Mathematical Anaysis of a chemotaxis type of model and applications to Biomedicine

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We first investigate a mathematical model proposed by Othmer and Stevens [8] which arises from reinforced random walk [3]. We show the global existence in time of the solution and the asymptotic behavior of the model(see [4]-[6]). Based on the result we clarify the mathematical structure of it. Next we apply the same approach to mathematical models of tumour growth([1],[2],[7]) and discuss the solvability and the asymptotic profile of the solution of them. It is shown that the above results allow us to characerize the models and to find some consistency in their mathematical sturctures.

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