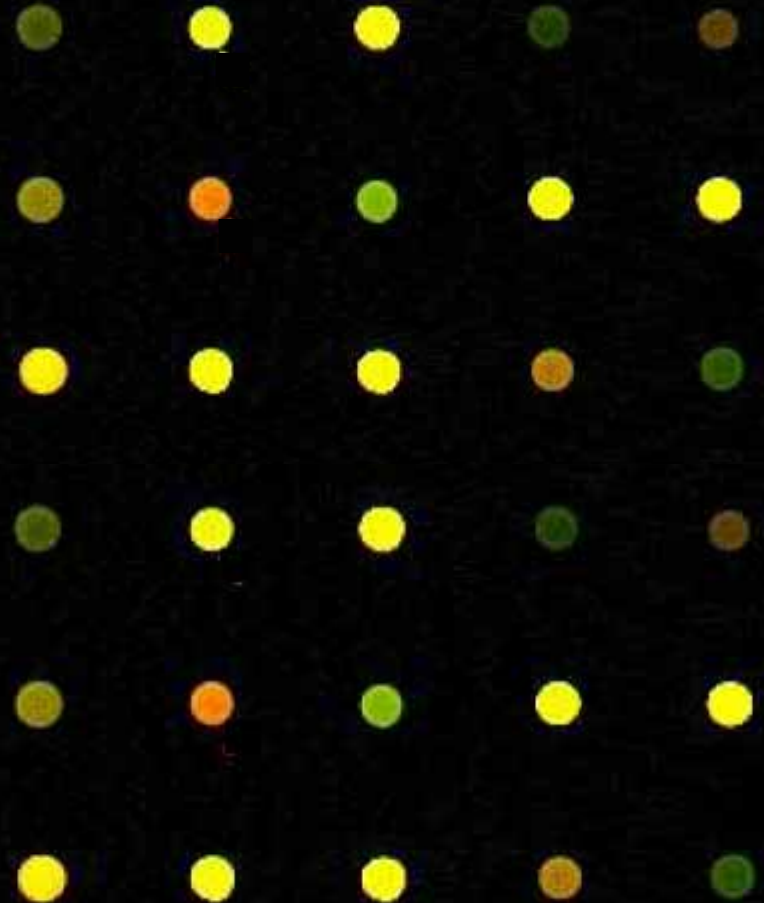


New approaches to endocrine disruptor issue

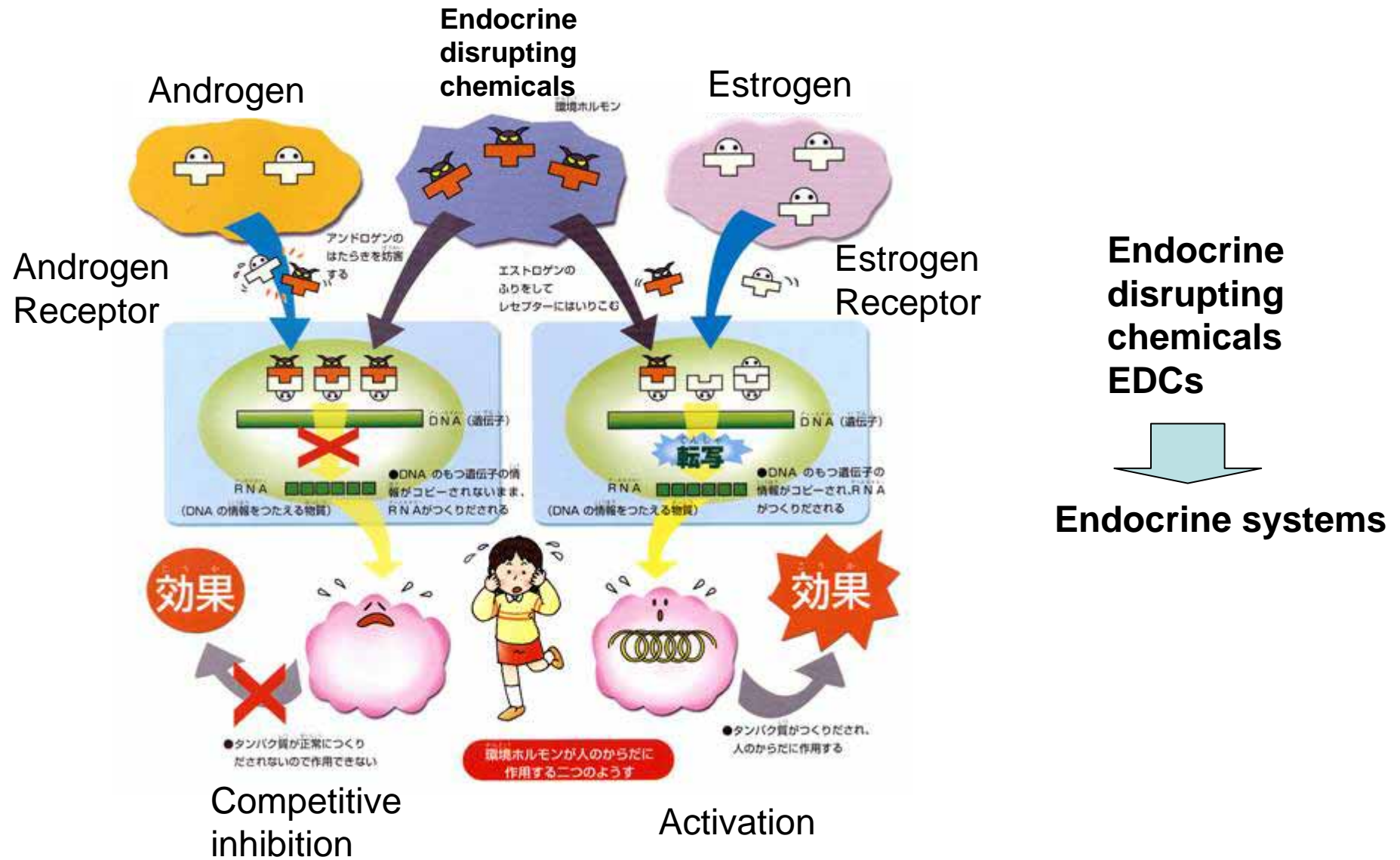
Effects of estrogenic chemicals estimated by gene expression profile

