



Cat-App Final Workshop Draft Programme

Thursday 6th September 2018
The SQUARE Brussels
Mont des Arts, 1000 Brussel, Belgium

9:00 – 9:30	Registration and Welcome Coffee	
9:30 – 9:40	Welcome and introductions	<i>Hans Ketelslegers, Concawe</i>
9:40 – 10:10	Read across initiatives to replace animal testing	<i>Thomas Hartung, Johns Hopkins University/CAAT</i>
10:00 – 10:40	Integrated Approaches to Testing and Assessment (IATA)	<i>Bob Diderich/Eeva Leinala, OECD</i>
10:40 – 11:15	Role of Cat-App Project in the Concawe REACH strategy for human health <i>(Followed by Q&A)</i>	<i>Hans Ketelslegers, Concawe</i>
11:15 – 11:30	Coffee Break	
11:30 – 12:15	Biological read-across of complex petroleum substances using human iPS-derived cells <i>(Followed by Q&A)</i>	<i>Ivan Rusyn, Texas A&M University</i>
12:15 – 13:00	Biological read-across of complex petroleum substances using human cell lines <i>(Followed by Q&A)</i>	<i>Tim Gant, Public Health England</i>
13:00 – 14:00	Lunch	
14:00 – 14:30	Gene expression connectivity mapping and its application in Cat-App <i>(Followed by Q&A)</i>	<i>Shu-Dong Zhang, University of Ulster</i>





14:30 – 15:15	Data Science: Integrative data analysis and visualization for chemical-biological read across <i>(Followed by Q&A)</i>	<i>Fred Wright, North Carolina State University</i>
15:15 – 15:30	Coffee Break	
15:30 – 16:00	Replacement of animal testing with new approach methodologies: Where are the opportunities? <i>(Followed by Q&A)</i>	<i>Animal rights representatives (TBC)</i>
16:00 – 16:30	Cat-App: New approach methodologies in a regulatory context <i>(Followed by Q&A)</i>	<i>George Daston, Procter & Gamble</i>
16:30 – 17:00	Discussion and summing up conclusions	<i>Hans Ketelslegers, Concawe</i>
17:00 – 18:30	Cocktail Reception	





Background information on the Cat-App Project

The **overall objective** of the multi-year, transatlantic Cat-App research consortium was to develop a framework supporting the Concawe strategy for human health assessment of complex petroleum substances to meet the regulatory requirements under the REACH¹ legislation. Petroleum substances are prototypical examples of UVCB² materials, which are a particular challenge for science-informed regulatory decision making: given the complexity of these products, current alternative strategies provided in specific regulations, mainly focusing on read across approaches, cannot be applied to petroleum UVCBs. In addition, taking animal welfare considerations, time and testing cost into account, it is practically unfeasible to address hundreds of petroleum products with conventional toxicological guideline studies in animals. The Cat-App framework aims to address this, by applying state of the art technical, statistical and transparent data communication methods to make best use of all available data in an integrative way - facilitating chemical-biological grouping and read across of these and other complex substances. In addition, this framework should be the basis of an intelligent testing strategy, leading to a significant reduction in the use of test animals for the cost- and time effective toxicity testing of petroleum products by concentrating efforts on specific targets where no or insufficient data are available. This work should eventually lead to a more sustainable way for the industry to screen for potential health risks related to the production, transport and use of petroleum products for workers and the population at large

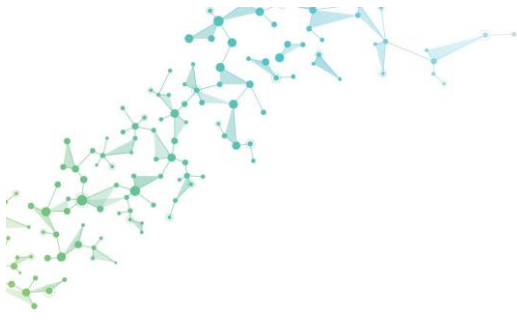
The *Specific Results* achieved:

- A framework for high-throughput chemical-biological read across of UVCB substances by combining multiple streams of information (production type/refining process, physico-chemical properties, analytical compositional data and a comprehensive array of the biological/toxicological data in a broad spectrum of *in vitro* assays);
- A demonstration how UVCB substances may be grouped/categorised by the integrative analysis of all these data for the purpose of risk and hazard assessment using petroleum substances as a case study;

¹ Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency.

² UVCB: Substances of Unknown, Variable composition, Complex reaction products, Biological materials





- A demonstration of how experimental and computational approaches work together to establish a UVCB read across framework which can be applied to a broad spectrum of other complex substances.

Join us on 6th September for the presentation of the final results and to discuss the practical application of these data with various interested stakeholders from academia, industry and regulatory bodies.

