

Curriculum Vitae

Prof. Dr. Ralf Reinhard Tönjes

1. General information

Name: Ralf Reinhard Tönjes
Date of birth: 07.09.1957
Sex: Male
Affiliation: Paul-Ehrlich-Institut
Federal Institute for Vaccines and Biomedicines
Division of Haematology, Cell and Gene Therapy
Section HZG 5, Transfusion medicine, Cell therapy and Tissue Preparations
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Current position: Head of Subsection "Tissue Preparations; Xenotransplantation";
Head of Laboratory

2. Academic education and scientific degrees

Since 2007 Adjunct (*Außerplanmäßiger*) Professor in Biochemistry, Goethe University, Frankfurt/Main, Germany
2002 Habilitation (*Privatdozent*), Venia legendi in Biochemistry, Goethe University, Frankfurt/Main, Germany
1986 PhD thesis, Dr. rer. nat. (*summa cum laude*) in Biology, Philipps-University, Marburg/Lahn, Germany
1983 Graduation (1st State exam) in Biology, Germanistics, Sports and Pedagogics; Philipps-University, Marburg/Lahn, Germany

3. Academic and research positions

Since 1991 Head of 3 sections, Paul-Ehrlich-Institut (PEI), Federal Agency for Vaccines and Biomedicines, Langen, Germany
1990/1991 External Research / Sabbatical, Rockefeller University, Molecular Cell Biology Laboratory, New York, U.S.A.
1988 – 1991 Scientist, Deputy Head of Division of Cell Biology, Fraunhofer-Institute for Toxicology and Aerosol-Research, Division of Cell Biology, Hannover, Germany
1988 Technical Product Manager, PROCTER & GAMBLE, Department of Product security / Consumer security, Bruxelles, Belgium and Schwalbach/Taunus, Germany
1986 – 1988 Postdoctoral Fellow, Fraunhofer-Institute for Toxicology and Aerosol-Research, Division of Cell Biology, Hannover, Germany

4. Additional information

Memberships The Transplantation Society (TTS);
International Xenotransplantation Association (IXA)

National Representative German Expert and Representative at the European Commission (EC), National Competent Authorities on Substances of Human Origin Expert Group (NCA SoHO), Brussels, Belgium;

SoHO Network, Paul-Ehrlich-Institut (PEI), SoHO National Focal Point for Blood, Human Organs, MAR and/or Tissues and Cells.

Expert for Tissues and Cells and Member of SoHO Network Coordination Committee (NCC) within SoHO National Focal Points

German Expert and Representative for Tissues and Cells at the European Directorate for the Quality of Medicines & HealthCare (EDQM), European Committee on Organ Transplantation (CD-P-TO), Strasbourg, France.

Reviewer

Research Funding Agencies:

Volkswagen-Stiftung, Hannover; Bundesministerium für Bildung und Forschung, BMBF, Berlin, Germany; Deutsche Forschungsgemeinschaft, DFG, Bonn, Germany; The Wellcome Trust, London, UK; Schweizerischer Nationalfonds zur Förderung der wissenschaftlichen Forschung, SNF, Switzerland; National Institutes of Health, National Institute of Allergy and Infection Disease, NIH/NIAIDS, Bethesda, USA; European Commission-funded Integrated Project FP 6, Bruxelles, Belgium.

Scientific Journals:

Animal Genetics, Archives of Virology, Biotechniques, Immunogenetics, Intervirology, Journal of Clinical Investigation, Journal of Virology, Journal of General Virology, Journal of Medical Virology, Journal of Virological Methods, Molecular and Cellular Biology, Pathogens, Regenerative Biomaterials, Retrovirology, Scientific Reports, Transplantation, Transplant Immunology, Transplantation Proceedings, Virology, Viruses, Virus Research, Xenotransplantation.

Lecturer

Adjunct Professor, Biochemistry, Goethe University, Frankfurt/Main, Germany.

5. Publications (last 12 years)

1. Fischer N, Gulich B, Keßler B, Längin M, Fishman JA, Wolf E, Boller K, Tönjes RR, Godehardt AW (2023) PCR and peptide based PCMV detection in pig – development and application of a combined testing procedure differentiating newly from latent infected pigs. *Xenotransplantation*: DOI: 10.1111/xen.12803
2. Rodrigues Costa M, Fischer N, Gronewold A, Gulich B, Godehardt AW, Tönjes RR (2023) Isolation of an Ecotropic Porcine Endogenous Retrovirus PERV-C from a Yucatan SLA^{D/D} Inbred Miniature Swine. *Journal of Virology*: DOI: 10.1128/jvi.00062-23
3. Reichart B, Cooper DKC, Längin M, Tönjes RR, Pierson III RN, Wolf E (2022) Cardiac xenotransplantation: From concept to clinic. *Cardiovascular Research*: DOI: 10.1093/cvr/cvac180
4. Fischer N, Gulich B, Tönjes RR, Godehardt AW (2022) Limited environmental stability of infectious porcine endogenous retrovirus type C; Usage of reverse transcriptase in combination with viral RNA as markers for infectious virus. *Xenotransplantation*: DOI: 10.1111/xen.12738
5. Godehardt AW, Tönjes RR (2020) Xenotransplantation of Decellularized Pig Heart valves - Regulatory Aspects in Europe. *Xenotransplantation*: DOI: 10.1111/xen.12609
6. Reichart B, Längin M, Radan J, Mokolke M, Buttgerit I, Ying J, Fresch AK, Mayr T, Issl L, Buchholz S, Michel S, Ellgass R, Mihalj M, Egerer S, Baeher A, Kessler B, Kemter E, Kurome M, Zakhartchenko V, Steen S, Sjöberg T, Paskevicius A, Krüger L, Fiebig U, Denner J, Godehardt AW, Tönjes RR, Milusev A, Sfriso R, Rieben R, Walz C, Kirchner T, Ayares D, Lampe K, Schönmann U, Hagl C, Wolf E, Klymiuk N, Abicht J-M, Brenner P (2020) Pig-to-non-human primate heart transplantation: the final step toward clinical xenotransplantation? *The Journal of Heart and Lung Transplantation*: DOI: 10.1016/j.healun.2020.05.004
7. Godehardt AW, Ramm R, Gulich B, Tönjes RR, Hilfiker A (2020) Decellularized pig pulmonary heart valves—Depletion of nucleic acids measured by proviral PERV *pol*. *Xenotransplantation*: DOI: 10.1111/xen.12565

