



Professor Dr. Thomas Efferth

born June 23th, 1960, married

Education:

1980-1986 Study of Biology, Technical University Darmstadt, Germany
1990 PhD Thesis at the German Cancer Research Center, Heidelberg, Germany
1997 Habilitation (Postdoctorate Thesis), Technical University Aachen, Germany

Positions:

2005 Research group leader, German Cancer Research Center, Heidelberg, Germany
2007 Associate Professor (apl.), University of Heidelberg, Germany
2009 Full Professor, Chair of the Department of Pharmaceutical Biology, Institute of Pharmacy and Biochemistry, University of Mainz, Germany

Honors:

1991 Ludolf Krehl-Award (1st place) of Southwest-German Society for Medicine
2006 Honorary professor at the Northeast Forestry University, Harbin, China
2006 Dr. Wilmar Schwabe Award conferred by the Society for Medical Plant Research in Helsinki, Finland, August 30th 2006
2008 Citizen Medal (*Bürgerplakette*) of the City of Heidelberg, Germany
2010 Visiting professor at the Zhejiang Medical University, Hangzhou, China
2011 Award (1st place) of the Central European Society for Anticancer Drug Research (CESAR) for translational research in the development of antitumoral agents
2015 Honorary professor at the Zhejiang Medical University, Hangzhou, China
2015 Visiting professor at the Zhejiang University for Science and Technology, Hangzhou, China
2015 "TheSCENTEdrop" Award (1st place) for research on medicinal herbs and fragrant plants, Graz, Austria
2016 Appreciation Award, Salah Wanasi Foundation for Cancer Research and Control, Khartoum, Sudan
2017 Qihuang International Award, Chinese Society of Chinese Medicine

Teaching: Pharmaceutical Biology, Molecular Pharmacology and Toxicology, Cancer Biology

Research:

- Pharmacogenomic and bioinformatic approaches to unravel modes of actions of synthetic and natural compounds with activity against otherwise drug-resistant tumors (basic research)
- Predictive and prognostic markers for personalized cancer medicine (translational research)

Publications:

- Hirsch (H)-factor: 70; total number of citations: 20,168 (according to Google Scholar)
- >500 PubMed-listed (565 Scopus-listed) publications in peer-reviewed journals
- 18 book chapters, four books
- Seven patents (US60/619,829; US10/748,713, EP 1 550 731 A1, ES200401396, 20 2014 006 418.0; 2015101808; 2015101721)
- More than 240 lectures and 180 posters at international meetings and congresses

Selected papers:

- Efferth T. From ancient herb to modern drug: *Artemisia annua* and artemisinin for cancer therapy. *Semin Cancer Biol.* 2017;46:65-83 (IF: 9.1)
- Seo EJ, Efferth T. Interaction of antihistaminic drugs with human translationally controlled tumor protein (TCTP) as novel approach for differentiation therapy. *Oncotarget* 2016;7:16818-39 (IF: 5.1)
- Kadioglu O, Fu YJ, Wiench B, Zu YG, Efferth T. Synthetic cajanin stilbene acid derivatives inhibit c-MYC in breast cancer cells. *Archives of Toxicology* 2016;90:575-88. (IF: 5.9)
- Zhao Q, Assimopoulou AN, Klauack SM, Damianakos H, Chinou I, Kretschmer N, Rios JL, Papageorgiou VP, Bauer R, Efferth T. Inhibition of c-MYC with involvement of ERK/JNK/MAPK and AKT pathways as a novel mechanism for shikonin and its derivatives in killing leukemia cells. *Oncotarget* 2015;6:38934-51. (IF: 5.1)

