# Ursula Theuretzbacher, Ph.D.

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# **Professional Experience**

# 1988present

# Founder of the Center for Anti-Infective Agents (CEFAIA), Austria

Ursula Theuretzbacher founded the Center for Anti-Infective Agents (CEFAIA) in 1988 to contribute to anti-infective research, training, and to provide scientific services to medical and research institutions, governments and regulatory authorities, as well as biotech and pharmaceutical industries in the field of anti-infective drug research&development (R&D) and appropriate usage of these drugs.

#### Areas of scientific interest:

- Apply pharmacokinetic/pharmacodynamic principles to define dosage regimens for antibacterial drugs to optimize the activity while minimizing toxicity and emergence of resistance
- Advise governments, NGOs, investors, national and international funding agencies, start-up companies on antibacterial and antifungal drug discovery and development strategies
- Initiate and coordinate major publicly funded international scientific projects in the antibiotics field
- Communicate and disseminate scientific results and knowledge to international research and policy bodies, to the health care community and students, advocacy and stakeholder support to contain antibiotic resistance
- Train and propagate best practices of appropriate usage of anti-infective drugs in all healthcare settings
- Evaluate and review large international research projects in Europe and the US

#### Current and recent projects include:

- New Drugs for Bad Bugs program of the European Innovative Medicines Initiative (IMI):
  - Work package leader in the DRIVE-AB project (Re-investment in R&D and responsible antibiotic use), 9.4Mill €
  - Partner in the COMBACTE-MAGNET project (Combatting Bacterial Resistance in Europe Molecules against Gram-Negative Infections), 167Mill €
- The 7th Framework Programme funded European Research and Technological Development: Work package leader in the AIDA project (Preserving old antibiotics for the future): 6Mill €
- Leading and organizing international medical/scientific societies and associations:
  - Past-President of the International Society of Anti-Infective Pharmacology (ISAP)
  - Member of the Executive Committee of the International Society for Infectious Diseases (ISID)
  - Founding President of EPASG (ESCMID Pharmacokinetic/Pharmacodynamic Study Group)
  - Chair Person of the International Society of Chemotherapy (ISC) working group Future Antibiotics
- Education and training: international workshops, CME events e.g. four annual workshops at the Interscience Conference of Antimicrobial Agents and Chemotherapy (ICAAC), one annual workshop at the European Conference for Clinical Microbiology and Infectious Diseases (ECCMID), international training courses in infectious diseases and antibiotic therapy in various European countries
- Organizing Conferences:
  - Member of the Organizing Committee of the Conference on Drug Development to Meet the Challenge of Antimicrobial Resistance, 2016, Vienna
  - Scientific organization of the international conference on Reviving Of Old Antibiotics, 2014, Vienna, Austria
  - Scientific organization of the annual ISAP symposium in the US
  - Member of the Programme Committee for the annual ECCMID
  - Member of the Organizing Committee for the International Conference on Polymyxins 2013, 2015
- Evaluation and review of research projects for the EU (IMI, JPIAMR), Wellcome Trust, US National Institute of Health, Carb-X and national funding bodies (e.g. Austria, The Netherlands, Greece)
- Advising regulatory and government agencies (EMA, European Commission, FDA)
- Advising on bacterial R&D strategies for non-profit research organizations
- Mentoring of young female scientists (worldwide)

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1994-2003 Lecturer, Medical University of Vienna (Department of Clinical Microbiology)
Designed and delivered courses in Advanced Bacteriology, Infectious Diseases and Antibiotic Treatment

1997-2002 Co-founder of the Medical Institute for Quality Management MedQM, Berlin-Vienna
Organized and developed CME accredited events in the area of quality management, quality assurance, clinical guidelines, evidence based therapy in Germany

1982-1988 Beecham Pharma GmbH Austria (now GlaxoSmithKline)
Marketing Director (responsible for product development; strategic planning; marketing communications)
Specialist for medical and regulatory affairs

