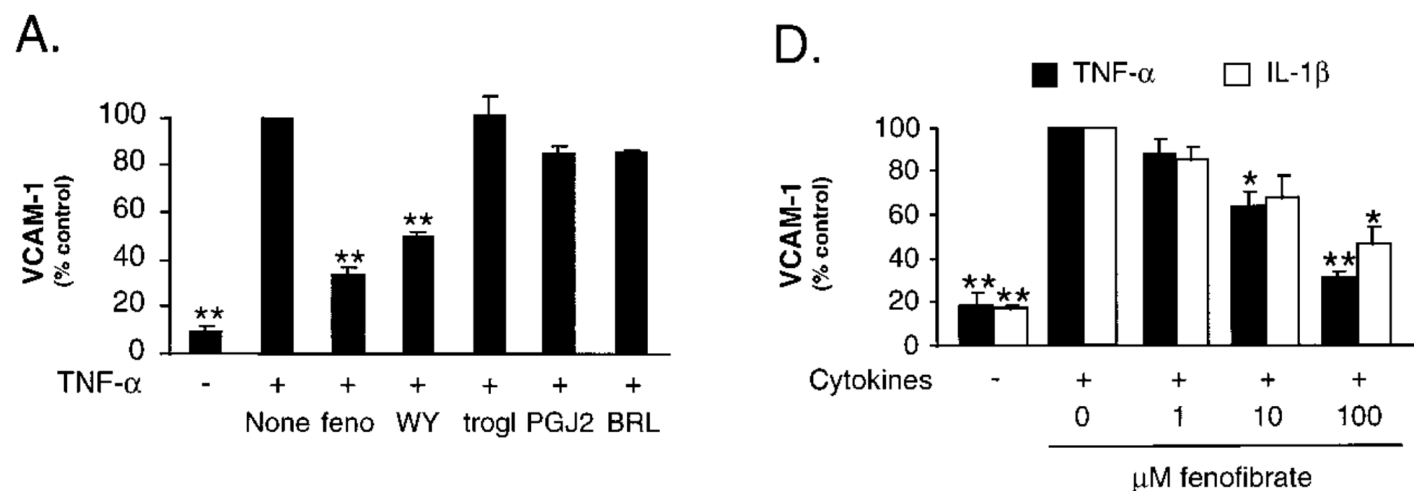# PPARα Activators Inhibit Cytokine-Induced Vascular Cell Adhesion Molecule-1 Expression in Human Endothelial Cells

Nikolaus Marx, MD; Galina K. Sukhova, PhD; Tucker Collins, MD, PhD;
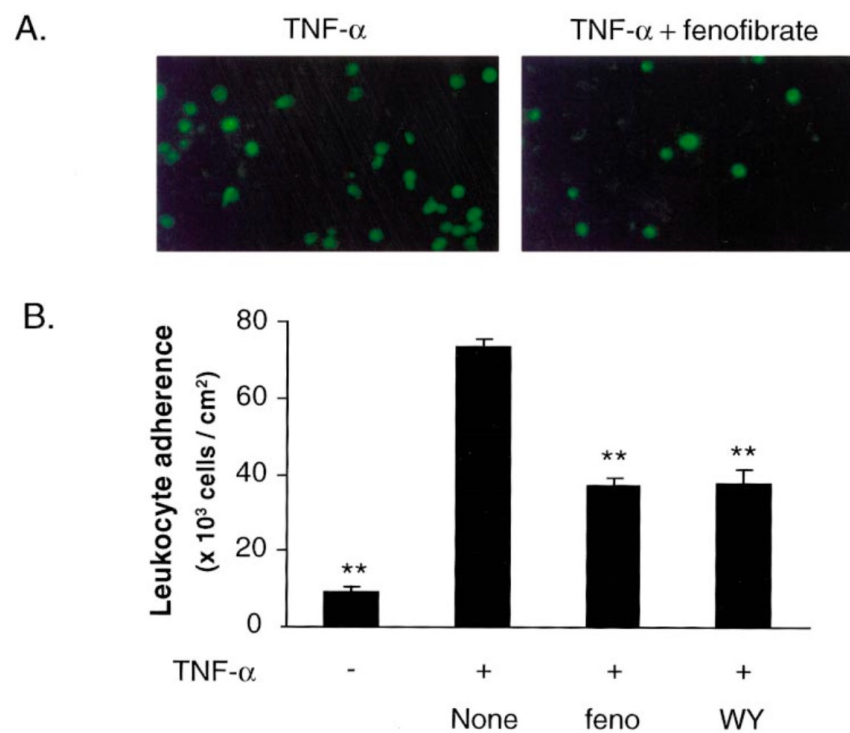Peter Libby, MD; Jorge Plutzky, MD

Attention, la **Figure 2** originale contient des panels B et C mais nous vous demandons de commenter seulement les panels A et D représentés ici.

**Figure 2.** PPARα but not PPARγ activators inhibit cytokine-induced cell surface expression of VCAM-1 in human ECs. A and B, Cells were pretreated with PPARα [100 μmol/L fenofibrate (feno), 250 μmol/L WY14643 (WY)] or PPARγ [10 μmol/L troglitazone (trogl), 10 μmol/L 15d-PGJ2 (PGJ2), 10 μmol/L BRL49653 (BRL)] activators for 24 hours and then stimulated with TNF-α 10 μg/L for 8 hours before cell surface EIAs were performed for VCAM-1 (A), ICAM-1, and E-selectin (B). Results are expressed as percent of TNF-α–stimulated cells (% control). Bars represent mean±SEM (VCAM-1, n=8; ICAM-1/E-selectin, n=4); *$P<0.05$, **$P<0.01$ vs control. C and D, PPARα activators inhibit surface expression of VCAM-1 in human ECs in a time- and concentration-dependent manner. Cells were pretreated with fenofibrate 100 μmol/L for duration shown before stimulation with TNF-α 10 μg/L for 8 hours (C). ECs were pretreated with fenofibrate at concentrations shown for 24 hours, before stimulation with TNF-α 10 μg/L (D, solid bars), or IL-1α 10 μg/L (D, open bars). Results are expressed as percent of cytokine-stimulated cells (% control) as determined by cell surface EIA. Circles/bars represent mean±SEM (n=3); *$P<0.05$, **$P<0.01$ vs control.

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**Figure 3.** PPARα activators inhibit adhesion of U937 monocytoid cells to human ECs. A, Fluorescein-labeled U937 cells were added to TNF-α 10 $\mu$g/L–stimulated human EC monolayers with or without fenofibrate pretreatment. Fluorescence microscopy shows adherent U937 cells (green) on ECs. B, Quantification of U937 adherence on EC monolayers after EC pretreatment with fenofibrate (feno) 100 $\mu$mol/L or WY14643 (WY) 250 $\mu$mol/L as determined by fluorescence assay. Results are expressed as cells/cm². Bars represent mean±SEM (n=3); **$P<0.01$ vs TNF-α stimulated cells.