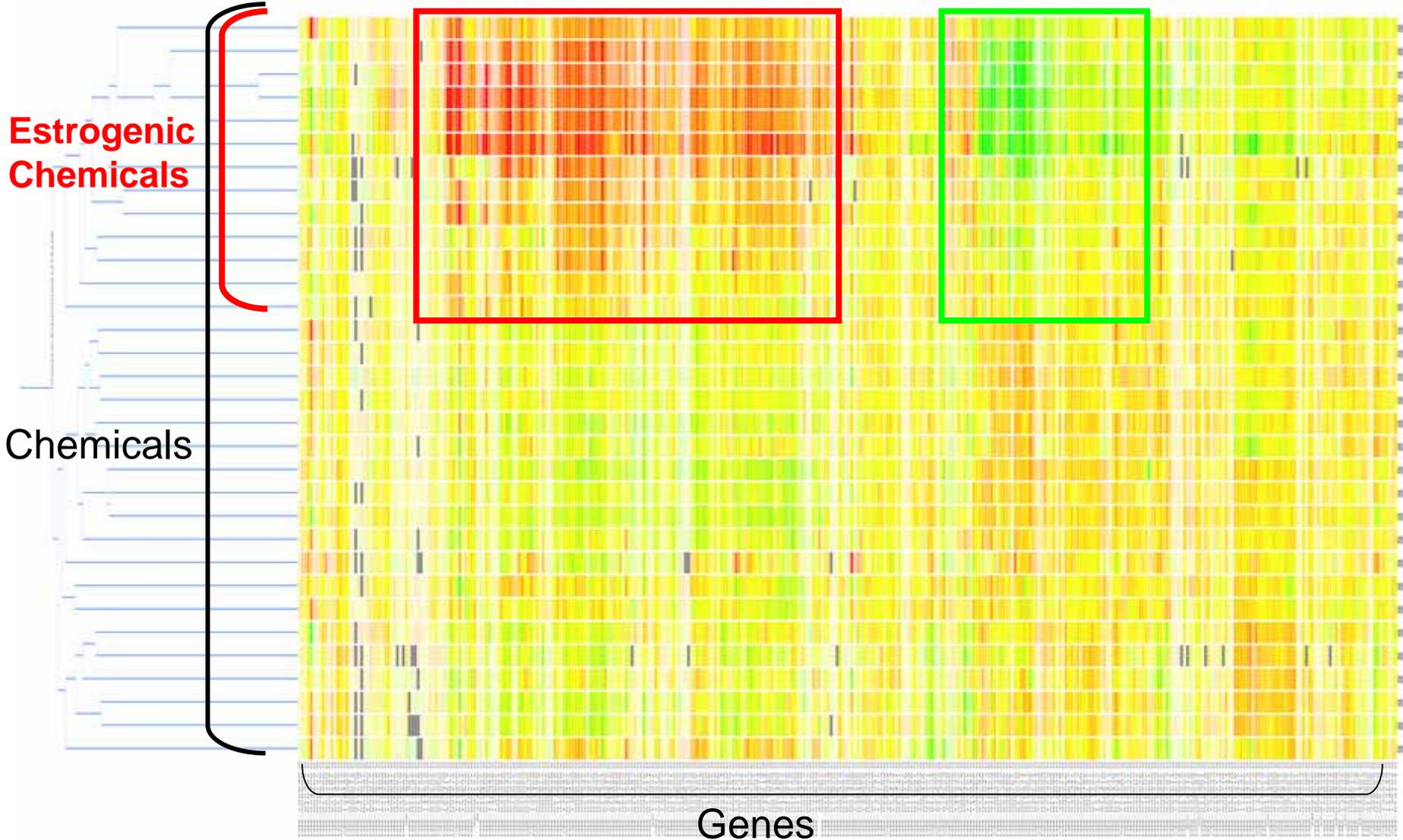


Evaluation of estrogenic activities by DNA microarray

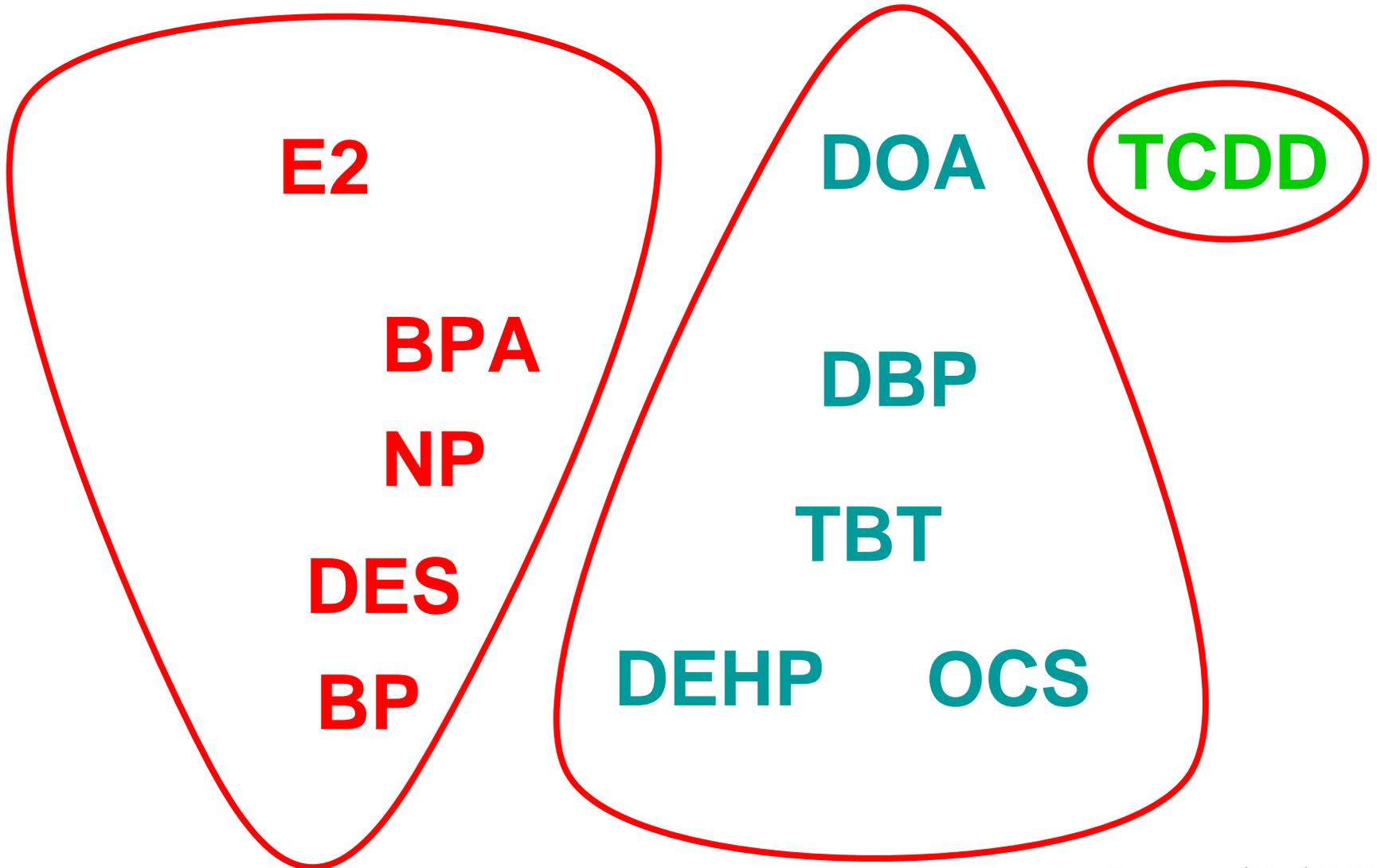
