

## Publication List

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### Original Papers

1. **Hornemann S.**, v. Schroetter C., Damberger F.F. and Wüthrich K. (2009) Prion protein-detergent micelle interactions studied by NMR in solution. *J. Biol. Chem.* **284**(34): 22713–22721.
2. Christen B., **Hornemann S.**, Damberger F.F. and Wüthrich K. (2009) Prion protein NMR structure from tammar wallaby (*Macropus eugenii*) shows that the  $\beta 2$ - $\alpha 2$  loop is modulated by long-range sequence effects. *J. Mol. Biol.* **389**(5): 833–45.
3. **Hornemann S.\***, Christen B.\*, von Schroetter C., Pérez D.R., and Wüthrich K. (2009) Prion protein library of recombinant constructs for structural biology. *FEBS J.* **276**(8): 2359–2567.
4. Nazabal A.\*, **Hornemann S.\***, Aguzzi A. and Zenobi R. (2009) Hydrogen/deuterium exchange mass spectrometry identifies two highly protected regions in recombinant full-length prion protein amyloid fibrils. *J. Mass Spectrom.* **44**(6): 965–977.
5. Sigurdson C.J., Nilsson K.P.R., **Hornemann S.**, Heikenwälder M., Manco G., Schwarz P., Ott D., Rüllicke T., Liberski P., Julius C., Stitz L., Wüthrich K. and Aguzzi A. (2009) De novo generation of transmissible spongiform encephalopathies by mouse transgenesis. *Proc. Natl. Acad. Sci. USA* **106**(1): 304–309.
6. Polymenidou M., Moos R., Scott M., Sigurdson C., Shi Y.Z., Yajima B., Hafner-Bratkovic I., Jerala R., **Hornemann S.**, Wüthrich K., Bellon A., Vey M., Garen G., James M.N., Kav N. and Aguzzi, A. (2008) The POM monoclonals: a comprehensive set of antibodies to non-overlapping prion protein epitopes *PLoS One.* **3**(12): 3872.
7. Christen B., Pérez D., **Hornemann S.** and Wüthrich K. (2008) NMR structure of the bank vole PrP at 20°C contains a structured loop of residues 165–171. *J. Mol. Biol.* **383**(2): 306–312.
8. Christen B., Wüthrich K. and **Hornemann S.** (2008) The putative prion protein from Fugu (*Takifugu rubripes*). *FEBS J.* **275**(2): 263–270.
9. Sigurdson C.J., Nilsson K.P.R., **Hornemann S.**, Manco G., Polymenidou M., Schwarz P., Leclerc M., Hammarström P., Wüthrich K. and Aguzzi A. (2007) Discrimination of multiple prion strains with luminescent conjugated polymers. *Nat. Methods* **4**(12): 1023–1030.
10. Sigurdson C.J., Manco G., Schwarz P., Liberski P., Hoover E.A., **Hornemann S.**, Polymenidou M., Miller M.W., Glatzel M. and Aguzzi A. (2006) Strain fidelity of chronic wasting disease upon murine adaptation. *J. Virol.* **80**(24): 12303–12311.
11. **Hornemann S.**, Schorn, C. and Wüthrich, K. (2004) NMR structure of the bovine prion protein isolated from healthy calf brains. *EMBO Rep.* **5**(12): 1159–1164.
12. **Hornemann S.**, Harlin O., Kaspers B., Erfle V., Häcker G. and Sutter G. (2003) Replication of modified vaccinia virus Ankara in primary chicken embryo fibroblasts requires expression of the interferon resistance gene E3L. *J. Virol.* **77**(15): 8394–8407.
13. Kramer M.L., Kratzin H.D., Schmidt B., Romer A., Windl O., Liemann S., **Hornemann S.** and Kretzschmar H. (2001) Prion protein binds copper within the physiological concentration range. *J. Biol. Chem.* **276**(20): 16711–16719.
14. Liu A., Riek R., Zahn R., **Hornemann S.**, Glockshuber R. and Wüthrich K. (1999) Peptides and proteins in neurodegenerative disease: helix propensity of a polypeptide containing helix 1 of the mouse prion protein studied by NMR and CD spectroscopy. *Biopolymers* **51**(2): 145–152.

