glioma cancer cells.we co-cultured WJ-MSCs, that transduced by miR-124, with U87 cell line as model of human glioma cancer. The effects of exogenous miR-124 on glioma cancer phenotype were examined by qPCR, migration assay, MTT and Anexin V methods.
Results: It is shown that the delivered miR-124 significantly decreased the expression of CDK6 genes and increased the expression of P53, P16, Smad4 and caspase-3 genes. Furthermore, migration assay, MTT and anexin V studies showed that delivery of miR-124 by WJ-MSCs,decreases the migration and proliferation of U87 cells.
Conclusion: Our results revealed thatWJ-MSCs can deliver therapeutic exogenous MiRNA to cancer cells with clinical implications.
Keywords: Glioblastoma, miR-124, WJ-MSCs, Migration, Cell Proliferation

Ps-107: Comparative Growth Rate of Equine Abdominal versus Gluteal Fat-Derived Mesenchymal Stem Cells

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Objective: It is established that mesenchymal stem cells (MSCs) derived from various sources in addition to the similarities; they have some differences in the characteristics such as growth rate. Aim of this study was to compare growth rate of equine adipose-derived MSCs (AMSCs) which were collected from two different adipose tissues (abdominal versus gluteal).
Materials and Methods: AMSCs were isolated from two regions including gluteal (tail base) and abdominal region of a 1.5 aged euthanized horse. AMSCs were enzymatically isolated and cultured until passage 3 (P3). Then P3 cells were analyzed for MSC characteristics. To evaluate cell growth rate, AMSCs at P3 were seeded in 12-well plates with a density of 30,000 cells per well .The cells of 3 wells were daily trypsinized and counted until day 8. Finally, the growth curve of cells in both groups was plotted.
Results: Gluteal region was an easily accessible site for fat collection and fewer vessels were in gluteal region which makes easier the fat collection process. AMSCs isolated from 2 different regions showed typical characteristics of MSCs including expression of specific markers (CD29, CD90 and CD44) as well as trilineage differentiation. Growth curve indicated that growth rate of AMSCs of gluteal region is more rapid compared with AMSCs derived from abdominal region. So, gluteal fat-derived AMSCs need less culture time *in vitro*.
Conclusion: We found that equine gluteal fat-derived AMSCs have the better growth rate than abdominal derived AMSCs and they are a more suitable choice for cell therapy in equine medicine.
Keywords: Mesenchymal Stem Cell, Growth Rate, Equine, Adipose

Ps-108: Decellularization of Equine Digital Flexor Tendon as a Suitable Scaffold for Tissue Engineering

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Objective: Tendon injuries are major cause of orthopaedic injuries in athletic horses. Tissue engineering (TE) provides an alternative method for managing these disorders. One of the major challenges in TE is the fabrication of a suitable scaffold that can provide proper niche for cells (such as mesenchymal stem cells) and three- dimensional structure. Among biological scaffolds, the use of decellularized tendons represent a good approach to regenerative medicine. Thus, this study aimed to decellulrize equine superficial digita flexor tendon (SDFT) for obtaining an efficient scaffold.
Materials and Methods: Equine SDFT was aseptically harvested from the forelimb of a 1.5 aged horse which euthanized for conditions unrelated to musculoskeletal disease. 10 cm pieces in length of tendon were divided into 2 groups as control and treatment. Samples was decellularized using 4 freeze-thaw cycles followed by 48h incubation in 1 M Tris–HCl (pH 7.8) combined with 1% sodium dodecyl sulfate (SDS), 10 mg/ml DNase-I under continuous agitation at 4˚C. Samples were embedded in paraffin, longitudinally sectioned into 5 µm slices, and stained with H&E and Masson's trichrome to assess cells and morphological extracellular matrix.
Results: The histological results demonstrated very few visible nuclei in treatment group compared with control along with a small increase inporosity and maintenance of collagen content following decellularization. This condition provides a physical environment similar to native tendon with minimal residual cellular debris which can be used as a therapeutic graft material.
Conclusion: The results showed that the modified freeze-thaw method could provide a decellularized SDF tendon which can be used as a suitable scaffold in equine tenogenic differentiation studies and for treatment of tendon disorders.
Keywords: Decellularization, Superficial Digital Fexor Tendon, Tissue Engineering, Equine, Mesenchymal Stem Cell

Ps-109: Evaluation of KDM5A Knockdown by shRNA in Acute Myeloid Leukemia Cell Line

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