Hierarchical clustering analysis

■ induced ■ no change ■ repressed



Cluster of chemicals in uterus and liver

Uterus

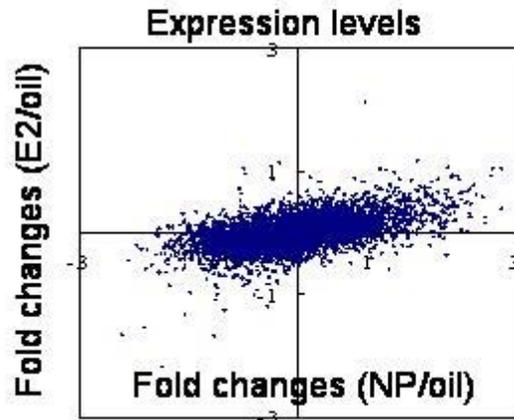
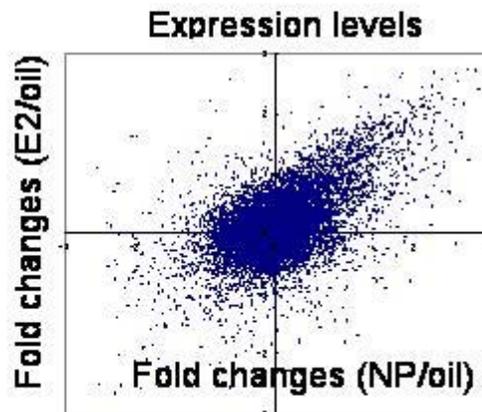
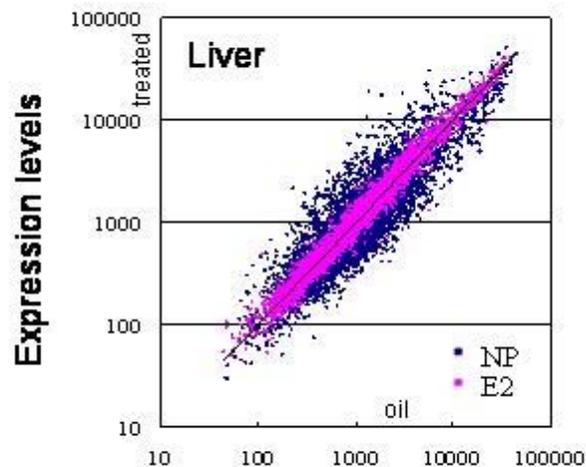
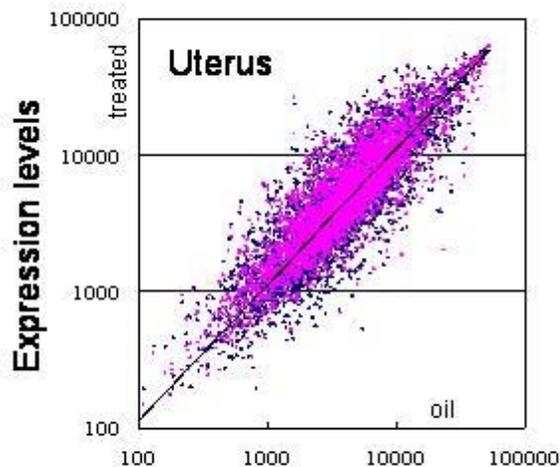


