

BIOGRAPHY

18 July 2012



Title and name

Dr. rer. nat. Lutz Edler

Nationality

German

Panel

Contaminants in the Food Chain

Education

University degree in Mathematics and Physics (Dipl. Math), 1970, Albert-Ludwigs- University, Freiburg, Germany

Ph D degree (Dr. rer. nat.) in Mathematics, 1976, Johannes-Gutenberg-University, Mainz, Germany

Fellowships at the National Institute of Environmental Health Sciences, NIH, Research Triangle Park, NC, USA and at the Institute of Statistical Mathematics, Tokyo, Japan

Scientific and risk assessment experience

- Mathematical and statistical modelling and data analysis for the investigation of carcinogenesis and for the cancer risk assessment
 - Dose-response modelling and the determination of dose-response descriptors (e.g., the Benchmark Dose) and their uncertainty
 - Methodology for the design and evaluation of studies in humans and experimental animals
 - Methods of computational statistics for the analysis of data in life sciences and their appropriate interpretation
 - Editorial activities for publications in the field of biostatistics.
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Main scientific publications

More than 270 peer reviewed scientific papers and more than 80 book chapters, dealing with stochastic processes and their applications in life science, biostatistics and applied statistical methods for pre-clinical and clinical research, statistical methods for risk assessment and the understanding of uncertainty, methods to identify prognostic and predictive factors including biomarkers based on molecular data. A selection of relevant publications is as follows:

1. Edler L and Kopp-Schneider A, 1998. Statistical models for low dose exposure. Mutation Research, 405, 227-236.
 2. Bartoszynski R, Edler L, Hanin L, Kopp-Schneider A, Pavlova L, Tsodikov A, Zorin A and Yakovlev AY, 2001. Modeling cancer detection: tumor size as a source of information on unobservable stages of carcinogenesis. Mathematical Biosciences, 171, 113-142.
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3. Edler L, Grassmann J and Suhai S, 2001. Role and results of statistical methods in protein fold class prediction. *Mathematical and Computer Modelling*, 33, 1401-1417.
 54. Edler L, Poirier K, Dourson M, Kleiner J, Mileson B, Nordmann H, Renwick A, Slob W, Walton K and Würtzen G, 2002. Mathematical modelling and quantitative methods. *Food and Chemical Toxicology*, 40, 283-326.
 5. Edler L and Ittrich C, 2003. Biostatistical methods for the validation of alternative methods for the *in vitro* toxicity testing. *ATLA*, 31 (Suppl.1), 5-41.
 6. Heinzl H, Mittlböck M and Edler L, 2008. Technical uncertainty in the back-calculation of occupational exposure to dioxins. *Statistics in Medicine*, 27, 2214-2233.
 7. Edler L. 2008. Dose-Response Analysis. In: *Encyclopedia of Quantitative Risk Assessment and Analysis*. Eds Melnick E and Evenitt B. Wiley, Chichester, UK, 523-528.
 8. Schneider K, Schwarz M, Burkholder I, Kopp-Schneider A, Edler L, Kinsner-Ovaskainen A, Hartung T, Hoffmann S. "ToxRTool", a new tool to assess the reliability of toxicological data. *Toxicology Letters*, 189, 138-144.
 9. Wandtner F., Schneider G., Edler L.: BMD approach for censored time-to-event (TTE) data for risk assessment of carcinogens. In: *Risk Analysis*. Eds Karagrigoriou A, Biebler KE and Frenkel IB. Shaker, Aachen, 153-169.
 10. Edler L and Kitsos CP, 2005. Recent advances in quantitative methods in cancer and human health risk assessment. *Wiley Series in Probability and Statistics*. Chichester, West Sussex, UK, 463 pp.
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