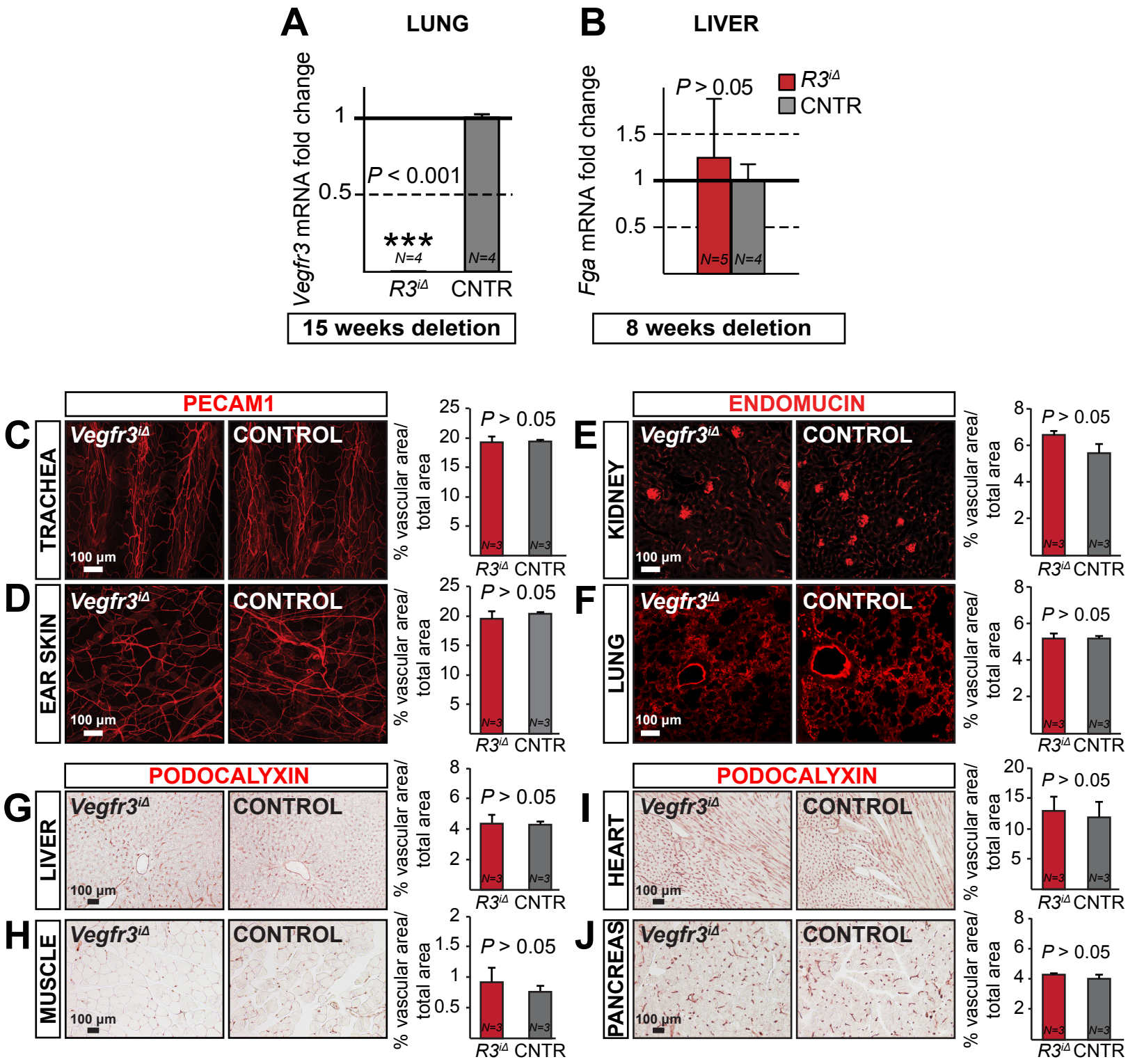
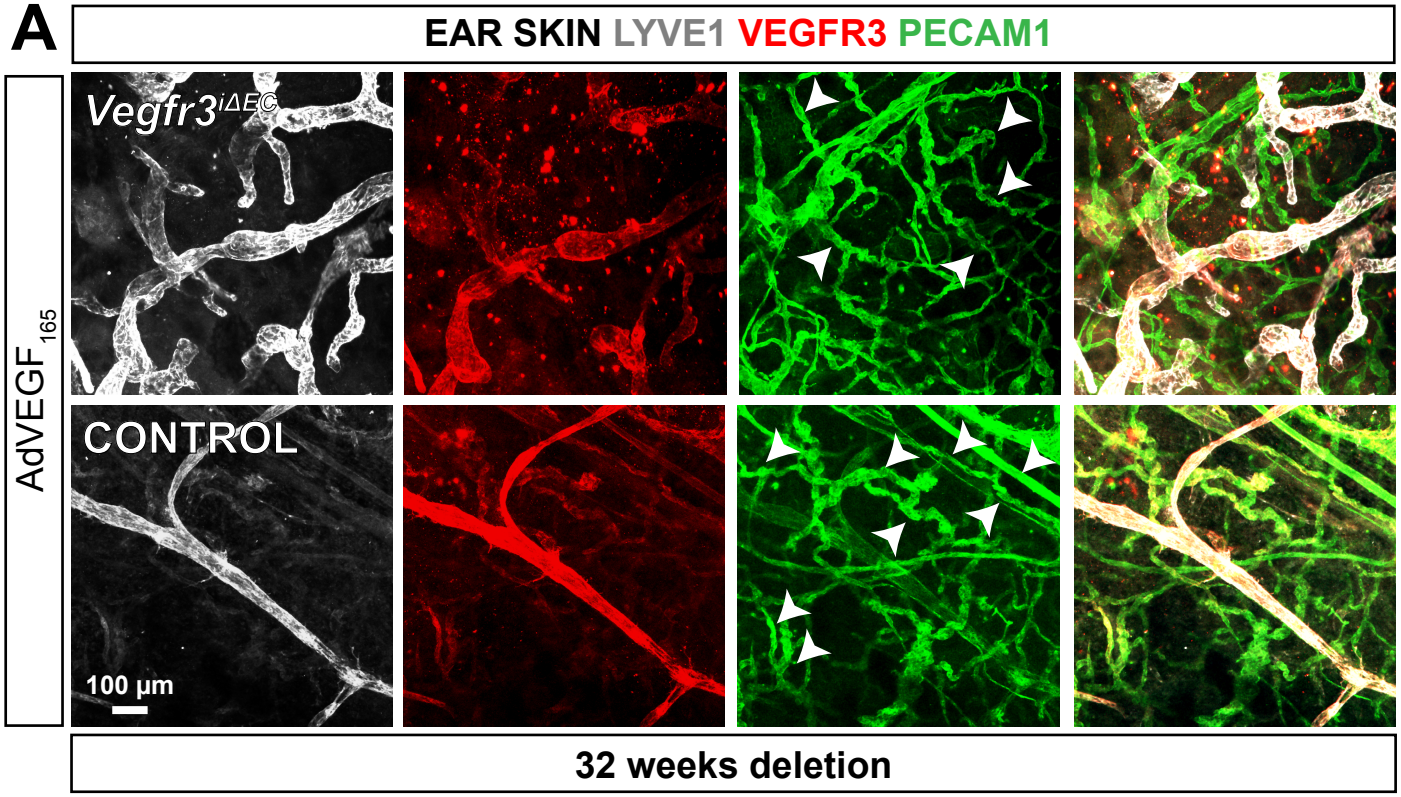
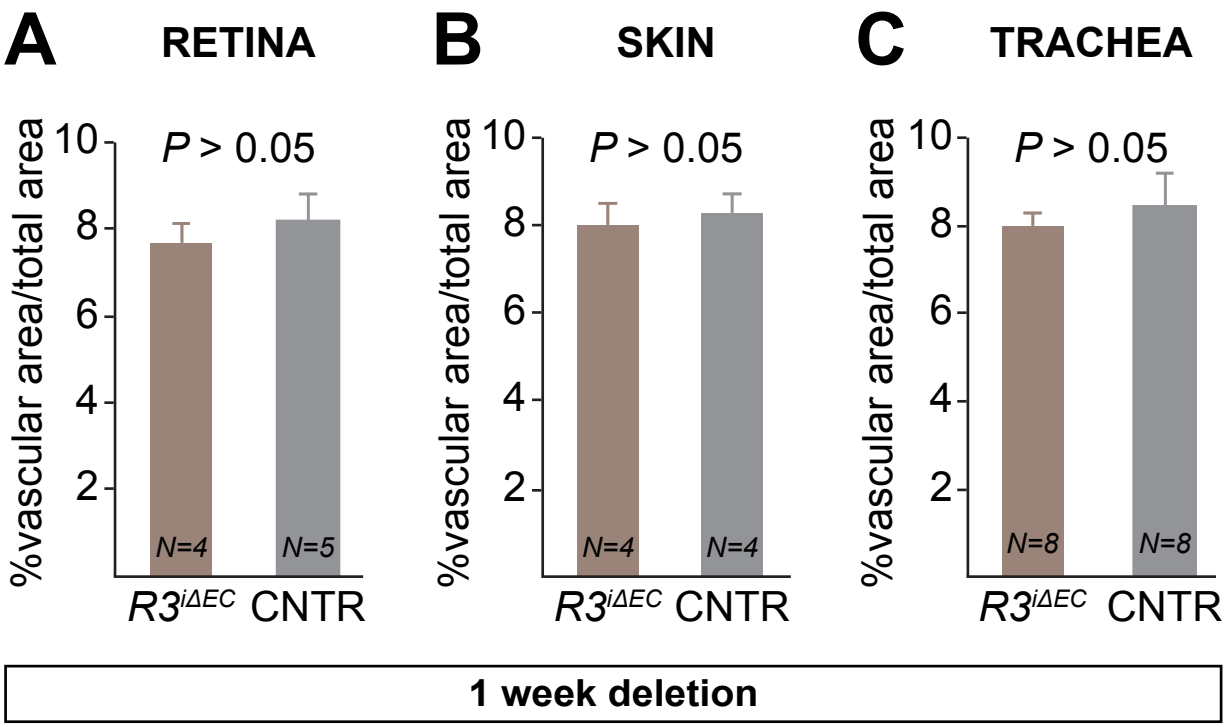


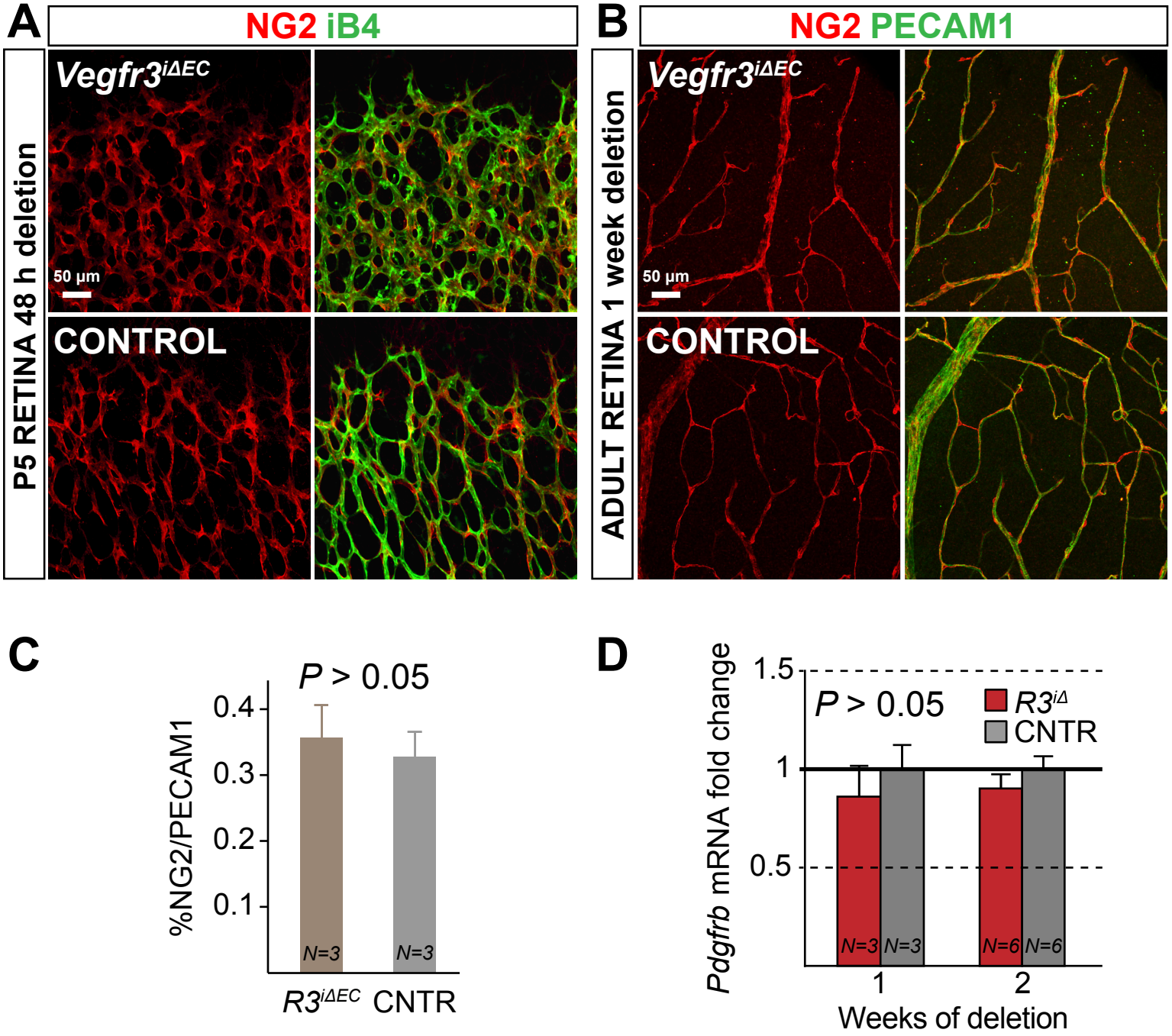
Online Figure I. A. *R26iCreER*^{T2}*;Vegfr3*$^{flox/flox}$ (*R3*^{iΔ}) mice were treated with intraperitoneal tamoxifen injections starting at postnatal week 10. *Vegfr3* mRNA fold change in lungs 15 weeks later. **B.** Fibrinogen mRNA expression in the liver of *R3*^{iΔ} vs. control littermates (*Vegfr3*$^{flox/flox}$) that received tamoxifen at 11 weeks of age and were analyzed 8 weeks later. **C-J.** Global deletion of *Vegfr3* does not affect blood vessel density. Vascular area per total area in *R3*^{iΔ} and control adult mouse trachea (C), skin (D), kidney (E), lung (F), liver (G), muscle (H), heart (I) and pancreas (J). Cre induction was achieved by intraperitoneal injections of 2 mg of tamoxifen/day for 5 days at 12 weeks of age and the mice were sacrificed 12 weeks later. *P* > 0.05. Error bars: S.E.M. N numbers are indicated on the bars.



