



Urs A. Meyer, M.D.
Descriptive CV and Scientific Achievements

Urs Meyer currently is Professor of Pharmacology (active emeritus) at the Biozentrum of the University of Basel and its Medical School. Urs Meyer received B.A. (1961) and M.D. (1967) degrees from the Universities of Geneva and Zürich, with additional training in biochemistry and metabolic diseases for 2 years at the Zurich University Hospital. He continued his training in Internal Medicine and Clinical Pharmacology at the University of California San Francisco Campus (UCSF), with straight medical internship and residency, followed by a postdoctoral fellowship in Clinical Pharmacology with Kenneth L. Melmon and a fellowship in hepatology at the University of Texas Southwestern Medical School, Dallas, Texas (with Harvey Marver and Ronald Estabrook). In 1971 he was recruited as Assistant Professor in Medicine and Pharmacology, Division of Clinical Pharmacology, Department of Medicine, UCSF. Urs Meyer returned to Switzerland in 1975 as Associate Professor of Clinical Pharmacology and as the first Chief of a new Division of Clinical Pharmacology at the University of Zürich Medical School. Since 1983 Urs Meyer is a Full Professor of Pharmacology at the Biozentrum of the University of Basel and was Chairman of the Division of Pharmacology/Neurobiology for many years. Urs Meyer also served as Director of the Biozentrum (1993 to 1995) and as a Medical Consultant in the Department of Medicine of the University Hospital. Urs Meyer was a visiting professor in the Department of Molecular Pharmacology at Stanford University, Palo Alto, USA (1992/93) and at the Office of Clinical Pharmacology, Center for Drug Evaluation and Research of the Food and Drug Administration (FDA), USA (2008).

Urs Meyer's research has focused on "pharmacological individuality" or person-to-person variation of drug response throughout his career, from studying the drug sensitivity of the pharmacogenetic disease porphyria to the pharmacogenomics of drug disposition and its co-regulation by drug interactions and environmental factors. These predictable variations in drug response are important components of individualized drug therapy or personalized and stratified medicine.

- Urs Meyer probably is best known for the discovery of the molecular mechanisms of several common genetic polymorphisms of drug disposition. His laboratory identified the genes and mutations in these genes causing variation in drug response and developed the first pharmacogenetic DNA tests, initially for the genes now called CYP2D6 and NAT2. The publications describing these genetic variations in drug response in *Nature*, *PNAS*, *Lancet*, etc. are some of the most cited papers in the therapeutic literature. At that time they transformed the field of pharmacogenetics into a molecular science.
- Urs Meyer's group was engaged and productive in another type of interindividual variation of drug response, namely the transcriptional activation or repression of numerous genes, including many drug metabolizing enzymes and drug transporters by exogenous and endogenous factors. His laboratory has discovered important early steps in the recognition mechanisms for these

drugs in cells and the consequent signal transfer to the nucleus (PNAS, 2007; Mol Pharmacol, 2006; Mol Pharm, 2009). This again is an area of great clinical importance in regard to interindividual variations in the therapeutic and toxic effects of drugs.

- Returning to the pharmacogenetic disease porphyria and its unsolved problems of neuropsychiatric symptoms (Urs Meyer takes care of most of the porphyria families in Switzerland and some of the surrounding countries), Urs Meyer's team has developed an animal model of this pharmacogenetic disease, imitating the human defect (Nature Genetics, 1996). These mice have a phenotype closely resembling the human disorder and are presently used in several laboratories to develop new therapeutic approaches to the treatment of inducible acute porphyria (J. Clin. Invest., 1999; Cell, 2005).

The sustained productivity across the domains of basic and clinical pharmacology has resulted in > 300 original publications, reviews and book chapters and Urs Meyer was listed in 2001 and the following years on the exclusive ISI's Highly Cited Researchers database. His scientific achievements have also been recognized by numerous awards and honors including the Rawls-Palmer Award for Progress in Medicine by the American Society for Clinical Pharmacology and Therapeutics and the RT Williams Distinguished Scientific Achievement Award of the International Society for the Study of Xenobiotics - among many others.

Beyond the laboratory and patient care, Urs Meyer has maintained a strong commitment to the teaching of rational therapeutics and to training programs in drug development sciences, e.g. within the European Center for Pharmaceutical Medicine ECPM courses in science-based drug development. He has trained 71 graduate students and 62 postdoctoral fellows and many of his previous collaborators are now in academic positions all over the world. A number of scientists, of which 9 from the USA, have spent time as sabbatical professors in the laboratory of Urs Meyer.

Urs Meyer also has assumed leadership roles at the international level, including the WHO and NIH. He served in numerous peer review panels and editorial boards, presently is Associate Editor of Annual Reviews of Pharmacology and Toxicology. He was the inaugural Editor-in-Chief of the "Journal of Personalized Medicine" in 2011. As an example of his international activities, he was selected to present the Pharmacogenomics Research Network PGRN to the NIH Council in 2000 and was a member of the External Scientific Panel for this program. He also was president of the International Society for the Study of Xenobiotics (ISSX) 2010-2011 with offices in Washington, D.C.

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