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On a Negative Relation between Bacterial Taxis and Turing Pattern Formation

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Abstract : In this paper we introduce a bacteria-leukocyte model with bacteria chemotaxsis. We assume that bacteria develop a tactic defense mechanism as a response to Leukocyte phagocytosis. We explore the effect of this tactic motion on Turing space in two parameter spaces. A fine tuning of bacterial chemotaxis shows a significant effect on developing a non-uniform steady state.

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