

Figure S1. Kill curve of C2C12 cells at day 1, day 3 and day 7 following treatment with various concentrations of G418 antibiotic. (A) Representative images of cells seeded both at low (0.1×10^6) and high (0.2×10^6) concentrations taken at day 1, day 3 and day 7 following treatment with various

concentrations of G418 antibiotic. Visible cell death and toxicity is seen after day 2 at higher antibiotic concentrations. Cells were imaged under brightfield light, captured at 40x magnification, scale bar=200 μm . The confluency of C2C12 cells was visually inspected daily for 7 days following treatment with various concentrations of antibiotic G418. 6-wells plates were seeded at **(B)** low concentration (0.1×10^6) and **(C)** high concentration (0.2×10^6) with minimum cell viability observed following treatment at a concentration of 800 $\mu\text{g/mL}$. **(D,E)** Percentage cell viability calculated by counting the number of live and dead cells following 7 days of treatment, data is represented as mean percentage of total cells \pm SEM with $n=2$. Cell viability of less than 10% was observed at a concentration of 1000 $\mu\text{g/mL}$.



Figure S2. Representation of the well-defined network of tubes formed from endothelial cells following seeding on Matrigel. The red arrows indicate the location of tubes, while the red star indicates a node. Number of tubes, nodes and total tube length were quantified using ImageJ software. Image taken at 10x magnification, scale bar= 200 μm .