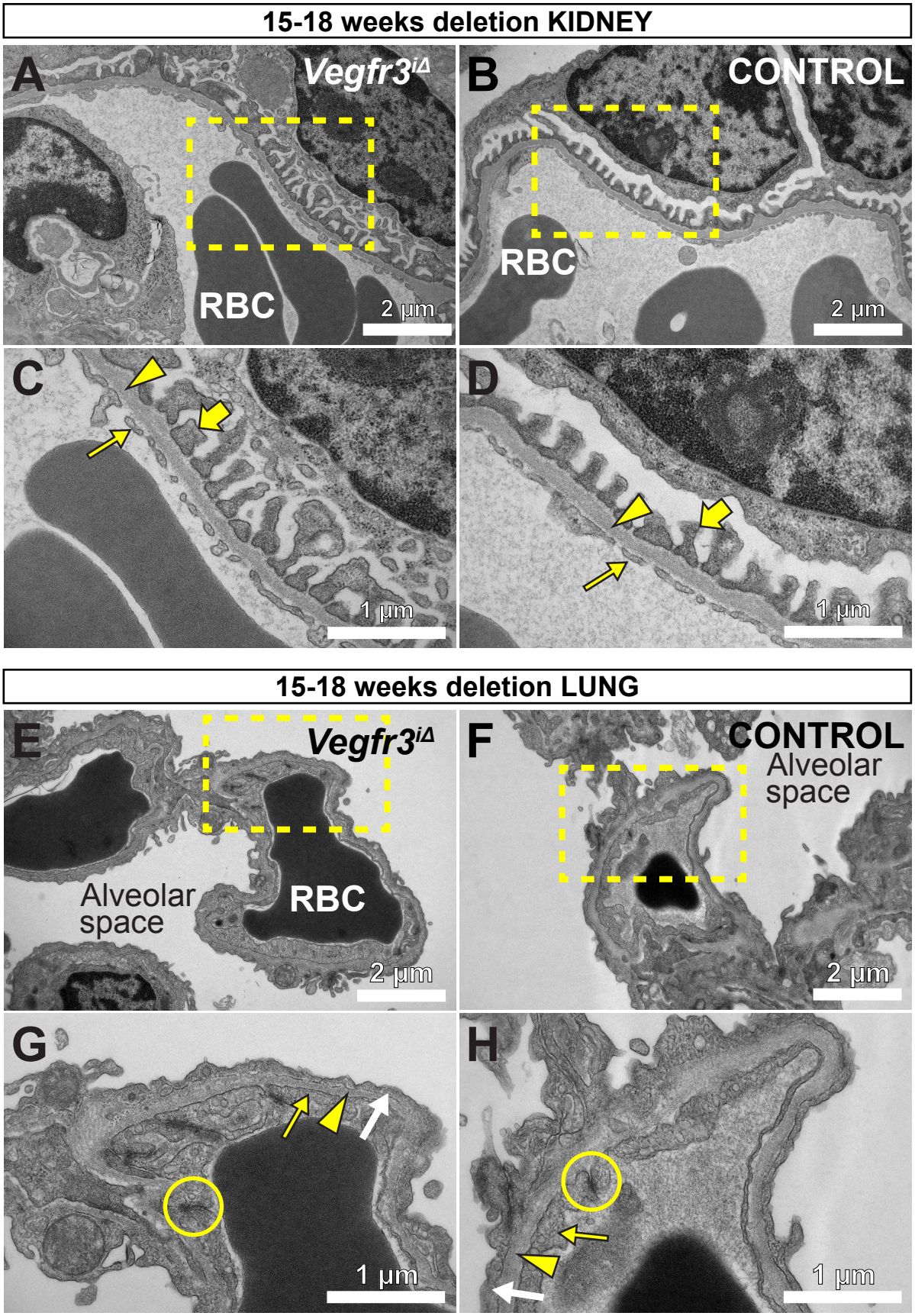
Online Figure II. **A.** *PdgfbiCreER*^{T2}*;Vegfr3*$^{flox/flox}$ and control *Vegfr3*$^{flox/flox}$ mice were induced with 20 µg of 4-OH-Tamoxifen on days P3, P4 and P5. 3x10^{8} pfu of adenoviral vector encoding for hVEGF-A$_{165}$ was injected intradermally into their ear skin 8 months later. Note that the angiogenic blood vessels (arrowheads) do not express VEGFR3 in the *Vegfr3*$^{i\Delta EC}$ skin, 4 days after vector administration.

