POROUS MEDIA MODELS FOR BIOMEDICAL APPLICATIONS

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Recently, porous media models have also been employed in the description of problems concerning biological systems and medical applications [1]. These models are usually based on very well-established mathematical formulations including Darcy or Brinkman equations for fluid flow, Staverman-Kedem-Katchalsky equation for mass transport, Biot poro-elasticity theory for fluid-structure interaction and heat transfer [2]. The appealing aspect about porous media in biomedicine is its capacity to model a complex biomedical problem (*e.g.* in terms of geometry and coupled multiphysics) with a simple and consistent manner.

With reference to biomedical engineering, areas like computational biology, microcirculation [3], biofilms [4], drug delivery [5], tissue engineering [6] tumor transport modeling [7] or cardiovascular diseases [8] can benefit even more from advances in computational modelling of porous media. The mini symposium aims to regroup the most recent original research contributions on development and application of porous media models in biomedical engineering field. Potential topics include, but are not limited to:

- ➢ Tissue engineering,
- ➢ Mechanobiology,
- ➢ Tumor modelling,
- ➢ Drug delivery,
- ➢ Electroporation,
- ➢ Biofilms,
- ➢ Thermal ablation,
- ➢ Cardiovascular diseases.

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