SUPPLEMENTAL INFORMATION

Figure 1 Iris samples collected from black C57 and C57-albino mice after implantation of FGF2 pellets for 6 days. Irises were assessed by western blot using an antibody against and vWF. β-actin was used as a loading control.

Figure 2 The experiments used non-pigmented Melan-c melanocytes isolated from Balb/c albino mice, and pigmented melanocytes where the tyrosinase allele was repaired by RNA-DNA mediated gene conversion in these cells. Mouse melanocytes were visualized by phase contrast micrographs (Fig. 2A). Quantification of tyrosinase activity in melanocytes was expressed as OD_{470} per 10^6 cells (Fig 2B).

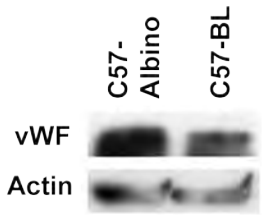
Figure 3. Western blot analysis was used to analyze FMOD protein in CM from pigmented cells grown in the presence and absence of tyrosine and non-pigmented cell.

Figure 4 HMVEC's incubated on top of 2D Matrigel as monolayers in order to form *in vitro* vasculogenesis. Cells treated with recombinant-FMOD or control to enhanced reorganization into tubular structures.

Figure 5. Spheroid formations of HMVECs were embedded into collagen gels containing recombinant FMOD (4.5nM) or control. After 48 h, *in vitro* angiogenesis was captured using a CCD camera (DC500, Leica, Switzerland).

Figure 6. The corneal micropocket assay was performed with pellets containing 200 ng carrier-free recombinant human Lumican versus sham pellets as control. When the area of neovascularization was measured, neither the control pellets nor the Lumican pellets induced significant vessel growth. The experiments were repeated 3 times and included 10 eyes per group in each experiment.

1



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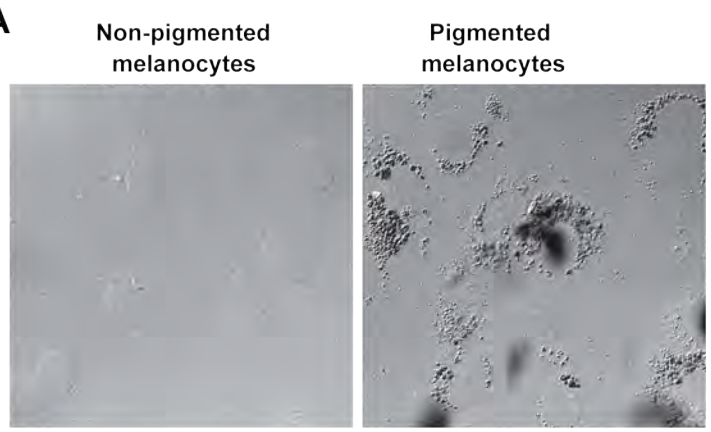

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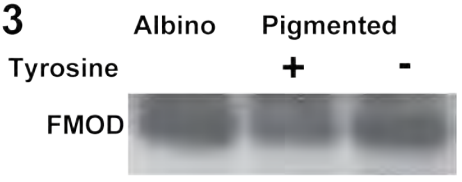

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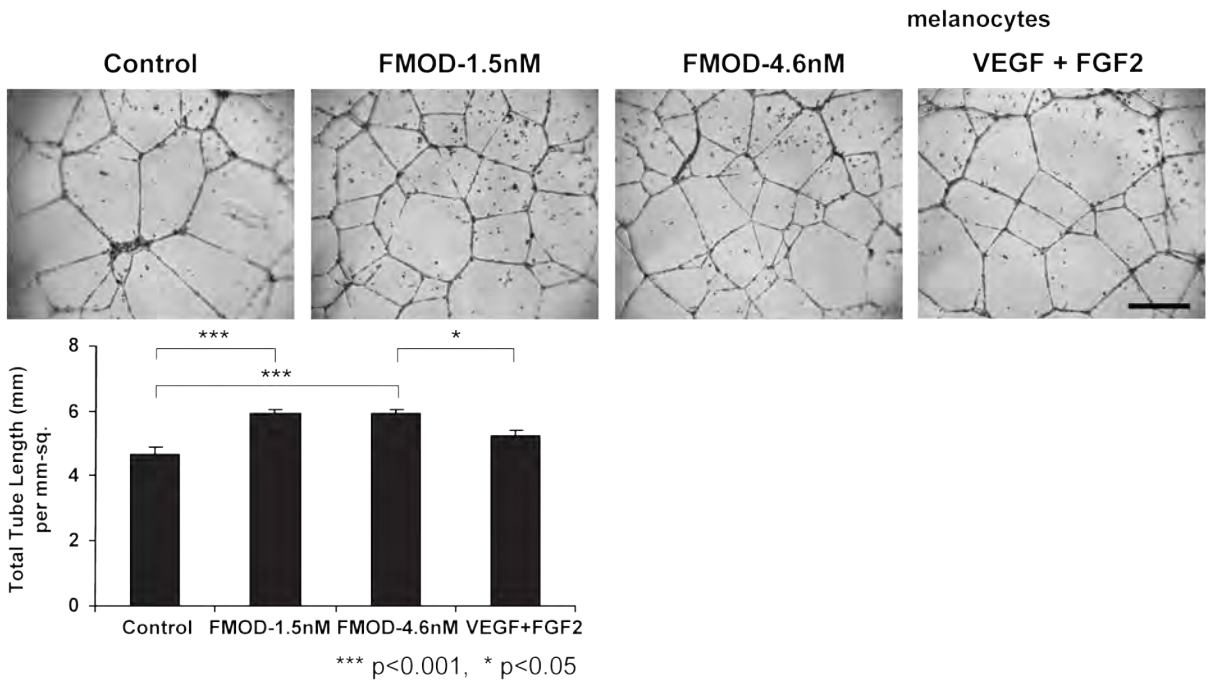

Supplemental Figures

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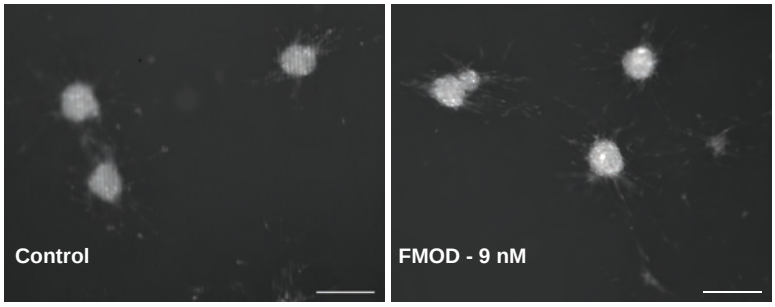

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	Control	Lumican
Average vessel area	0	0.11*
SD	0	0.24

Supplemental Figures