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Matrix modulation in monocytes

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Jonathan B Weitzman

Email: jonathanweitzman@hotmail.com

The interactions of cells with the **extracellular matrix (ECM)** are critical for orchestrating immune and inflammatory responses. In the December *Immunity*, de Fougères *et al.* report a comprehensive analysis of gene expression profiles affected by the attachment of monocytes to fibronectin and other ECM components (*Immunity* 2000, **13**:749-758). They used a quantitative, restriction enzyme-based profiling method, named **GeneCalling**, to examine the integrin-mediated induction of genes in the monocyte cell line THP-1. De Fougères *et al.* identified over 140 genes induced by matrix attachment, including several encoding secreted cytokine factors and cell surface receptors. ECM and growth factors synergistically activated many genes regulated by the NF-kappaB and Jak/STAT signalling pathways. Furthermore, different ECM substrates induced both distinct and overlapping gene sets. Matrix-induced genes are likely to play roles in extravasation, migration and phagocytosis by monocytic cells during the inflammatory response.

References

1. Adhesion receptors of the immune system.
2. *Immunity*, [<http://www.immunity.com>]
3. Gene expression analysis by transcript profiling coupled to a gene database query.