15. Riek R., Wider G., Billeter M., **Hornemann S.**, Glockshuber R. and Wüthrich K. (1998) Prion protein NMR structure and familial human spongiform encephalopathies. *Proc. Natl. Acad. Sci. U.S.A.* **95**(20): 11667–11672.
16. Zanusso G., Liu D., Ferrari S., Hegyi I., Yin X., Aguzzi A., **Hornemann S.**, Liemann S., Glockshuber R., Manson J.C., Brown P., Petersen R.B., Gambetti P. and Sy M.S. (1998) Prion protein expression in different species: analysis with a panel of new mAbs. *Proc. Natl. Acad. Sci. U.S.A.* **95**(15): 8812–8816.
17. **Hornemann S.** and Glockshuber R. (1998) A scrapie-like unfolding intermediate of the prion protein domain PrP(121–231) induced by acidic pH. *Proc. Natl. Acad. Sci. U.S.A.* **95**(11): 6010–6014.
18. Glockshuber R., **Hornemann S.**, Billeter M., Riek R., Wider G. and Wüthrich K. (1998). Prion protein structural features indicate possible relations to signal peptidases. *FEBS Lett.* **426**(3): 291–296.
19. Korth C., Stierli B., Streit P., Moser M., Schaller O., Fischer R., Schulz-Schaeffer W., Kretzschmar H., Raeber A., Braun U., Ehrensperger F., **Hornemann S.**, Glockshuber R., Riek R., Billeter M., Wüthrich K., and Oesch B. (1997) Prion (PrP<sup>Sc</sup>)-specific epitope defined by a monoclonal antibody. *Nature* **390**(6655): 74–77.
20. Riek R., **Hornemann S.**, Wider G., Glockshuber R. and Wüthrich K. (1997) NMR characterization of the full-length recombinant murine prion protein, mPrP(23–231). *FEBS Lett.* **413**(2): 282–288.
21. **Hornemann S.**, Korth C., Oesch B., Riek R., Wider G., Wüthrich K. and Glockshuber R. (1997) Recombinant full-length murine prion protein, mPrP(23–231): purification and spectroscopic characterization. *FEBS Lett.* **413**(2):277–281.
22. Billeter M., Riek R., Wider G., **Hornemann S.**, Glockshuber R. and Wüthrich K. (1997) Prion protein NMR structure and species barrier for prion diseases. *Proc. Natl. Acad. Sci. U.S.A.* **94**(14): 7281–7285.
23. **Hornemann S.** and Glockshuber R. (1996). Autonomous and reversible folding of a soluble amino-terminally truncated segment of the mouse prion protein. *J. Mol. Biol.* **261**(5): 614–619.
24. Riek R., **Hornemann S.**, Wider G., Billeter M., Glockshuber R. and Wüthrich K. (1996) NMR structure of the mouse prion protein domain PrP(121–231). *Nature* **382**(6587): 180–182.

### **Review Articles**

25. Wüthrich K., Riek R., Wider G., Garcia F.L., Liu A., Zahn R., **Hornemann S.** and Glockshuber R. (1999) Structural biology of prion proteins. *Transfusion clinique et biologique* **6**, 31.
26. Glockshuber R., **Hornemann S.**, Riek R., Wider G., Billeter M. and Wüthrich K. (1997) Three-dimensional NMR structure of a self-folding domain of the prion protein PrP(121–231). *Trends Biochem. Sci.* **22**(7): 241–242.
27. Glockshuber R., **Hornemann S.**, Riek R., Wider G., Billeter M. and Wüthrich K. (1997). Autonomous folding and three-dimensional structure of the carboxy-terminal domain of the mouse prion protein, PrP(121–231). In *NATO ASI Series A: Life Sciences* (D. R. O. Morrison, ed.) vol. 295, pp. 203–216.
28. Glockshuber R., **Hornemann S.**, Riek R., Billeter M., Wider G. and Wüthrich K. (1996). Drei-dimensionale Struktur einer Domäne des zellulären Prion-Proteins aufgeklärt. *Spektrum der Wissenschaften* **9**, 16–18.

### **Book Chapters**

29. Wüthrich K., Billeter M., Riek R., Wider G., **Hornemann S.** and Glockshuber R. (1999) Prion protein structure and pathology of transmissible spongiform encephalopathies in: Peptide Science - Present and Future (Y. Shimonishi, ed.), Kluwer, Dordrecht, pp. 330–334.
30. Glockshuber, R., Hornemann S., Riek R., Billeter M., Wider G., Liemann S., Zahn R. and Wüthrich K. (1998). Folding and three-dimensional NMR structure of the recombinant cellular prion protein from the mouse. In PRIONS - Molecular and Cellular Biology (D. A. Harris, ed.), Horizon Scientific Press, pp.1-25.

### **Patents**

31. **Hornemann S.**, Erfle V., Sutter G.: Vaccinia virus MVA-E3L-Knock-out-mutants and use thereof. German patent office, Nr. 101 44 664.0, Registration date: 11.09.2001

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