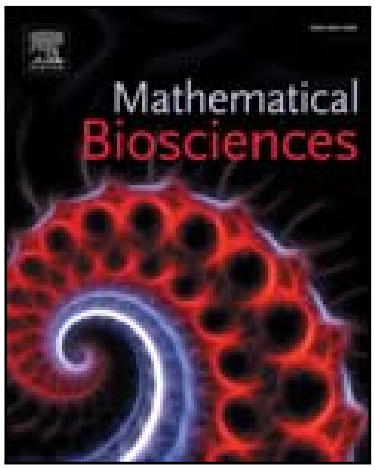

Analysis of the peristaltic-ciliary flow of Johnson-Segalman fluid induced by peristalsis-cilia of the human fallopian tube

H. Ashraf, A.M. Siddiqui, M.A. Rana

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Highlights

- A model of peristalsis-cilia induced flow of Johnson-Segalman fluid within fallopian tubal fluid in a finite narrow tube is developed.
- Highly non-linear PDE is solved using perturbation method.
- Important flow variables are analyzed for the involved parameters and constants.
- Residue time of the Johnson-Segalman fluid in the narrow tube is 3-4 days, which agreed with the time taken by the developing embryo in the human fallopian tube.