

3D Estimation of Synaptic Vesicle Distributions in Serial Section Transmission Electron Microscopy

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Abstract : We study the effect of stress on nervous system and we use two experimental groups of rats: sham rats and rats subjected to acute foot-shock stress. We investigate the synaptic vesicles density as a function of distance to the active zone in serial section transmission electron microscope images in 2 and 3 dimensions. By estimating the density in 2D and 3D we compare two groups of rats.

Keywords : stress, 3-dimensional synaptic vesicle density, image registration, bioinformatics

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