

Boundedness and Asymptotic Behavior of Solutions for Gierer-Meinhardt Systems

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Abstract : This work is devoted to study the global existence and asymptotic behavior of solutions for Gierer-Meinhardt systems arising in biological phenomena. We prove that the solutions are global and uniformly bounded by a positive constant independent of the time. Our technique is based on Lyapunov functional argument. Under suitable conditions, we established a result on the asymptotic behavior of solutions. These results are valid for any positive continuous initial data, and improve some recently results established.

Keywords : asymptotic behavior, Gierer-Meinhardt systems, global existence, Lyapunov functional

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