Figure 2S. Contribution of retinal blood flow to the laser-Doppler flowmetry (LDF) in rats. Blood flow is measured with LDF probe inserted in the vitreous chamber while retinal circulation in a blood vessel under the probe is transiently blocked. A & B: fundus views before and during vascular occlusion induced by insertion of a blunt occluder (lower probe) while maintaining the position of (upper) LDF probe. Scale bar = 200 mm. The arrow heads indicate the area of blood vessel occlusion. C: blood flow in this eye is halved during vascular occlusion for 10 seconds, whilst the backscatter (D) remains stable indicating a constant measurement distance. E & F: the group data (n = 6) binned in 2-second intervals and expressed relative to baseline. The result suggests that at least 50% of the LDF signal is attributable to inner retinal circulation. Shaded boxes: duration of vascular occlusion. Error bars: SEM. Care should be taken in interpreting these data as the LDF measurement includes the first order blood vessel which is approximately 40 micron in diameter (Panel A). Blood vessel of this size may come close to violating the Bonner-Nossal theory upon which the LDF is based.