

BIOGRAPHICAL SKETCH

NAME Reiser, Jakob		POSITION TITLE Associate Professor of Medicine	
eRA COMMONS USER NAME			
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Zürich, Switzerland	Diploma	1972	Molecular Biology
University of Basel, Switzerland	Ph.D.	1976	Biochemistry
Stanford University		1976-1979	Molecular Biology

A. Positions and Honors

Positions and Employment

1972-1976	Research Assistant and Laboratory Instructor, Department of Microbiology, Biozentrum, University of Basel
1976-1979	American Cancer Society Junior Fellow, Department of Biochemistry, Stanford University School of Medicine
1979-1980	Research Fellow, Molecular Virology Laboratory, Imperial Cancer Research Fund Laboratories, London
1980-1983	Research Assistant, Institute of Molecular Biology, University of Zürich
1983-1986	Head, Molecular Biology Laboratory, Berna Biotech Ltd., Bern
1986-1994	Head Molecular Genetics Group and Privatdozent, Institute of Biotechnology, Swiss Federal Institute of Technology (ETH) Zürich
1994-1996	Special Volunteer, Developmental and Metabolic Neurology Branch, National Institute of Neurological Disorders and Stroke (NINDS), NIH, Bethesda, MD
1996-1999	Visiting Scientist, Developmental and Metabolic Neurology Branch, NINDS
1999-present	Associate Professor of Medicine, LSU Health Sciences Center, New Orleans, LA

Other Experience and Honors

1993-1995	Member, Working Party on Applied Molecular Genetics, European Federation of Biotechnology
1991-1997	Editorial Board Journal of Biotechnology
2000	The Rebecca Davilene Carter Grant for Research in Cancer
2000-2002	Howard Hughes Predoctoral Fellowship Review Committee
2003	Ad hoc reviewer for NCI Special Emphasis Panel (Innovative Technologies for the Molecular Analysis of Cancer)
2004	Ad hoc reviewer for NIH Neurogenesis and Cell Fate Study Section
2004	Ad hoc reviewer for NIAID Special Emphasis Panel
2004	Ad hoc reviewer for NCI Special Emphasis Panel
2004	Ad hoc reviewer for NIDDK Special Emphasis Panel
2005	Ad hoc reviewer for NIH Special Emphasis Panel (Gene Therapy and Inborn Errors)
2005	Ad hoc reviewer for NIH Developmental Brain Disorders Study Section

2005	Ad hoc reviewer for NCI Special Emphasis Panel (Applications of Emerging Technologies for Cancer Research)
2005	Ad hoc reviewer NIH Special Emphasis Panel (Gene Expression and Neuronal Development)
2006	Ad hoc reviewer for NIH Developmental Brain Disorders Study Section
2006	Ad hoc reviewer for NIH Neurogenetics/Genomics Special Emphasis Panel
2006	Ad hoc reviewer for NCI Special Emphasis Panel (Applications of Emerging Technologies for Cancer Research)

