



PKC AND *DFOXP* ARE NECESSARY FOR OPERANT SELF-LEARNING

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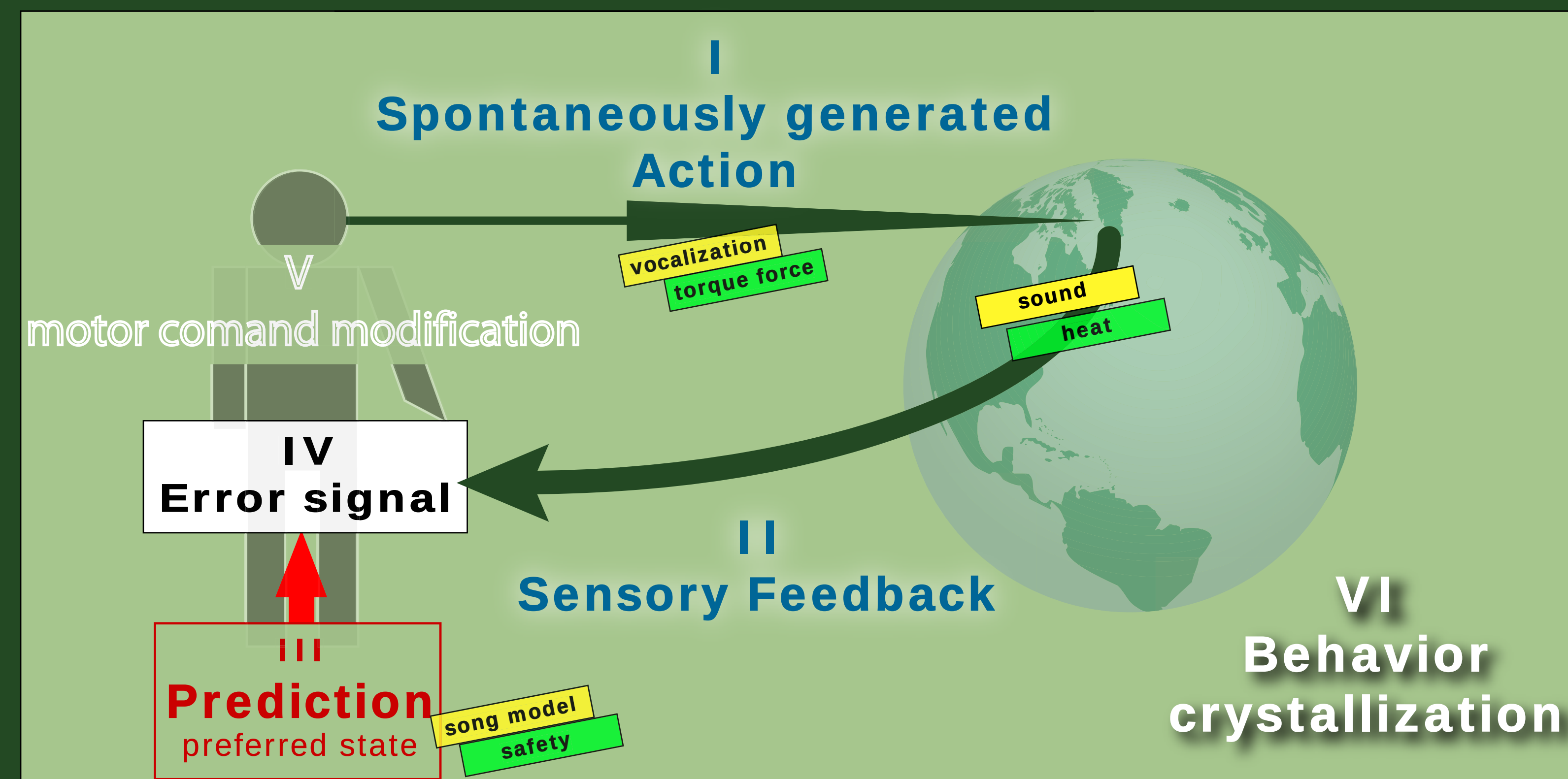
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<http://lab.brembs.net>



