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Modeling of microcirculation-brain in the focus

The presentation focuses the cerebral microcirculation that responds to a plethora of different stimuli, both physical and chemical, at a variety of time scales, and by a great variety of pathways. No any existing models of the brain circulation have the scope or flexibility to deal with the complexities which arise in many medical situations. One the other hand, simplified models are used to demonstrate the ways a healthy brain circulation responds to changes in a variety of stimuli, including systemic arterial pressure, blood CO₂ levels, blood oxygenation, and functional activity of the brain. The model I would like to present provides basic insight to the regulation of cerebral microcirculation and is usable in courses of different levels of medical education.