Macrophage inflammatory response mediated by intimin and bundle-forming pilus from enteropathogenic *Escherichia coli*

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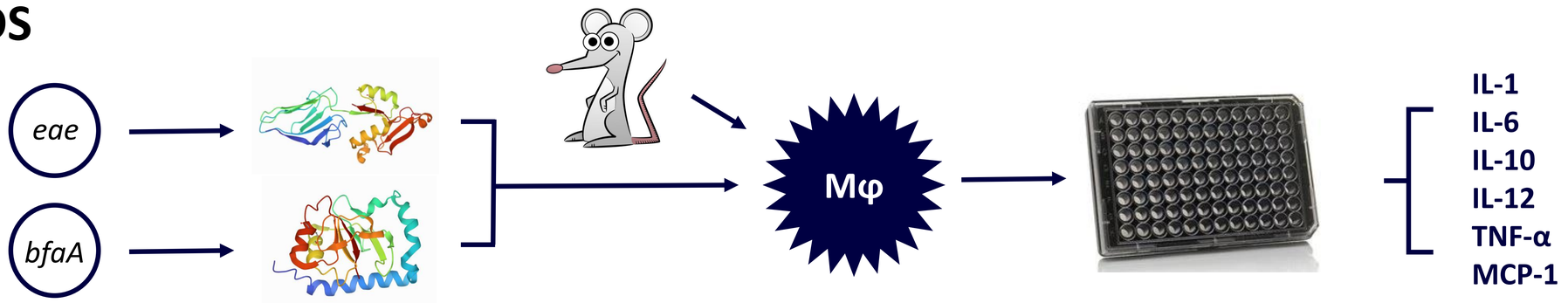
INTRODUCTION

Enteropathogenic *Escherichia coli* (EPEC) are important agents of acute diarrhea in children living in developing countries. The main **virulence factors** include the adhesins **intimin** and **bundle-forming pilus** (BFP). The initial interaction of EPEC with the host cell and the role of effector proteins are well known. However, the role of the EPEC virulence factors in **macrophage activation** is not fully understood.

OBJECTIVE

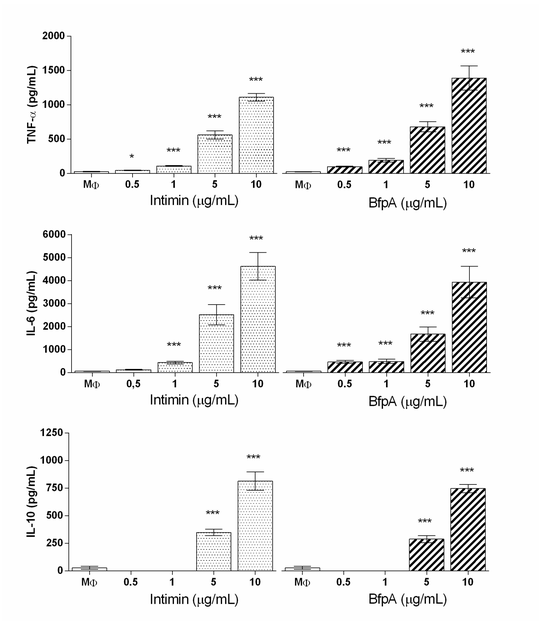
Analyze the ability of intimin and BfpA to activate the **innate response** mediated by macrophages.

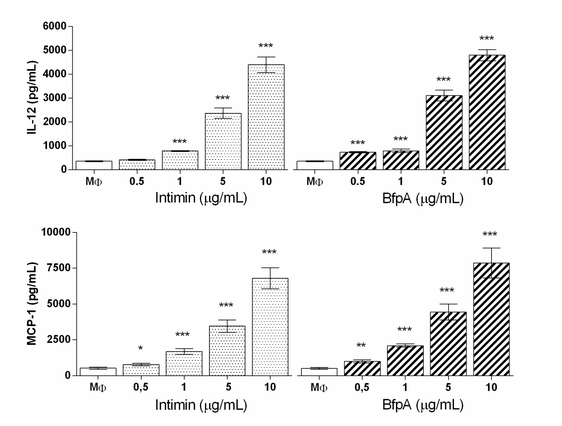
METHODS

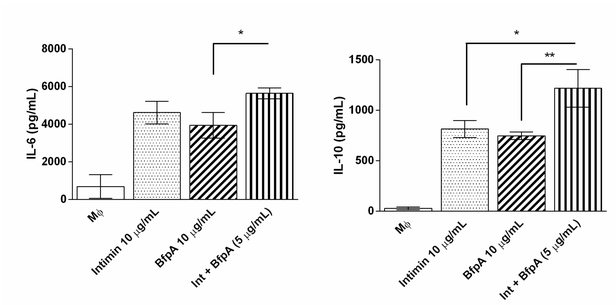


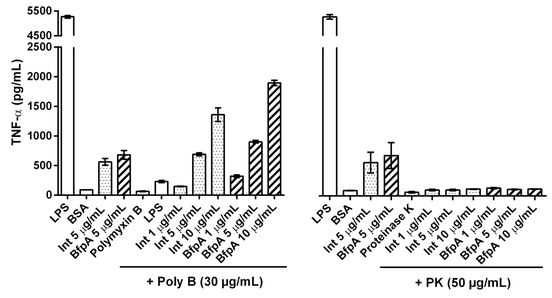
RESULTS

Recombinant intimin and BfpA activate macrophages in **dose-dependent** manner, and the stimulated cells produced **TNF-α, IL-12, IL-6, IL-10** and **MCP-1**, but not IL-1β. No synergistic effect was observed in the production of proinflammatory cytokines by combining BfpA and intimin, although production of IL-10, an anti-inflammatory mediator, was potentiated at a higher dose.









CONCLUSION

Intimin and **BfpA** can activate the innate immune response having role as **inflammatory molecules** in EPEC infection.

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