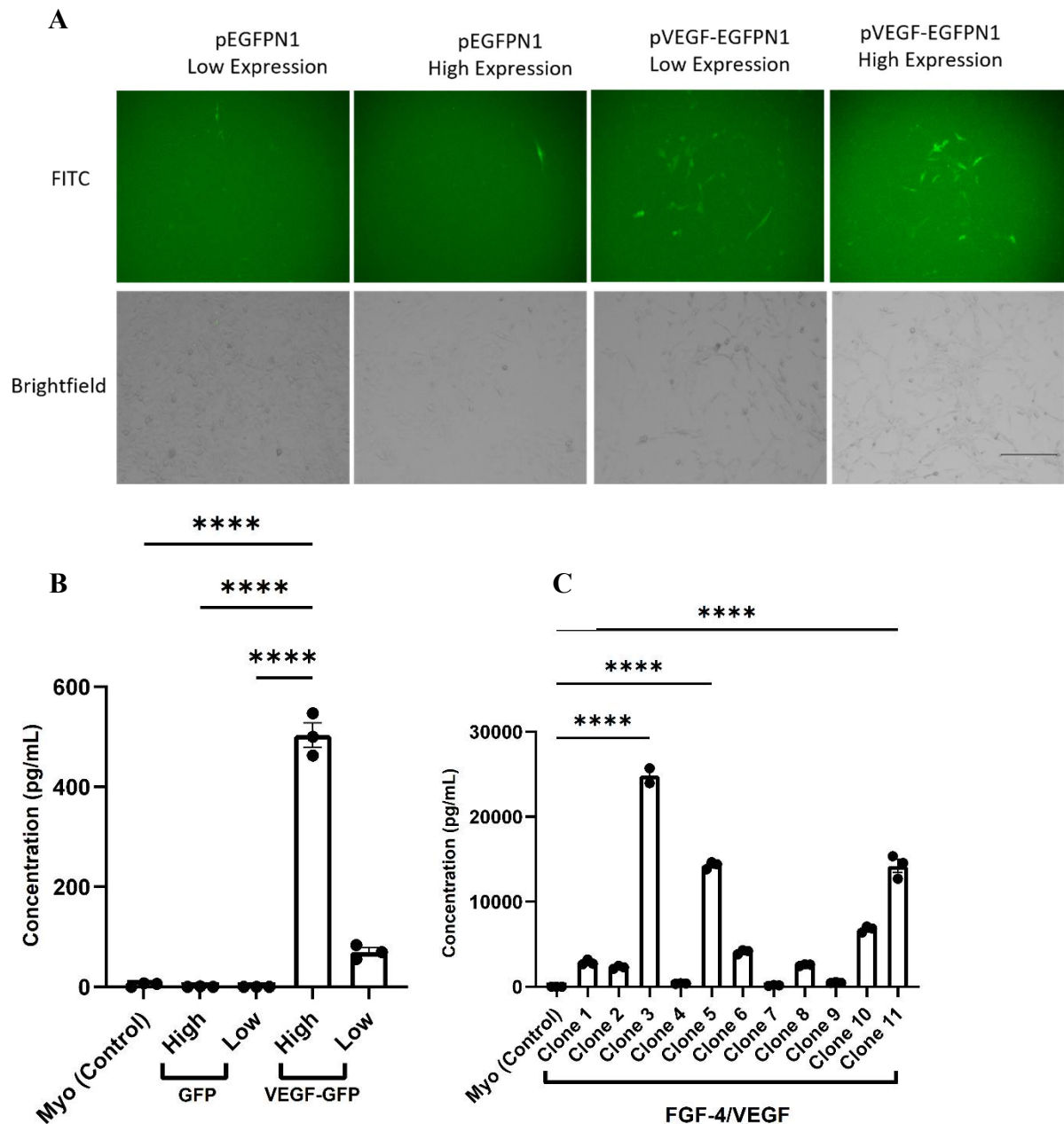


Figure S3. Stable transfection of C2C12 myoblast cells with p-VEGF-EGFPN1, pEGFPN1 and pTR-UF-22-FGF4-ires-VEGF. (A) Representative images of selected pEGFPN1 and pVEGF-EGFPN1 stable transfected cell lines following stable transfection and antibiotic selection using 1000 $\mu\text{g/mL}$ G418 for 4 weeks under FITC and Brightfield light. pTR-UF-22-FGF4-ires-VEGF plasmid does not contain a GFP tag, therefore could not be visualised. Images captured under 10x magnification, scale bar=300 μm . (B) VEGF-A secretion into cell media (DMEM). Supernatant media was removed from confluent cells after 48 hours. A one-way ANOVA with Tukey's post hoc test indicates a significant increase in VEGF-A production in high expression pVEGF-EGFPN1 cells compared to pEGFPN1 transfected and non-transfected C2C12 cells. (C) Similarly, a significant increase in VEGF-A secretion is also seen in pTR-UF-22-FGF4-ires-VEGF transfected clones 3, 5 and 11 compared to Myo (control) cells. Cells which exhibited most potent VEGF-A expression were selected for further analysis of

angiogenic potential and named Myo-GFP, Myo-VEGF-GFP and Myo-FGF4-VEGF. Data presented at mean \pm SEM with n=2-3; ****p<0.001.

