

ANNUAL EPIGENETICS CONFERENCE

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MECHATRONICS, AUTOMATION AND SYSTEMS ENGINEERING

Epigenetics: Methionine-homocysteine-folate cycle and 1-carbon metabolism

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Although during pregnancy folic acid is administered to preserve neuro-tube defects, the mechanisms are unclear. The epigenetic DNA/RNA/Protein methylation inhibits the genes and generates homocysteine, unequivocally. During development genes are needed to turn-on and turn-off. Histone acetylations relax and open up the chromatin to synthesize the gene. Interestingly, the role of SIRT and SIRT inhibitors as well as DNA

methylation inhibition of promoter and gene suppression is not well understood. The other epigenetic regulators are miRNA and LNCRNA generated from exon and introns. These all processes are controlled by methylation cycle via methionine-homocysteine-folate cycle during embryogenesis. The processes will be discussed at this conference.

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