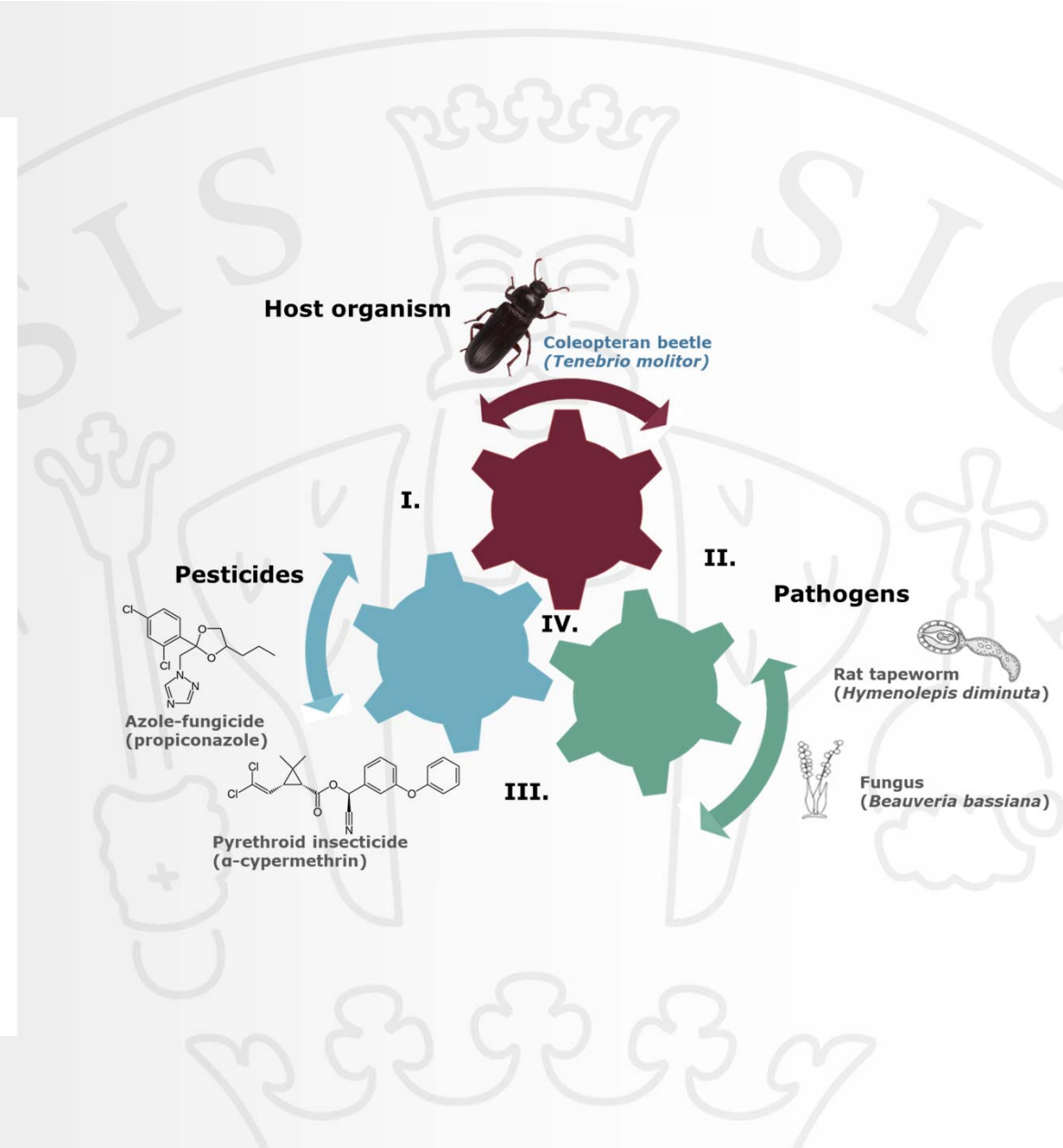


Quantifying synergistic effects of combining chemical and immune stressors

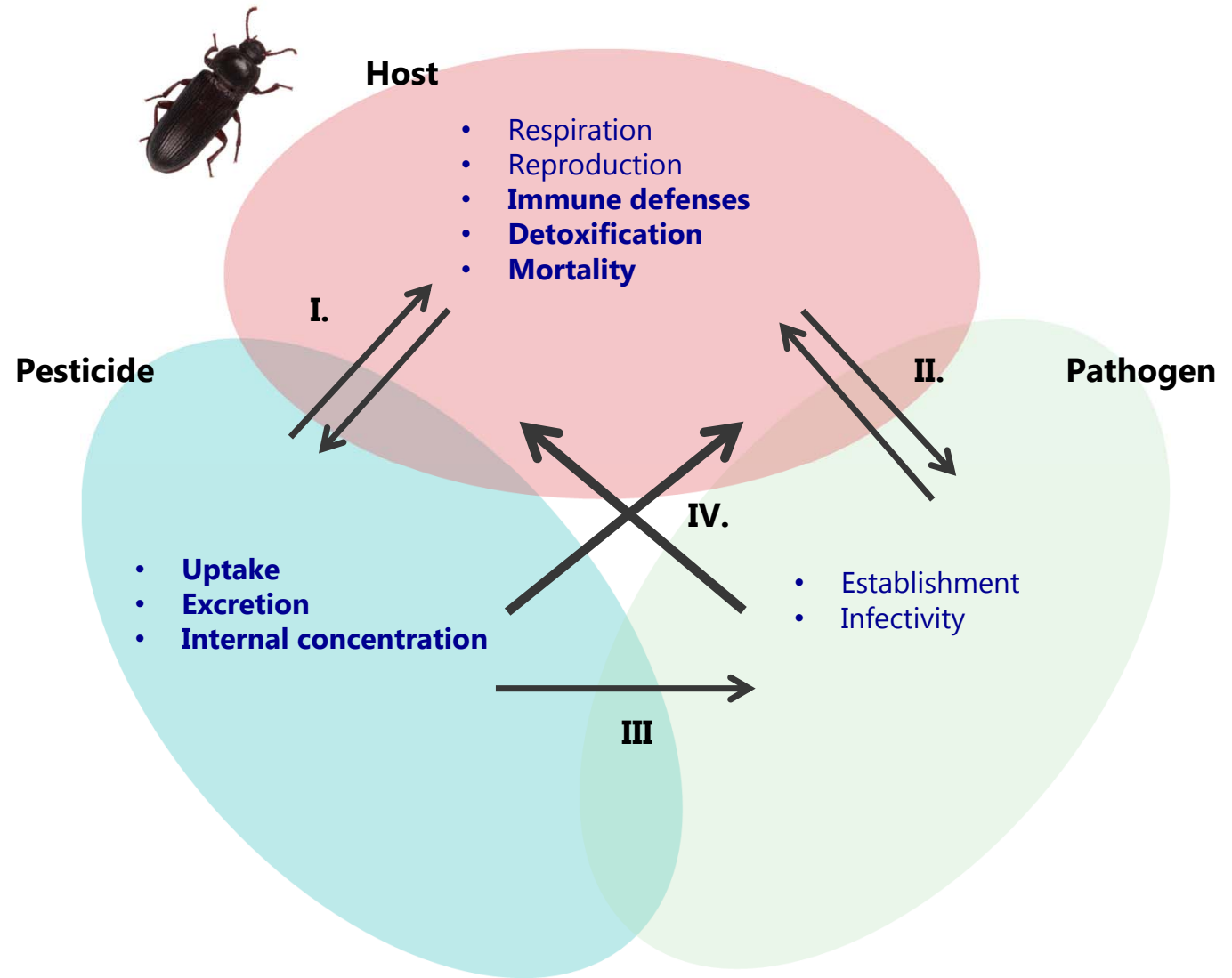
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KØBENHAVNS UNIVERSITET



Hypothesis

The hypothesis is that environmental