Food Testing and Research Institute in Vienna Head of the Bacteriological Department

#### **Publications**

#### Selected invited reviews and leading articles

- Huttner A, Leibovici L, Theuretzbacher U, Huttner B, Paul M. Closing the evidence gap in infectious disease: point-of-care randomization and informed consent. Clin Microbiol Infect. 2016 Aug 3
- Dickstein Y, Leibovici L, Yahav D, Eliakim-Raz N, Daikos GL, Skiada A, Antoniadou A, Carmeli Y, Nutman A, Levi I, Adler A, Durante-Mangoni E, Andini R, Cavezza G, Mouton JW, Wijma RA, Theuretzbacher U, Friberg LE, Kristoffersson AN, Zusman O, Koppel F, Dishon Benattar Y, Altunin S, Paul M; AIDA consortium: Multicentre open-label randomised controlled trial to compare colistin alone with colistin plus meropenem for the treatment of severe infections caused by carbapenem-resistant Gram-negative infections (AIDA): a study protocol. BMJ Open. 2016 Apr 20:6(4):e009956
- Theuretzbacher U, Paul M: Revival of old antibiotics: structuring the re-development process to optimize usage. Clin Microbiol Infect. 2015 Oct;21(10):878-80
- Muller AE, Theuretzbacher U, Mouton JW: Use of old antibiotics now and in the future from a pharmacokinetic/pharmacodynamic perspective. Clin Microbiol Infect. 2015 Oct;21(10):881-5.
- Huttner A, Verhaegh EM, Harbarth S, Muller AE, Theuretzbacher U, Mouton JW. Nitrofurantoin revisited: a systematic review and meta-analysis of controlled trials. J Antimicrob Chemother. 2015 Sep;70(9):2456-64
- Theuretzbacher U, Van Bambeke F, Cantón R, Giske CG, Mouton JW, Nation RL, Paul M, Turnidge JD, Kahlmeter G. Reviving old antibiotics. J Antimicrob Chemother. 2015 Aug;70(8):2177-81
- Harbarth S, Theuretzbacher U, Hackett J; on behalf of the DRIVE-AB consortium.

  Antibiotic research and development: business as usual? J Antimicrob Chemother. 2015 Jun;70(6):1604-7
- Nation R, Li J, Cars O, Couet W, Dudley M, Kaye K, Mouton J, Paterson D, Tam V, Theuretzbacher U, Tsuji B, Turnidge J: Framework for optimising the clinical use of colistin and polymyxin B: The Prato Polymyxin Consensus. Lancet Infectious Diseases 2014,15(2):225-234
- Paul M, Carmeli Y, Durante-Mangoni E, Mouton JW, Tacconelli E, Theuretzbacher U, Mussini C, Leibovici L. Combination therapy for carbapenem-resistant Gram-negative bacteria. J Antimicrob Chemother 2014,69(9):2305-2309
- JA Roberts, MHA Aziz, J Lipman, JW Mouton, AA Vinks, TW Felton, WW Hope, A Farkas, MN Neely, JJ Schentag, G Drusan, OR Frey, U Theuretzbacher, JL Kuti. On behalf of The International Society of Anti-Infective Pharmacology (ISAP) and the PK/PD Study Group of the European Society of Clinical Microbiology and Infectious Diseases (ESCMID). Individualised antibiotic dosing for patients who are critically ill: challenges and potential solutions. Lancet Infect Dis. 2014 Jun;14(6):498-509
- U. Theuretzbacher: Product information for parenteral colistin varies substantially across Europe. J Antimicrob Chemother 2014, 69(7):1987-92
- Nation RL, Li J, Cars O, Couet W, Dudley MN, Kaye KS, Mouton JW, Paterson DL, Tam VH, Theuretzbacher U, Tsuji BT, Turnidge JD. Consistent global approach on reporting of colistin doses to promote safe and effective use. Clin Infect Dis. 2014 58(1):139-41
- Kaier K, Lambert ML, Frank UK, Vach W, Wolkewitz M, Tacconelli E, Rello J, Theuretzbacher U, Martin M. Impact of availability of guidelines and active surveillance in reducing the incidence of ventilator-associated pneumonia in Europe and worldwide. BMC Infect Dis. 2014, 12;14(1):199