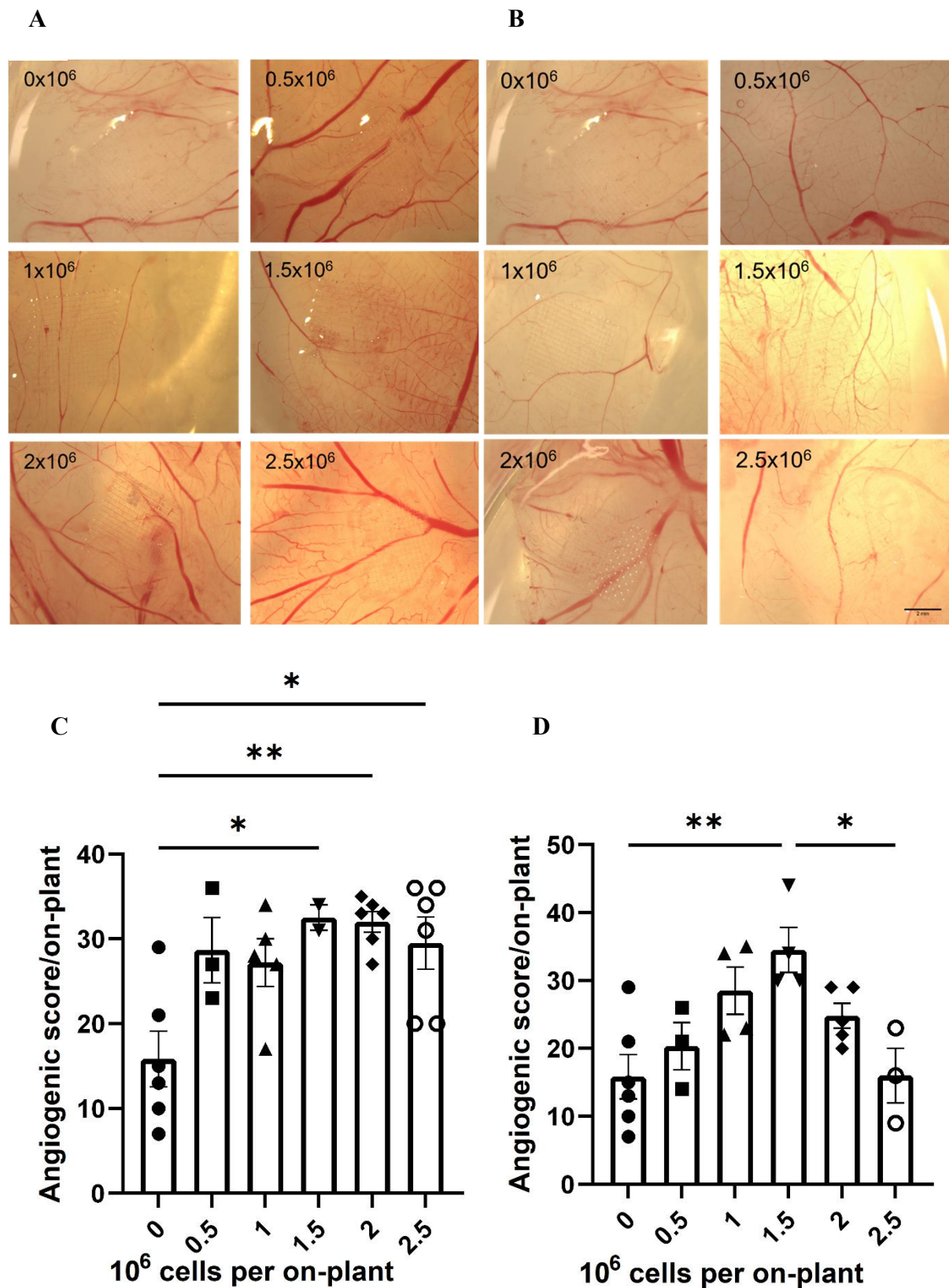


Figure S4. Dose dependent angiogenic response of VEGF-A secreting cells on CAM assay. Representative images of dose dependent angiogenic dose response of on-plants containing increasing amounts of (A) Myo-VEGF-GFP and (B) Myo-FGF4-VEGF cells applied to the CAM on EDD8 for 72 hours. Images taken at 25x magnification. Scale bar= 2 mm. Dose response of (C) Myo-VEGF-GFP

and **(D)** Myo-FGF4-VEGF cell on-plants. A one-way ANOVA with Tukey's post hoc test indicates there is a significant increase in angiogenic score when more than 1.5×10^6 Myo-VEGF-GFP cells and exactly 1.5×10^6 Myo-FGF4-VEGF cells are applied compared to Matrigel alone ($p < 0.05$). Data presented as dot plot \pm SEM with $n=2-6$. * $p < 0.05$; ** $p < 0.01$.

Table S1. The sequences of forward (F) and reverse (R) primers used in quantitative real-time PCR (RT-qPCR.)

Gene	Gene full name	Sequence
mS29 (Housekeeping gene)	Mouse Ribosomal Protein S29	F: ATGGGTCACCAGCAGCTCTA
		R: GTATTTGCGGATCAGACCGT
hVEGF	Human vascular endothelial growth factor	F: AGATTATGCGGATCAAAC
		R: TTCTTGTCTTGCTCTATC
hFGF	Human fibroblast growth factor	F: CGATGAGTGCACGTTCAAGG
		R: TTCCCATTCTTGCTCAGGGC