# Enhanced neovasculature formation in ischemic myocardium following delivery of pleiotrophin plasmid in a biopolymer.

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## Abstract:

Coronary heart disease is currently the leading killer in the western world. Therapeutic angiogenic agents are currently being examined for treatment of this disease. We have recently demonstrated the effective use of Pleiotrophin (PTN) as a therapeutic agent for treatment of ischemic myocardium. We have also shown that injection of the biopolymer fibrin glue preserves left ventricular geometry and prevents a deterioration of cardiac function following myocardial infarction. Due to the low transfection efficiency of naked plasmid injections, we examined the use of PTN plasmid and the biopolymer as a gene-activated matrix in the myocardium. In this study, we demonstrate that delivery of PTN plasmid in fibrin glue increases neovasculature formation compared to injection of the naked plasmid in saline.