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Molecular approaches to the diagnosis and monitoring of  
production diseases in pigs

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### **Abstract**

Production disease in pigs is caused by a variety of different pathogens, mainly enteric and respiratory and can result in significant economic loss. Other factors such as stress, poor husbandry and nutrition can also contribute to an animal's susceptibility to disease. Molecular biomarkers of production disease could be of immense value by improving diagnosis and risk analysis to determine best practice with an impact on increased economic output and animal welfare. In addition to the use of multiplex PCR or microarrays to detect individual or mixed pathogens during infection, these technologies can also be used to monitor the host response to infection via gene expression. The patterns of gene expression associated with cellular damage or initiation of the early immune response may indicate the type of pathology and, by extension the types of pathogen involved. Molecular methods can therefore be used to monitor both the presence of a pathogen and the host

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