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Title: Inhibitory effect of statins on fibrogenic mediator production from lung cells

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**Body:** Introduction: The pathogenesis of idiopathic pulmonary fibrosis remains largely unknown. Pulmonary fibrosis also remains a devastating clinical disorder for which there are limited therapeutic options. Statins are 3-hydroxy-3-methylglutaryl-coenzyme A reductase inhibitors of cholesterol biosynthesis, and they have been reported to exert pleiotropic effects on cellular signaling involved in tissue inflammation and also in organ fibrosis/remodelling. Objective: To examine the preventive effects of statins on fibrogenic mediator expression and production in lung cells. Methods: Normal human lung fibroblasts and type II pneumocyte A549 cells, cultured with pitavastatin, pravastatin, or medium alone, were stimulated by transforming growth factor- $\beta$ 1 (TGF- $\beta$ 1). Then, mRNA expression and protein secretion of several mediators from these cells were evaluated by real-time PCR, ELISA, or multiplex assays. Results: The TGF- $\beta$ 1-induced expression or production of mediators, such as CXCL8, platelet-derived growth factor, vascular endothelial growth factor, and collagen-1, were significantly suppressed in both lung cells pretreated with statins, compared to non-treated cells. Conclusion: Statins inhibited TGF- $\beta$ 1-induced fibrogenic mediator production from lung fibroblasts and airway epithelial cells. Although further evaluation of the signaling pathways for these phenomena is needed, our results suggest the possibility of statins as anti-fibrotic agents for pulmonary fibrosis.