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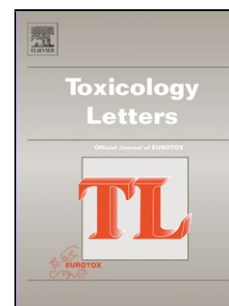
Title: Environmentally relevant dose of arsenic interferes in functions of human monocytes derived dendritic cells

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Environmentally relevant dose of arsenic interferes in functions of human monocytes derived dendritic cells

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Highlight

- Low doses of arsenic dramatically decreases phagocytosis capacity of MDDCs through the down-regulation of MHCII and CD40.
- Arsenic exposure differently and TLRs-independently changes genes expression of pro-inflammatory cytokines.
- Only one ppb arsenic turns MDDCs to apoptotic but not necrotic state.

Abstract

Arsenic is a major environmental pollutant and highly hazardous toxin to human health, which well established as carcinogen and immune deregulatory properties. Dendritic cells (DCs) have a pivotal role in cell-mediated immunity for T-cell activation and antigen presentation.

In this study, T cell activation, some key functional genes expression, cell stability and phagocytosis capacity of human monocytes derived DCs (MDDCs) were analyzed after in vitro exposure to very low dose of arsenic for 12 and 24 h. Arsenic decreased continually phagocytosis capacity of MDDCs. Furthermore,

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