

## Conclusion



There are behavioural differences between the wild type and domestic chickens

The mutation of the TSHR-gene is involved in the behavioural changes during domestication



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A mutation in the TSHR-gene — how does it affect social and fear related behaviours in chickens?



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# Background

The wild ancestor to all domestic chickens is the red junglefowl. The domestication of chickens started around 8000 years ago. This led to changes in behaviour, morphology and physiology.

Thyroid hormones are important in the development and growth in birds. Thyroid stimulating hormone can affect a wide range of domestication phenotypes, such as behaviour, growth rate and pigmentation.



*A red junglefowl (left) and a domestic White leghorn (right).*

The thyriod stimulating hormone receptor (TSHR) gene has mutated in domestic chickens and can be involved in the release of the strict photoperiodic regulation, which also can affect development, behaviour and growth.

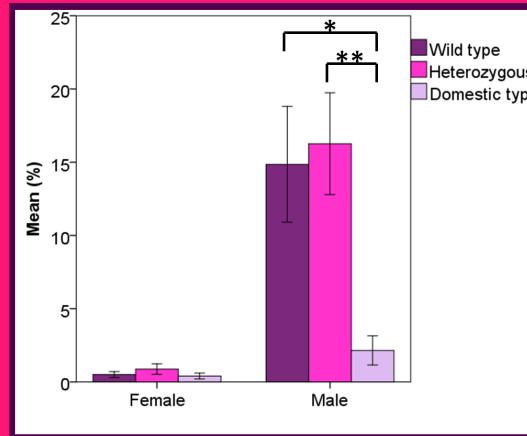
**The aim of this project was to investigate whether the TSHR-gene was involved in the domestication effect of fear related behaviours**

# Results

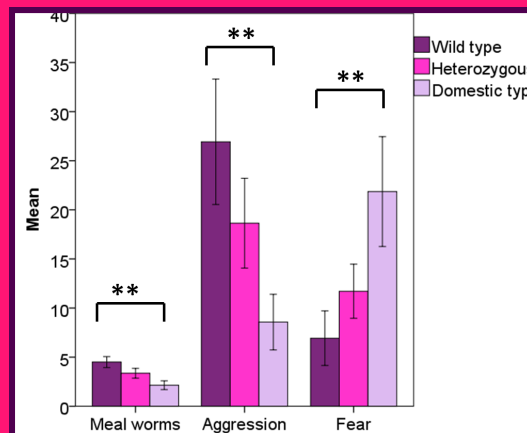


There are behavioural differences between the different genotypes.

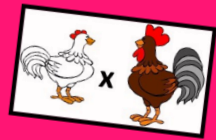
Domestic male chickens showed less fear behaviours in the fear of human test. There were no differences between the female chickens.



The social dominance test showed that the wild type chickens are more aggressive towards and less afraid of other



# Methods



Chickens from a cross of Red junglefowl and White leghorn were chosen either for having the mutation of the TSHR-gene or not.



The fear related behaviours were measured in three different tests:

- Aerial Predator
- Fear of Human
- Tonic Immobility

Social behaviours were studied in a Social dominance test.