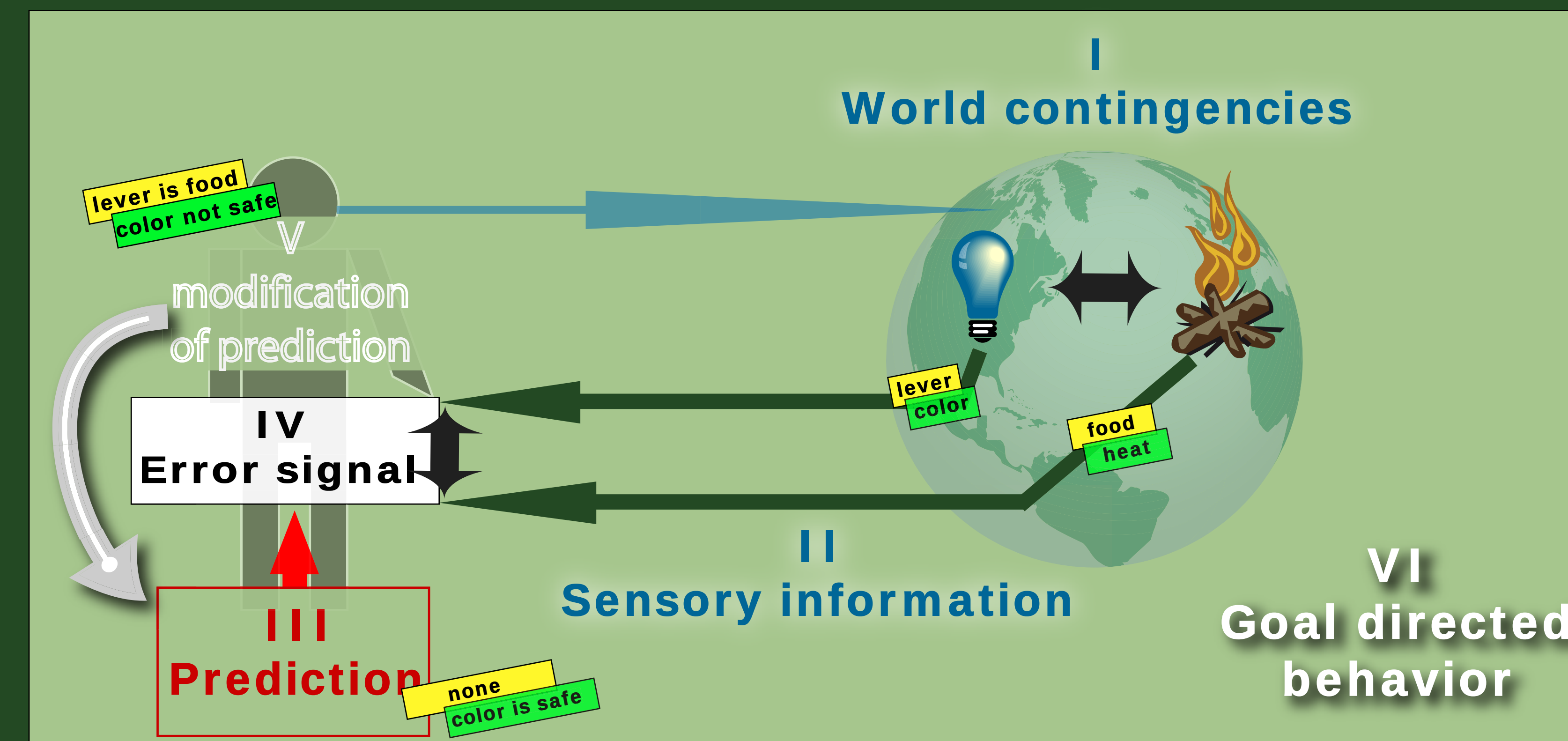
self-learning

