1067-92-1474   **L. R. Ritter*** (`lritter@spsu.edu`), 1100 S. Marietta Pkwy, Dept. of Mathematics, Marietta, GA 30060, and **A. I Ibragimov** (`akif.ibraguimov@ttu.edu`) and **J. R. Walton** (`jwalton@math.tamu.edu`). *General stability analysis of a model of atherogenesis.*

Atherosclerosis is a disease characterized by chronic inflammation and the accumulation of lipids and apoptotic cells in the walls of large muscular arteries. A principal component of the disease process involves the accumulation and oxidation of low density lipoproteins within the arterial wall and its corruptive effect on the immune process. We consider a reaction-diffusion model involving chemo-taxis and perform a general stability analysis accounting for immune cell subspecies interactions and the differing roles of immune cells with respect to the components of an emerging lesion. (Received September 21, 2010)

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