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## Curriculum Vitae: Frank Thomas Wunderlich, PhD

**Nationality:** German

**Date and Place of Birth:** 28.07.1972, Freiburg i. Br.

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### Professional and Research Experience:

- April 2008** Application W2 Professorship for Cytokine Signaling at the Christian Albrechts University of Kiel, 2<sup>nd</sup> place.
- 2008** Leibniz Junior Research Group Leader: Institute for Genetics, University of Cologne, Mouse Genetics and Obesity-associated Cancer  
Research focus: Mouse models in liver and colon carcinogenesis.
- 2005-2007** Postdoctoral Fellow: Institute for Genetics, University of Cologne, Department of Mouse Genetics and Metabolism, Prof. Brüning.  
Research focus: Mouse models in obesity and liver carcinogenesis.
- 2004** Postdoctoral Fellow: CBR Institute for Biomedical Research Inc. Harvard Medical School, Boston, MA, USA, Prof. Rajewsky.  
Research focus: Mouse models for inducible conversion of T cells in NK T cells.

### Education:

- 2004** Title of PhD thesis: Generation of inducible Cre systems for conditional gene inactivation in mice, University of Cologne.
- 2000- 2004** PhD Student: Institute for Genetics, University of Cologne, Department of Immunology, Prof. Rajewsky.  
Research focus: Advancement of inducible Cre systems *in vivo*.
- 1998- 1999** Diploma Student: Institute for Genetics, University of Cologne, Department of Immunology, Prof. Rajewsky.  
Title of Diploma thesis: Modification and analysis of optimized Cre recombinase expression-vectors for improved expression in eucaryotic cells.  
Research focus: Advancement of inducible Cre systems *in vitro*.
- 1996- 1998** Undergraduate studies in Biology, University of Cologne.
- 1994- 1996** Undergraduate studies in Biology, University of Mainz.

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## **Publications:**

Remedi MS, Kurata HT, Scott A, **Wunderlich FT**, Rother E, Kleinridders A, Tong A, Brüning JC, Koster JC, Nichols CG (2009) Secondary consequences of beta cell inexcitability: identification and prevention in a murine model of K (ATP)-induced neonatal diabetes mellitus. *Cell Metab.* 9(2): 140-51.

Girard CA, **Wunderlich FT**, Shimomura K, Collins S, Kaizik S, Proks P, Abdulkader F, Clark A, Ball V, Zubcevic L, Bentley L, Clark R, Church C, Hugill A, Galvanovskis J, Cox R, Rorsman P, Brüning JC, Ashcroft FM (2009) Expression of an activating mutation in the gene encoding the KATP channel subunit Kir6.2 in mouse pancreatic beta cells recapitulates neonatal diabetes. *J Clin Invest.* 119 (1): 80-90.

Frommer F, Heinen TAJ, **Wunderlich FT**, Yogeve N, Buch T, Roers A, Bettelli E, Müller W, Anderton S, Waisman A (2008) Tolerance without clonal expansion: self antigen-expressing B cells program self-reactive T cells for future deletion. *J Immunol.* 181 (8): 5748-59

Pfannkuche K, **Wunderlich FT**, Doss MX, Hescheler J (2008) Generation of a double fluorescent double selectable Cre/loxP indicator. *Nature Protoc.* 3 (9): 1510-26.

Stachelscheid H, Ibrahim H, Koch L, Schmitz A, Tschardt M, **Wunderlich FT**, Scott J, Michels C, Wickenhauser C, Haase I, Brüning JC, Niessen CM (2008) Epidermal insulin/IGF receptor signaling control interfollicular morphogenesis and proliferative potential through Rac activation. *EMBO J.* 27 (15): 2091-101.

Koch L, **Wunderlich FT**, Hampel B, Irlenbusch S, Brabant G, Seibler J, Schwenk F, Kahn CR, Brüning JC (2008) Central insulin action regulates peripheral glucose and fat metabolism in mice. *J Clin Invest.* 118 (6): 2132-47.

Klötting N, Koch L, **Wunderlich T**, Kern M, Ruschke K, Krone W, Brüning JC, Blüher M (2008) Autocrine IGF-1 action in adipocytes controls systemic IGF-1 concentrations and growth. *Diabetes.* 57 (8): 2074-82.

