

## Supplemental figures for case (iii)

This SI shows results from simulations where the convective transport term in (19), i.e.  $\nabla(s_1 l \mathbf{v}_l)$ , is neglected.

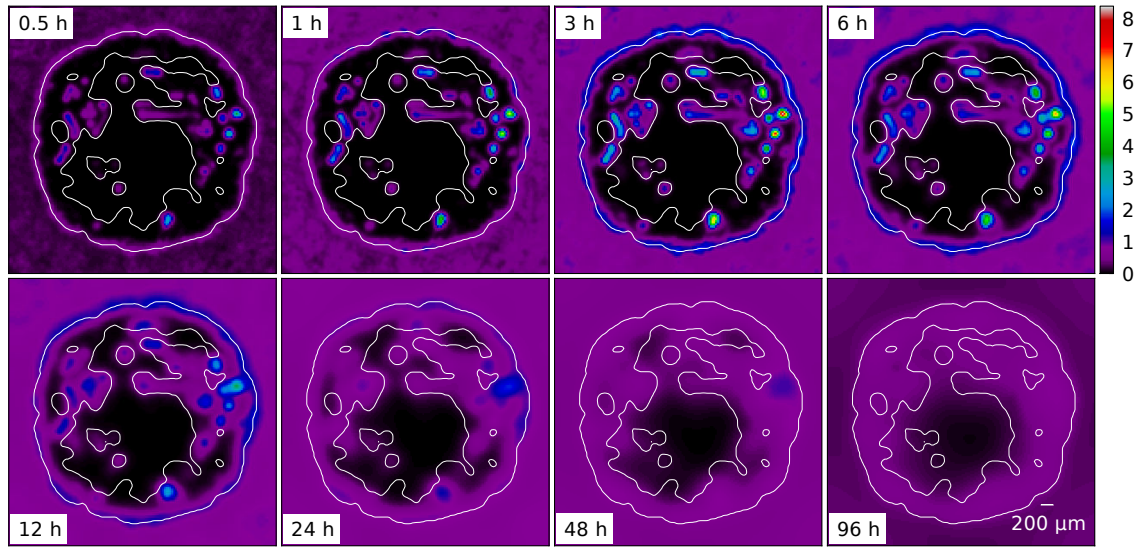


Figure 1: Drug distribution  $s$  in a series of snapshots. Corresponds to Figure 7 in the paper.

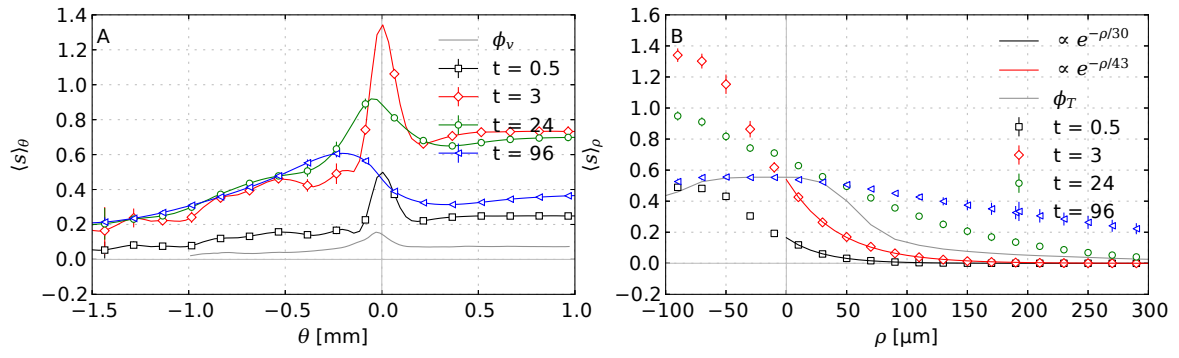


Figure 2: **Drug concentration profiles at different times.** (A) plotted vs.  $\theta$ , and (B) vs. distance from vessels  $\rho$ . Corresponds to Figure 8 in the paper.

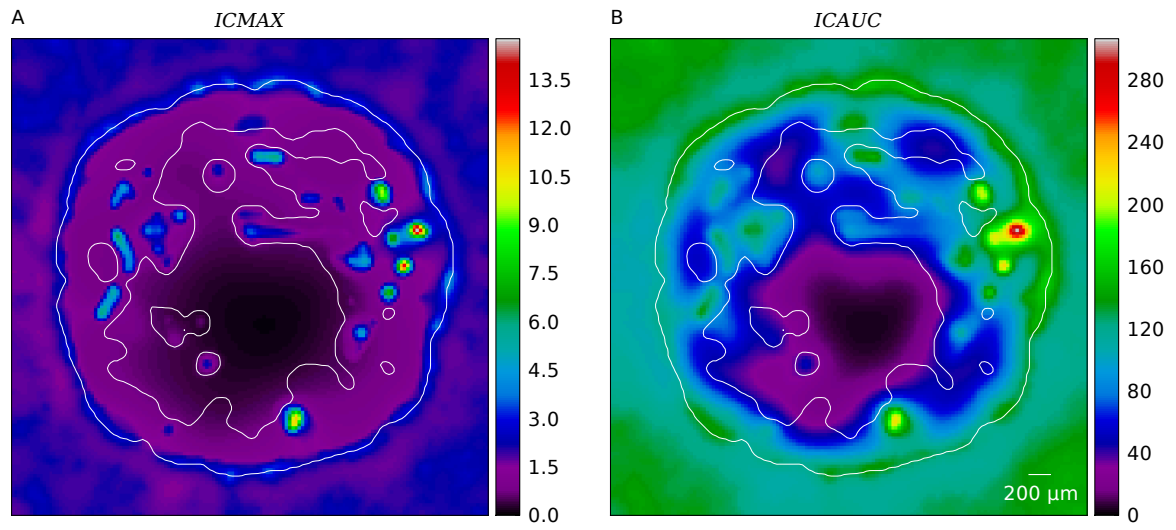


Figure 3: **Spatial distribution of drug exposure metrics.** (A) maximum concentration ICMAX and (B) the AUC ICAUC, taken from a slice through the origin of the system. Corresponds to Figure 9 in the paper.

