miR 29c

Using a quantitative miR 29c reporter, Bier et al., demonstrated that the PL-MSC effects were partly mediated by the transfer of exosomal miR-29c. Intramuscular transplantation of PL-MSCs in mdx mice resulted in decreased creatine kinase levels. PL-MSCs significantly decreased the expression of TGF-β and the level of fibrosis in the diaphragm and cardiac muscles, inhibited inflammation and increased utrophin expression. In vivo imaging analyses using MSCs labeled with gold nanoparticles or fluorescent dyes demonstrated localization of the cells in the muscle tissues up to 3 weeks post treatment. Altogether, these results demonstrate that PL-MSCs and their secreted exosomes have important clinical applications in cell therapy of DMD partly via the targeted delivery of exosomal miR-29c [1].

MiR-29c overexpression increased TMZ efficacy in cultured glioma cells and in mouse xenograft models. The miR-29c levels were positively correlated with patient outcomes. Our data suggest miR-29c may be potential therapeutic targets for glioma treatment [2].

1)
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2)
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