# PERSONALITY OF WILD RODENTS AND ITS LINK TO PATHOGEN COMMUNITIES

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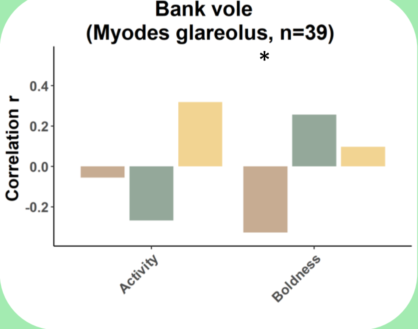
## BACKGROUND

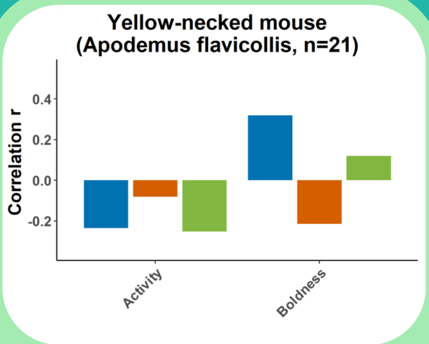
- **Rodents** are major **reservoir of zoonoses** and can cause disease in humans and livestock .
- **Personality traits,** like activity and boldness, **influence movement**, home range, space use and can thus affect exposure to parasites and possibly spillover to humans.

## PRELIMINARY RESULTS

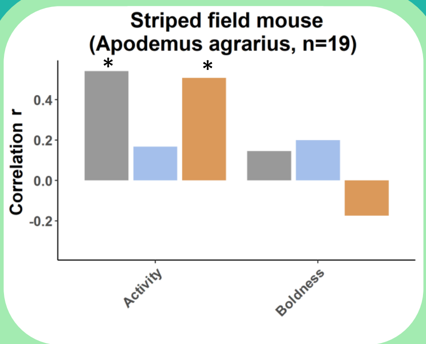
We used multiple correspondence analysis to obtain pathogen associations. Graphs show correlations of two personality traits and the three dimensions that explain >50% of the variance in the data. The main pathogens that characterize these dimensions and the variance they explain are listed below.



| | | |
|---|---|---|
| 🟫 | Borrelia + Chlamydia | (22%) |
| ⬜ | Sarcocystidae + Mycoplasma | (15%) |
| 🟨 | Mycoplasma | (14%) |



| | | |
|---|---|---|
| 🟦 | Mycoplasma + Candidatus Neoehrlichia | (28%) |
| 🟧 | Mycoplasma + Borrelia | (18%) |
| 🟩 | Mycoplasma + Candidatus Neoehrlichia + Borrelia | (14%) |

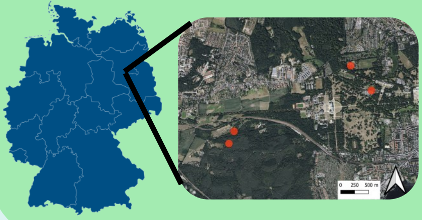


| | | |
|---|---|---|
| ⬛ | Haemobartonella muris + Mycoplasma coccoides | (30%) |
| 🟦 | Mycoplasma + Bartonella | (20%) |
| 🟨 | Mycoplasma coccoides + Borrelia | (19%) |

## METHODS

### Trapping

We trapped rodents on two locations in NE Germany in Autumn 2021 and Spring 2022.

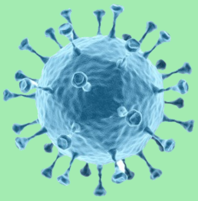


### Personality

Combined dark-light and open -field tests in the field. Using PCA we reduced behavioural variables into two components, boldness and activity. (n=158)

### Pathogen communities

Bacterial communities were characterized using 16S rRNA amplicon sequencing of splenic samples. (n=80)



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