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**Objectives** To explore the expression of Notch 1 by ox-LDL in Macrophages.

**Methods** Human macrophage from THP1 cell line transform by PMA was cultured with different concentration of ox-LDL for 48 h to induce proinflammatory response. Macrophages were harvested and supernatants were collected for further experiments. The expression of Notch1 mRNA and protein were measured by real-time quantitative PCR (RT-PCR) and Western blot, respectively. The levels of vascular cell adhesive molecule-1 (VCAM-1) and Monocyte chemoattractant protein-1 (MCP-1) were determined by RT-PCR and ELISA, respectively.

**Results** Our data showed that with ox-LDL challenge, The expressions of Notch1 and the levels of VCAM-1 and MCP-1 significantly increased in macrophages in a dose-dependent manner within some extent compared with that in the control group ( $p < 0.05$ ).

**Conclusions** Notch signalling is activated by ox-LDL stimulation and regulates macrophage functions.