Belgardt BF, Husch A, Rother E, Ernst MB, **Wunderlich FT**, Hampel B, Klöckener T, Alessi D, Kloppenburg P, Brüning JC (2008) Inactivation of PDK1 in POMC-expressing cells reveals FOXO1-dependent and independent pathways in control of energy homeostasis and stress response. *Cell Metab.* 7 (4): 291-301.

Mesaros A, Koralov S, Rother E, **Wunderlich FT**, Ernst MB, Barsh GS, Rajewsky K, Brüning JC (2008) Stat3 Signalling in AgRP-Neurons of the Arcuate Nucleus of the Hypothalamus controls Locomotor Activity. *Cell Metab.* 7 (3): 236-48.

Merkwirth C, Dargazanli S, Tatsuta T, Geimer S, Löwer B, **Wunderlich FT**, von Kleist-Retzow JC, Waisman A, Westermann B, Langer T (2008) Prohibitins in mitochondria control OPA1-dependent cristae morphogenesis linked to cell proliferation and apoptosis. *Genes Dev.* 22 (4): 476-488.

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**Wunderlich FT**, Luedde T, Singer S, Schmidt-Supprian M, Baumgartl J, Schirmacher P, Pasparakis M, Brüning JC (2008) Hepatic NEMO-Deficiency Prevents Obesity Induced Insulin Resistance But Synergizes With High Fat Feeding in Tumorigenesis. *Proc Natl Acad Sci USA*. 105 (4): 1297-1302.

Plum L, Rother E, Münzberg H, **Wunderlich FT**, Morgan DA, Hampel B, Shanabrough M, Janoschek R, Köhner AC, Alber J, Suzuki A, Krone W, Horvarth TL, Rahmouni K, Brüning JC (2007) Enhanced Leptin-Stimulated Pi3k Activation in the CNS Promotes White Adipose Transdifferentiation. *Cell Metab*. 6 (6): 431-445.

Hövelmeyer N<sup>†</sup>, **Wunderlich FT**<sup>†</sup>, Massoumi R, Jakobsen CG, Song J, Wörns MA, Merkwirth C, Kovalenko A, Aumailley M, Brüning JC, Strand D, Galle PR, Wallach D, Fässler R, Waisman A (2007) Regulation of B cell homeostasis and activation by the tumor suppressor gene *Cyld*. *J Exp Med* 204 (11): 2615-27.

<sup>†</sup> the authors equally contributed to this work.

Schmidt-Supprian M, **Wunderlich FT**, Rajewsky K (2007) Excision of the Frt-flanked neo (R) cassette from the CD19cre knock-in transgene reduces Cre-mediated recombination. *Transgenic Res*. 16 (5): 657-660.

Nolden L, Edenhofer F, Haupt S, Koch P, **Wunderlich FT**, Siemen H, Brüstle O (2006) Site-specific recombination in human embryonic stem cells induced by cell permeant Cre recombinase. *Nature Methods* 3 (6): 461-7.

Buch T, Heppner FL, Tertilt C, Heinen TJ, Kremer M, **Wunderlich FT**, Jung S, Waisman A (2005) A Cre-inducible diphtheria toxin receptor mediates cell lineage ablation after toxin administration. *Nature Methods* 2 (6): 419-26.

Plum L, **Wunderlich FT**, Baudler S, Krone W, Brüning JC (2005) Transgenic and knockout mice in diabetes research: novel insights into pathophysiology, limitations and perspectives. *Physiology (Bethesda)* 20: 152-61. Review.

**Wunderlich FT**, Wildner H, Rajewsky K, Edenhofer F (2001) New variants of inducible Cre recombinase: a novel mutant of Cre-PR fusion protein exhibits enhanced sensitivity and an expanded range of inducibility. *Nucleic Acids Res*. 29 (10): E47.

**Wunderlich FT**, Edenhofer FOS, Rajewsky K (2000) Mutationen kryptischer Spleissstellen in Cre und Cre Fusionsproteinen zur Verbesserung der Expression und Induzierbarkeit. *Patent*. Patent Nr. 00114622.4-2105.