Hajime Watanabe and Taisen Iguchi

National Institutes of Natural Sciences



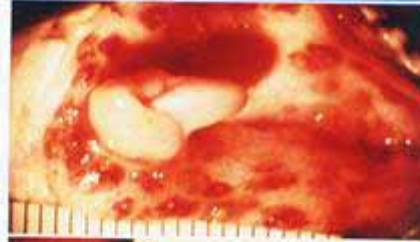
From textbook of elementary school...



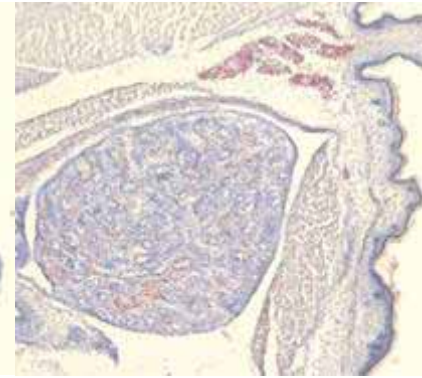
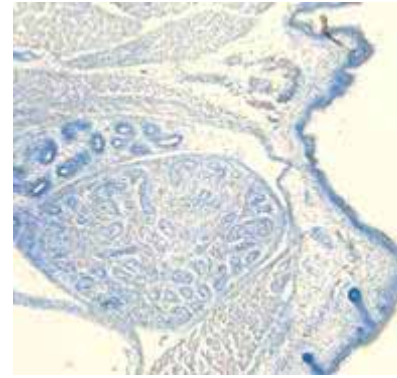
Birds



