Conclusions Direct adherent and modicum medium changing method is the best one for MSC isolation and culture. 11% is the most suitable serum concentration for MSC growth.

**e0174** EFFECT OF HIF1A ON PROLIFERATION AND DIFFERENTIATION OF MSC UNDER HYPOXIA CONDITION IN VITRO

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**Aims** To investigate the effect of HIF-1a on MSC under hypoxia condition.

**Materials and methods** We transfected HIF-1a into MSC of F3 generation through liposome 2000, and observed the expression of green fluorescence protein in order to assess transfecting efficiency. G418 was used to screen stable transfected cells, and limited dilution method used for monoclonal culture of screened cells. We identified the stable HIF-1a transfected MSC through the cell surface antigen testing. We compared the growth state among stable transfected MSC with HIF-1a, vacant plasmid transfected MSC and untransfected MSC under hypoxia condition, and the expression of HIF-1a mRNA, VEGF mRNA, HIF-1a protein and VEGF protein was tested.

**Results** pcDNA3.0-HIF-1a-eGFP can be successfully transfected into MSC mediated by liposome 2000, with efficiency of 21%. Stable monoclonal of transfected MSC can be obtained by G418 screening and limited dilution method. Stable transfected MSCs still reserve the ability of differentiating to chondrocyte and lipocyte. MSCs transfected with pcDNA3.0-HIF-1a-eGFP had lower apoptosis (p<0.05), greater proliferation (p<0.05), and more expression of HIF-1a mRNA, VEGF mRNA, HIF-1a protein, VEGF protein than MSCs transfected with vacant plasmid pcDNA3.0-eGFP and untransfected ones under hypoxia condition.

**Conclusions** Stable transfected MSC with HIF-1a has a significant high expression of HIF-1a protein, HIF-1a mRNA, VEGF protein and VEGF mRNA under hypoxia condition. HIF-1a could reduce MSC apoptosis and enhance its proliferation under hypoxia condition.

**e0175** THE EFFECT OF GHERLIN ON THE REGRESSION OF ATHEROSCLEROSIS PLAQUE IN APOE–/– MICE AORTA

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**Objective** To observe the effect of ghrelin on reducing the apoE–/– mice plasma IL-8, MCP-1, TNFα level and the NFkB65 expression in vascular wall and the regression of atherosclerotic plaque.

**Method** 8 week ApoE–/– mice were fed with Western style meals, and the same age mice C57BL/6f fed with the same meals as control. In the eighth week, ApoE–/– mice were assigned to ghrelin intra-peritoneal injection and saline injection group randomly in the twelfth week. All of the groups had blood drawn from eye sockets, with isolated plasma used to measure IL-8, MCP-1, TNFα by ELISA. Mice were killed for examination with stereomicroscopy and paraffin embedding for HE and immunohistochemistry, and frozen section for red oil stain.

**Result** 1. On stereomicroscopy, HE, oil red stain and image analysis equipment measurement demonstrated no plaque at C57BL/6f mice vessels, and both apoE–/– group and ApoE–/– + ghrelin groups had atherosclerosis plaque at vessels (22.56±2.2 vs 32.37±3.2, p<0.01). 2. Contrast to C57BL/6f mice, apoE–/– mice has higher plasma TNFα, IL-8, MCP-1 level (28.81±1.8 vs 11.5±0.6, p<0.05; 335±16.7 vs 25.0±2.0, p<0.05; 78.5±5.6 vs 15.8±2.0, p<0.05), but apoE–/–+ghrelin mice has lower TNFα, IL-8, MCP-1 level than ApoE–/– mice (15.45±0.98 vs 24.5±1.68, p<0.05; 168.32±7.8 vs 335±16.7 p<0.05; 45.5±4.75 vs 78.5±5.6, p<0.05). 3. Contrast to C57BL/6f mice, apoE–/– mice NFkB65 immunohistochemistry positive cell integral calculus value were increase (124.23±167.80 vs 659.68±675.34, p<0.01); ghrelin+apoE–/– mice NFkB65 immunohistochemistry positive cell integral calculus value was lower than apoE–/– mice (342.78±321.6 vs 659.68±675.34, p<0.01), ghrelin can decrease the expression of NFkB65 in apoE–/– mice aorta.

**Conclusion** Ghrelin can inhibit the inflammatory response to decrease apoE–/– mice atherosclerosis plaque formation.

**e0176** THE EFFECTS OF ROSUVASTATIN ON THE EXPRESSION OF HOMOCYSTEINE-INDUCED EXPRESSION OF MATRIX METALLOPROTEINASE-2 (MMP-2) AND CELL MIGRATION IN RAT VASCULAR SMOOTH MUSCLE CELLS

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**Objective** The aim of this study was to investigate the effects of rosuvastatin on the expression of homocysteine-induced expression of matrix metalloproteinase-2 (MMP-2) and cell migration in rat vascular smooth muscle cells (VSMC).

**Methods** Cultured rat VSMC were incubated with different concentrations of Hcy and rosuvastatin (Hcy 1000 μmol/l) in vitro for 24, 48 and 72 h. The expression of MMP-2 was determined by using the methods of gelatin zymography and western blotting. Cultured rat VSMC was incubated with different concentrations of Hcy and rosuvastatin (Hcy 1000 μmol/l) in transwell for 24, 48 and 72 h. The number of VSMC which transited the membrane represented the aggressivity of VSMC.

**Results** Hcy (50 ~ 1000 μmol/l) increased the expression and activity of MMP-2 significantly. Incubated with the same concentration of Hcy the expression and activity of MMP-2 of 72 h was higher than that of 24 h and 48 h. Hcy reduced the expression of MMP-2 at the concentration of 5000 μmol/l. Rosuvastatin could inhibit the augmentation of homocysteine-induced expression and activity of MMP-2. Hcy (50 ~ 5000 μmol/l) could stimulate the migration of VSMC. Rosuvastatin could decrease the stimulation of homocysteine-induced migration of VSMC.

**Conclusions** These data suggested that Hcy can increase the MMP-2 expression/activity and migration of VSMC. It may be one of the pleiotropic of rosuvastatin besides lipid-lowering on the roles in the pathogenesis of atherosclerosis induced by Hcy. Rosuvastatin can inhibit the augmentation of homocysteine-induced expression/activity and migration of VSMC. This may be one of the pleiotropic of rosuvastatin besides lipid-lowering and benefit the therapy of CHD.

**e0177** EXPLORATION NEW METHODS FOR ESTABLISHMENT OF PORCINE MODEL OF ACUTE MYOCARDIAL INFARCTION

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**Objective** To explore and develop one optimise method that it could establish the porcine model of acute myocardial infarction more safer, quicker, convenient than routine methods.

**Methods** 80 animals with health condition, mean weight 26.5±4.8 kg. The pigs were divided into two groups randomly, group A (n=13) and group B (n=17), according to different method. Angioplasty balloon was positioned in the mid-distal of left anterior...