New approaches to endocrine disruptor issue

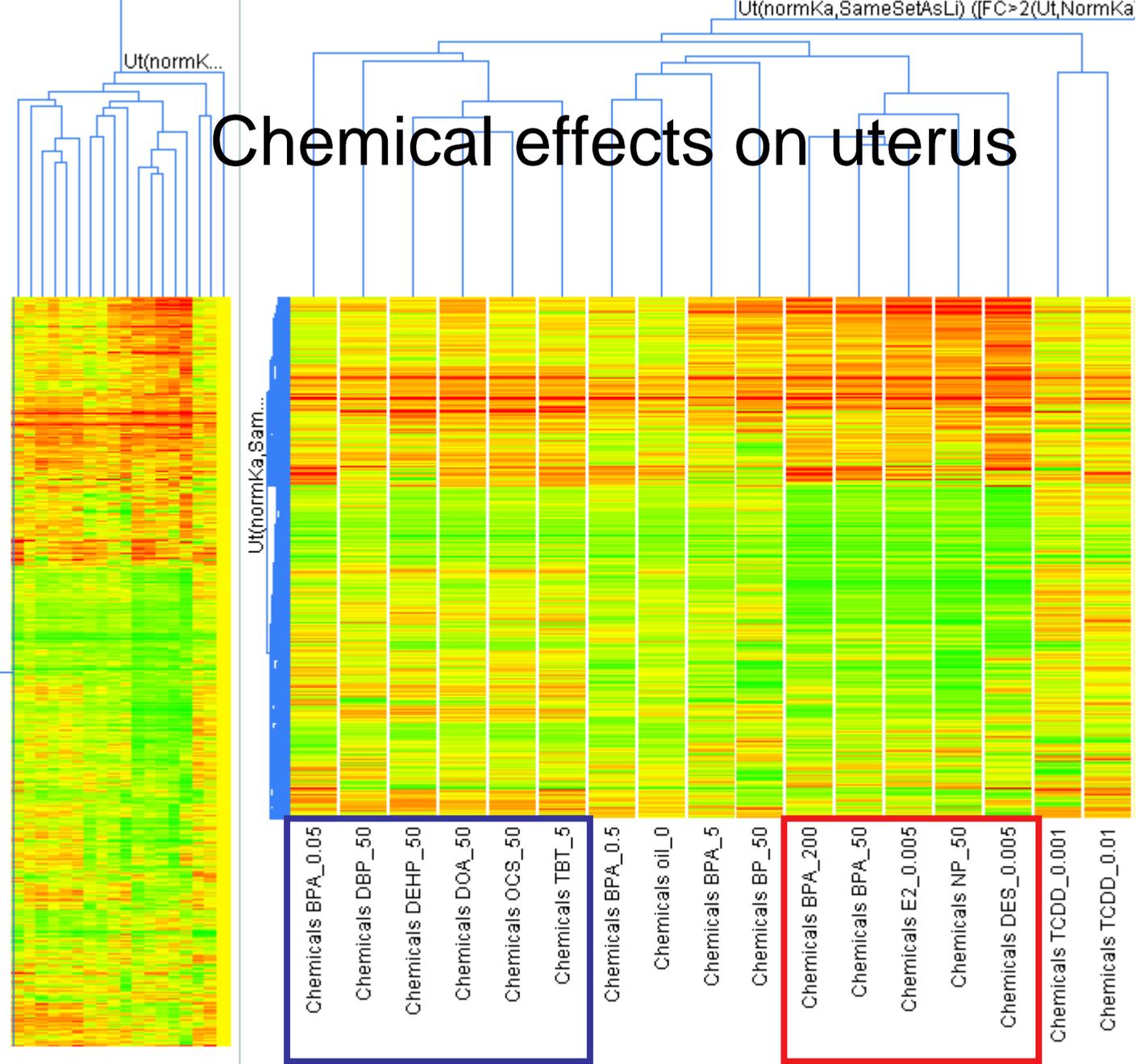
- **Toxicogenomic approach** **Mouse**
 - Estrogen and chemicals
 - **Tissue specificity**
 - Temporal specificity
- **Ecotoxicogenomics**
 - Comparative approach
 - Example of TBT and other chemicals

