









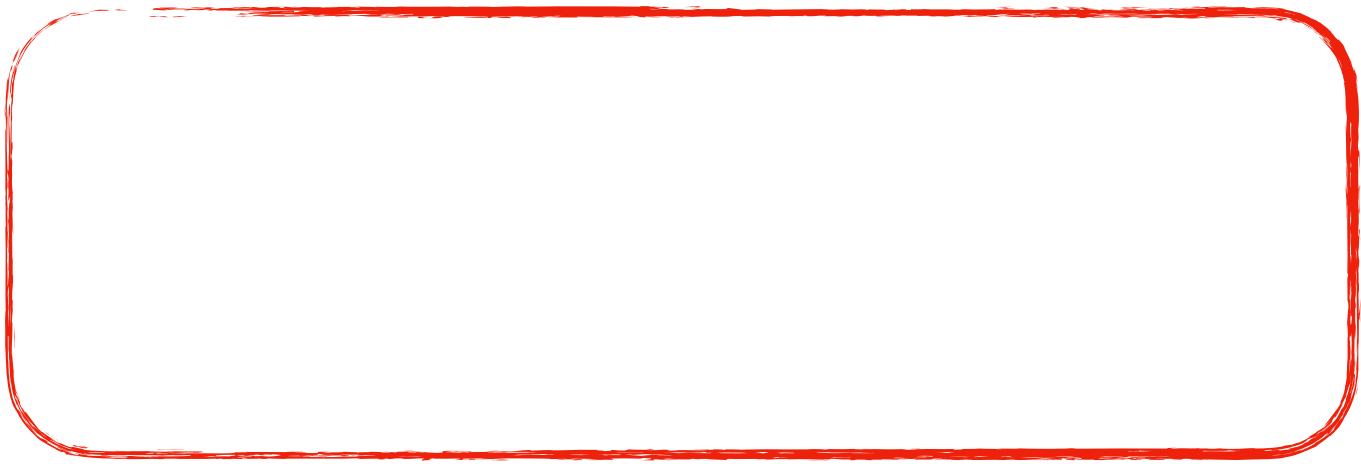


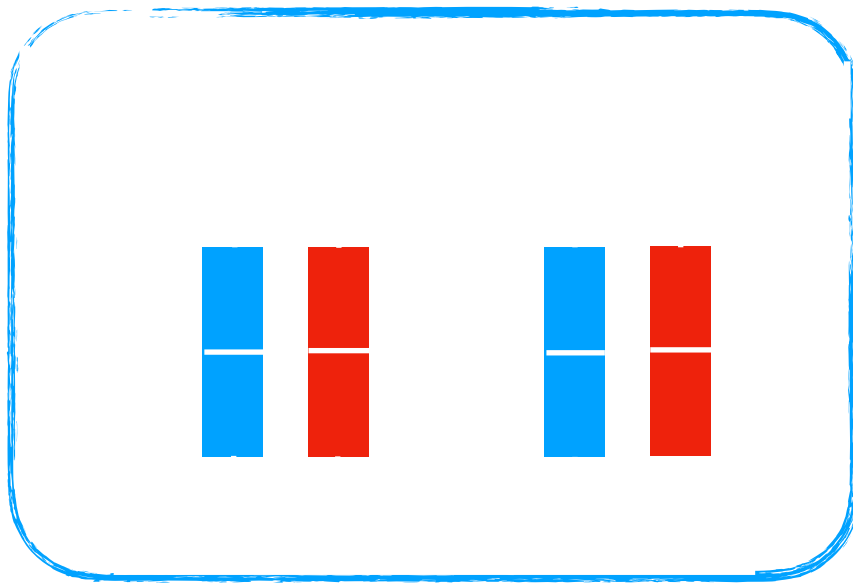
● Methodology







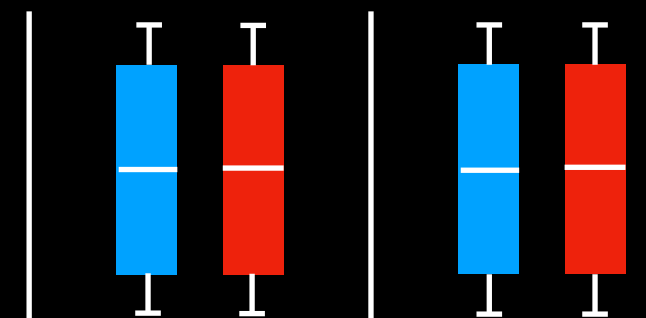




Comparing RNA-Seq vs  
microarray for whole body  
sample

Do microarrays and RNA-Seq tell a  
consistent story in *T. castaneum*?

Microarray vs RNA-Seq



# Introduction...

Reasons for the discrepancy:

- Sample
- Methodology

Why is this important?

- Helps eliminate 1 of the two variables in the controversy.
- If indeed Type 4 is true, *Tribolium* provides a novel insight in the evolution of dosage compensation more specifically on the down-regulation of the X-linked gene expression in females.

# Ohno's Paradigm for Dosage Compensation

“During the course of evolution, an ancestor to the placental mammals must have escaped a peril resulting from the hemizygous existence of all the X-linked genes in the male by doubling the rate of product output of each X-linked gene. Once this step was accomplished, the female no longer needed two X's in her somatic cells. Hence, the dosage compensation mechanisms by random inactivation of one or the other X evolved.”

–Susumo Ohno, 1967