assigning value to particular self-generated action

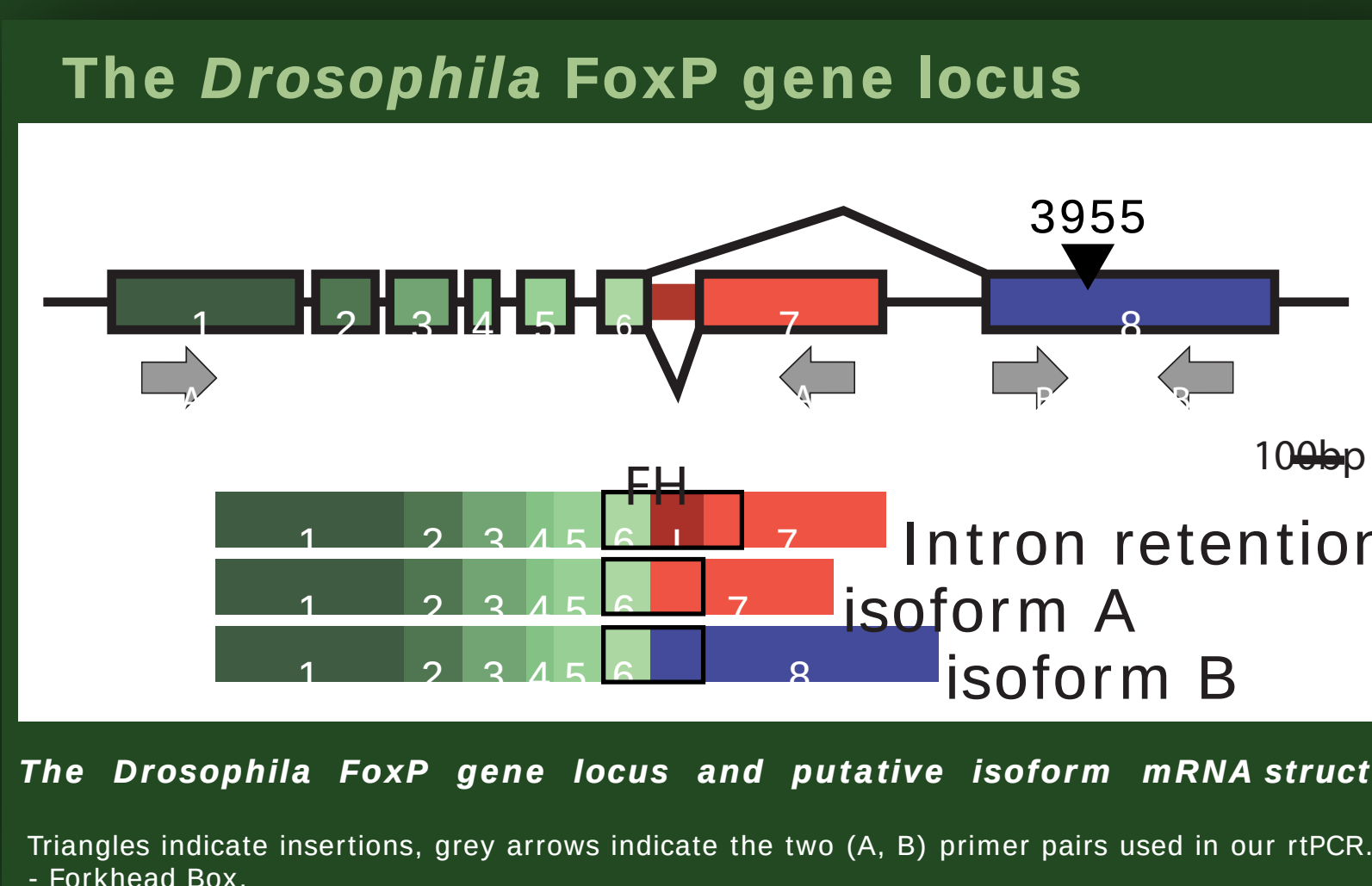
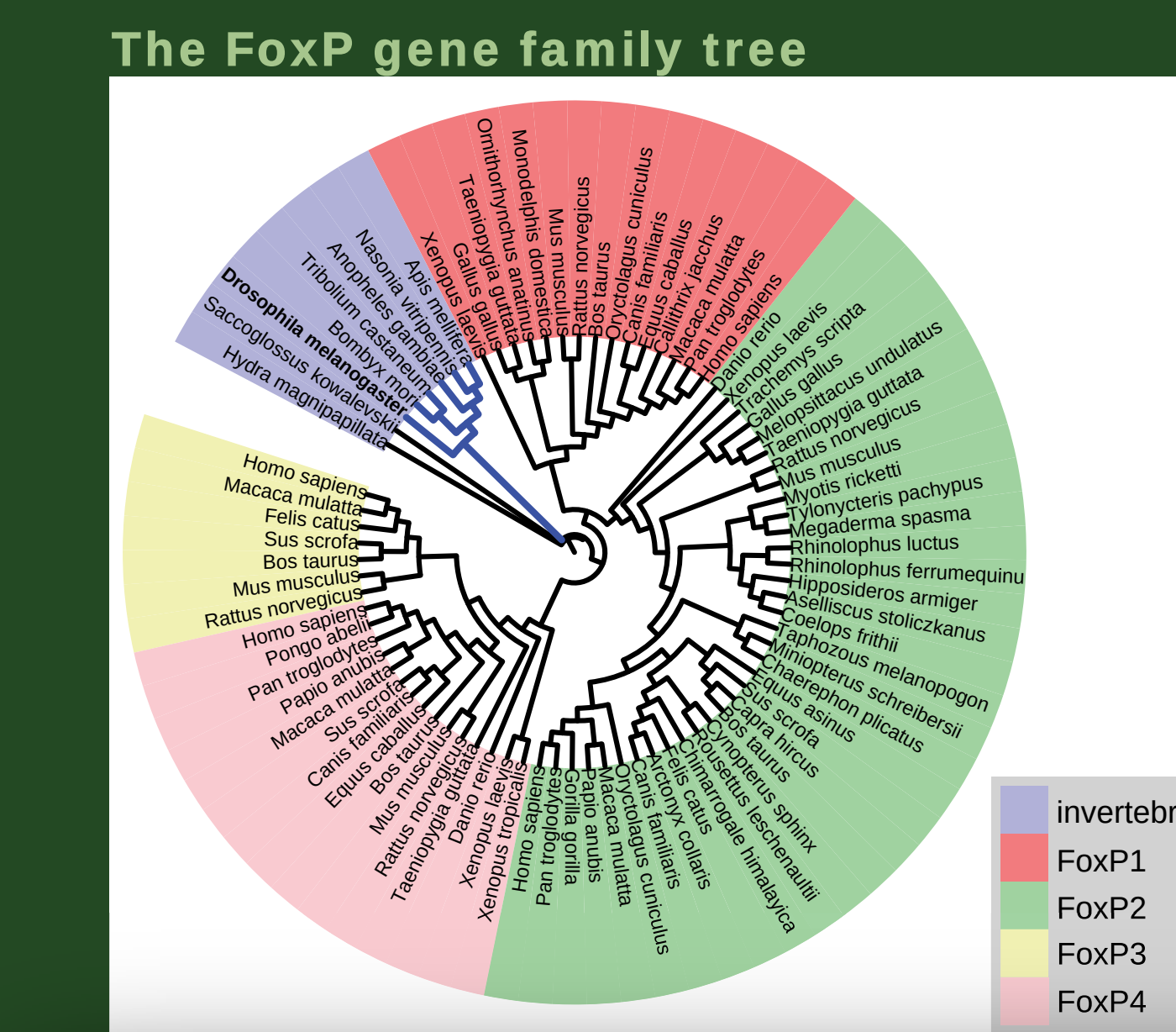


