

En uno momento dado

Highlights of SETAC Europe @ Barça:
Ecotoxicology

Barça speak

- You only see it when you get it
- Every advantage has its disadvantage
- Before I make a mistake, I don't make it
- The Catalans cannot beat you but you can loose from them



Johan Cruijff



A cruijffian approach to identifying highlights

- If you cannot get into the room, there's a lot going on
 - Microplastics
 - Metals – models and mixtures
 - Omics and evolutionary responses
 - Invertebrate – vertebrate comparisons

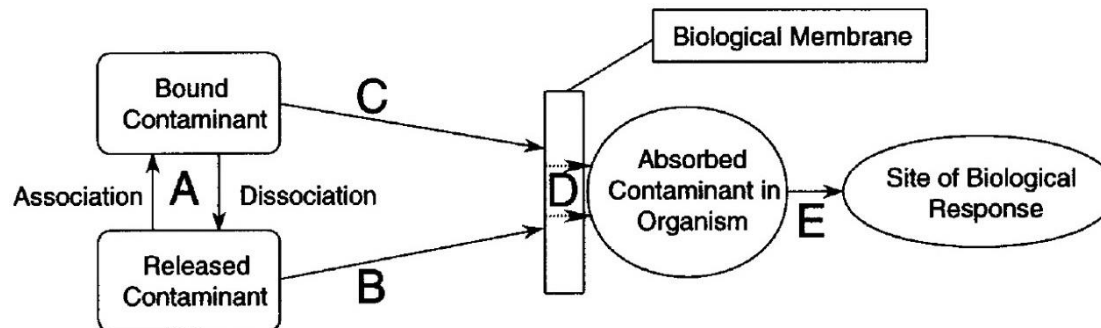
Microplastics

- Microplastics in the ocean not only from river discharge, also from atmospheric fall-out
- Size-selective uptake of microplastics in benthic invertebrates
- The field of microplastics is maturing – more effect studies with environmentally relevant exposures are needed



Metals – models and mixtures

- Increased understanding of metal bioavailability
- Comprehensive modelling of speciation, uptake kinetics and dynamics
- Mixtures additive at low concentrations



Omics and evolutionary approaches



- High-throughput biology is there to serve risk assessment
- A European initiative to co-ordinate omics advances to risk assessment
- Gene copy number variation contributes to adaptive responses, also in parthenogenetic (“clonal”) lineages of *Daphnia*

Invertebrate and vertebrate models

- Zebrafish: top model for developmental toxicology, but need to expand to other fish models
- Comparative (functional) genomics to identify commonalities in toxicant responses
- Disruption of lipid homeostasis: from *Daphnia* to mammals



What I felt missing

- Toxicants produced by genetically modified plants – and interactions
- Bio-based chemical synthesis and risk assessment – ‘green’ chemicals
- Animal-microbe interactions – disturbance of a co-adapted complexes

Become a sportsman to serve risk assessment

Half of the people can be part right all of the time
Some of the people can be all right part of the time
But all of the people can't be all right all of the time
Abraham Lincoln

You can observe a lot by watching
Yogi Berra