

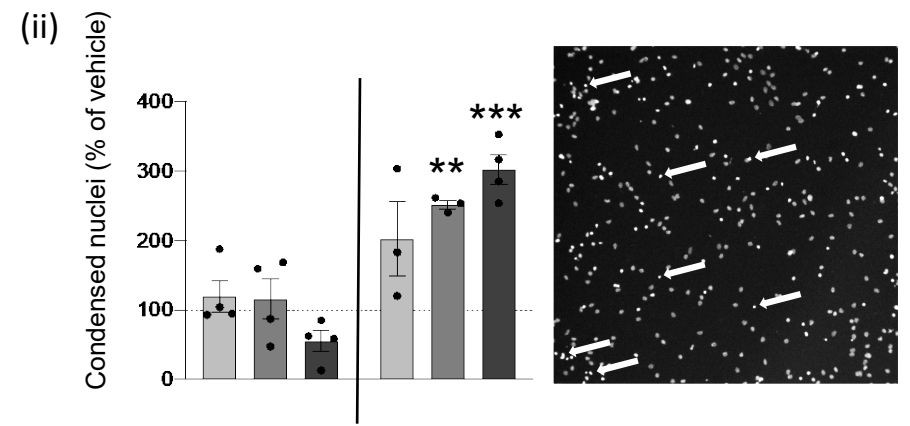
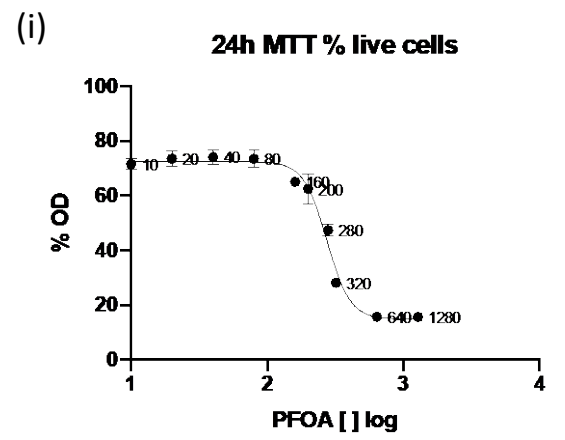


Cellular platforms for the study of the toxic effects on animal and human health of mixtures of persistent environmental pollutants (POPs) and reciprocal concentrations (one-health toxicology)

Objective Identification *in vitro* screening of PFAS molecules on pluripotent stem cells. Analysis of selected substances *in vivo* and *ex vivo* to study their effect on neurodevelopment.

Materials and Methods In vitro models of Rat Embryonic Stem Cells isolated from blastocyst; isolation of Neural Stem Cell from fetuses exposed to molecules in utero through maternal exposure; complex behavioral tests to investigate learning and memory in adulthood

Results



Evaluation of toxicity by conventional method (i) and by High Content Screening (ii)

Morris water Maze test (iii)

Conclusions this project allows to elucidate the effect of PFAS at the level of central nervous system; to apply a translational approach from *in vitro* to *ex vivo* and *in vivo* models; in compliance with the principles of 3Rs, essential in animal experiments.

Future Proposal Use this screening platform to test mixtures of PFAS; Test this platform on other types of pollutants

References

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