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Journée des Doctorants

Lundi 14 Mars (9 h -14h)

Amphi Ampère – Bât. Gabriel

Au programme : 8 posters, 11 présentations orales dont 1 invité surprise + 1 buffet

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New paradigms for European pesticide policy to reduce pressure on the environment

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Despite their benefits for humanity, pesticides pose serious threats to environmental and human health. Those pesticides deemed to be most persistent and dangerous have thus been subject to a series of bans, including several hundred formerly authorized and widely used pesticides that are banned in Europe today, following the emergence of unexpected and unacceptable risks decades after their market introduction. In particular, pesticide transformation products, which form in the environment via abiotic or biotic processes, can pose higher risks to the environment than the parent compound itself. The nature and chemistry of these products is however largely unknown. The safe use of pesticides is one of the biggest challenges of agricultural intensification. Here we argue that a paradigm shift in European pesticide policy is required to reduce pressure on the environment.

I will constructively discuss the process of pesticide environmental risk assessment including major weaknesses in pesticide policy. I will present a new method combining suspect screening and molecular typology for environmental risk assessment of pesticides, which has the potential to detect and identify unknown transformation products. Furthermore, *in silico* molecular typology allows evaluating environmental parameters of transformation products for their potential inclusion in environmental risk studies in the post-registration assessment.

Key words: Pesticide policy, pesticide registration, environmental risk assessment, transformation product, suspect screening