

**PEDF mediates pathological neovascularization by regulating
macrophage recruitment and polarization in the mouse model of
oxygen-induced retinopathy**

Sha Gao^{1#}, Changwei Li^{2#}, Yanji Zhu¹, Yanuo Wang¹, Ailing Sui¹, Yisheng
Zhong^{1*}, Bing Xie^{1*}, Xi Shen^{1*}

¹ Department of Ophthalmology, Ruijin Hospital, Shanghai Jiaotong
University School of Medicine, 197 Ruijin 2nd Road, Shanghai, 200025,
People's Republic of China.

² Shanghai Key Laboratory for Prevention and Treatment of Bone and Joint
Diseases with Integrated Chinese-Western Medicine, Shanghai Institute of
Traumatology and Orthopedics, Ruijin Hospital, Shanghai Jiaotong
University School of Medicine, 197 Ruijin 2nd Road, Shanghai, 200025,
People's Republic of China.

These authors contributed equally to this work

* Corresponding authors:

Xi Shen

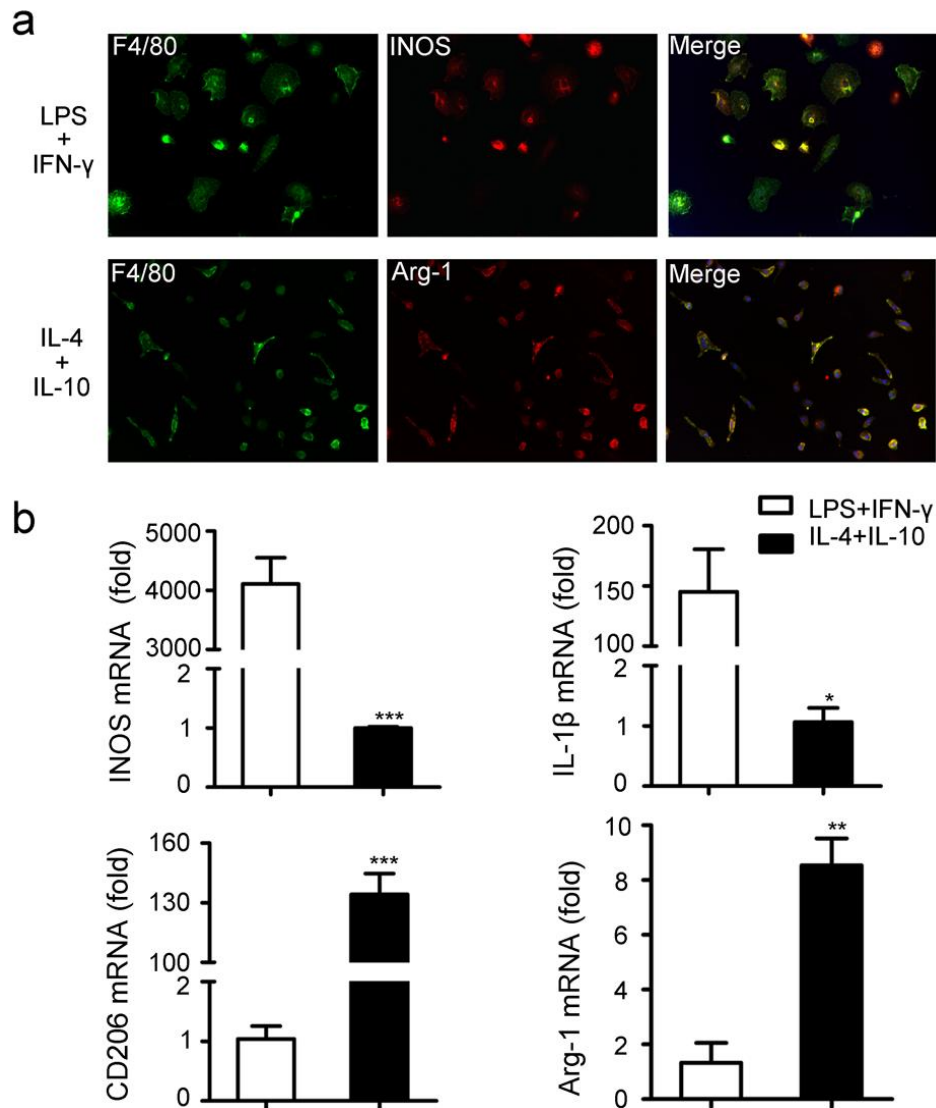
The Department of Ophthalmology, Ruijin Hospital, Shanghai Jiao Tong
University School of Medicine, Shanghai, China; Address: No. 197, Ruijin
2nd Road, Shanghai 200025 China; Zip Code: 200025; Phone: +86 21
64335742; Fax: +86 21 64370045; E-mail: carl_shen2016@126.com

Yisheng Zhong

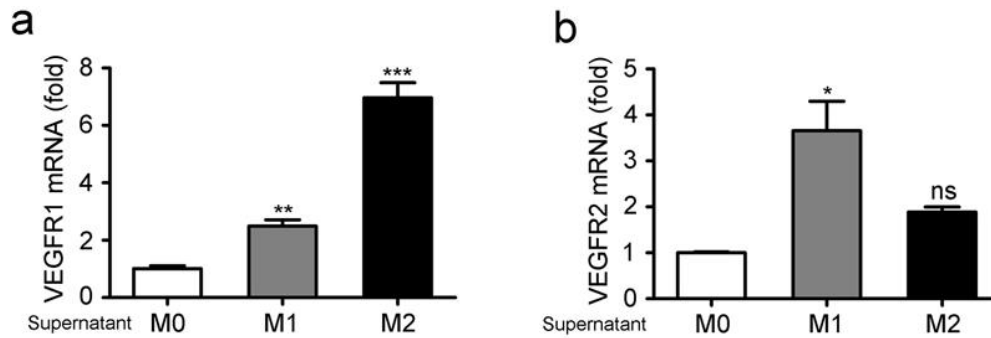
The Department of Ophthalmology, Ruijin Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China; Address: No. 197, Ruijin 2nd Road, Shanghai 200025 China; Zip Code: 200025; Phone: +86 21 64335742; Fax: +86 21 64370045; E-mail: zhongyis2016@126.com

Bing Xie

The Department of Ophthalmology, Ruijin Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China; Address: No. 197, Ruijin 2nd Road, Shanghai 200025 China; Zip Code: 200025; Phone: +86 21 64335742; Fax: +86 21 64370045; E-mail: bingxie2016@126.com



Supplementary figure 1, M1- and M2-like macrophages related genes expression induced by LPS plus INF- γ or IL-4 plus IL-10. (a) Immunofluorescence analysis of F4/80 and iNOS in bone marrow derived macrophages induced by LPS plus INF- γ or IL-4 plus IL-10. (b) Quantitation of iNOS, IL-1 β , CD206 and Arg-1 expression in bone marrow derived macrophages induced by LPS plus INF- γ or IL-4 plus IL-10. * P <0.05, ** P <0.01, *** P <0.001. P values were analyzed by two-tailed t tests. All data are representative of three independent and are means \pm SEM.



Supplementary figure 2, VEGFR1 and VEGFR2 expression in HUVECs induced by the supernatant of M0-, M1- and M2-like macrophages. (a&b) Quantitation of VEGFR1 (a) and VEGFR2 (b) in human umbilical vein endothelial cells (HUVECs) post 24 hours incubated with the supernatant of M0-, M1-, or M2-like macrophages. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$. P values were analyzed by one-way ANOVA. All data are representative of three independent experiments and are means \pm SEM.