[gw22-e0818] **OX40-OX40L INTERACTION TARGETS NFATC1 IN APOE-/- MICE DURING ATHEROGENESIS**

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Background We have previously reported the emerging role of OX40-OX40L interaction in inflammation and atherosclerosis. However, the mechanism of OX40-OX40L interaction contribution towards pathogenesis has been poorly understood.
Aim To investigate the effect of OX40-OX40L interaction on the nuclear factor of activated T cells c1(NFATc1) in $ApoE^{-/-}$ mice. Atherosclerotic plaque was induced by rapid perivascular carotid collar placement in $ApoE^{-/-}$ mice. The expression of OX40, OX40L and NFATc1 in lymphocytes was measured by Real Time PCR (RT-PCR) and flow cytometry (FCM), respectively. The presence of NFATc1 in the atherosclerotic plaque was detected by immunohistochemistry. The level of IL-4 was measured by ELISA. We found that the expression of NFATc1 was significantly elevated both in atherosclerotic lesion and in leukocytes from $ApoE^{-/-}$ mice. In vitro, after stimulating OX40-OX40L interaction, the expression level of NFATc1 mRNA and protein was significantly increased in lymphocytes, while anti-OX40LmAb significantly suppressed the expression of NFATc1 in leukocytes, Moreover substantially elevated level of IL-4 was induced by anti-OX40 mAb, while NFATc1 inhibitor markedly suppressed production of IL-4. The current study suggested that OX40-OX40L interaction regulates the expression of NFATc1, which may play a critical role in atherosclerotic plaque formation, which might also have implications with pathophysiology of atherosclerosis.