world-learning

assigning value to sensory stimuli



dFoxP is necessary for self-learning formation



P-element insertion 3955

RNAi in Exon 8

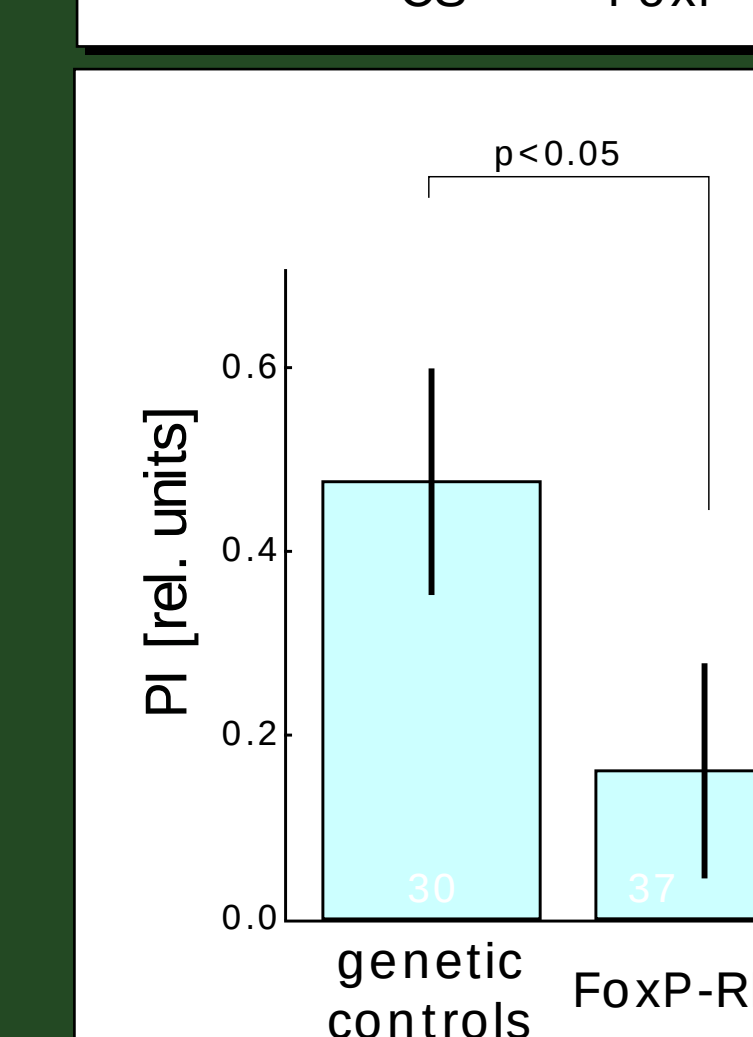
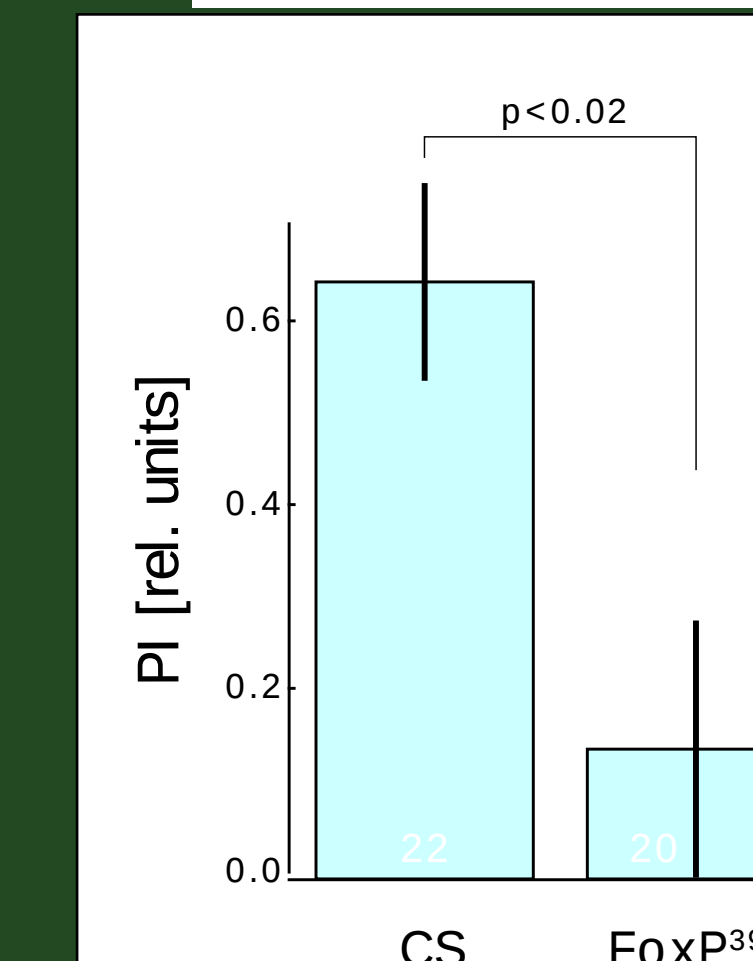
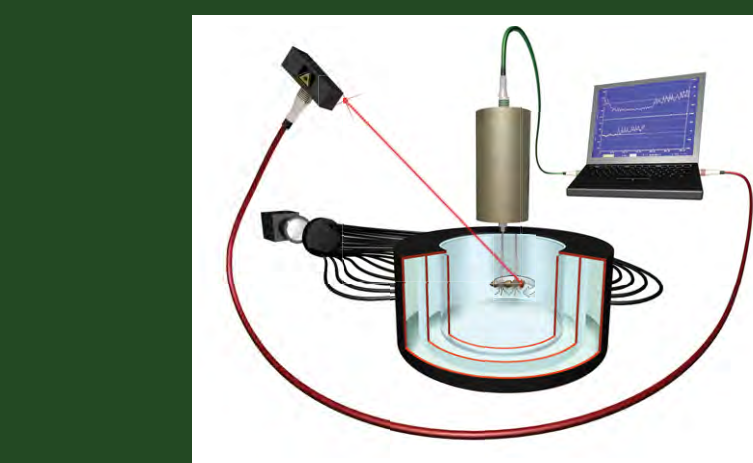
mRNA level

