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Alina Chertock, Alexander Kurganov, Maria Lukacova and Seyma Nur Ozcan*,
snozcan@ncsu.edu. *An Asymptotic Preserving Simulation for Kinetic Equations of Chemotaxis.*

Chemotaxis models describe the cell movements in relation to the chemical substance in the medium. It is known that the most common PDE based chemotaxis models, so-called (Patlak) Keller-Segel models, can be derived as a drift-diffusion limit of corresponding kinetic equation. These diffusive limits are obtained by rescaling the kinetic models. We develop an Asymptotic Preserving numerical method to solve the kinetic models, in which the new scheme yields to the scheme of the limit problem. (Received January 19, 2016)