

Prof. RNDr. Jana Klánová, Ph.D.



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CURRENT POSITION

Since 2013 **Professor, director of the RECETOX Centre and RECETOX Research Infrastructure**
Faculty of Science, Masaryk University, Brno, Czech Republic

WORK EXPERIENCE

2007 – 2013 **Associate Professor**, RECETOX, MU
2004 – 2007 **Assistant Professor**, RECETOX, MU
2001 – 2004 **Researcher**, TOCOEN, Ltd., Brno
1998 – 2001 **Researcher**, Laboratory of Plant Molecular Physiology, MU
1994 – 1998 **Lecturer**, East Lansing Public Schools, Michigan, USA
1987 – 1994 **Researcher**, Dept. of Technol., Fac. of Electrical Eng. and Computer Science, Brno Uni of Technology
1986 – 1987 **Study stay**, Dept of Chemistry, Fac. of Education, MU

EDUCATION

2013 **Professor in Environmental Chemistry**, MU
2007 **Associate Professor in Environmental Chemistry**, MU
2004 **Ph.D. in Environmental Chemistry**, MU
1986 **RNDr. (MS.) in Mathematics and Chemistry**, MU

PROFESSIONAL ACTIVITIES

Research Focus

- Fate of chemical compounds in the environment, development of sampling and analytical techniques
- Toxic exposures and their environmental and health impacts and risks
- Human exposome as a theoretical concept for holistic assessment of non-genetic factors affecting human health and its practical implementation (functional exposomics)
- Development of global monitoring networks for effectiveness evaluation of international regulations
- Building longitudinal population studies for assessment of human health risks
- Development of environmental information systems and infrastructures making data available for integrative analysis

International grants received

- European and ESIF projects in a total volume exceeding € 70 mil. since 2016, including
- 2022-2025 Coordinator of Horizon Europe project EIRENE PPP – € 3 mil.
 - 2022-2028 Mng. Board member and WP Lead in Horizon Europe Partnership PARC – € 11.7 mil. for MU
 - 2022-2026 MU PI in Horizon Europe projects DISCERN and EOSC4Cancer – € 0.7 mil. for MU
 - 2020-2026 Coordinator of H2020 Teaming II project CETOCOEN EXCELLENCE – € 30 mil.
 - 2019-2024 MU PI in 13 EU H2020 collaborative projects such HERA, ICARUS, INTERWASTE, EURION or EHEN clusters, etc.
 - 2017-2021 Mng. board member and WP Lead in H2020 EJP HBM4EU – € 2.5 mil.
 - 2016-2020 Mng. board member and WP Lead in H2020 ERA NET ERA-PLANET – € 0.7 mil.
 - 2017-2022 director of the ESIF project CETOCOEN PLUS - € 10 mil.
 - 2017-2020 director of the ESIF project RECETOX RI - € 10 mil.
 - 2016-2019 PI of the RECETOX RI II project from MEYS - € 5 mil.

Academic memberships

- Elected member of the Learned Society of the Czech Republic
- Member of the Scientific Board of the Technology Agency of the Czech Republic
- Member of the Board for Large Research Infrastructures of the Czech Ministry of Education, Youth and Sports (MEYS)
- Member of the Scientific Board of Masaryk University, Palacky University and Masaryk memorial Cancer Institute

Scientific prizes and Awards

- 2023 Honorary doctorate at Orebro University, Sweden

- 2020 Award of the MU rector
- 2021 Award of the MU vice-rector

International Recognition

- Member of the Strategic Working Group on Environment of the European Strategic Forum for Large Research Infrastructures (since 2019)
- Leader of the GEO (Global Earth Observations) Initiative GOS4POPs (Global Observation System for POPs) (since 2016)
- Delegate of the Horizon 2020 Programme Committee on Climate, Resources and Environment (2016-17)
- Member of the Expert Group on Global Monitoring Plan of the Stockholm Convention on POPs (since 2009)
- Expert contributing to capacity building projects of WHO a UNEP
- Evaluator of the longitudinal international programmes (IADN - Integrated Atmospheric Deposition Network in USA and Canada, JOSM - Joint Oil Sands Monitoring in Canada) and projects (Netherlands, Switzerland)
- Ph.D. reviewer for multiple universities in Europe, Canada, and Australia

Collaboration with Applied Sector and Patents

- Long-term experience with implementation of contracted research projects with application sector, both private and public
- Transfer of research knowledge to policy
- Long-term collaboration of Ministries of Environment and Health (member of the National Board for Toxic Chemicals)
- Regional Centre for Knowledge Transfer and Capacity Building in the CEE region
- Collaboration with the United Nations Environment Programme and WHO

Teaching

- Director of master and doctoral study programmes in Environmental Chemistry and Environmental Health Sciences
- Long-term teaching experience in various subject (Environmental analytical chemistry, Environmental processes, Good laboratory practice, Genomics and Proteomics)
- Student supervision and mentoring at the bachelor, master, and PhD levels
- Courses at the RECETOX international summer schools since 2005 (Environmental analysis, Mass spectroscopy, Analysis of ambient air for the Global monitoring plan, Analysis of milk and blood for the Global monitoring plan)
- International training and capacity building programmes (WHO, UNEP)

