Dick, Tobias

General Information

Last name, First name:	Dick, Tobias Peter
Academic title:	Prof. Dr. rer. nat.
Institute address:	German Cancer Research Center (DKFZ) Division of Redox Regulation Im Neuenheimer Feld 280 69120 Heidelberg Germany
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Current positions:	Division Head, German Cancer Research Center (DKFZ) Professor, Faculty of Biosciences, University of Heidelberg

Academic Education and Qualifications

1989-1994	Studies in Biochemistry, Free University of Berlin
1994-1997	PhD thesis (Dr. rer. nat.) German Cancer Research Center, Heidelberg and Institute for Immunology, University of Tübingen (*summa cum laude*)
2009	Habilitation in Biochemistry, Faculty of Biosciences, Heidelberg University

Professional Career

1998-2002	Postdoctoral Researcher, Howard Hughes Medical Institute, Yale University, New Haven, USA
2003-2009	Independent Junior Group Leader, German Cancer Research Center, Heidelberg
since 2010	Head of Division 'Redox Regulation', German Cancer Research Center, Heidelberg

Major Grants and Awards

2004	Marie Curie Excellence Grant
2009	Chica- and Heinz-Schaller-Award for young scientists
2017	Basic Science Award from the Society for Free Radical Research Europe
2017	ERC Advanced Grant
2019	Highly Cited Researcher 2019 (Cross-Field) - Web of Science (Clarivate)

Dick, Tobias

Selected last-author publications:

1. Eid M, Barayeu U, Sulková K, Aranda-Vallejo C, **Dick TP** (2024) Using the heme peroxidase APEX2 to probe intracellular H_2O_2 flux and diffusion. ***Nature Communications*** 15:1239

2. Talwar D, Miller CG, Grossmann J, Szyrwiel L, Schwecke T, Demichev V, Mikecin Drazic AM, Mayakonda A, Lutsik P, Veith C, Milsom MD, Müller-Decker K, Mülleder M, Ralser M, **Dick TP** (2023) The GAPDH redox switch safeguards reductive capacity and enables survival of stressed tumour cells. ***Nature Metabolism*** 5:660

3. Pedre B, Talwar D, Barayeu U, Schilling D, Luzarowski M, Sokolowski M, Glatt S, **Dick TP** (2023) 3-Mercaptopyruvate sulfur transferase is a protein persulfidase. ***Nature Chemical Biology*** 19:507

4. Barayeu U, Schilling D, Eid M, Xavier da Silva TN, Schlicker L, Mitreska N, Zapp C, Gräter F, Miller AK, Kappl R, Schulze A, Friedmann Angeli JP, **Dick TP** (2022) Hydropersulfides inhibit lipid peroxidation and ferroptosis by scavenging radicals. ***Nature Chemical Biology*** 19:28

5. Schilling D, Barayeu U, Steimbach RR, Talwar D, Miller AK, **Dick TP** (2022) Commonly Used Alkylating Agents Limit Persulfide Detection by Converting Protein Persulfides into Thioethers. ***Angewandte Chemie International Edition*** e202203684

6. Talwar D, Messens J, **Dick TP** (2020) A role for annexin A2 in scaffolding the peroxiredoxin 2–STAT3 redox relay complex. ***Nature Communications*** 11:4512

7. Ezerina D, Takano Y, Hanaoka K, Urano Y, **Dick TP** (2018) N-Acetyl Cysteine Functions as a Fast-Acting Antioxidant by Triggering Intracellular H_2S and Sulfane Sulfur Production. ***Cell Chemical Biology*** 25:447-459 e444

8. Morgan B, Van Laer K, Owusu T, Ezerina D, Pastor-Flores D, Amphonsah P, Tursch A, **Dick TP** (2016) Real-time monitoring of basal H_2O_2 levels with peroxiredoxin-based probes. ***Nature Chemical Biology*** 12:437-443

9. Peralta D, Bronowska AK, Morgan B, Doka E, Van Laer K, Nagy P, Grater F, **Dick TP** (2015) A proton relay enhances H_2O_2 sensitivity of GAPDH to facilitate metabolic adaptation. ***Nature Chemical Biology*** 11:156-163

10. Sobotta MC, Liou W, Stocker S, Talwar D, Oehler M, Ruppert T, Scharf AN, **Dick TP** (2015) Peroxiredoxin-2 and STAT3 form a redox relay for H_2O_2 signaling. ***Nature Chemical Biology*** 11:64-70

11. Morgan B, Ezerina D, Amoako TN, Riemer J, Seedorf M, **Dick TP** (2013) Multiple glutathione disulfide removal pathways mediate cytosolic redox homeostasis. ***Nature Chemical Biology*** 9:119-125

12. Albrecht SC, Barata AG, Grosshans J, Teleman AA, **Dick TP** (2011) In vivo mapping of hydrogen peroxide and oxidized glutathione reveals chemical and regional specificity of redox homeostasis. ***Cell Metabolism*** 14:819-829

13. Gutscher M, Pauleau AL, Marty L, Brach T, Wabnitz GH, Samstag Y, Meyer AJ, **Dick TP** (2008) Real-time imaging of the intracellular glutathione redox potential. ***Nature Methods*** 5:553-559

14. Kienast A, Preuss M, Winkler M, **Dick TP** (2007) Redox regulation of peptide receptivity of major histocompatibility complex class I molecules by ERp57 and tapasin. ***Nature Immunology*** 8:864-872