

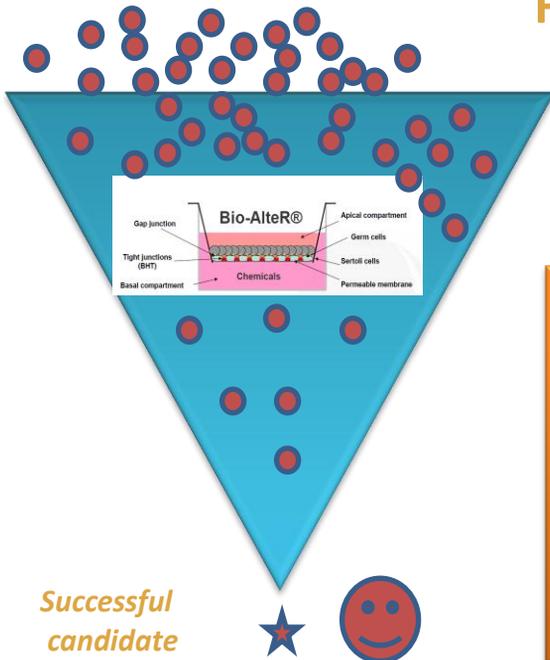
# Agrochemical Application

## Background

The exposure to some agrochemicals such as crop protecting agents, veterinary disinfectants, and wood preservatives is now known to have an effect on male fertility.

However, the identification of male fertility toxicants and their mechanisms of action remain a major scientific challenge during the safety assessment of such products. Thorough data profiles for agrochemicals products are required to support the risk assessments. Regulatory authorities rely on *In vivo* studies to evaluate the impact of these substances on testicular function. These studies are costly, time-consuming, and require a high number of animals to be sacrificed, and do not yield relevant data on the substance's mechanisms of action.

*In vitro* alternatives are a cost effective solution, recommended by some authorities to avoid animal testing.



## FROM A SCREENING PLATFORM....

Bio-AlteR® adult or juvenile model

Blood testis barrier (BTB) integrity  
*Trans-epithelial resistance (TEER) measurement*

✓ Modification of cell number populations  
Cell viability and FACS analysis  
Specific cell gene expression analysis  
*(6 different testicular cellular population and BTB components)*

✓ Endocrine Disruptor effects  
Specific cell gene expression analysis  
*(hormones & signalling pathway)*  
✓ Bio-AlteR® Sertoli Focus  
✓ Sertoli cell culture / Leydig cell culture  
*(primary cells or cell line)*

## .....TO A MODE OF ACTION DETERMINATION

## Agrochemical Application

### Why is Bio-AlteR® the solution to your testicular toxicity issues ?

- Bio-AlteR® is a **3D cell based assay unique on the market.**
- Bio-AlteR® allows you to **assess, anticipate and address potential testicular toxicity issues due to xenobiotics.**
- Bio-AlteR® provides **reliable safety data on male fertility, relevant to effects on humans.**
- Bio-AlteR® allows substance testing at **«physio-toxicological»** concentrations.
- Bio-AlteR® is a **medium throughput assay** allowing the testicular toxicity screening of a large number of compounds, (8 weeks in average between the compound reception and the data report sending).
- Bio-AlteR® provides a deep understanding of the **mechanisms of toxicity in male fertility.**
- Bio-AlteR® **dramatically reduces the use of animals** (from 20 to 30 times).
- Bio-AlteR® is a **cost effective** solution for reprotox studies during the REACH Process.