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## Innate Response Activator B Cells Protect Against Microbial Sepsis.

Rauch PJ, Chudnovskiy A, Robbins CS, Weber GF, Etzrodt M, Hilgendorf I, ..., Chicoine AT, Mouded M, Pittet MJ, Nahrendorf M, Weissleder R, Swirski FK

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PubMed Abstract

**Baidong Hou** and **Anthony DeFranco**, University of California, San Francisco, USA. F1000 Immunology

26 Jan 2012 | New Finding

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These authors have identified a novel B cell population, which they call innate response activator (IRA) B cells, and have shown that they contribute to the early immune defense to bacterial infection in the blood by secreting the cytokine granulocyte-macrophage colony-stimulating factor (GM-CSF). These B cells constitute the major GM-CSF-producing cells in the spleen of mice treated repeatedly with lipopolysaccharide (LPS) or in a polymicrobial infection model (cecal ligation and puncture, CLP).

The authors further determined that this group of B cells is distinct from traditional B cell subsets (T1 transitional, follicular, marginal zone and B1 B cells and plasma cells) through a combination of cell surface marker staining, fate mapping and transcriptome analysis, although they derive from B1 cells.

Based on the authors' findings, IRA B cells constitute a distinct effector B cell population with a role in innate defense against bacterial infection.

**Competing interests:** None declared [Cite this evaluation](#) [Cite this page](#)

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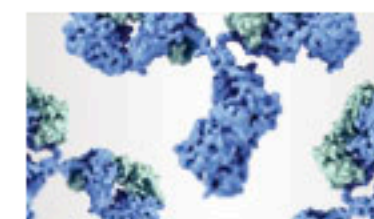
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