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

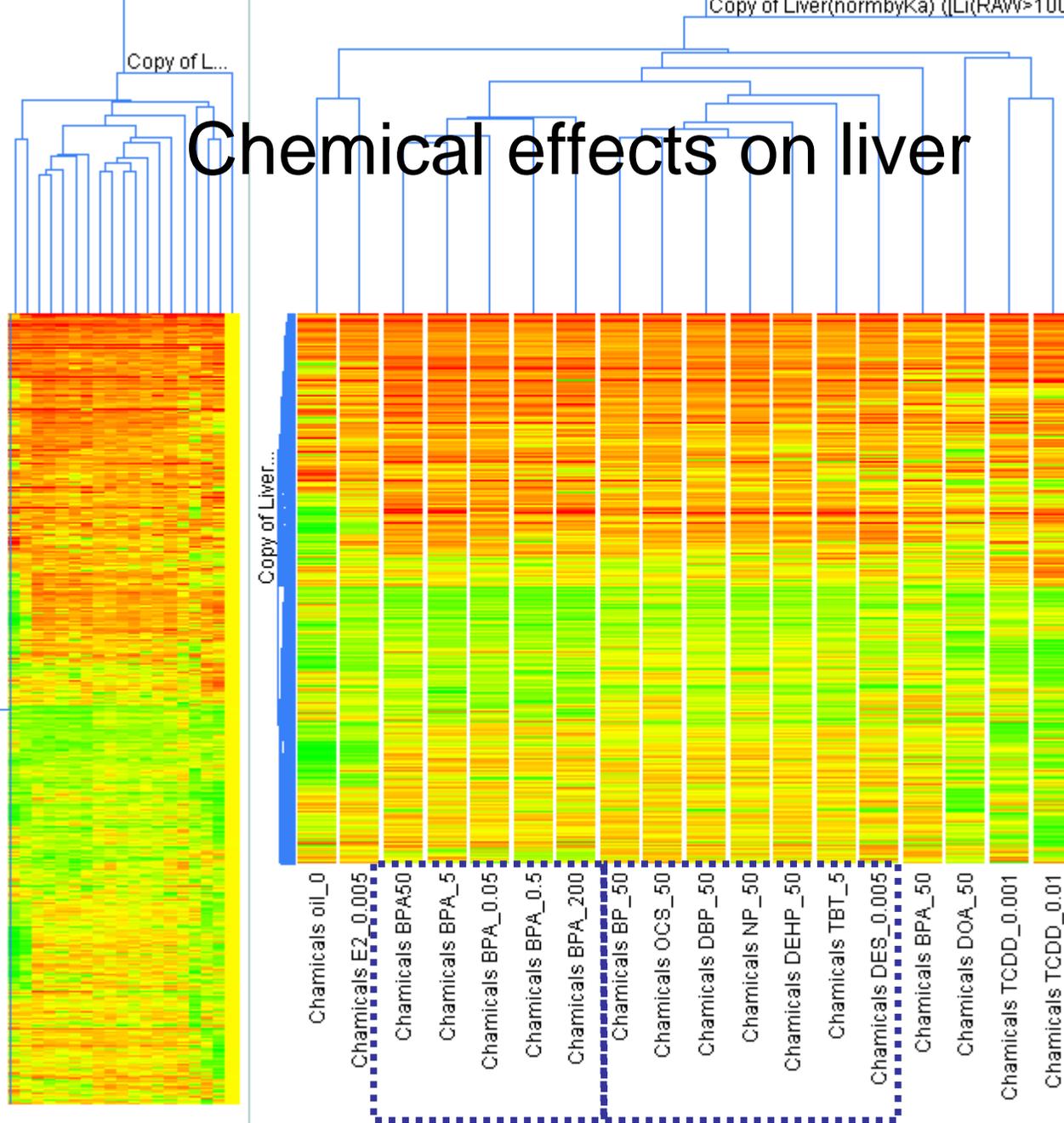
E2/NP induced genes in uterus and liver



