Abstract

Work presented through this paper aims at performing the optimization of IVF treatment. Considering the vital aspect that helps in accurate analysis of embryo viability, in this regard many embryo scoring techniques have been reported in the literature. The usual way of analysing the quality of human embryo is through the grading process (that is on the day fifth of embryo development) that takes into consideration the following components along with their morphological features; namely: zona pellucid, trophectoderm and inner cell mass (ICM). Hatching of embryo to the uterus wall mainly depend on trophectoderm (TE) region development. Thus the quality assessment of TE region in order to find the viable embryo is highly essential. This paper presents a method for TE region segmentation using watershed method, so that the segmented region is represented in much better way. These results of segments are compared with those obtained level-set algorithm and meaningful conclusions have been derived.

References


Index Terms

Computer Science Image Processing
Keywords

Grading of Blastocyst, In vitro fertilization (IVF), Level set, Retinex, Watershed, K-means Clustering.