Current Position and Address

Lecturer
MRC Centre for Developmental Neurobiology
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Civil status: married, 2 children
Nationality: Switzerland
Languages: German, English, French

Education

Postgraduate Certificate in Academic Practice, King's Institute of Learning and Teaching, King's College London 2008

Postdoctoral Fellow, Molecular Neurobiology Lab, Salk Institute 1998 – 2006
Advisor: Prof. Dennis D.M. O'Leary
Vertebrate visual system development: Role of Eph receptors, ephrin ligands and regulatory genes in axon pathfinding, topographic mapping and binocular vision. Gene expression studies in the eye as a basis to understand development and diseases.

Postdoctoral Research Assistant, University of Zürich and ICRF, London 1996–1998
Advisors: Prof. U. Hübscher and Prof. Rick Wood
Analyzing the genetic background of a variant form of Xeroderma pigmentosum XP-V

PhD in Molecular Biology University of Zürich 1992-1996
Advisors: Prof. U. Hübscher and Prof. W. Schaffner
Studies in eukaryotic DNA replication with focus on DNA polymerase δ.

EMBO International Summer School on Molecular and Cellular Biology Spetsai, Greece. 1993
Topic: 'Protein Structure, Function and Design'

Diplomarbeit (MSc equivalent) in Microbiology, University of Zürich 1991 - 1992
Advisor: Prof. A.J. Slusarenko
Topic: RNA-based inhibition of gene expression in plants

Teaching/Supervision Experience

- Teaching at King's College London and UCL 2007 -
- Supervision of graduate and rotation students from UCSD 1998 - 2006
- Instructor for students participating in the San Diego County Regional Occupation Program (ROP Biotechnology). 2004 - 2006
- Teaching invitation to UC Riverside (Developmental Biology) 2000
- Production of a video film about "PCR", used for teaching in high schools and Universities Biology classes in collaboration with the Uni TV Zürich 1998
- Organisation and teaching of a PhD student course from the Swiss Committee of Molecular Biology (SKMB) in 'Protein Function and Protein-Protein Interaction' 1997
- Supervision of summer students 1992 - 1998
- Teaching Assistant and Examiner in Molecular Biology/Biochemistry, University of Zürich 1992 - 1998
- Teaching Assistant in Cytology/Histology, University of Zürich 1989 - 1992

Professional Societies

British Society for Developmental Neurobiology
Swiss Society for Cell Biology, Molecular Biology and Genetics (ZMG)
Society for Neuroscience (USA)
International Society for Developmental Neuroscience
International Society for Transgenic Technologies

Other Professional Services

Member Guy's Ethical Review Process Committee, King's College London 2008 -
Member NHH BSU Monitoring and Planning Committee, King's College London 2007 -
Member ROP Biotechnology Advisory Board at High Tech High San Diego 2004 - 2006
Member "Partnership in Education" program, Board of Education, San Diego City Schools 2005 - 2006

Awards and Funding

- EMBO Grant for Practical Course organization 2010
- Research Grant, Wellcome Trust 2009
- EMBO Grant for Practical Course organization (Co-applicant) 2008
- Research Grant (Co-applicant), Wellcome Trust 2008
- Research Grant, Friends of Guy's Hospital 2007
- Research Grant, MRC 2007
- Research Grant, Royal Society, UK 2006
- Stipendium für fortgeschrittene Forscher (advanced research grant), Swiss National Science Foundation (maximum of 36 months) 1998 - 2001
- Stipendium für angehende Forscher (research grant), University of Zürich (declined) 1998 - 1999

Publications

20. Tahirovic, S., Hellal, F., Neukirchen, D., **Hindges, R.**, Garvalov, B., Flynn, K., Stradal, T., Chrostek-Grashoff, A., Brakebusch, C. and Bradke, F. (2010). Rac1 regulates neuronal polarization through the WAVE complex. *J. Neuroscience* **30**: 6930-6943.

19. Pinter, R. & **Hindges, R.** (2010). Perturbations of MicroRNA Function in Mouse Dicer Mutants Produce Retinal Defects and Lead to Aberrant Axon Pathfinding at the Optic Chiasm, *PLoS ONE* **5**(4): e10021.

18. van Diepen, M.T., Parsons, M., Downes, C.P., Leslie, N.R., **Hindges, R.** & Eickholt, B.J. (2009). MyosinV controls PTEN function and neuronal cell size. *Nature Cell Biol.* **11**: 1191-1196.

    Article was selected for *News & Views* in *Nature Cell Biol*, written by Jing Zhou & Luis Parada.

