Additional file 2. Parameters from the 2D model used to compute the total resistance in the extracellular space and through inter-endfeet gaps both on the arterial and venous side.

| Parameter                                      | Value                                                                 |
|------------------------------------------------|-----------------------------------------------------------------------|
| Computational domain of 2D ECS                 | $L = 3.91$ mm, $H = 2.81$ mm                                        |
| Number of arterioles and venules in 2D domain  | $N_a = 125, N_v = 50$                                                |
| Arteriole and venule radius                    | $r_a = 15\mu m, r_v = 20\mu m$                                     |
| Endfeet thickness                              | $t = 1\mu m$                                                        |
| Inter-endfeet cleft gaps                       | $h_a = 24$ nm, $h_v = 31$ nm $^{[52, 53]}$                           |
| Artery/arteriole and vein/venule area           | $A = 1.64m^2$                                                       |
| Total inter-endfeet cleft gap area             | $A_{EF} = 0.0034A \approx 0.005$ $^m$ $^{[53]}$                     |
| Inter-endfeet cleft length along entire vessel | $D = 90.67$ m                                                       |
| Average number of clefts per vessel            | $n_a = 14.14, n_v = 18.85$                                          |