**Abstract**

The present invention relates to the use of erythropoietin for stimulating the physiological mobilization, proliferation and differentiation of endothelial progenitor cells, for stimulating vasculogenesis, for the therapy of diseases associated with a dysfunction of endothelial progenitor cells and for producing pharmaceutical compositions for the treatment of such diseases, and pharmaceutical compositions which comprise erythropoietin and other suitable active ingredients for stimulating endothelial progenitor cells.