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- U. Theuretzbacher: Global antibacterial resistance The never ending story. Global J Antimicrob Res. 2013; 1 (2): 63-69
- Tambyah AP, Levy Hara G, Daikos GL, Falagas ME, Mazzei T, Mouton JW, Novelli A, Chen B, Wang MG, Ko WC, Li T, Fan X, Theuretzbacher U: Treatment of extensively drug-resistant Gram-negative infections in critically ill patients: Outcome of a consensus meeting at the 13<sup>th</sup> Asia Pacific Congress of Clinical Microbiology and Immunology October 2012. Global J Antimicrob Res. September 2013; 1(3):117-122
- U. Theuretzbacher: Pharmacokinetic and pharmacodynamic issues for antimicrobial therapy in patients with cancer. Clin Infect Dis. 2012 Jun;54(12):1785-92
- U. Theuretzbacher: Accelerating resistance, inadequate antibacterial pipelines and international responses. Int J Antimicrob Agents. 2012;39(4):295-9
- Theuretzbacher U, Mouton JW. (Editorial): Update on antibacterial and antifungal drugs can we master the resistance crisis? Curr Opin Pharmacol. 2011;11(5):429-432
- U. Theuretzbacher: Resistance drives antibacterial drug development. Curr Opin Pharmacol. 2011, 11(5):433-438
- Zeitlinger MA, Derendorf H, Mouton JW, Cars O, Craig WA, Andes D, Theuretzbacher U. Protein binding do we ever learn? Antimicrob Agents Chemother. 2011, 55(7):3067-74
- Gonzalez D, Conrado DJ, Theuretzbacher U, Derendorf H.

  The Effect of Critical Illness on Drug Distribution. Curr Pharm Biotechnol. 2011, 12(12):2030-2036.
- Mouton JW, Ambrose PG, Canton R, Drusano GL, Harbarth S, Macgowan A, Theuretzbacher U, Turnidge J.: Conserving antibiotics for the future: New ways to use old and new drugs from a pharmacokinetic and pharmacodynamic perspective. Drug Resist Updat. 2011, 14(2):107-17.
- Y. Li, U. Theuretzbacher, CJ. Clancy, MH. Nguyen, H. Derendorf: Pharmacokinetic/Pharmacodynamic Profile of Posaconazole. Clin Pharmacokin 2010, 49 (6) 379-396

### Selected books, book chapters

- C. Aspöck; co-authored by M. Hell, B. Springer, U. Theuretzbacher: MRSA and ESBL. UNI-MED Verlag AG, Bremen. 2012
- Ursula Theuretzbacher and Markus Zeitlinger: "Antibacterial Distribution and Drug-Drug Interactions in Cancer Patients". Published in "Principles and Practice of Cancer Infectious Diseases" edited by Amar Safdar, 1st Edition., 2011, Humana Press, Series: Current Clinical Oncology, 2011
- U. Theuretzbacher: Mikrobiologie im klinischen Alltag (Clinical microbiology for physicians and specialists). Kohlhammer-Verlag, 2004, 800 pages (2nd edition)
- U. Theuretzbacher, M. Seewald: Mikrobiologie im klinischen Alltag (Microbiology for physicians and specialists). Kohlhammer-Verlag, 1999, 500 pages, edition: 35.000 copies

# **Active Membership in Professional Societies**

American Society for Microbiology (ASM), European Society of Clinical Microbiology and Infectious Diseases (ESCMID), International Society of Anti-Infective Pharmacology (ISAP), International Society of Infectious Diseases (ISID) International Society of Chemotherapy (ISC)

#### **Education**

■ Ph.D. in Microbiology University of Vienna and University of Innsbruck, Austria