

Project Blood Transport and Exchange between Tissue Compartments

The interpretation of perfusion measurements requires quantitative understanding of blood transport in the vasculature. The transport and the tissue-blood exchange are also in the focus of the dynamic contrast-enhanced and the arterial spin labeling techniques. We derive the characteristics of blood transport and exchange from the physics of fluid dynamics and diffusion, properly accounting for the structure of a real vascular tree.

Related publication

- Ureña JR, Olmos S, Kiselev VG.
[Tissue-blood exchange of extravascular longitudinal magnetization with account of intracompartmental diffusion.](#)
Magn Reson Med. 2011 Apr 12. doi: 10.1002/mrm.22919. [Epub ahead of print]

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