- Zeino M, Paulsen MS, Zehl M, Urban E, Kopp B, Efferth T. Identification of new P-glycoprotein inhibitors derived from cardiotonic steroids. *Biochemical Pharmacology* 2015;93:11-24. (IF: 4.6).
- Zhao Q, Bauer R, Efferth T. Shikonin and its derivatives inhibit epidermal growth factor signaling and synergistically kill glioblastoma cells in combination with erlotinib. *International Journal of Cancer* 2015;137:1446-56. (IF: 6.5)
- Efferth T, Romero MR, Wolf DG, Stamminger T, Marin JJG, Marschall M. The antiviral activities of artemisinin and artesunate. *Clinical Infectious Diseases* 2008;47:804-811 (IF: 8.2)
- Li PCH, Lam E, Roos WP, Zdienicka MZ, Kaina B, Efferth T. Artesunate derived from traditional Chinese medicine induces DNA damage and repair. *Cancer Research* 2008;68:4347-51. (IF: 9.1)
- Efferth T, Konkimalla VB, Wang YF, Sauerbrey A, Furchtbar S, Zintl F, Mattern J, Volm M. Prediction of broad spectrum resistance of tumors towards anticancer drugs. *Clinical Cancer Research* 2008;14:2405-12. (IF: 9.6)
- Gillet JP, Efferth T, Remacle J. Chemotherapy-induced resistance by ATP-binding cassette transporter genes. *Biochemical Biophysical Acta – Reviews on Cancer* 2007;1775:237-262 (IF: 7.85)
- Efferth T, Li P, Kaina B. From traditional Chinese medicine to rational cancer therapy. *Trends in Molecular Medicine* 2007;13:353-361 (IF: 9.45)
- Steinbach D, Gillet JP, Sauerbrey A, Gruhn B, Dawczynski K, Bertholet V, de Longueville F, Zintl F, Remacle J, Efferth T. ABCA3 as a possible cause of drug resistance in childhood acute myeloid leukemia. *Clinical Cancer Research* 2006;12:4357-63. (IF: 9.5).
- Efferth T, Kahl S, Paulus K, Adams M, Rauh R, Boechzelt H, Hao X, Kaina B, Bauer R. Phytochemistry and pharmacogenomics of natural products derived from traditional Chinese medicine and Chinese materia medica with activity against tumor cells. *Mol Cancer Ther* 2008;7:152-61. (IF: 5.0).
- Efferth T, Gillet JP, Sauerbrey A, Zintl F, Bertholet V, de Longueville F, Remacle J, Steinbach D. Expression profiling of ATP-binding cassette transporters in childhood T-cell acute lymphoblastic leukemia. *Mol Cancer Ther* 2006;5:1986-94. (IF: 5.0).
- Efferth T, Volm M. Pharmacogenetics and individualized cancer chemotherapy. *Pharmacology and Therapeutics* 2005;107:155-176 (IF: 11.1)
- Efferth T. Mechanistical perspectives of 1,2,4-trioxanes for anti-cancer therapy. *Drug Resistance Updates* 2005;8:85-97 (IF: 10.9).
- Efferth T, Bachli EB, Schwarzl SM, Goede JS, West C, Smith JC, Beutler E. Glucose-6-phosphate dehydrogenase (G6PD) deficiency-type Zurich: a splice site mutation as an uncommon mechanism producing enzyme deficiency. *Blood* 2004;104(8):2608. (IF: 13.2).

Editorial Boards:

- Editor-in-Chief: *Phytomedicine* (since 2017); *Medicinal and Aromatic Plants* (since 2014); *Phytopharmacology* (2011-2013)
- Co-Editor: *Journal of Ethnopharmacology*; *Eur. J. Med. Plants*, *Nat. Prod. Bioprospect.*, *World J. TCM*, *Phytomedicine* (2014-2016), *Planta Medica* (2007-2015) etc.
- Editorial Board member: *Int. J. Oncol.*, *Curr. Med. Chem.*, *Crit. Rev. Oncogen.*, *Chem-Biol. Interact.* *Cancer Genomics Proteomics*, *Pharmaceuticals*, *World J. Translat. Med.*, *World J. of Pharmacology* etc.