17. Marler, K., Becker-Barroso, E., Martinez, A., Llovera, M., Wentzel, C., Poopalasundaram, S., **Hindges, R.**, Soriano, E., Comella, J. & Drescher, U. (2008). A TrkB - ephrinA interaction controls retinal axon branching and synaptogenesis. *J. Neuroscience* **28**: 12700-12712.

16. Reber, M., **Hindges, R**. & Lemke, G (2007). Eph receptors and ephrin ligands in axon guidance. *Adv Exp Med Biol.* **621**:32-49.

15. Pak, W., **Hindges, R**., Lim, Y.-S., Pfaff, S.L. & O'Leary, D.D.M. (2004). Magnitude of binocular vision controlled by Islet-2 repression of a genetic program that specifies laterality of retinal axon pathfinding. *Cell* **119**: 567-578.

    This article was presented in the "Research Highlights" section in *Nature* **432**: 458**,** and it was evaluated as a "Must read" by the *Faculty of 1000*.

14. McLaughlin, T., **Hindges, R.**, Yates, P.A. & O'Leary, D.D.M. (2003). Bifunctional action of ephrin-B1 as a repellent and attractant to control bidirectional branch extension in dorsal-ventral retinotopic mapping. *Development* **130**: 2407-2418.

    This article was evaluated as a "Must read" by the *Faculty of 1000*.

13. McLaughlin, T., **Hindges, R.** & O'Leary, D.D.M. (2003). Regulation of axial patterning of the retina and its topographic mapping in the brain. *Current Opinion in Neurobiology* **13**: 57-69.

12. **Hindges, R.**, McLaughlin, T., Genoud, N., Henkemeyer, M. & O'Leary, D.D.M. (2002). EphB forward signaling controls directional branch extension and arborization required for dorsal-ventral retinotopic mapping. *Neuron* **35**: 475-487. (Cover article)

    This article was selected for a Preview in the same issue of *Neuron*, written by Andrew J. Pittman and Chi-Bin Chien

11. Mui, S.H., **Hindges, R.**, O'Leary, D.D.M., Lemke, G. & Bertuzzi, S. (2002). The homeodomain protein Vax2 patterns both the dorsoventral and nasotemporal axes of the eye. *Development* **129**: 797-804

10. Missura, M., Buterin, T., **Hindges, R.**, Hübscher, U., Kasparkova, J., Brabec, V. & Naegeli, H. (2001) Double-check probing of DNA bending and unwinding by XPA-RPA: an architectural function in DNA repair. *EMBO J.* **20**: 3554-3564.

9. Tanguy Le Gac, N., Hoffmann, J.-S., **Hindges, R.** and Villani, G. (2000). DNA by CHO cell extracts on fork-like DNA templates containing the major cisplatin adduct requires a ligation step. *Biochimie* **82**: 41-49.

8. Bertuzzi, S., **Hindges, R.**, Mui, S.H., O'Leary, D.D.M. & Lemke, G. (1999). The homeoboxprotein Vax1 is required for axon guidance and major tract formation in the developing forebrain. *Genes & Development* **13**: 3092-3105. (Cover article).

7. Jónsson, Z.O., **Hindges, R.** & Hübscher U. (1998). Regulation of DNA replication and repair proteins through interaction with the front side of proliferating cell nuclear antigen. *EMBO J*. **17**: 2412-2425.

6. Schurtenberger, P., Egelhaaf, St., **Hindges, R.**, Maga, G., Jónsson, Z.O., May, R., Glatter, O. & Hübscher, U. (1998). The solution structure of the human proliferating cell nuclear antigen determined by small angle neutron scattering. *J. Mol. Biol*. **275**: 123-132.

5. **Hindges, R.** & Hübscher, U. (1997). Cloning, chromosomal localization and interspecies interaction of mouse DNA polymerase δ small subunit (PolD2). *Genomics* **44**: 45-51.

4. **Hindges, R.**, & Hübscher, U. (1997). DNA Polymerase δ, an essential enzyme for DNA transactions. *Biological Chemistry* **378**: 345-362. (Cover article).

3. **Hindges, R.** & Hübscher, U. (1995) Production of active mouse DNA polymerase δ in bacteria. *GENE* **158**: 241-246.

2. Cullmann, G., **Hindges, R.**, Berchtold, M.W. and Hübscher, U. (1993). Cloning of a cDNA encoding DNA polymerase δ: refinement of the homology boxes. *GENE* **134**: 191-200.

1. **Hindges, R.** & Slusarenko, A. (1992). cDNA and derived amino acid sequence of a cytosolic Cu,Zn superoxide dismutase from *Arabidopsis thaliana* (L.) Heyn. *Plant Molecular Biology* 18: 123-125.