



Newsletter

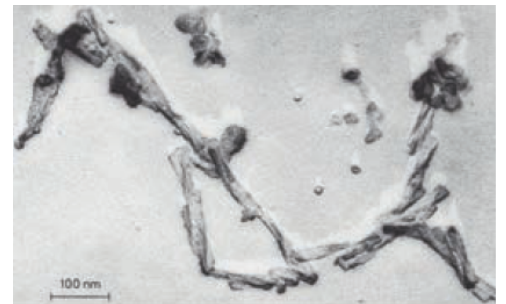
Berlin-Brandenburg research platform BB3R – Issue 2

June 2017

BB3R introduces: Prion and Prionoid Research Unit (AG Beekes, Robert Koch-Institute)

The Prion and Prionoid Research Unit (Head: PD Dr. Michael Beekes) is part of the Division Proteomics and Spectroscopy in the Centre for Biological Threats and Special Pathogens at the Robert Koch-Institute. Our research foci are prions, prion diseases and prion-like protein particles (prionoids). Current **basic research** projects are the molecular determinants of the seeding activity of prions and prionoids of scrapie and Creutzfeldt-Jakob disease, and of Alzheimer's and Parkinson's disease, respectively. Furthermore, we analyze sialic acids as molecular switches of prion infectivity.

Risk assessment and prevention is another important topic. Therefore we analyze the iatrogenic transmission risks of Parkinson-associated prionoids and the zoonotic risk potential of chronic wasting disease for humans. Furthermore, we develop and validate methods for the inactivation of prions and prionoids in the reprocessing of medical instruments. Regarding **prion therapy** we investigate the pharmacological inhibition of prion replication.



Scrapie-associated fibrils ("Prion rods").
Courtesy of M. Özel & H. Diringler (Robert Koch-Institute)

We are associated to the BB3R research platform since 2016 and contribute to **3R research** by developing alternative methods to animal experiments for the titration, propagation and molecular engineering of prions and prionoids. Parts of this 3R-related work are funded by the Federal Ministry of Education and Research (BMBF) in the context of the call "Alternative Methods to Animal Experiments" (Project: "Alternative Methods to Animal Bioassays for Human Prions", [FKZ 031L0065]).

Upcoming Events

- June 24th 2017: BB3R will present the latest 3R related research at the „Lange Nacht der Wissenschaften“ in Berlin and Potsdam [\[more information\]](#)
- August 17th : Seminar “*In silico* Methods – Computational Alternatives to Animal Testing” [\[more information\]](#)
- August 18th : Workshop “RETHINK 3R” [\[more information\]](#)
- A new homepage of the Universities of Berlin is now online. BB3R is presented there as one of the “Erfolgsgeschichten” [\[homepage\]](#).

New Publication

- Hohlbaum et al, PLoS ONE, 2017: Severity classification of repeated isoflurane anesthesia in C57BL/6JRj mice – Assessing the degree of distress. [\[online publication\]](#)

Contact: lisa.grohmann@fu-berlin.de



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