





Gene array and real time PCR analysis of the adrenal sensitivity to adrenocorticotrophic hormone in pig  
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### Conclusion

- Comparison of gene expression in the adrenal glands of Meishan (high cortisol production) and Large White (low production) pigs in response to ACTH shows that the expression of numerous genes differ according to breed and/or treatment.
- Several of these genes are involved in cortisol synthesis
  - No difference in the ACTH signalling pathway and in steroidogenic enzymes
  - Cholesterol transport (*Star*, *Ldlr*) and several kinases involved in phosphorylation of S1AR (*Snf1lk*)
  - Tricarboxylic acid cycle (*Mdh2*, *Sdha* and *Suc2g2*) involved in heme biosynthesis (*Alas1*)
- Still to be characterized transcripts / genes
- Current studies aim at finding molecular polymorphisms underlying these genetic differences. Further genetic selection will allow the study of functional consequences of different adrenal sensitivity to ACTH and cortisol production.

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 12-14th Nov 2008, Animal Sciences Group, Wageningen UR, Lelystad

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