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## Fly immunity

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Studies of the response to microbial infection in *Drosophila* have taught us much about the conserved features of the **innate immune response**. In the October 23 [Proceedings of the National Academy of Sciences](#), Ennio De Gregorio and colleagues at the CNRS [Centre de Genetique Moleculaire](#), Gif-sur-Yvette, France, describe a genome-wide analysis of the *Drosophila* immune response (*Proc Natl Acad Sci USA* 2001, **98**:12590-12595). They used high-density oligonucleotide microarrays to probe over 13,000 genes following septic injury or natural bacterial infection. They identified about 400 **DIRGs**, *Drosophila* immune-regulated genes; 230 were induced and 170 repressed. De Gregorio *et al.* discuss the relevance of 134 DIRGs that are predicted to play roles in immune recognition, phagocytosis, coagulation, synthesis of antimicrobial peptides and activation of signalling pathways. Study of the large number of DIRGs representing unknown genes will provide new insights into innate immunity in flies and man.

## References

1. Genes that fight infection: what the *Drosophila* genome says about animal immunity.
2. *Proceedings of the National Academy of Sciences*, [<http://www.pnas.org>]
3. Centre de Genetique Moleculaire , [<http://www.cgm.cnrs-gif.fr>]
4. Genome-wide Gene Expression Patterns of *Drosophila* in Response to Immune Challenge , [<http://www.fruitfly.org/expression/immunity>]