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Grande salle + visio

## **EPIGENETIC SIGNATURES OF SOCIAL STATUS IN FREE-RANGING SPOTTED HYENAS (*CROCUTA CROCUTA*)**

par

Alexandra Weyrich,

Leibniz Institute for Zoo and Wildlife Research, Berlin

- 📌 In mammalian societies, dominance hierarchies translate into inequalities in health, reproductive performance and survival. DNA methylation is thought to mediate the effects of social status on gene expression and phenotypic outcomes, yet a study of social status-specific DNA methylation profiles in different age classes in a wild social mammal is missing.
- 📌 We tested for social status signatures in DNA methylation profiles in wild female spotted hyenas (*Crocuta crocuta*), cubs and adults, using noninvasively collected gut epithelium samples. In spotted hyena clans, female social status influences access to resources, foraging behavior, health, reproductive performance and survival. We identified 149 differentially methylated regions between 42 high- and low-ranking female spotted hyenas (cubs and adults). Differentially methylated genes were associated with energy conversion, immune function, glutamate receptor signalling and ion transport.
- 📌 Our results provide evidence that socioenvironmental inequalities are reflected at the molecular level in cubs and adults in a wild social mammal.



**Leibniz Institute for Zoo  
and Wildlife Research**

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