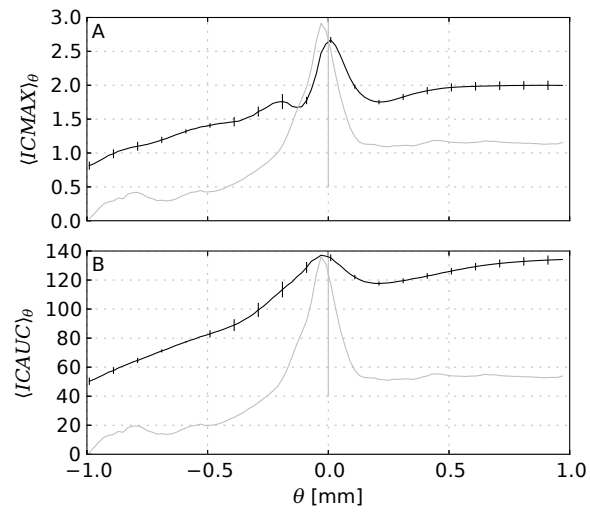


Figure 4: **Drug exposure metrics profiles.** Maximal concentration  $ICMAX$  (A) and area under curve  $ICAUC$  (B) plotted vs.  $\theta$ . Corresponds to Figure 10 in the paper.

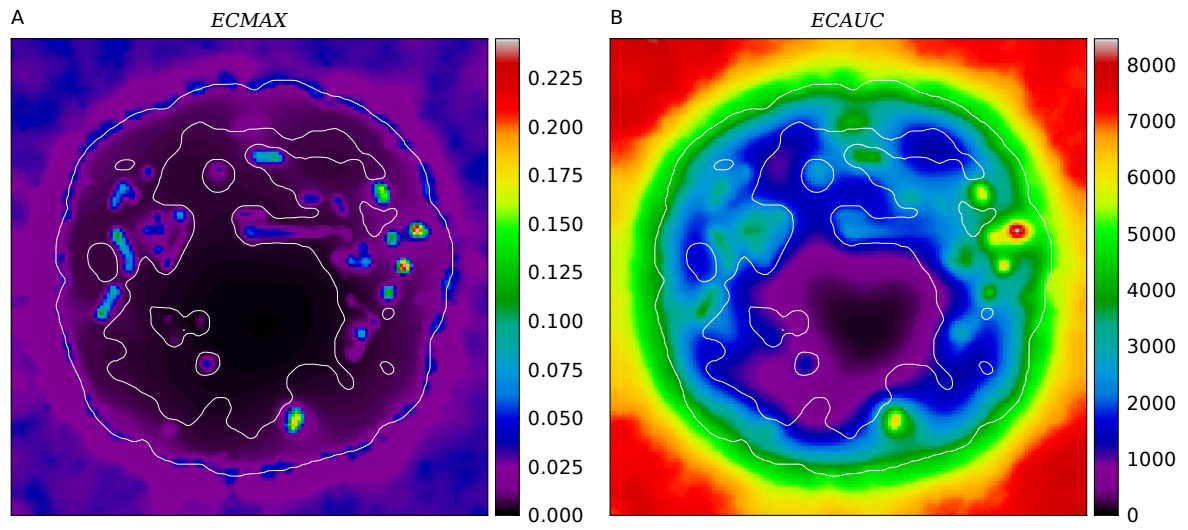


Figure 5: Maximal concentration (A) and area under curve (B) for the concentration in the interstitial compartment.

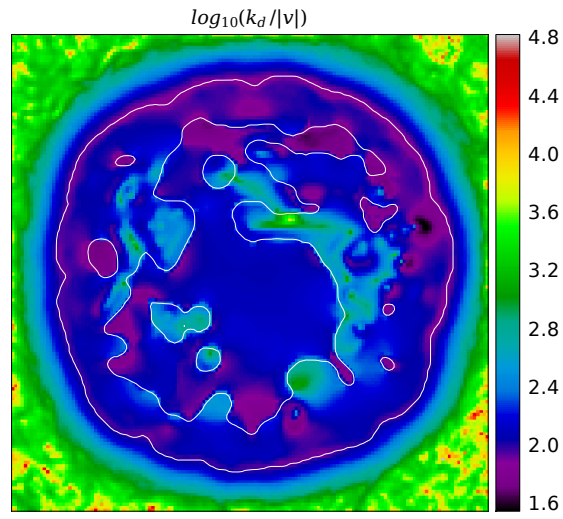


Figure 6: **Logarithmic plot of the length scale  $L_{dc}$ .** It is defined by  $L_{dc} = k_d/|v|$  following the requirement that the Peclet number equals one, i.e.  $1 = Pe = L_{dc}|v|/k_d$ . The data is scaled logarithmically.