

Institute of Pharmaceutical Technology Goethe University

Dr. Matthias G. Wacker

Biocenter, N230 / 2.03
Max-von-Laue-Straße 9
D-60438 Frankfurt/Main
Phone +49 69 798 296 91
Fax +49 69 798 296 94
Email info@nanomedicines.de



Scientific career

- 2013 - today Head, Pharmaceutical Technology – Nanosciences at Fraunhofer Institute for Molecular Biology and Applied Ecology (IME) – Translational Medicine & Pharmacology (TMP)
- 2010 - today Group leader, Institute of Pharmaceutical Technology, Goethe University
Coordinator for Pharmaceutical Technology in the Center for Drug Research and Safety (ZAFES) in Frankfurt

Research activities:

- Development of nanoparticulate drug delivery systems for parenteral and peroral applications
- Nano- and microencapsulation of sensitive or poorly soluble compounds
- Development of physiology-based in vitro release systems for the characterization of nanosized drug delivery systems

Teaching activities:

- Lectures, Pharmaceutical Technology (2nd semester)
- Winter school/summer school in Pharmacy (4th semester)
- Lectures, Biopharmacy (6th semester)
- Compulsory optional courses in Pharmacy, Pharmaceutical Technology (8th semester)

Other activities:

- Scientific Advisor to the Editors of JPharmSci® (Journal of Pharmaceutical Sciences)
- Reviewer for the European Journal of Pharmaceutics and Biopharmaceutics, International Journal of Pharmaceutics, International Journal of Nanomedicine

2010-2012 Project management

- 2009-2010 Scientific advisor, EU FP7 project SaveMe
 Project management, BMBF-funded project NanoCancer
 2007 – 2010 PhD student under the supervision of Prof. Dr. Klaus Langer (Goethe University/WWU Münster), Development of albumin-based drug delivery systems for photodynamic therapy (PDT)

Most relevant publications

- 05/2011 Wacker M, Zensi A, Kufleitner J, Ruff A, Schütz J, Marstaller T, Stockburger T, Vogel V; A toolbox for the upscaling of ethanolic human serum albumin (HSA) desolvation. *Int. J. Pharm.* (414), 225-232
- 01/2011 Löw K, Wacker M, Wagner S, Langer K, von Briesen H; Targeted human serum albumin nanoparticles for specific uptake in EGFR-expressing colon carcinoma cells, *Nanomedicine* 7(4), 454-463
- 11/2010 Preuß A, Chen K, Hackbarth S, Wacker M, Langer K, Roeder B; Photosensitizer loaded HSA nanoparticles II: In vitro investigations, *Int. J. Pharm.* (404), 308-316
- 08/2010 Chen K, Wacker M, Hackbarth S, Ludwig C, Langer K, Roeder B; Photophysical evaluation of mTHPC-loaded HSA nanoparticles as novel PDT delivery systems, *J. Photochem. Photobiol. B* (101) 340-347.
- 04/2010 Wacker M, Chen K, Preuss A, Possemeyer K, Roeder B, Langer K; Photosensitizer loaded HSA nanoparticles I: Preparation and photophysical properties, *Int. J. Pharm.* (393) 253-263

Patents

- US2010059364 Langer K, Wacker M, Röder B, Preuss A, Albrecht V, Gräfe S, Wiehe A, von Briesen H, Löw K, Wagner S: Nanoparticle Carrier Systems based on Human Serum Albumin for Photodynamic Therapy