

# RD-systems with chemotaxis: global existence, boundedness and blow-up of solutions

Xue Xu<sup>1</sup> and Zhong Huang<sup>2</sup>

<sup>1</sup>Haerbin University

<sup>2</sup>nan kai da xue

March 15, 2021

## Abstract

result shows that the blow-up is equivalent to the blow-up of the  $L^r$ -norms of the solutions for  $r$  exceeding some critical value  $r_c$ . Under very loose conditions we give the estimation of  $r_c$ , relying on a variant of Gagliardo-Nirenberg inequality, and a kind of bootstrap method which is very similar to the Alikakos-Moser iteration procedure.

## Hosted file

HXrd-mod.pdf available at <https://authorea.com/users/401747/articles/513738-rd-systems-with-chemotaxis-global-existence-boundedness-and-blow-up-of-solutions>