

ANTITUMOR EFFECTS OF ALLOGENIC MESENCHYMAL STEM CELLS

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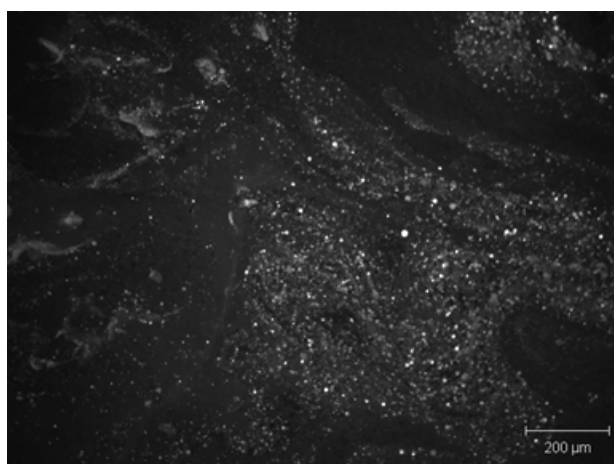
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In conditions of ketamine-xylazine-acepromazine anaesthesia (55.6, 5.5, and 1.1 mg/kg respectively), Vistar rats (n=25) after skull trepanation of sensorimotor zone were implanted with 100 mcl of glioma C6 cell culture (500 cells/mcl). After trepanation rats were divided in 3 groups: 1st group (n=9), subjected to 3 intranasal Mesenchymal Stem Cells injections (500 cell/mcl, with FITC labeled CD105) at one-week interval. 2nd group (n=6) animals were intranasally injected with saline 3 times with one-week interval. 3rd group (n=10) rats were studied without any subsequent interventions. Rat's lifespan resulted in 22.7 days for 1st group, 16.8 days for 2nd, 18.1 days for 3rd. Only 1st group included top 4 animals, by lifespan, with mean of 36 days. As malignant gliomas are ones of the most fatal tumors and existing methods remain ineffective due to invasive growth and high risk of relapse, the Neural and Mesenchymal SCs based therapy becoming promising judging on both experimental and clinical results. Collected data say for the use of SCs potential in combination with traditional surgical, chemotherapeutical, radiological and especially those techniques which are aimed at activation of immune system, delivery of metabolizing genes and/or oncolytic viruses.

Biography

A. Zamaro is a 21 y.o. Belarusian Medical State University student and Research Assistant of the Institute of Physiology, Natl Acad Sci, Belarus. Her primary specialization fields are the injured brain and spinal cord regeneration, artificial neural networks, brain cancer and stem cells, neural networks and stem cell therapy. She has given a number of oral presentations on the subject. She has published more than 11 papers on this subject in reputed journals this year.

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Distribution of MSC in glioma after intranasal implantation