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## Statistical Mobility Properties of Choanoflagellate Colonies

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## **Statistical Mobility Properties of Choanoflagellate Colonies**

We study the stochastic hydrodynamics of aggregate random walkers (ARWs) typified by organisms called Choanoflagellates. The objective is to link cell-scale dynamics to colony-scale dynamics for Choanoflagellate rosettes and chains. We use a synthesis of linear autoregressive stochastic processes to explain the effective statistical dynamics of the Choanoflagellate colonies in terms of colony parameters. We model and characterize the non-linear chemotactic reaction of the aggregates to a local chemical gradient in terms of colony parameters.