isoform A
CS FP 1347bp

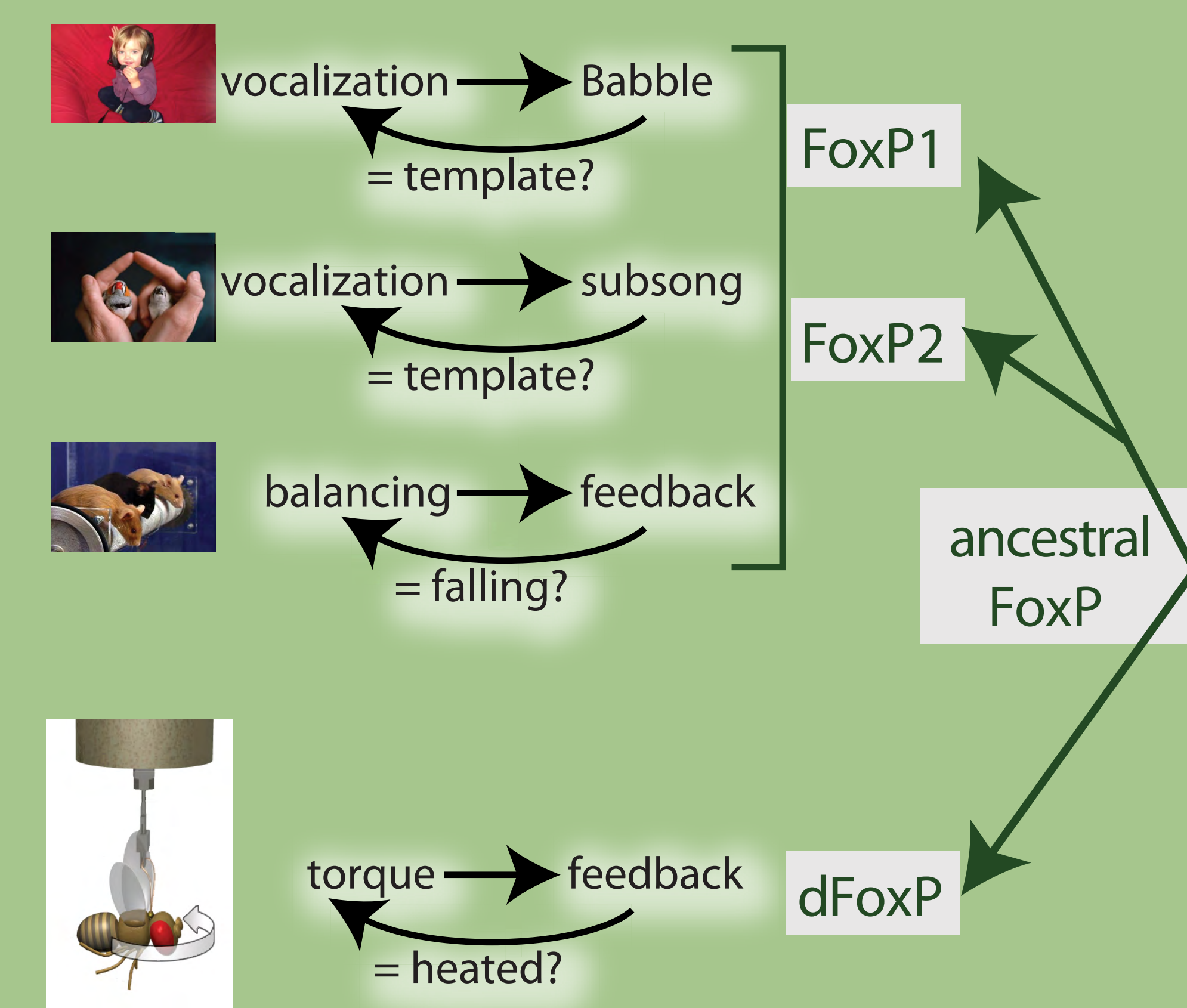
isoform B
CS FP 532bp

