treated group, CD59 treated group, C-PC treated group and C-PC-CDS9 treated group. The high-fat diet fed mice were treated with drug intervention. At the end of the 12th week, CD59 mRNA levels in whole blood were determined by RT-PCR and CD59 protein expressions in tissue were detected by western blot. The biochemical indexes such as TG, TC, LDL, HDL and ApoB in blood serum were detective. The paraffin sections of aortic root of mice were made and the degrees of atherosclerotic plaques formation were observed by HE staining. The expressions of cell apoptosis related proteins (Bcl-2 and Fas) and plaque stability related protein (MMP-2) were detected by immunohistochemistry. Then the cell apoptosis levels were detected by TUNEL, the expression of cell cycle protein Di (Cyclin Di) were detected by immunofluorescence and the mRNAs level of cyclin dependent protein kinase 4 (CDK4) were detected by ISH.

RESULTS Atherosclerotic mouse model was successfully established. CD59 gene was overexpressed in blood cells and tissue cells by liposome transfection. Results showed that both CD59 and C-PC could reduce blood lipid levels, positively regulate cell cycle, maintain the stability of cell proliferation and apoptosis of aorta cells, and finally slow down the development of atherosclerotic vulnerable plaque. In addition, C-PC was proved to be able to promote expression of CD59 gene in mice.

CONCLUSIONS Both CD59 gene and C-PC can significantly inhibit the progress of atherosclerosis in ApoE (-/-) mice, and the anti-atherosclerotic effects of CPC may be fulfilled by promoting the CD59 gene expression and smooth muscle cell proliferations, preventing the apoptosis of endothelial cells, reducing blood fat levels, and at last inhibit the development of atherosclerosis.

GW26-e0450 CamKII is involved in the cardiotoxicity of Doxorubicin
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OBJECTIVES To explore the roles of CamKII in Doxorubicin (DOX) induced cardiotoxicity.

METHODS After treated with DOX, the cell viability, as well as the expression level and activity of CamKII of cardiomyocytes H9c2 were monitored. The CamKII gene was knocked out using CRISPR method. The responses to DOX treatment, including the variation of viability, NF-xb activity and mIr-146a expression, were compared between normal and CamKII KO cardiomyocytes.

RESULTS DOX inhibited the proliferation of cardiomyocytes, in which the activity of CamKII was increased, with little changes in expression level. The CamKII expression was successfully knocked out using CRISPR. The sensitivity to DOX was decreased after CamKII knockout. Meanwhile, deletion of CamKII suppressed DOX induced NF-xb activation and mIr-146a upregulation.

CONCLUSIONS CamKII participates in the cardiotoxicity of DOX, which involve NF-xb and mIr-146a.

GW26-e0495 Impact of Myocardial Remodeling in a Rat Model of Heart Failure Transfected with Recombinant Adenovirus Vector-mediated Klotho Gene
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OBJECTIVES To assess the impact of Transfection with recombinant adenovirus vector-mediated Klotho gene on myocardial remodeling in a rat model of heart failure (HF) by intraperitoneal injection of isoproterenol. In addition, we approach to the possible mechanisms how Klotho gene repair the myocardial injury.

METHODS Rats were divided into 5 groups (n=5 each) by table of exponential random numbers. All groups were tested left ventricular ejection fraction (LVEF) with echocardiography; hemodynamic parameters obtained by multi-channel physiological recorder; myocardial tissue underwent pathohistological examination. Additionally, the green fluorescence expression was observed on frozen heart section. Myocardial fibrosis correlated gene expression including Klotho gene, Collagen I and III was detected by RealTime-PCR. Moreover, plasma levels of B-type natriuretic peptide (BNP) were measured with ELISA.

RESULTS In contrast to saline control group, LVEF, LVSP and ±dp/dtmax (all P<0.01) were significantly decreased myocardial fibrosis and myocardial remodeling were significantly attenuated in the AD. Klotho group. And there was green fluorescin distri- bution of AD, Klotho group. However, LVEDP was increased in groups of heart failure (P<0.01). In addition, Klotho expression was down-regulated and Collagen I and III expression was up-regulated in HF rats compared to normal control group (all P<0.05). And these changes could be significantly reversed in AD. Klotho group (all P<0.05). Plasma BNP level was also significantly lower in AD. Klotho group than in others (P<0.05).

CONCLUSIONS Models of rat heart failure can be constructed effect- ibly by isoproterenol-induced intraperitoneal injection. Klotho gene transfection could improve cardiac function and attenuate cardiac remodeling and reducing myocardial fibrosis.

GW26-e0776 Regulation of NOD1/RIP2 Signal Pathway in Macrophage Inflammatory Activation
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OBJECTIVES To explore the role of NOD1/RIP2 signal pathway in the initiation and progression of atherosclerosis, we observed the effects of NOD1/RIP2 signal pathway on macrophage inflammatory activation and polarity switch by the human monocytic cell line THP-1.

METHODS Human THP-1 cells were differentiated into macro- phages by the addition of 16nmol/l phorbol 12-myristate 13-acetate(PMA) for 24h. Macrophages were incubated with different concentrations of OX-LDL(10, 25, 50 mg/L) for 24h. The expression of NOD1, RIP2 was detected by semi-quantitative reverse- tran- scription polymerase chain reaction (RT-PCR) and Western blotting. Enzyme-linked immunosorbent assay (ELISA) was used to detect the secretion of monocyte chemotactic protein 1(MCP-1) and macrophage migration inhibition factor (MIF); fluorescence activated cell sorting (FACS) was used to detect membrane molecule CD69,CD68.

RESULTS 1. OX-LDL could up-regulate the expression of NOD1/RIP2 signal pathway as a dose-dependent manner in macrophages. With the increasing concentration of OX-LDL, the secretion of MCP-1 and MIF from the cell culture supernatants. Enzyme-linked immunosorbent assay (ELISA) was used to detect the secretion of monocyte chemotactic protein 1(MCP-1) and macrophage migration inhibition factor (MIF); fluorescence activated cell sorting (FACS) was used to detect membrane molecule CD69,CD68.

CONCLUSIONS Models of rat heart failure can be constructed efectively by isoproterenol-induced intraperitoneal injection. Klotho gene transfection could improve cardiac function and attenuate cardiac remodeling and reducing myocardial fibrosis.