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Sorin Mitran* (mitran@unc.edu), CB3250, Chapel Hill, NC 27599-3250. *When do cilia stop beating?*

Ciliar propulsion is an ubiquitous fluid transport mechanism in the animal kingdom. The effectiveness of the transport depends both on the internal force-generating mechanism and the properties of the surrounding fluid. In this work a computational fluid-structure interaction model is used to investigate how fluid transport rates vary when changing the viscoelastic properties of the medium and the cilium axoneme structure. (Received October 30, 2010)