strength was increased by coating different GO concentrations to 173.64Kpa at concentration of 90µg/ml. None of our samples showed toxic effect by MTT assay.Electrical conductivity measured after reducing our samples were in the range of semi-conductive materials which is appropriate for cardiac tissue engineering applications.
**Conclusion:** It was proved ,in our study, that GO-Col scaffolds have potential as conductive scaffolds for cardiac patch application, although, further investigations are needed to find out several aspects of reaching to a beating cardiac tissue on this kind of scaffold.
***Keywords:*** Cardiac Patch, Conductive Scaffold, Graphene Oxide, Reduced Graphene Oxide, Collagen

### Ps-86: Spermatogonial Stem Cells of Azoospermic Patients Can Be Enter into Meiosis *In Vitro*

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**Objective:** Azoospermia is a condition that causes infertility in men. Due to low efficiency of previous treatments for this disease, today stem cell field are considered as a new therapeutic approach for the treatment of male infertility. Stem cells are undifferentiated cells and are found in different tissues. These cells have capacity of self-renewal and differentiation into other lineages that termed potency. Classification of their potency is: totipotent, pluripotent, multipotent, and unipotent. Spermatogonial stem cells (SSCs) are the multipotent stem cells that considered to use as appropriate source in treatment of azoospermic patients for differentiation into sperm cells.
**Materials and Methods:** SSCs after mechanical and enzymatic isolation from azoospermic patient's testes biopsies were cultured in T25 flasks. After confluent phase and second passage, the expression of mesenchymal stem cell markers assessed by flowcytometry. In next step SSCs induced by sheep testes extraction for differentiation into sperm cells. Expression of Dazl gene as meiosis marker was investigated by western blotting technique.
**Results:** After primary culture of SSCs in passage 2 (about 10 days) stem cell markers expression studied by flowcytometry. Flowcytometry results showed that human SSCs highly expressed CD90, CD105 and CD44 and are positive for Stro-1, CD146, CD106 and CD166. Furthermore, the expression of CD19 and CD45 observed in low percentage of these cells. After differentiation these cells showed sperm like shape. Western blotting analysis showed that Dazl proteins have expressed in differentiated SSCs and this cells have entered into the meiosis stage.
**Conclusion:** SSCs have mesenchymal stem cell markers that can be differentiated into sperm like cells.
***Keywords:*** Western Blotting, Dazl, Sperm, Stem Cells, Spermatogonial Stem Cells

### Ps-87: Defined Co-Culture System of Equine Mesenchymal Stem Cells with Neutrophils

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**Objective:** It has been suggested that mesenchymal stem cells (MSCs) have immunomodulatory effects through interaction with immune system cells. We aimed to define a suitable condition for co-culture of equine adipose-derived MSCs and neutrophils.
**Materials and Methods:** Frozen equine adipose-derived MSCs (AMSCs) were thawed and their purity and characteristics were confirmed at passage 5. Equine Polymorphonuclear neutrophils (PMN) were isolated by density and hypotonic lysis. Cells were resuspended and neutrophil suspensions were perfused over adherent AMSC (at AMSC to neutrophil ratios of 1:50) in direct contact for 24 h in 12-well plates. After that, probability of pure isolation of AMSCs and neutrophils, and cell viability were checked.
**Results:** AMSCs showed typical characteristics of MSC such as marker expression (CD29, CD90 and CD44) as well as trilineage differentiation potentials. Neutrophils were not affected by isolation procedure and their normal morphology was confirmed under light microscope. AMSCs strictly adhere to the plates whereas neutrophils were in suspended status during 24 h of co-culture. At the end, supernatants on plate wells containing neutrophils were removed and purified neutrophils were isolated. In next step, pure and alive adherent AMSC was collected using trypsin.
**Conclusion:** We conclude that MSC can co-culture easily with neutrophils and this culture system can be used for studying interactions between MSc and Neutrophils *in vitro*.
***Keywords:*** Mesenchymal Stem Cell, Neutrophils, Co-culture, Equine

### Ps-88: Temozolomide Induces Apoptosis Through Mitochondrial Pathway in U87MG Cell Line

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**Objective:** Apoptosis is a gene-directed cell death program, occurring without the production of inflammation. The dysfunction of the apoptotic signaling process is often a major causative factor in tumorigenesis, and also renders the cancer cell resistant to treatment. Induction of apoptosis in cells can be an appropriate strategy by which chemotherapeutic agents kill tumor cells. Temozolomide is a novel oral alkylating agent that has been widely used in the treatment of glioblastoma. The aim of the present study was to investigate the mechanism of temozolomide induced apoptosis in human glioblastoma multiforme cell line (U87MG).
**Materials and Methods:** U87MG cells were cultured in