

EFFECT OF EMBRYO CULTURE ON THE EXPRESSION OF BRAIN-DERIVED NEUROTROPHIC FACTOR (BDNF) IN THE HIPPOCAMPUS

Ayesha Maqbool^{1,2}, Heba Salem³, Goksel Dogan² and Levent Karagenc²

¹Virtual University of Pakistan, Pakistan

²Adnan Menderes University, Turkey

³King Khalid University, Saudia Arabia

Assisted reproductive technologies (ART) are widely used for the treatment of infertility. There are evidences, which suggest that children born through ART have relatively low IQ levels and the in vitro culture of embryos can alter neurodevelopmental processes in the resulting offspring. These findings raise the possibility that embryo culture alters the expression of neurotrophins; factors that regulate the development, survival and functions of neurons. Among these, BDNF is a key molecule, which maintains synaptic plasticity, survival of the hippocampal neurons and cognitive ability. The aim of the present study was to determine whether embryo culture affects the morphology of the dentate gyrus and the expression of BDNF in the hippocampus. Analyses by qRT-PCR

and western blotting indicated no significant alterations in the expression of BDNF or the thickness of dentate gyrus in our mouse model.

Biography

Ayesha Maqbool has completed her PhD from University of Ulm, Germany in 2013. She did Post doc from Adnan Menderes University, Aydin, Turkey in 2016. At the moment she is working as Assistant Professor in Virtual University of Pakistan. She is supervising eleven MS students in the field of Biotechnology, Genetics and Zoology.

drayeshamaqbool23@gmail.com