Chemical effects on uterus



Chemical effects on liver



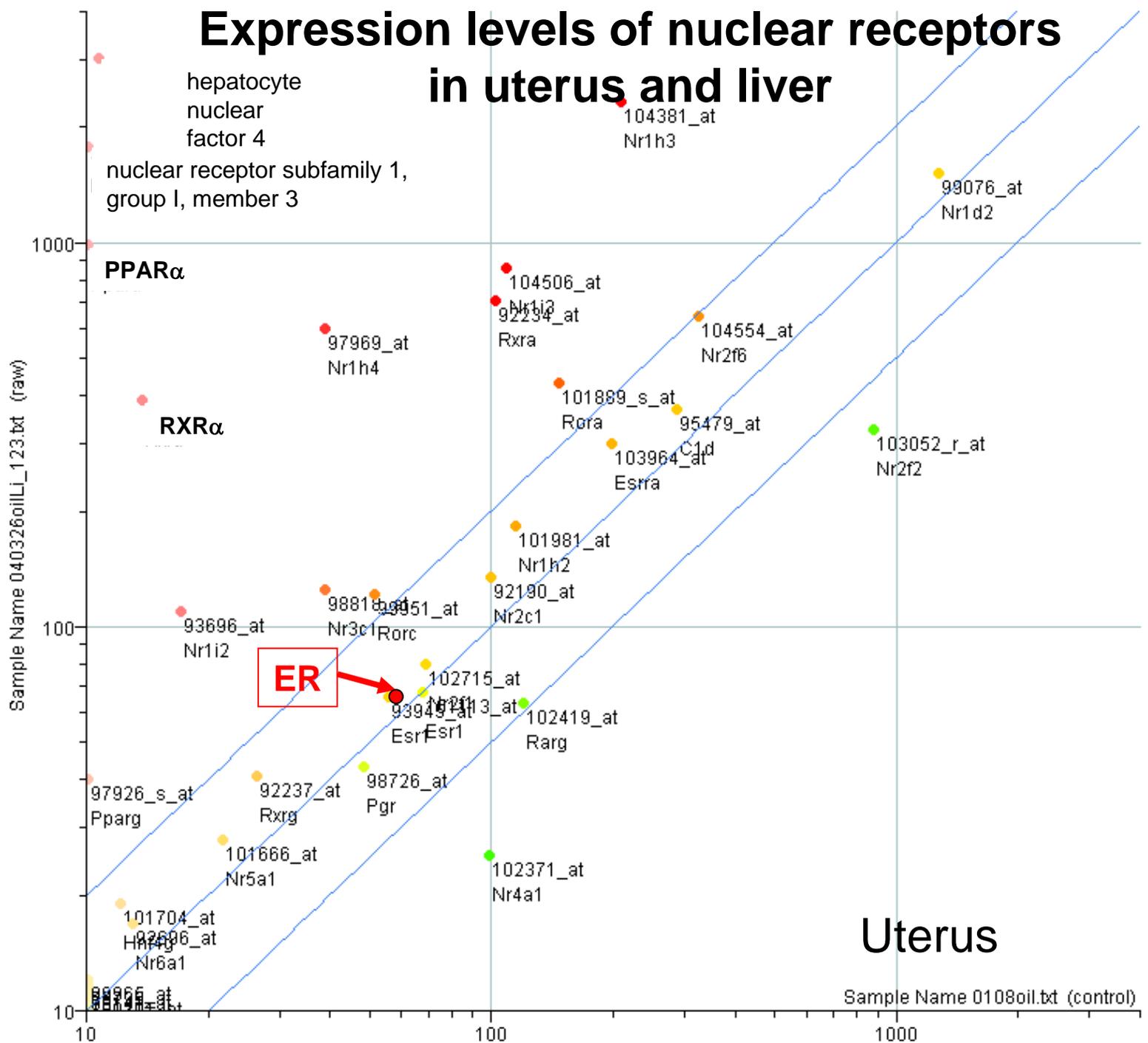
Selected Gene Tree:

Copy of Liver(normbyKa) (Li...

