

Announcement of the conference NonTarget2016

“Non-target screening of organic chemicals for a comprehensive environmental risk assessment”



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Date: May 29 - June 3, 2016

Venue: Congressi Stefano Franscini, Monte Verità, Ascona, Switzerland

Keynote speakers (accepted):

Jan Christensen, Univ. of Copenhagen, Denmark
Kathrin Fenner, Eawag, Switzerland
Eunha Hoh, San Diego State University, USA
Marja Lamoree, Univ. of Amsterdam, the Netherlands
Derek Muir, Environment Canada & Univ. of Toronto, Canada
Steffen Neumann, Leibniz Institute of Plant Biochemistry, Germany
Susan Richardson, Univ. of South Carolina, USA
Wolfgang Schulz, Langenau Waterworks, Germany
Nikolaos Thomaidis, Univ. of Athens, Greece
Mark Viant, Univ. of Birmingham, UK
David Wishart, University of Alberta, CA

Scientific committee

Lee Ferguson, Duke University, USA
Oliver Fiehn, UC Davis, California, USA
Felix Hernandez, UJI, Castellon, Spain
Juliane Hollender, Eawag/ETH Zurich
Martin Krauss, UFZ, Germany
Derek Muir, Environment Canada, CA
Heinz Singer, Eawag, CH
Thomas Ternes, BFG, Germany
Nikolaos Thomaidis, Univ. of Athens, Greece

Organizing committee

Juliane Hollender, Eawag/ETH Zurich, CH
Lee Ferguson, Duke University, USA
Heinz Singer, Eawag, CH
Emma Schymanski, Eawag, CH
Paolo Demaria, Demaria Event Management

Deadline for abstract submission: **February 8, 2016**; Deadline for registration: **April 29, 2016**

Further information can be found under <http://www.nontarget2016.ch>

Conference Themes

NonTarget 2016 will address state-of-the-art non-target screening approaches, including analytical technologies for detecting organic contaminants, application to real-world studies, and implementation in risk assessment. The conference with about 100 participants will be a forum to bring together leading scientists from allied disciplines (chemistry, informatics, toxicology) along with stakeholders from industry and regulatory bodies to stimulate scientific exchange, identify future research needs and foster practical application of non-target screening.

The program will feature a mixed format, with keynote lectures from leaders in the field along with shorter oral and poster presentations from conference participants with special consideration for young researchers. Workshops and working groups will be organized to stimulate intense discussions on the applicability of practical informatics tools as well as to trigger exchange of new and emerging strategies for unknown compound identification that could be continued after the conference.

Topic 1: Frontiers in non-target screening: instrumentation, data evaluation, application to micropollutant monitoring in the aquatic environment

This topic will discuss latest developments in high resolution mass spectrometry (HRMS) coupled to gas and liquid chromatography, including different ionization techniques and multi-dimensional separation as well as software tools such as mass spectral prediction. It will extend to their innovative application to monitoring of the occurrence and fate of chemicals within the water cycle (surface water, groundwater, wastewater, drinking water, sediment).

Topic 2: Identification of contaminant transformation products and metabolites formed in biological and technical systems

Formation of potentially harmful transformation products in systems such as biological or chemical water treatment and its prevention by appropriate mitigation is an issue under intense current study. Suspect and non-target screening methods are extremely useful to identify such transformation products. Pathway prediction systems can help to guide this process of detection. Knowledge about metabolites in aquatic organisms or humans can help to link the exposure with effects. This session will discuss how to bring the different fields together to facilitate identification and improve risk assessment.

Topic 3: Tools to prioritize identification: statistics, exposure modeling, toxicity

Thousands of features are revealed in chromatograms of complex environmental samples and identification of all of them is not presently feasible. Therefore, proper prioritization is needed for effective data analysis. Many approaches to prioritization are being developed. Effect directed analysis uses bioassays linked to sophisticated analytical tools for identifying "causative stressors". In more applied fields such as surface water monitoring, frequency of occurrence determined by statistical tools or predicted by modeling can guide the identification work. This session will highlight the state of the art of current prioritization approaches and their practical application to monitoring and regulation.

Workshops on

A. Unknowns contaminant identification from mass spectrometry data:

Working groups on (i) instrument technology (ii) data preprocessing (e.g. grouping/componentization), (iii) spectra libraries, *in silico* fragmentation, structure generation, substructure search (iv) additional evidence (e.g. retention time, toxicity, use data)

B. Prioritization strategies

Working groups on (i) monitoring/field studies (e.g. time series analysis, influent/effluent comparison) (ii) lab experiments (e.g. for transformation product identification), (iii) exposure modelling, (iv) toxicity/effect directed analysis

C. Exchange of data on suspects & unknowns

Working groups on (i) suspect and unknown lists, (ii) demonstration of open-source tools, (iii) application to participants own data, (iv) code clinic