

## Areas of research:

1. Aryl hydrocarbon receptor (AhR) studies – modes of action, induction of XMEs, genotoxicity, relative effective potencies
2. Endocrine-disrupting activities of environmental aromatic contaminants (PCBs, PAHs, PACs)
3. Carcinogenesis, developmental biology and other processes related to tissue-specific toxicity
4. Complex environmental mixtures - toxicology in vitro
5. Nanotoxicology
6. Lipidomics (modulations linked to carcinogenesis and toxicity of environmental contaminants, lipid biomarkers) – determination of SLs, PLs, FAs and eicosanoids
7. Ecotoxicology

## Selected publications (2001-2024)

Hýžd'alová M, Procházková J, Straková N, Pěňčíková K, Strapáčová S, Slováčková J, Kajabová S, Líbalová H, Topinka J, Kabátková M, Vondráček J, Mollerup S, Machala M. Transcriptional and phenotypical alterations associated with a gradual benzo[a]pyrene-induced transition of human bronchial epithelial cells into mesenchymal-like cells. *Environ Toxicol Pharmacol.* 2024, 107, 104424.

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Marvanová S, Pěňčíková K, Pálková L, Ciganek M, Petráš J, Lněničková A, Vondráček J, Machala M. Benzo[b]naphtho[d]thiophenes and naphthylbenzo[b]thiophenes: Their aryl

hydrocarbon receptor-mediated activities and environmental presence. *Sci Total Environ.* 2023, 879, 162924. doi: 10.1016/j.scitotenv.2023.162924.

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