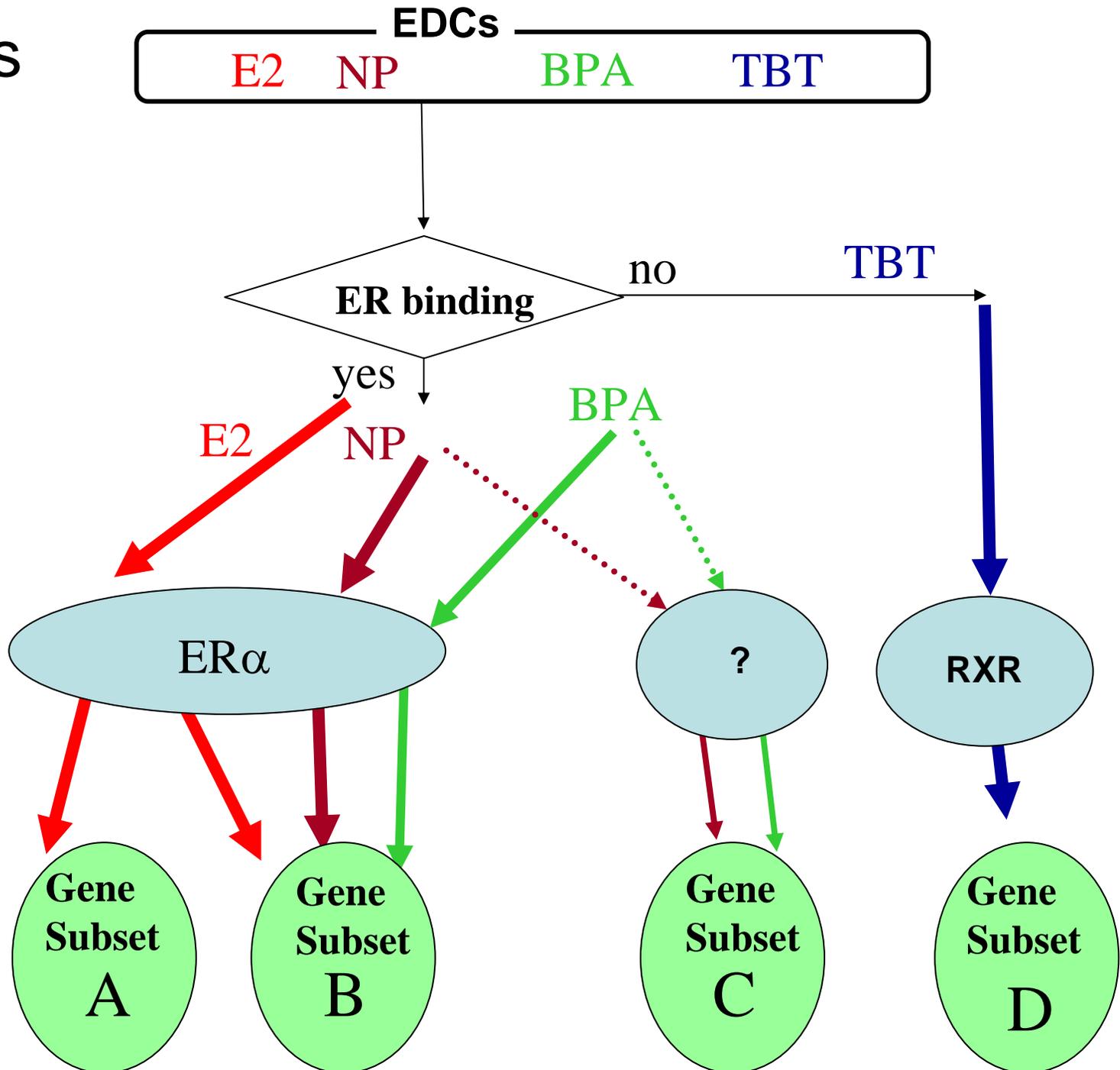
Colored by: Copy of Liver(normbyKa) (Default Interpret...