BIBLIOGRAPHY

- **> 260 impacted papers, > 7300 citations, h-index: 48 (WoS)**

TOP 5 publications (2016-2022)

- Venier, M.; Audy, O.; Vojta, S.; Becanova, J.; Romanak, K.; Melymuk, L.; Kratka, M.; Kukucka, P.; Okeme, J.; Saini, A.; Diamond, M.L.; Klanova, J.: Brominated flame retardants in the indoor environment - Comparative study of indoor contamination from three countries. *Environment International* 2016, 94, 150-160. DOI10.1016/j.envint.2016.04.029 (IF=13.4, TOP5% - 103 citations)
- Vykoukalova, M.; Venier, M.; Vojta, S.; Melymuk, L.; Becanova, J.; Romanak, K.; Prokes, R.; Okeme, J.O.; Saini, A.; Diamond, M.L.; Klanova, J.: Organophosphate esters flame retardants in the indoor environment. *Environment International* 2017, 106, 97-104. DOI10.1016/j.envint.2017.05.020 (IF=13.4, TOP5% - 110 citations)
- Sharma, B. M.; Becanova, J.; Scheringer, M.; Sharma, A.; Bharat, G. K.; Whitehead, P. G.; Klanova, J.; Nizzetto, L.: Health and ecological risk assessment of emerging contaminants (pharmaceuticals, personal care products, and artificial sweeteners) in surface and groundwater (drinking water) in the Ganges River Basin, India. *Science of the Total Environment* 2019, 646, 1459-1467. DOI10.1016/j.scitotenv.2018.07.235 (IF=10.8, TOP10% - 236 citations)
- White, K.B.; Kalina, J.; Scheringer, M.; Přibylková, P.; Kukucka, P.; Kohoutek, J.; Prokeš, R.; Klánová, J.: Temporal Trends of Persistent Organic Pollutants across Africa after a Decade of MONET Passive Air Sampling. *Environmental Science and Technology* (2021), 55 (14), 9413-9424. DOI10.1021/acs.est.0c03575 (IF=11.4, TOP10%)
- Price, E.J.; Vitale, C.M.; Miller, G.W.; David, A.; Barouki, R.; Audouze, K.; Walker, D.I.; Antignac, J.P.; Coumoul, X.; Bessonneau, V.; Klanova, J.: Merging the exposome into an integrated framework for "omics" sciences. *IScience* (2022), 25(3), Article Number103976. DOI10.1016/j.isci.2022.103976 (IF=6.1, Q1)

Other 15 key publications

- Karaskova, P.; Venier, M.; Melymuk, L.; Becanova, J.; Vojta, S.; Prokes, R.; Diamond, M.L.; Klanova, J.: Perfluorinated alkyl substances. (PFASs) in household dust in Central Europe and North America. *Environment International* 2016, 94, 315-324. DOI10.1016/j.envint.2016.05.031 (IF=13.4, TOP5%)
- Piler, P.; Kandrnal, V.; Kukla, L.; Andryšková, L.; Švancara, J.; Jarkovský, J.; Dušek, L.; Pikhart, H.; Bobák, M.; Klánová, J.: Cohort profile: European Longitudinal Study of Pregnancy and Childhood (ELSPAC) in the Czech Republic. *International Journal of Epidemiology* 2017, 46 (5), 1379+. DOI10.1093/ije/dyw091 (IF=9.7, Q1)
- Kalina, J.; Scheringer, M.; Boruvkova, J.; Kukucka, P.; Přibylková, P.; Bohlin-Nizzetto, P.; Klanova, J.: Passive Air Samplers As a Tool for Assessing Long-Term Trends in Atmospheric Concentrations of Semivolatile Organic Compounds. *Environmental Science & Technology* 2017, 51(12), 7047-7054. DOI10.1021/acs.est.7b02319 (IF=11.4, TOP10%)
- Vojta, S.; Melymuk, L.; Klánová, J.: Changes in flame retardant and legacy contaminant concentrations in indoor air during building