B. Selected peer-reviewed publications (selected from 75 publications)

1. Renart, J., J. Reiser, and G.R. Stark. Transfer of proteins from gels to diazobenzyloxymethyl-paper and detection with antisera: A method for studying antibody specificity and antigen structure. *Proc. Natl. Acad. Sci. USA* 76, 3116-3120 (1979).
 2. Hogg, N., M. Slusarenko, J. Cohen and J. Reiser. Monoclonal antibody with specificity for monocytes and neurons. *Cell* 24, 875-884 (1981).
 3. Kühne, T., B. Wieringa, J. Reiser and C. Weissmann. Evidence against a scanning model of RNA splicing. *EMBO J.* 2, 727-737 (1983).
 4. Wieringa, B., F. Meyer, J. Reiser and C. Weissmann. Unusual sequence of cryptic splice sites utilized in the β -globin gene following inactivation of an authentic 5' splice site by site-directed mutagenesis. *Nature* 301, 38-43 (1983).
 5. Dierks, P., A. van Ooyen, M. Cochran, C. Dobkin, J. Reiser and C. Weissmann. Three regions upstream of the cap site are required for efficient and accurate transcription of the rabbit β -globin gene in mouse 3T6 cells. *Cell* 32, 695-706 (1983).
 6. Aebi, M., H. Hornig, R.A. Padgett, J. Reiser and C. Weissmann. Sequence requirements of splicing or higher eukaryotic nuclear pre-mRNA. *Cell* 47, 555-565 (1986).
 7. Ochsner, U.A., A. Koch, A. Fiechter and J. Reiser. Isolation and characterization of a gene involved in the regulation of rhamnolipid biosynthesis in *Pseudomonas aeruginosa*. *J. Bacteriol.* 176, 2044-2054 (1994).
 8. Ochsner, U.A., A. Fiechter and J. Reiser. Isolation, characterization, and expression in *Escherichia coli* of the *Pseudomonas aeruginosa* rhlAB genes encoding a rhamnosyltransferase involved in rhamnolipid biosurfactant synthesis. *J. Biol. Chem.* 269, 19787-19795 (1994).
 9. Reiser, J., A. Muheim, M. Hardegger and A. Fiechter. Aryl-alcohol dehydrogenase from the white-rot fungus *Phanerochaete chrysosporium*. Gene cloning, sequence analysis, expression and purification of the recombinant enzyme. *J. Biol. Chem.* 269, 28152-28159 (1994).
 10. Gaskell, J., P. Stewart, P.J. Kersten, S.F. Covert, J. Reiser and D. Cullen. Allele-specific polymerase chain reaction: Application to the lignin peroxidase gene family of *Phanerochaete chrysosporium*. *Bio/Technology* 12, 1372-1375 (1994).
 11. Zang, M., H. Trautmann, C. Gandor, F. Messi, F. Asselbergs, C. Leist, A. Fiechter and J. Reiser. Production of recombinant proteins in Chinese hamster ovary cells using a protein-free cell culture medium. *Bio/Technology* 13, 389-392 (1995).
 12. Ochsner, U.A., and J. Reiser. Autoinducer-mediated regulation of rhamnolipid biosurfactant biosynthesis in *Pseudomonas aeruginosa*. *Proc. Natl. Acad. Sci. USA* 92, 6424-6428 (1995).
 13. Reiser, J., G. Harmison, S. Kluepfel-Stahl, R.O. Brady, S. Karlsson and M. Schubert. Transduction of nondividing cells using pseudotyped defective high-titer HIV type 1 particles. *Proc. Natl. Acad. Sci. USA* 93, 15266-15271 (1996).
 14. Mochizuki, H., J.P. Schwartz, K. Tanaka, R.O. Brady, and J. Reiser. High-titer HIV-1-based vector systems for gene delivery into nondividing cells. *J. Virol.* 72, 8873-8883 (1998).
 15. Reiser, J. Production and concentration of pseudotyped HIV-1-based vectors. *Gene Therapy* 7, 910-913 (2000).
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16. Mautino, M.R., W.J. Ramsey, J. Reiser, and R.A. Morgan. Modified HIV-based lentiviral vectors display decreased sensitivity to trans-dominant Rev. *Human Gene Therapy* 11, 895-908 (2000).
 17. Lai, Z., I. Han, G. Zirzow, R.O. Brady, and J. Reiser. Intercellular delivery of a herpes simplex virus VP22 fusion protein from cells infected with lentiviral vectors. *Proc. Natl. Acad. Sci. USA* 97, 11297-11302 (2000).
 18. Reiser, J., Z. Lai, X.-Y. Zhang and R.O. Brady. Development of multigene and regulated lentiviral vectors. *J. Virol.* 74, 10589-10599 (2000).
 19. Nomura, T., T. Yabe, H. Mochizuki, J. Reiser, S.P. Becerra and J.P. Schwartz. Survival effects of pigment epithelium-derived factor (PEDF) expressed by a lentiviral vector in rat cerebellar granule cells. *Developmental Neuroscience* 23, 145-152 (2001).
 20. Zhang, X.-Y., V.F. La Russa, L. Bao, J. Kolls, P. Schwarzenberger and J. Reiser. Lentiviral vectors for sustained transgene expression in human bone marrow-derived stromal cells. *Molecular Therapy* 5, 555-565 (2002).
 21. Marino, M., M.J. Luce and J. Reiser. Small to high scaled production of lentivirus vectors. In: *Methods in Molecular Biology, Vol. 229, Lentivirus Gene Engineering Protocols*. M. Federico (Ed.), pp. 43-55. The Humana Press (2003).
 22. Zhang, X.-Y., V.F. La Russa and J. Reiser. Mesenchymal stem cells. In: *Methods in Molecular Biology Vol. 229, Lentivirus Gene Engineering Protocols*. M. Federico (Ed.), pp. 131-140. The Humana Press (2003).
 23. Zhang, X.-Y., V.F. La Russa and J. Reiser. Transduction of bone marrow-derived mesenchymal stem cells using lentiviral vectors pseudotyped with modified RD114 envelope glycoproteins. *J. Virol.* 78, 1219-1229 (2004).
 24. Bao, L., V. Jaligam, X.-Y. Zhang, R. Kutner, S.P. Kantrow, S.P. and J. Reiser. Stable transgene expression in tumors and metastases following transduction with lentiviral vectors based on HIV-1. *Human Gene Therapy* 15, 445-456 (2004).
 25. Pluta, K., M.J. Luce, L. Bao, S. Agha-Mohammadi and J. Reiser. Tight control of transgene expression by lentivirus vectors containing second-generation tetracycline-responsive promoters. *J. Gene Med.* 7, 803-817 (2005).
 26. Cronin, J., X.-Y. Zhang and J. Reiser. Altering the tropism of lentiviral vectors through pseudotyping. *Current Gene Therapy* 5, 387-398 (2005).
 27. Bialkowska, A., X.-Y. Zhang and J. Reiser. Improved tagging strategy for protein identification in mammalian cells. *BMC Genomics* 2005, 6: 113.
 28. Reiser, J., X.-Y. Zhang, C.S. Hemenway, D. Mondal, L. Pradhan and V.F. La Russa. Potential of mesenchymal stem cells in gene therapy approaches for inherited and acquired diseases. *Expert Opinion on Biological Therapy* 5, 1571-1584 (2005).
 29. Yang, G., Q. Zhong, W. Huang, J. Reiser and P. Schwarzenberger. Retrovirus molecular conjugates: a versatile and efficient gene transfer vector system for primitive human hematopoietic progenitor cells. *Cancer Gene Therapy* 13, 460-468 (2006).
 30. Ruan, S., E. Young, M.J. Luce, J. Reiser, J.K. Kolls and J.E. Shellito. Conditional expression of interferon-gamma to enhance host responses to pulmonary bacterial infection. *Pulmonary Pharmacology & Therapeutics* 19, 251-257 (2006).
 31. Song, Y., Z. Zhang, X.Y. Yu, M. Yan, X. Zhang, S. Gu, T. Stuart, C. Liu, J. Reiser, Y.D. Zhang and Y.P. Chen. Application of lentivirus-mediated RNAi in studying gene function in mammalian tooth development. *Developmental Dynamics* 235, 1347-1357 (2006).
 32. Doebis, C., S. Schu, A. Busch, F. Beyer, J. Reiser, R.F. Nicosia, S. Brösel, H.-D. Volk and M. Seifert. An intrabody against the Major Histocompatibility Complex class I protects rat aortic endothelial cells from the attack by immune mediators. *Cardiovascular Research*. 2006 Aug 8; [Epub ahead of print].
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C. Research Support

