Workshop Rodent-Borne Diseases

Who is the reservoir of Monkeypox? Work in progress

Anne Laudisoit[1], Erik Verheyen[2], Mare Geearerts[3], Tosca Van Roy[3], Pascal Baelo[4], Guy Crispin Gembu[4]

[1]Ecohealth Alliance, New York, USA & University of Antwerp, Belgium, herwig.leirs@uantwerpen.be
[2]Royal Belgian Institute of Natural Sciences, Brussels, and University of Antwerp, Belgium
[3]University of Antwerp, Belgium
[4]Centre de Surveillance de la Biodiversité, Kisangani University, Demoratic Republic of the Congo

Human Monnkeypox is a disease that is known from central and west Africa and that is caused by the Monkeypox virus, an Orthopoxvirus. It is a zoonosis with symptoms similar to smallpox and increasing frequency of human-to-human transmission in central Africa. Two separate clades of the virus exist: the Congo basin clade with a mortality of about 15% and the west African clade that causes a milder disease. Human cases were frequently seen during localized outbreaks in DR Congo but in the last 12 months epidemics have been reported from Nigeria (where Monnkeypox had not been reported since 1978), Central African Republic and Liberia. In none of these cases, the source of the virus or what caused the (re-)emergence of the disease was known. The natural reservoir is still unknown (despite the name, it is not primates) but an introduction of Monnkeypox to the USA in 2003 was linked to the import *of Cricetomys gambianus* and *Graphiurus* sp. from Ghana. Also squirrels are often mentioned as potential hosts. Intensive field work in DRC, in areas where Monnkeypox is endemic in humans but also in areas where it has not been reported, has yielded a number of sequences from different species of small mammals (rodents, shrews, bats, carnivores, …) that showed traces of Orthopoxvirus DNA. Overall prevalence was between 10 and 20 percent. Yet no species stood out as one in which the infection is more common and the genetic distances between the observed viral material were not related to the phylogeny of the host. Similarly, a wide array of mammals have proven seropositive without pointing to a particular host species. Our screening work is currently continuing and by the time of the conference we hope to present more detailed results and to suggest working hypotheses for further research.

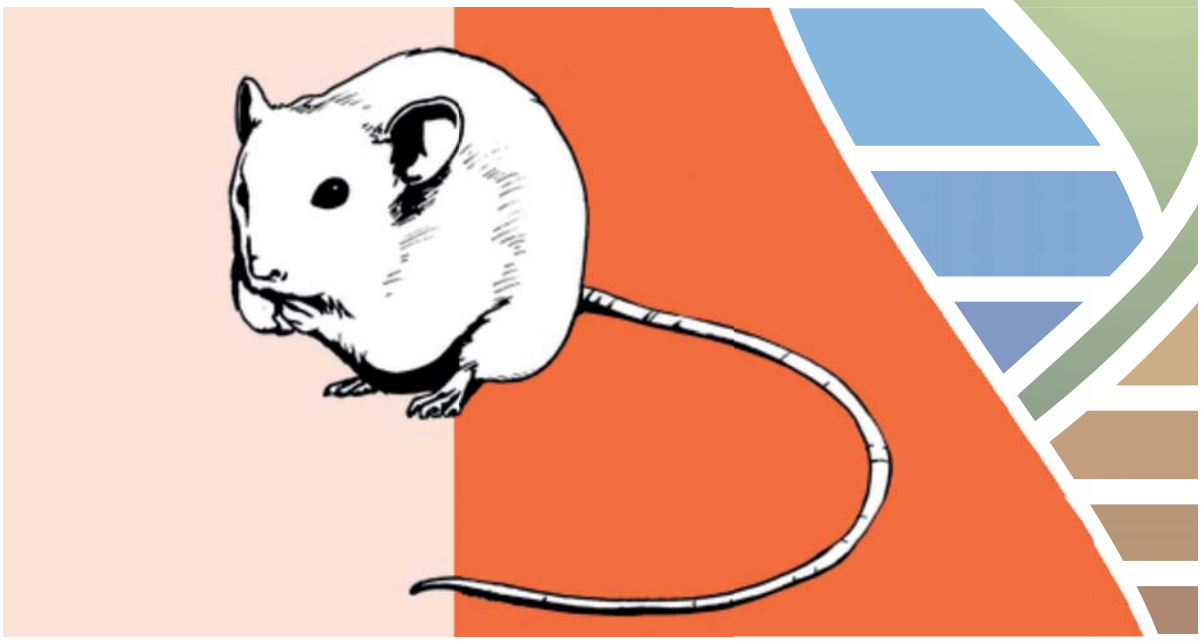
459
Julius-Kühn-Archiv

Jens Jacob, Jana Eccard (Editors)

6th International Conference of Rodent Biology and Management and 16th Rodens et Spatium

Potsdam, Germany, 3-7 September 2018

Book of Abstracts



Julius Kühn-Institut
Bundesforschungsinstitut für Kulturpflanzen

459
Julius-Kühn-Archiv

Jens Jacob, Jana Eccard (Editors)

6th International Conference of Rodent Biology and Management and 16th Rodens et Spatium

Potsdam, Germany, 3-7 September 2018

Book of Abstracts

Julius Kühn-Institut
Bundesforschungsinstitut für Kulturpflanzen

Editors:
Jens Jacob[1] and Jana Eccard[2]
[1]Julius Kuehn Institute, Federal Research Centre for Cultivated Plants,
Institute for Plant Protection in Horticulture and Forests, Vertebrate Research,
Toppheideweg 88, 48161 Münster, Germany
[2]University of Potsdam, Institute of Biochemistry and Biology,
Animal Ecology Group, Maulbeerallee 1,
14469 Potsdam, Germany

Bibliografische Information der Deutschen Nationalbibliothek
Die Deutsche Nationalbibliothek verzeichnet diese Publikation
In der Deutschen Nationalbibliografie: detaillierte bibliografische
Daten sind im Internet über http://dnb.d-nb.de abrufbar.

ISSN 1868-9892
ISBN 978-3-95547-059-3
DOI 10.5073/jka.2018.459.000

Printed in Germany by Arno Brynda GmbH, Berlin.