-G transcription was determined by semi-quantitative RT-PCR. Choriocarcinoma JEG-3 (HLA-G^{+ve}) and JAR (HLA-G^{-ve}) cell lines were obtained from American Type Culture Collection (ATCC). The level of HLA-G mRNA transcripts in trophoblast cells were elevated by Dexamethasone and hydrocortisone in dose and time dependent manners. Glucocorticoids have an up-regulatory effect on HLA-G transcripts in trophoblast cells.