8. Godehardt AW, Fischer N, Rauch P, Gulich B, Boller K, Church GM, Tönjes RR (2020) Characterization of porcine endogenous retrovirus particles released by the CRISPR/Cas9 inactivated cell line *PK15 clone 15*. *Xenotransplantation*: DOI: 10.1111/xen.12563
9. Hawthorne WJ, Cowan PJ, Bühler LH, Yi S, Bottino R, Pierson III RN, Ahn C, Azimzadeh A, Cozzi E, Gianello P, Lakey JRT, Luo M, Shuji Miyagawa S, Mohiuddin MM, Park C-G, Schuurman H-J, Scobie L, Sykes M, Tector J, Tönjes RR, Wolf E, Nuñez JR, Wang W. 2019. Third WHO Global Consultation on Regulatory Requirements for Xenotransplantation Clinical Trials, Changsha, Hunan, China December 12–14, 2018. “The 2018 Changsha Communiqué”. The 10-Year Anniversary of The International Consultation on Xenotransplantation. *Xenotransplantation* 26:e12513
10. Tönjes RR (2018) Non-viral pathogens: Identification, relevance, and prevention for xenotransplantation. *Xenotransplantation*: DOI: 10.1111/xen.12413
11. Godehardt AW, Petkov S, Gulich B, Fischer N, Niemann H, Tönjes RR (2018) Comparative gene expression profiling of pig-derived iPSC-like cells: Effects of induced pluripotency on expression of porcine endogenous retrovirus (PERV). *Xenotransplantation*: DOI: 10.1111/xen.12429
12. Cozzi E, Tönjes RR, Gianello P, Bühler LH, Rayat GR, Matsumoto S, Park CG, Kwon I, Wang W, O’Connell P, Jessamine S, Elliott RB, Kobayashi T, Hering BJ (2016): First update of the International Xenotransplantation Association consensus statement on conditions for undertaking clinical trials of porcine islet products in type 1 diabetes - Chapter 1: update on national regulatory frameworks pertinent to clinical islet xenotransplantation. *Xenotransplantation* 23, 14-24.
13. Denner J, Tönjes RR, Takeuchi Y, Fishman J, Scobie L. (2016): First update of the International Xenotransplantation Association consensus statement on conditions for undertaking clinical trials of porcine islet products in type 1 diabetes-Chapter 5: recipient monitoring and response plan for preventing disease transmission. *Xenotransplantation* 23, 53-59.
14. Godehardt, A.W., Schilling-Leiß, D., Sanzenbacher, R., Tönjes, R.R. (2015). Xenogeneic cell therapeutics: Treatment of type 1 diabetes using porcine pancreatic islets and islet cells. *Bundesgesundheitsblatt* 15(11), 1281-1288.
15. Tönjes, R.R., Hergert, P. (2015) Germany: Regulation of Tissues and Tissue Banking - A Special Case. In: Phillips GO (Hrsg.), *Legal Basis of Global Tissue Banking: A Proactive Clinical Perspective*. Singapore: World Scientific Publishing Co. Pte. Ltd. p 211-226. ISBN 987-9814663434.
16. Godehardt, A.W., Rodrigues Costa, M., Tönjes, R.R. (2015). Review on porcine endogenous retrovirus detection assays-impact on quality and safety of xenotransplants. *Xenotransplantation* 22, 95-101.
17. Bhat, R.K., Rudnik, W., Antony, J.M., Maingat, F., Ellestad, K.K., Wheatley, B.M., Tönjes, R.R., Power, C. (2014). Human Endogenous Retrovirus-K(II) Envelope Induction Protects Neurons during HIV/AIDS. *PLoS One* 9, e97984.
18. Rodrigues Costa, M., Fischer, N., Gulich, B., Tönjes, R.R. (2014). Comparison of porcine endogenous retroviruses infectious potential in supernatants of producer cells and in co-cultures. *Xenotransplantation* 21, 162-173.
19. Tönjes, R.R. (2013). Safe Transplantation. In: *Lifeline. Medical research for healthy lives. International Innovations* 1: 82-83.
20. Denner, J., Tönjes, R.R. (2012). Infection Barriers to Successful Xenotransplantation Focusing on Porcine Endogenous Retroviruses. *Clinical Microbiology Reviews* 25(2), 318-343.
21. Dörrschuck, E., Fischer, N., Bravo, I.B., Hanschmann, K.-M., Kuiper, H., Spötter, A., Möller, R., Cichutek, K., Münk, C., Tönjes, R.R. (2011). Restriction of Porcine Endogenous Retrovirus by Porcine APOBEC3 Cytidine Deaminases. *Journal of Virology* 85(8), 3842-3857. Cover photograph in *Journal of Virology* 85(17).