

# 第179回 広島数理解析セミナー (2014年度)

## Hiroshima Mathematical Analysis Seminar No.179

日時 : 6月6日(金) 16:30 ~ 17:30

場所 : 広島大学理学部 B707

講師 : 筒井 容平 氏 (東京大学)

題目 : Boundedness of global solutions to a chemotaxis system  
with non-diffusive chemical

要旨 : We consider a chemotaxis system with a logarithmic sensitivity and a non-diffusive chemical substance. For chemotactic system, it is important to know whether or not the cell density of the species blows up. With some chemotactic sensitivity constants, Ahn and Kang proved the existence of bounded global solutions to the system. An entropy functional was used in their argument. Our purpose is to show the existence of bounded global solutions for all the chemotactic sensitivity constants, assuming the smallness on initial data. From this assumption, we can get some uniform estimates for time. These estimates are applied to extend bounded local solutions.

This talk is partially based on a joint work with Y. Sugiyama (Kyushu Univ.) and J.J.L. Velázquez (Bonn Univ.).

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