Alligator



Mouse



Endocrine
disrupting
chemicals
EDCs



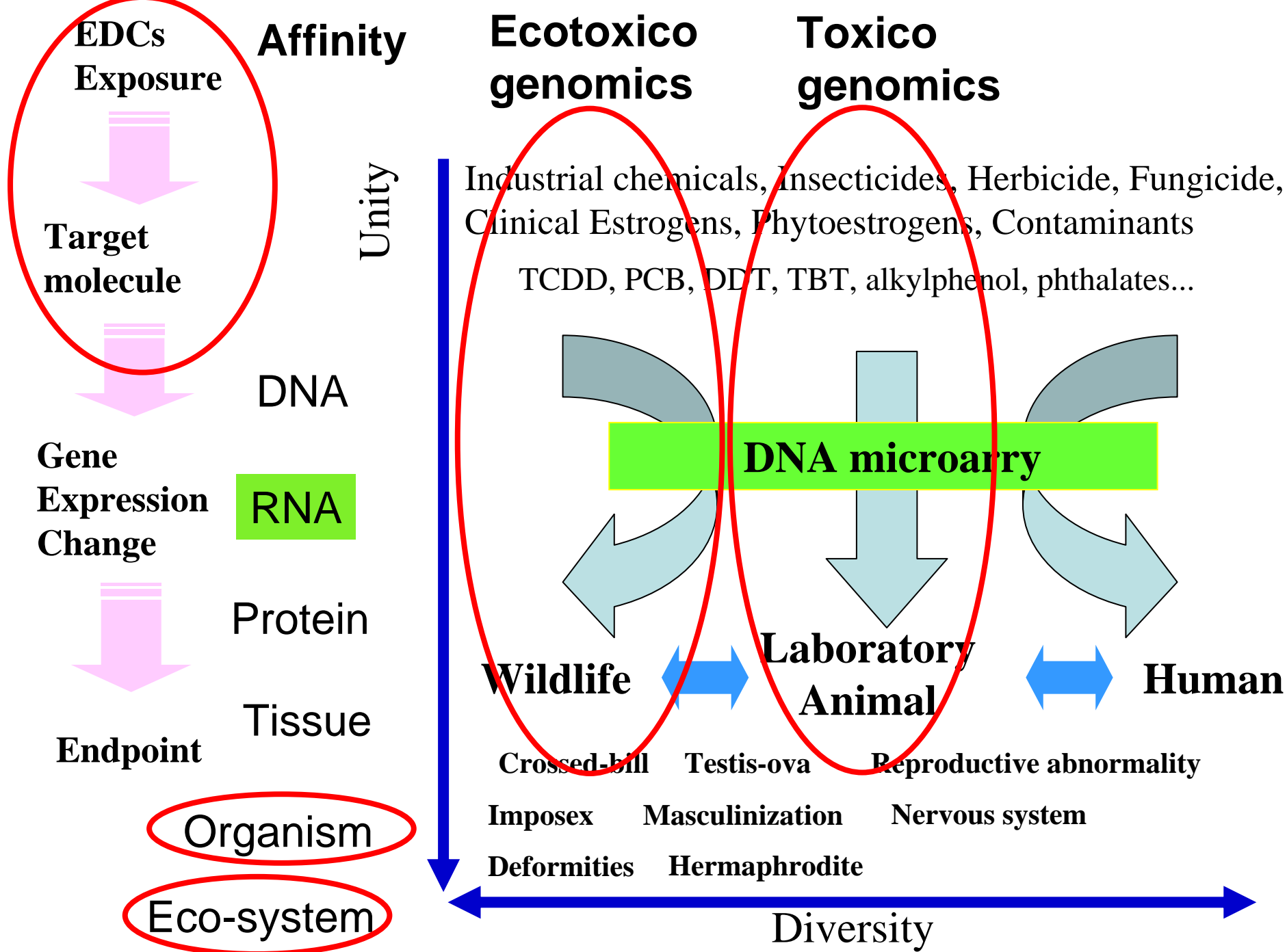
Endocrine
systems

Targets of TCDD
and TBT are not
hormone receptors



正常なオス

ペニスをもったメス



New approaches to endocrine disruptor issue

- **Toxicogenomic approach**
 - Estrogen and chemicals
 - Tissue specificity
 - Temporal specificity

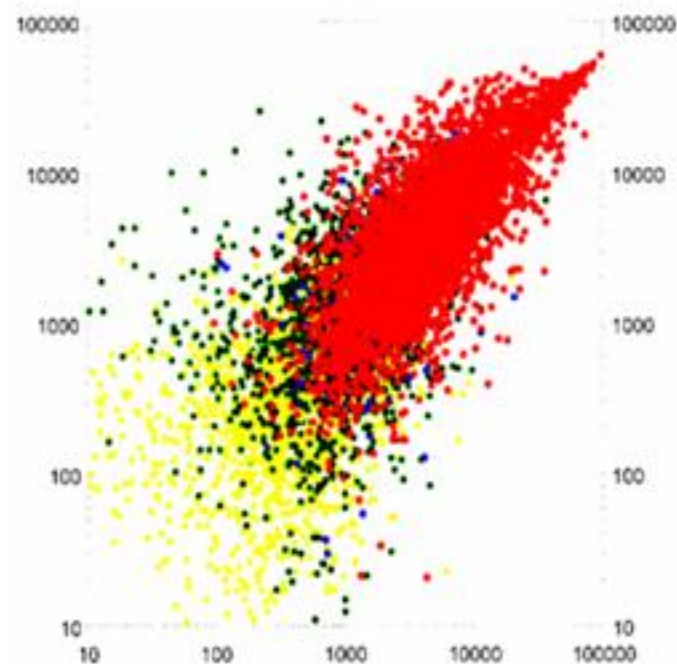
Mouse
- **Ecotoxicogenomics**
 - Comparative approach
 - Example of TBT and other chemicals

Water flea
Daphnia magna
ミジンコ
- **Direct target identification**
 - Old but new approach

Human/Mouse/vitro

Phenotype anchoring

Phenotype \longleftrightarrow Gene Expression Changes



Model: Adult uterus