Ongoing Research Support

1 R01 NS044832 Reiser (PI) 4/01/03-3/31/07
NIH/NINDS
Delivery of Therapeutic Enzymes and Genes to Cells in the Central Nervous System
The major goals of this project are to explore novel gene therapy approaches for globoid cell leukodystrophy using improved lentivirus-based gene and protein delivery strategies. Role: PI

1 P01 HL076100 Shellito (PI) 2/01/04-1/31/09
NIH/NHLBI
Vector Core (Host Defense Against HIV-related Pulmonary Infections)
This core provides adenoviral vectors and recombinant fowl pox viruses for investigators participating in this Program Project Grant. Role: Core-PI

1 R01 HL073770 Welsh (PI) 07/1/03-06/30/07
NIH/NHLBI
Mesenchymal Stem Cell Homing to the Lung in Emphysema
This project explores the potential of MSCs to engraft in the lung in the elastase model of emphysema. The role of chemokines produced in the lung in directing MSCs to the respiratory system will be investigated. Engraftment will be enhanced by overproduction of chemokines in the lung. Role: Co-Investigator

1 P01 HL075161 Prockop (PI) 07/18/05 – 5/31/10
NIH/NHLBI
Homing and Differentiation of Adult Stem Cells to Lung
The overall aim of this program project grant application is to foster collaborative research among four groups of investigators at two neighboring institutions that will develop systematic and definitive data about the potential usefulness of adult stem cells to treat important pulmonary diseases. Specifically, different subpopulations of MCSs will be examined for their potential as cell therapy for lung diseases. Role: Co-Investigator Project 3

Louisiana Board of Regents Health Excellence Fund Ramsay (PI) 1/01/02-12/31/06
Gene Therapy and Cell Therapy Strategies for Krabbe Disease
The major goal of this project is to have save and efficient HIV-1-based vectors available for in vivo applications in the mouse and monkey models of globoid cell leukodystrophy (Krabbe disease). Role: Project-PI

Completed Research Support

1 R21 ES012026-02 Reiser (PI) 9/10/02-7/31/04
NIH/NIEHS
Protein Trapping Tools for Mammalian Cells
This grant dealt with the design of novel tools for the discovery and functional analysis of proteins in mammalian cells based on protein trapping involving GFP tags. Role: PI