- construction, furnishing and use. *Environmental Science & Technology* 2017, 51(20), 11891-11899. DOI10.1021/acs.est.7b03245 (IF=11.4, TOP10%)
- Sharma, B.M., Melymuk, L., Bharat, G.K., Pribylova, P., Sanka, O., Klanova, J., Nizzetto, L.: Spatial gradients of polycyclic aromatic hydrocarbons (PAHs) in air, atmospheric deposition, and surface water of the Ganges River basin. *Science of the Total Environment* (2018), 627), p. 1495-1504. DOI10.1016/j.scitotenv.2018.01.262 (IF=10.8, TOP10%)
 - Kalina, J., Scheringer, M., Boruvkova, J., Kukucka, P., Pribylova, P., Sanka, O., Melymuk, L., Vana, M., Klanova, J.: Characterizing Spatial Diversity of Passive Sampling Sites for Measuring Levels and Trends of Semivolatile Organic Chemicals. *Environmental Science & Technology* 52 (18), 10599-10608. DOI10.1021/acs.est.8b03414 (IF=11.4, TOP10%)
 - Pozo, K., Gomez, V., Torres, M., Vera, L., Nunez, D., Oyarzun, P., Mendoza, G., Clark, B., Fossi, M. C., Bains, M., Pribylova, P., Klanova, J.: Presence and characterization of microplastics in fish of commercial importance from the Biobio region in central Chile. *Marine Pollution Bulletin* (2019), 140, 315-319. DOI10.1016/j.marpolbul.2019.01.025 (IF=7, Q1)
 - Pourchet, M., Debrauwer, L., Klanova, J., Price, E.J., Covaci, A., Caballero-Casero, N., Oberacher, H., Lamoree, L., Damonti, A., Fenaillet, F., Vlaanderen, J., Meijer, J., Krauss, M., Sarigiannis, D., Barouki, R., Le Bizec, B., Antignac, J.P.: Suspect and non-targeted screening of chemicals of emerging concern for human biomonitoring, environmental health studies and support to risk assessment: From promises to challenges and harmonisation issues. *Environment International* (2020), 139, 105545. DOI10.1016/j.envint.2020.105545 (IF=13.4, TOP5%)
 - Barouki, R., Kogevinas, M., Audouze, K., Belesova, K., Bergman, A., Birnbaum, L., Boekhold, S., Denys, S., Desseille, C., Drakvik, E., Frumkin, H., Garric, J., Destoumieux-Garzon, D., Haines, A., Huss, A., Jensen, G., Karakitsios, S., Klanova, J., Koskela, I. M., Laden, F., Marano, F., Matthies-Wiesler, E. F., Morris, G., Nowacki, J., Paloniemi, R., Pearce, N., Peters, A., Rekola, A., Sarigiannis, D., Sebkova, K., Slama, R., Staatsen, B., Tonne, C., Vermeulen, R., Vineis, P.: The COVID-19 pandemic and global environmental change: Emerging research needs. *Environment International* (2021), 146. Article Number: 106272. DOI10.1016/j.envint.2020.106272 (IF=13.4, TOP5%)
 - David A., Chaker J., Price E.J., Bessonneau V., Chetwynd A.J., Vitale C.M., Klanova J., Walker D.I., Antignac J.-P., Barouki R., Miller G.W.: Towards a comprehensive characterisation of the human internal chemical exposome: Challenges and perspectives. *Environment International* (2021), 156, 106630. DOI10.1016/j.envint.2021.106630 (IF=13.4, TOP5%)
 - Stepanikova, I., Acharya, S., Colon-Lopez, A., Abdalla, S., Klanova, J., Darmstadt, G. L.: Maternal gender discrimination and child emotional and behavioural problems: A population-based, longitudinal cohort study in the Czech Republic. *EClinical Medicine* (2022), 53, Article Number101627. DOI10.1016/j.eclinm.2022.101627.
 - Veludo, A. F., Figueiredo, D. M., Degrendele, C., Masinyana, L., Curchod, L., Kohoutek, J., Kukucka, P., Martinik, J., Pribylova, P., Klanova, J., Dalvie, M. A., Roosli, M., Fuhrmann, S.: Seasonal variations in air concentrations of 27 organochlorine pesticides (OCPs) and 25 current-use pesticides (CUPs) across three agricultural areas of South Africa. *Chemosphere* (2022), 28, Article Number133162. DOI10.1016/j.chemosphere.2021.133162
 - Huber, C., Nijssen, R., Mol, H., Antignac, J. P., Krauss, M., Brack, W., Wagner, K., Debrauwer, L., Vitale, C. M., Price, E. J., Klanova, J., Molina, B. G., Leon, N., Pardo, O., Fernandez, S. F., Szigeti, T., Kozepesy, S., Sulc, L., Cupr, P., Martinsone, I., Akulova, L., Ottenbros, I., Vermeulen, R., Vlaanderen, J., Luijten, M., Lommen, A.: A large scale multi-laboratory suspect screening of pesticide metabolites in human biomonitoring: From tentative annotations to verified occurrences. *Environment International* (2022), 168, Article Number107452. DOI10.1016/j.envint.2022.107452
 - Thon, V., Piler, P., Pavlik, T., Andryskova, L., Dolezel, K., Kostka, D., Pikhart, H., Bobak, M., Klanova, J.: Investigation of SARS-CoV-2 seroprevalence in relation to natural infection and vaccination between October 2020 and September 2021 in the Czech Republic: a prospective national cohort study. *BMJ Open* (2023), 13(3). DOI10.1136/bmjopen-2022-068258.
 - Arias, A. H., Alvarez, G., Pozo, K., Pribylova, P., Klanova, J., Pirani, L. S. R., Picone, A. L., Alvarez, M., Tombesi, N.: Beached microplastics at the Bahia Blanca Estuary (Argentina): Plastic pellets as potential vectors of environmental pollution by POPs. *Marine Pollution Bulletin* (2023), 18, Article Number114520. DOI10.1016/j.marpolbul.2022.114520.