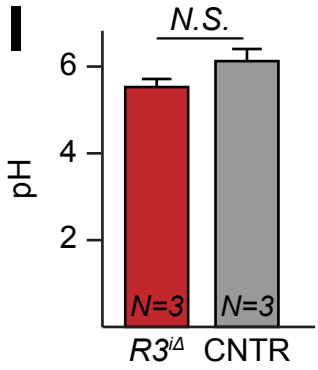


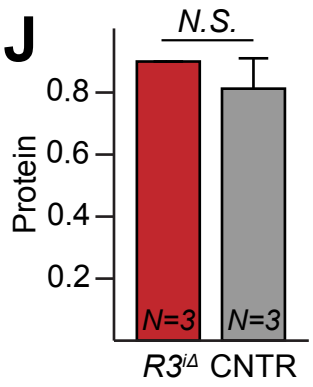
Online Figure III. A-C. *Vegfr3* deletion from blood vascular endothelium does not affect blood vessel density. Vascular area per total area in *Vegfr3*$^{i\Delta EC}$ (*R3*$^{i\Delta EC}$) and control adult mouse retina (A), skin (B) and trachea (C). 8-week old *PdgfbiCreER*^{T2}*;Vegfr3*$^{flox/flox}$ and control mice were induced with tamoxifen via gavage for 3 consecutive days and analyzed 7 days later. *P* > 0.05. Error bars: S.E.M. N numbers are indicated on the bars.



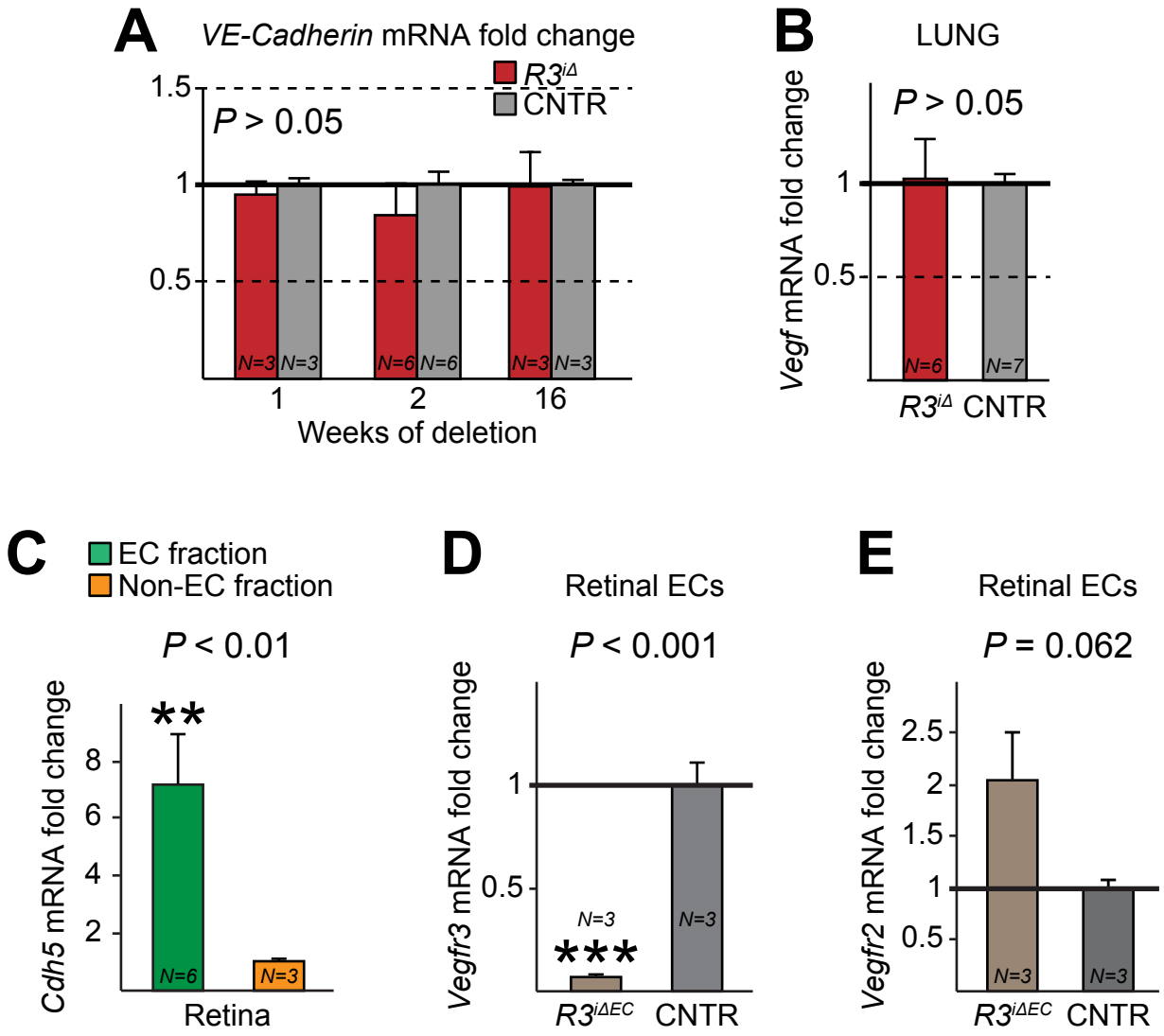
Online Figure IV. A-B. NG2 (in red) and iB4 or PECAM1 (in green) staining of *PdgfbiCreER*^{T2}*;Vegfr3*$^{flox/flox}$ (*R3*^{iΔEC}) and control *Vegfr3*$^{flox/flox}$ postnatal retinas at 48 hours (A) or adult retinas 7 days after Cre induction by tamoxifen administration (B). **C.** Quantification of pericyte staining intensity, normalized to blood vessel staining intensity from the retinas shown in (B). **D.** *Pdgfrb* mRNA levels in mouse lung, normalized to *Gapdh* mRNA, 1 or 2 weeks after tamoxifen administration in *R26iCreER*^{T2}*;Vegfr3*$^{flox/flox}$ (*R3*^{iΔ}) and control adult mice. *P* > 0.05. Error bars: S.E.M. N numbers are indicated on the bars.



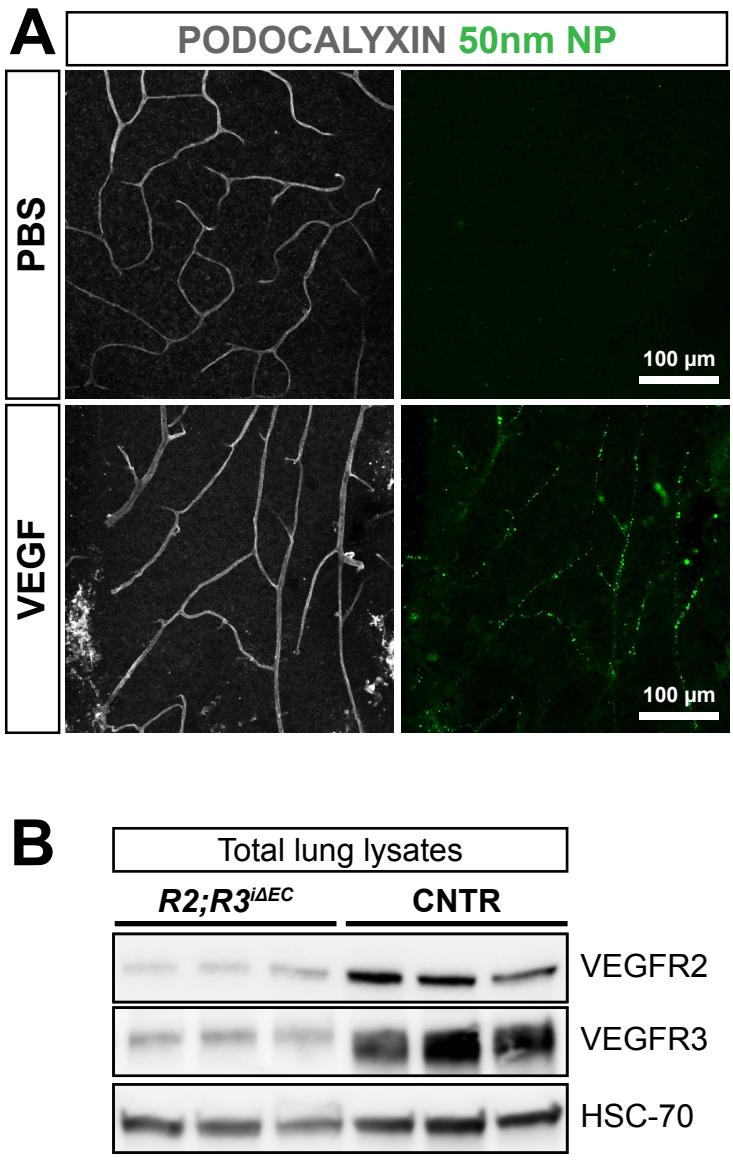