pollutants/pesticides interact with natural infections resulting in interactive effects.



Reference model and quantifying interactions

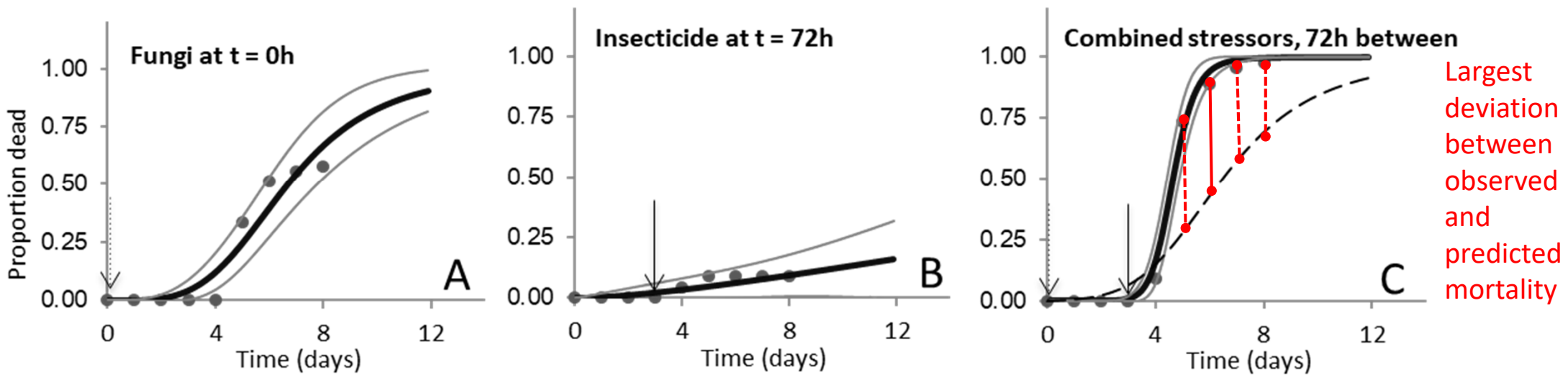
Model of Independent Action (IA):

$$S_{A+B} = S_A \times S_B \quad \text{or} \quad S_{A+B} = 0.5 \times 0.5 \quad \text{or}$$

