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## Plenary Talks

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### **Responses to human-induced changes - ecological and genomic drivers of wildlife health**

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Anthropogenic environmental change and loss of biodiversity has been shown to increase the infection prevalence in wildlife reservoirs and drive zoonotic diseases. However, despite recent advances in theoretical concepts and mathematical models, empirical data concerning the ecological and genomic drivers of pathogen transmission in wild animal populations, especially from the tropics, remain scarce. We have studied small mammal populations in three tropical landscapes in central Panama differing in their degree of human-induced changes to test whether shifts in species richness affect host population density, species ecology and virus prevalence. We furthermore investigated the effects of host adaptive (TLR, MHC) diversity on infection and resistance pattern to infer the impact of genomic constraints and reduced genetic diversity. Our study has revealed ecological and genomic mechanisms by which human-induced landscape change can have significant effects on pathogen transmission and infection susceptibility.

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# Julius-Kühn-Archiv

Jens Jacob, Jana Eccard (Editors)

6<sup>th</sup> International Conference of Rodent  
Biology and Management  
and  
16<sup>th</sup> Rodens et Spatium

Potsdam, Germany, 3-7 September 2018

Book of Abstracts



Julius Kühn-Institut  
Bundesforschungsinstitut für Kulturpflanzen

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