Expression levels of nuclear receptors in uterus and liver

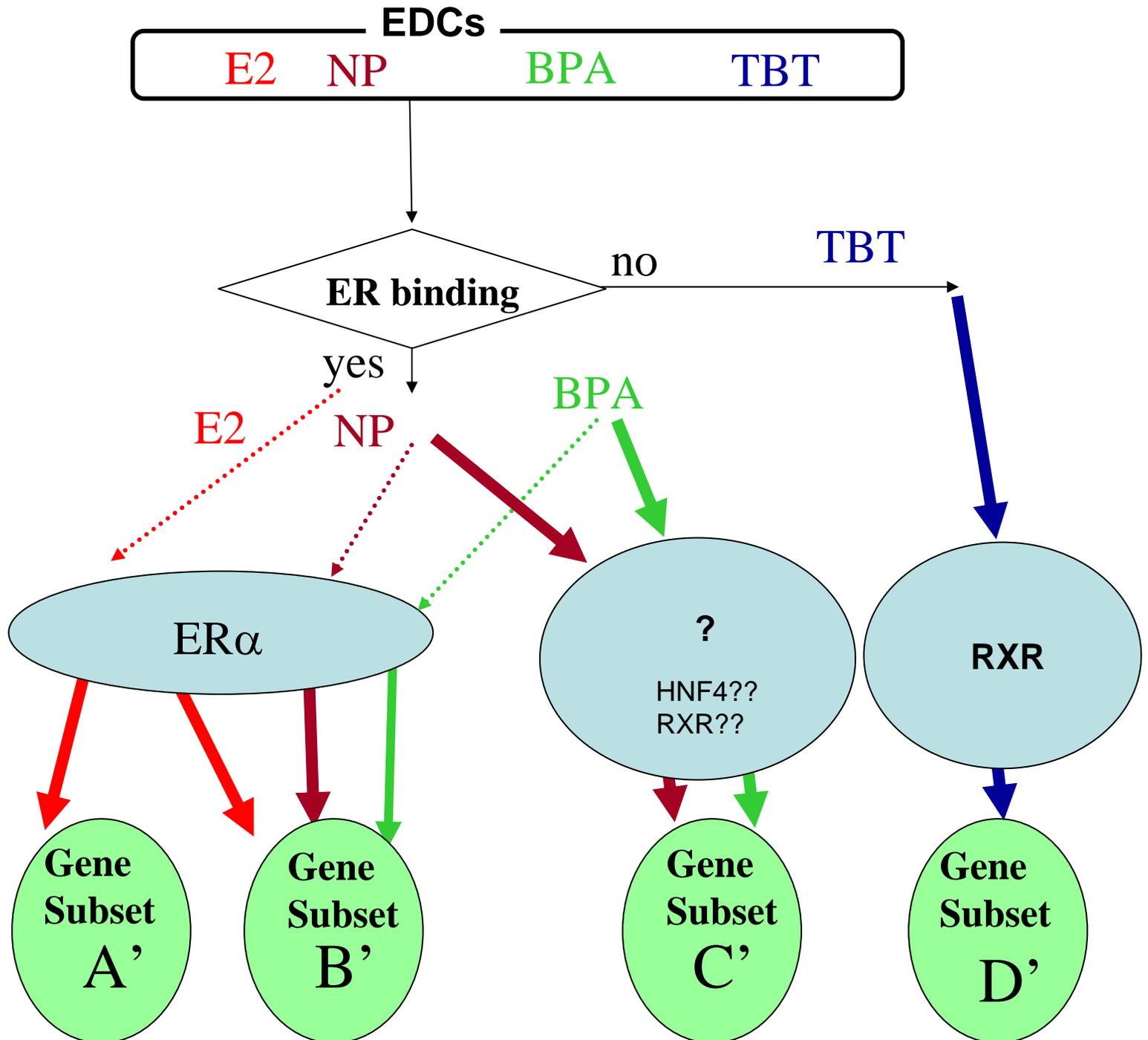
Liver



Uterus



Liver



Cluster of chemicals in uterus and liver