Society Memberships:

- Specialty Committee on Immunology of TCM, World Fed. of Chin. Med. Societies, vice-president
- German Pharmaceutical Society (DPhG), scientific advisory member
- International Society of Ethnopharmacology, board of directors
- Good Practice in TCM Research Association, board of directors
- American Association for Cancer Research (AACR)
- Society for Medicinal Plant Research (GA)

Scientific Advisory Board Memberships:

- Research Grant Council Hong Kong (since 2016)
- Institute of Biotechnology and Drug Research, Johannes Gutenberg University (since 2016)
- Agricultural Biotechnology Research Center, Academia Sinica, Taipei Taiwan (since 2013)
- Begell House Publishers, New York, USA (2012-2014);
- Dafra Pharma R&D, Tournhout, Belgium (2011-2013)
- HanseMerkur Zentrum, Universitätsklinikum Eppendorf, Hamburg (since 2010)
- Herbal Medicinal Products Platform Austria (HMPPA) (since 2016)
- Institute of Biotechnology and Drug Research, Johannes Gutenberg University Mainz, Germany (since 2015)
- International Institute of Anticancer Research (since 2009)

Appointments of former lab members as associate and assistant professors:

- 2017: Mohamed Elamir F. Hegazy, Full Professor, National Research Center, Giza, Egypt

- 2017: Sami Hamdoun, Assistant Professor, University of Khartoum, Khartoum, Sudan
- 2015: Asuman Karadeniz, Assistant Professor, Mehmet Akif Ersoy University, Biology Department, Burdur, Turkey
- 2014: Victor Kuete, Associate Professor, Department of Biochemistry, University of Dschang, Cameroon
- 2013: Else Dapat, Assistant Professor, Department of Biology, University of the Philippines, Padre Faura Street, Ermita, Manila, Philippines
- 2011: Serkan Sertel, Privatdozent (Habilitation), 2017: apl.-Professor, University of Heidelberg, Germany
- 2010: Hiroshi Nakagawa, Assistant Professor, Department of Applied Biological Chemistry, College of Bioscience and Biotechnology, Chubu University, Aichi, Japan
- 2009: Mahmoud Youns, Assistant Professor: Department of Biochemistry and Molecular Biology, Faculty of Pharmacy, University of Helwan, Ain Helwan, Cairo, Egypt
- 2009: Badireenath Konkimalla, Assistant Professor, National Institute of Science Education and Research (NISER), Bhubaneswar, India.

Awards of former and current lab members:

- 2017 Mohamed E.M. Saeed: Boehringer Ingelheim Award for best PhD thesis
- 2016: Maen Zeino: Boehringer Ingelheim Award for best PhD thesis
- 2015: Rebecca Hamm: Boehringer Ingelheim Award for best PhD thesis
- 2014: Jonas Börtzler: Award of the Johannes-Gutenberg University Mainz for best Student Research project
- 2014: Chunlan Hong: Excellent Paper Award, Postraumatic Stress Conference, Hangzhou.
- 2014: Benjamin Wiench, Boehringer Ingelheim Award for best PhD thesis
- 2014: Onat Kadioglu, Poster Award, 2nd Bahecesehir University Drug Design Congress, Istanbul, Turkey.
- 2013: Mohamed E. Saeed, Young Investigator Award, 15th Symposium of the Natural Products Research Network for Eastern and Central Africa (NAPRECA). Khartoum, Sudan
- 2013: Onat Kadioglu. Poster Award, Bahecesehir University Drug Design Symposium. Istanbul, Turkey.
- 2012: Victor Kuete, Alexander von Humboldt fellowship
- 2012: Badireenath Konkimalla, Innovative Young Biotechnologist Award (IYBA), DBT, India.
- 2012: Else Dapat, Poster Award, 34th Ann. Sci. Meeting, Natl. Acad. Sci. Technol., Philippines
- 2011: Thomas Efferth: Award of the Central European Society for Anticancer Drug Research (CESAR) for translational research in the development of antitumoral agents
- 2010: Tolga Eichhorn, L.A.B. Award of GIT Publishing House and Fair, Leipzig, Germany.



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