## The effects of transfer and social isolation



# on stress level and maternal care in breeding German shepherd dogs



Caroline Bergvall
Supervisors: Per Jensen & Pernilla Foyer
IFM Biology, Linköping University



### Background

Dogs are bred for military purposes at the breeding kennel in Sollefteå. Prior to the delivery the bitches are transferred to the breeding kennel from their civilian home. The biggest differences between the civilian homes and the breeding kennel are access to a smaller area, shorter walks and social isolation. These differences can be perceived as stressors. Stress during gestation can affect the maternal care.



#### Results

The variation of cortisol level between the bitches decreased during time. Lying had a negative effect on suckling while Restless had a positive effect. High cortisol level was correlated with low vocalisation frequency.

#### Conclusion

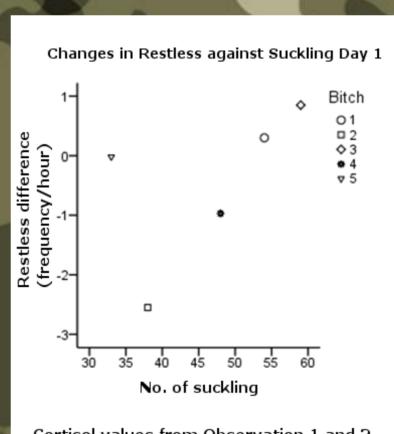
Stressed dogs seemed to show apathetic behaviours. The differences in the behaviour categories may reflect different coping strategies. Small sample size may preclude generalisation of the results.

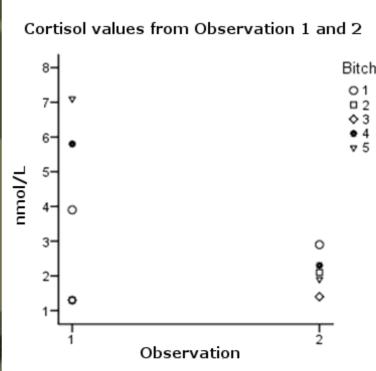
#### Aim

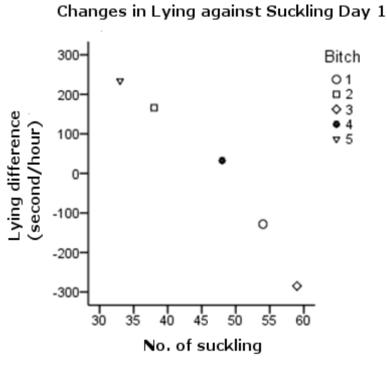
The aims are to see if transfer and social isolation are perceived as stressors for the bitches, as well as to see if these potential stressors affect the maternal care.

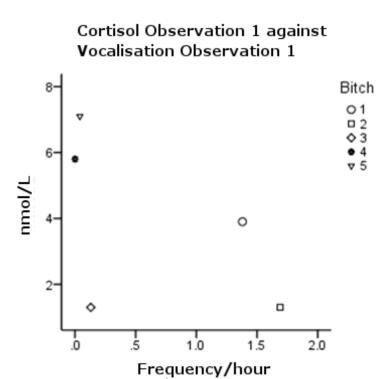
#### Method

Five breeding bitches were used in this study. Behavioural observations and saliva collection for cortisol occurred two times for each bitch, the day after arrival and five days later. After whelping two 24 h observations occurred during day 1 and day 7 to record the interaction between bitch and pups.









Contact information:
Caroline Bergvall
bergvall.caroline@gmail.com