MFB lesions of 6-OHDA resulted in significant loss of TH immunoreactivity in the striatum of the control group. In contrast, the GH treatment group did not show a homologous loss of TH immunoreactivity in the striatum. Early GH treatment showed a neuroprotective effect in 6-OHDA model of PD, prevented loss of dopaminergic innervation in the striatum and corrected motor impairment of the animals. Further studies are needed to evaluate its long term effects.

## O-57

### Differentiation of bone marrow mesenchymal stem cells to germ cells by sertoli cells conditioned medium

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**Objectives:** Sertoli cells are responsible for differentiation of germ stem cells to spermatozoa by secreting some factors in vivo. Mesenchymal stem cells could differentiate into germ cells under appropriate conditions. This study investigated differentiation of bone marrow derived mesenchymal stem cells (BMSCs) to germ line cells using Sertoli cells conditioned medium.

**Methods:** Mesenchymal stem cells were isolated from the bone marrow of adult male mice and cultured for 7 days until 80% confluence. On the other hand, Sertoli cells were enriched using lectin coated plates, cultured for 48 hours and collected medium. Mesenchymal stem cells cultured using Sertoli cells conditioned medium.

**Results:** We have found that conditioned medium prepared from adult sertoli cells supports the differentiation of BMSCs into putative germ cells. BMSCs cultured with Sertoli cells condition medium, expression of meiotic and post-meiotic genes was observed (Mvh, ID4, Piwil2) by RT-PCR and protein expression of germ-cell-specific marker Scp3 identified by immunocytochemistry. Gel Electrophoresis of PCR showed expression Mvh, ID4, Piwil2 transcripts in BMSCs differentiated to germ like cells while expression of these molecular marker didn't observed in control cells ($p \leq 0.05$) .

**Conclusion:** Sertoli cells conditioned medium may allow induction of BMSCs to germ cells for treatment of male infertility.

**Keywords:** Bone marrow mesenchymal stem cells, sertoli cell conditioned medium, differentiation, germ cell

## O-58

### Protective effect of pentoxifylline on male Wistar rat testicular germ cell apoptosis induced by 3.4-methylenedioxymethamphetamine

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**Objectives:** 3.4 methylenedioxymethamphetamine (MDMA) is one of the methamphetamine derivatives that is prevalent in young individuals. A growing number of young people are consumers of drugs such as MDMA which can affect their reproductive capability. Apoptosis is a main mechanism for male infertility. Pentoxifylline (PTX) increases cAMP intracellularly and reduces tumor necrosis factor-α. This study aimed to investigate the effect of PTX administration on MDMA that induces apoptosis in testis of male Wistar rats.

**Methods:** Thirty male Wistar rats weighing 250-300 g were randomly divided into five groups: control group, the group received MDMA (7.5 mg/kg, three times at every two hours), first experimental group received PTX (100 mg/kg Just in the time of the third injection of MDMA), second experimental group received PTX (100 mg/kg a week before MDMA administration) and group received saline. Two weeks after interventions, testes were removed and prepared for H&E staining, TUNEL and western blot techniques.

**Results:** In first and second experimental groups, the mean testicular biopsy score was increased significantly compared with the MDMA group. The number of TUNEL-positive cells/tubule was increased significantly in MDMA and saline groups. A significant difference was revealed in the mean number of TUNEL-positive cells between the rats treated with PTX before MDMA administration and MDMA group. Expression of active caspase-3 was significantly increased in the MDMA group.

**Conclusion:** Pentoxifylline can significantly reduce the severity of lesions in the testis following administration of MDMA.

## O-59

### The neuroprotective effect of propofol on CA1 area of male Wistar rat hippocampus following transient global ischemia/reperfusion

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**Objectives:** Cerebral ischemia is a major problem in the world and its subsequent reperfusion makes cell death or apoptosis. CA1 pyramidal cells of hippocampus are highly vulnerable to ischemic results. Lives of patients are threatened by cerebral ischemia and its neurological injury. Recent studies reported that propofol has neuroprotective effect on neuron but it needs more studies. The goal of this study is to evaluate the neuroprotective effects of propofol on CA1 pyramidal cells of hippocampus

**Methods:** The male rats (n=18) were randomly divided into the 3 groups: Control group, IR- induced group, Propofol-treated group. Propofol (40 mg/kg) was administrated intraperitoneally for 1h before the induction of ischemia. Global Cerebral ischemia was induced by clamping the bilateral common carotid