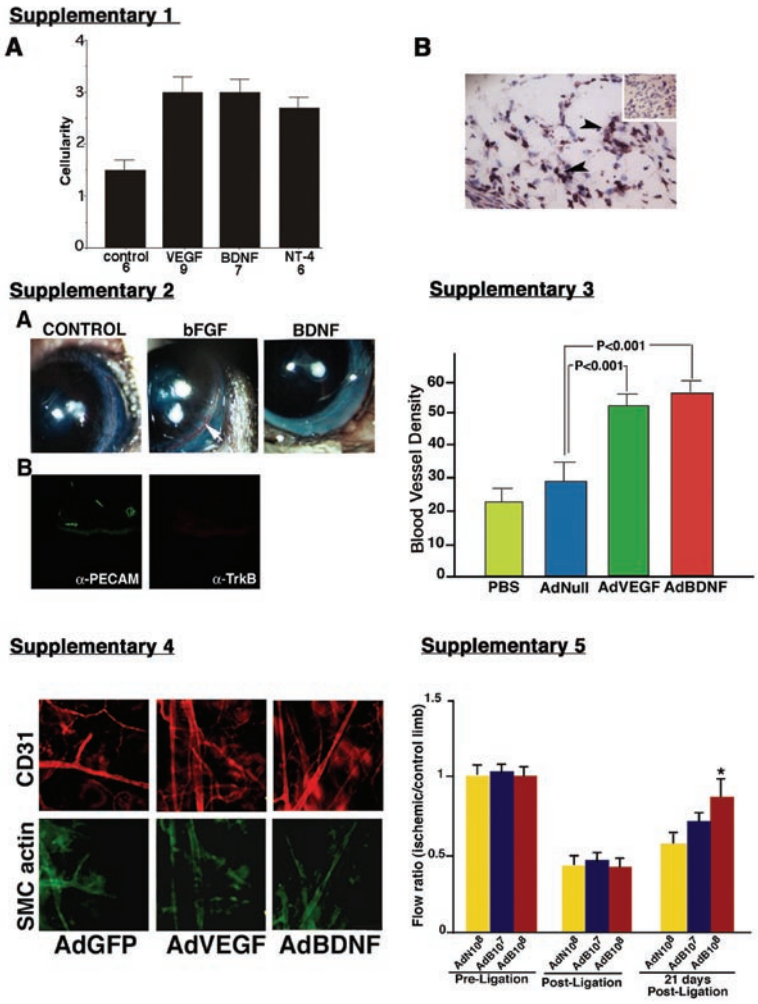

Supplementary Fig. 1. Quantitation of cellularity in the Matrigel assay. Quantitation of the cellularity in the central region of the Matrigel plugs at 14 days post-implantation is presented as maximal cell recruitment in each group. Graph represents mean values of 20 sections in each group. B. Immunoreactivity for TrkB (magnification 40X), was assessed, followed by Hematoxylin counter-staining. Matrigel plugs containing BDNF showed that a significant number of infiltrared cells express the TrkB receptor.

Supplementary Fig. 2. Analysis of blood vessel development in mouse cornea model. Micropellets of FGF-2, BDNF or control (PBS), were implanted into mouse corneal micropockets. A. Corneal neovascularization was examined on day 5 post-implantation using a dissecting microscope. Photographs represent 20X amplification of the mouse eye. Arrow heads point to the neovascularization. B. Eye tissue was sectioned and immunofluorescence microscopy was performed to detect CD31 immunoreactivity, using fluoroscein-avidin detection, or TrkB immunoreactivity, using rhodamine conjugated secondary antibody.

Supplementary Fig. 3. Quantitative analysis of the total CD31 positive cells in the skeletal muscle of the ischemic hindlimb. Quantitative morphometric analysis of 5 sections/condition in a blinded manner disclosed 2-fold increase in CD31 positive vessels.

Supplementary Fig. 4. Morphometric analysis of vessel length using CD31 and α-actin antibodies in whole mount preparations of ear skin from mice treated with AdBDNF, AdVEGF-A or AdGFP. Whole mount immunostaining with anti-CD31 or anti-smooth muscle α-actin of ear skin of mice treated with AdGFP, AdVEGF-A or AdBDNF. Photographs represent 20X magnification of the whole mount of ear skin. Quantitative morphometric analysis of 5 sections/condition in a blinded manner disclosed no differences in the proportion of smooth muscle α-actin positive vessels.

Supplementary Fig. 5. Dose-response study of adenovirus expressing BDNF in the ischemic hindlimb in a rat model. Hindlimb blood flow monitored serially in rats receiving 10^8 pfu (AdB10^8/red) 10^7 (AdB10^7/blue) of AdBDNF or 10^8 pfu of AdNull (AdN10^8/yellow). An increase of blood flow is noted in animals treated with AdBDNF and the recovery is accelerated in the group treated with 10^8 pfu of AdBDNF, at 21 days post-ligation.