Online Figure V. Representative Transmission Electron Microscopy (TEM) images from kidneys (**A-D**) and lungs (**E-H**) of adult *R26iCreER^{T2};Vegfr3$^{flox/flox}$* (*R3^{iΔ}*) and control mice from 2 independent experiments. The mice received 5 consecutive injections of tamoxifen at 8 weeks of age and were analyzed 15-18 weeks later. Renal glomerular (A-D) or pulmonary capillaries (E-H) show no ultrastructural changes. (C-D) and (G-H) show higher magnification of the boxed areas in (A-B) and (E-F) respectively. Endothelial cells (yellow arrows), endothelial basement membranes (yellow arrowheads), podocyte foot processes (thick yellow arrows in C and D), type I pneumocytes (white arrows in G and H), interendothelial junctions (circled in G and H), red blood cells (RBC). **I-J**. Urinalysis of *R3^{iΔ}* and control adult mice using Combur-test strips. Cre induction was achieved by gavage of 2 mg of Tamoxifen for 5 consecutive days and the mice were analyzed 4 months later. No significant (NS) differences were observed in the pH (I) and protein (J) levels. Error bars: S.E.M. N numbers are indicated on the bars.



Online Figure VI. A. Global deletion of *Vegfr3* does not affect *VE-Cadherin* expression levels. *Cdh5* mRNA in total lysates of lungs, normalized to *Gapdh* mRNA in *Vegfr3*$^{i\Delta}$ (*R3*$^{i\Delta}$) and control mice, one, two or 16 weeks after tamoxifen treatment. Cre induction was achieved by tamoxifen administration for 3 consecutive days via gavage. $P > 0.05$. **B.** *Vegf* mRNA levels in the lungs of *R3*$^{i\Delta}$ and control mice after 16 weeks of deletion. **C.** *Cdh5* mRNA in the EC fraction isolated from whole retinas compared to the non-endothelial fraction. **D-E.** *Vegfr3* (D) and *Vegfr2* (E) mRNA levels in the endothelial cell fraction of retinas. ** $P < 0.01$, *** $P < 0.001$, Error bars: S.E.M. N numbers are indicated on the bars.



Online Figure VII. A. Nanoparticle extravasation in steady state and after VEGF stimulation in wild-type mouse retinas. 16-week-old male mice received 50 µL (1 %) dragon green beads (50 nm) intravenously, together with 0.25 µg/g of $hVEGF_{165}$ or equivalent volume of PBS. 12 minutes later, the mice were perfused and the retinas were harvested and stained for Podocalyxin (white) as wholemounts. Note that the dragon green bead extravasation is observed only in the VEGF treated group. **B.** Validation of *Vegfr2* and *Vegfr3* deletion by western blotting of lung lysates in adult mice after tamoxifen induction of the endothelial specific *PdgfbiCreER*^{T2} promoter. Three mice are shown per group.