Modelling the period-average transport of species within pulsatile blood flow

Sargon A. Gabriel, Yan Ding, Yuqing Feng

PII: S0022-5193(18)30330-8
DOI: https://doi.org/10.1016/j.jtbi.2018.07.006
Reference: YJTBI 9531

To appear in: *Journal of Theoretical Biology*

Received date: 13 November 2017
Revised date: 31 May 2018
Accepted date: 6 July 2018

Please cite this article as: Sargon A. Gabriel, Yan Ding, Yuqing Feng, Modelling the period-average transport of species within pulsatile blood flow, *Journal of Theoretical Biology* (2018), doi: https://doi.org/10.1016/j.jtbi.2018.07.006

Highlights

- Blood flow pulsatility induces oscillatory disturbances in the transport of species
- Disturbances can cause the period-average transport to differ from its steady-state
- The OKEI and OSAFI are used to identify the spatial distribution of disturbances
- The RPA model is developed to compute the period-average of species transport
- The RPA model approximates the period-average better than the steady-state model