

Platforms for toxicological analysis of chemical and drugs

Scientists involved: Heng Lu, Dr Philippe Nizard, Dr Karla Perez Toralla, Ouriel Caen

Scientists involved previously: Raphaëlle Leclerc, Nicolas Bordet

Our aim is to develop platforms for reliable High Throughput toxicology analysis allowing the toxicological properties of any xenobiotic (including for example drugs or environmental pollutants) to be determined accurately. In addition, to procure an unprecedented tool for toxicology such platform will allow to reduce the number of animals required to establish the safety of a chemical. The use of digital microfluidic will allow to perform experiments, which are totally outside the range of all existing technologies. By allowing to obtain a high level of informations (metabolism, enzymes induction, cytotoxicity, tissue toxicity, body penetration, etc.) for thousands to millions of compounds there are no doubt that such a platform would constitute a great benefit toward the protection of human health and environment. The complementarity of the different elements of our platform will allow toxicology assays for an unprecedented number of compounds leading to the necessary technologic breakthrough in toxicology.

Fundings

IMTCE, Région Ile-de-France, Ville de Paris.

Collaborators

Within UMRS775: Dr Isabelle De Waziers, Dr Philippe Beaune

Dr J.-C. Baret, Droplets, Membranes and Interfaces Group, Max Plank Institute, Germany

Fluigent company. Paris. France