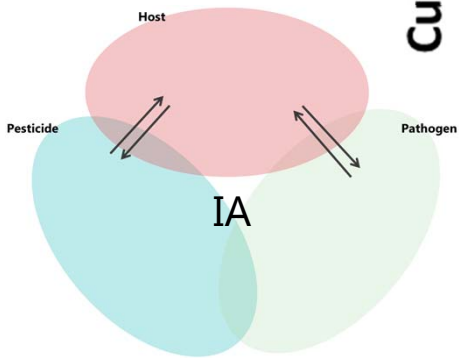
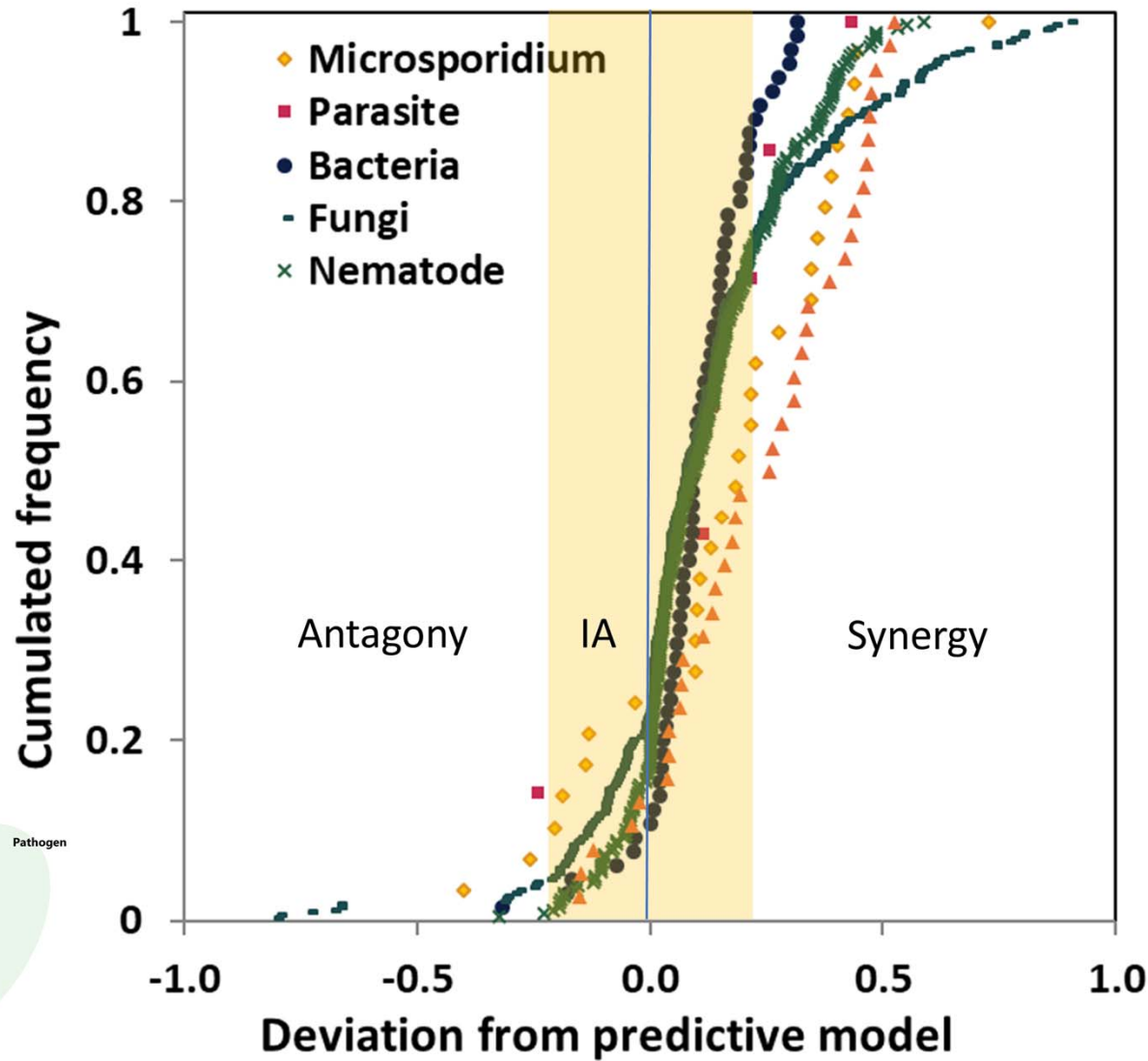
$$E_{A-B} = E_A + E_B - E_A \times E_B \quad E_{A-B} = 0.5 + 0.5 - 0.5 \times 0.5$$



Mortality is often measured over time:



Results



Conclusion

Synergistic interactions seem to be more common than antagonistic interactions

More frequent with microsporidium and virus mixtures

Further analysis of data will be done