## SUPPLEMENTAL FIGURE LEGENDS

**Fig. 1.** Live/Dead image of mouse mesometrium tissue after 3 days in culture. To determine tissue viability, the tissue was incubated in EthD-1 and Calcein AM in sterile MEM at 37°C for 10 min using the Live/Dead Viability/Cytotoxicity Kit (Molecular Probes), and then rinsed with PBS. The majority of the tissue remains viable after culture with live cells comprising the blood vessels and within the interstitial space. Scale bar = 100  $\mu$ m.

**Movie 1.** Compiled time-lapse images showing angiogenesis from a venule in an intact microvascular network. Mesometrium tissue from FlkEGFP female mice cultured with MEM supplemented with 20% FBS for 7 days. For day 0 and 1, an image was captured every 24 hours; for day 2 and 3, images were captured every 4 hours; and for days 4-7, images were captured every 6 hours.

