Séminaire

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**Amphithéâtre Henri Benoît**


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# Progresses in Chemical Hazard Assessment


Chemical risk management fundamentally relies on the actual experience of risk: as long as a hazard has not materialised, it can only be estimated through hazard identification and exposure assessment. Both parameters are challenging to control: unproven hazards can only be assumed, and exposure depends on chemical, physical, and biological factors that are often poorly understood.

To rationalise risk management, the most common approach relies on Analogical reasoning and expert judgement (read-across), which leverage known cases to evaluate new situations. Complementarily, QSAR models (Quantitative Structure-Activity Relationship), powered by artificial intelligence, provide predictive tools for anticipating risks. These models result from the digestion of aggregated data and they bring to experts additional evidence on which they can make a decision. More precisely, they can quantify properties, explore data consistency, rationalise extrapolation, and take advantage of multiple channels of information.

This presentation illustrates the application of these tools through concrete examples: auto-ignition temperature, skin permeability and sensitization, ADME profiling (absorption, distribution, metabolism, excretion), and ecotoxicological profiling.


*Les personnes souhaitant rencontrer G. Marcou sont priées de prendre contact avec Loic Jierry.*