isoform A
CS RNAi 1347bp

isoform B
CS RNAi 532bp

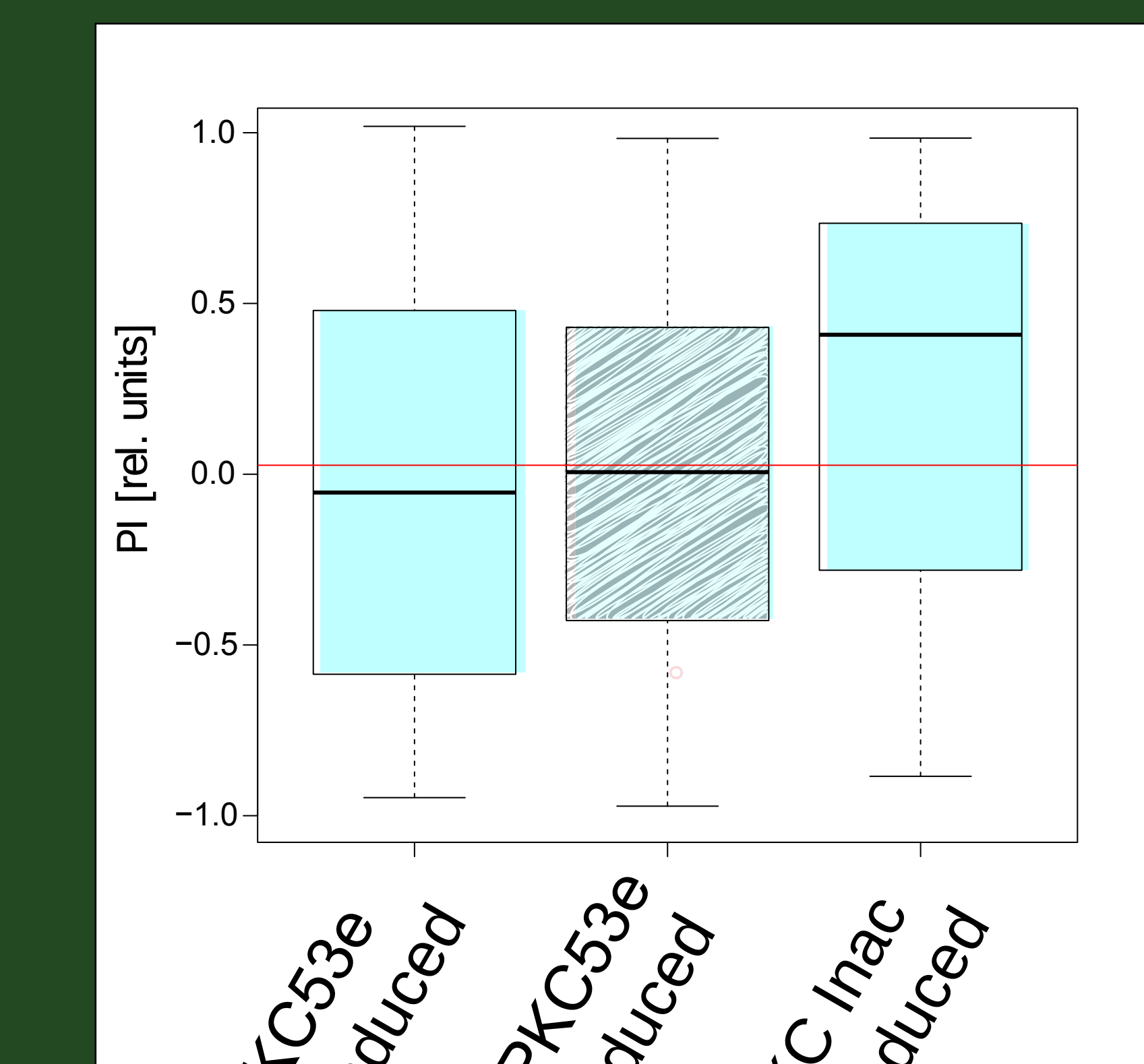
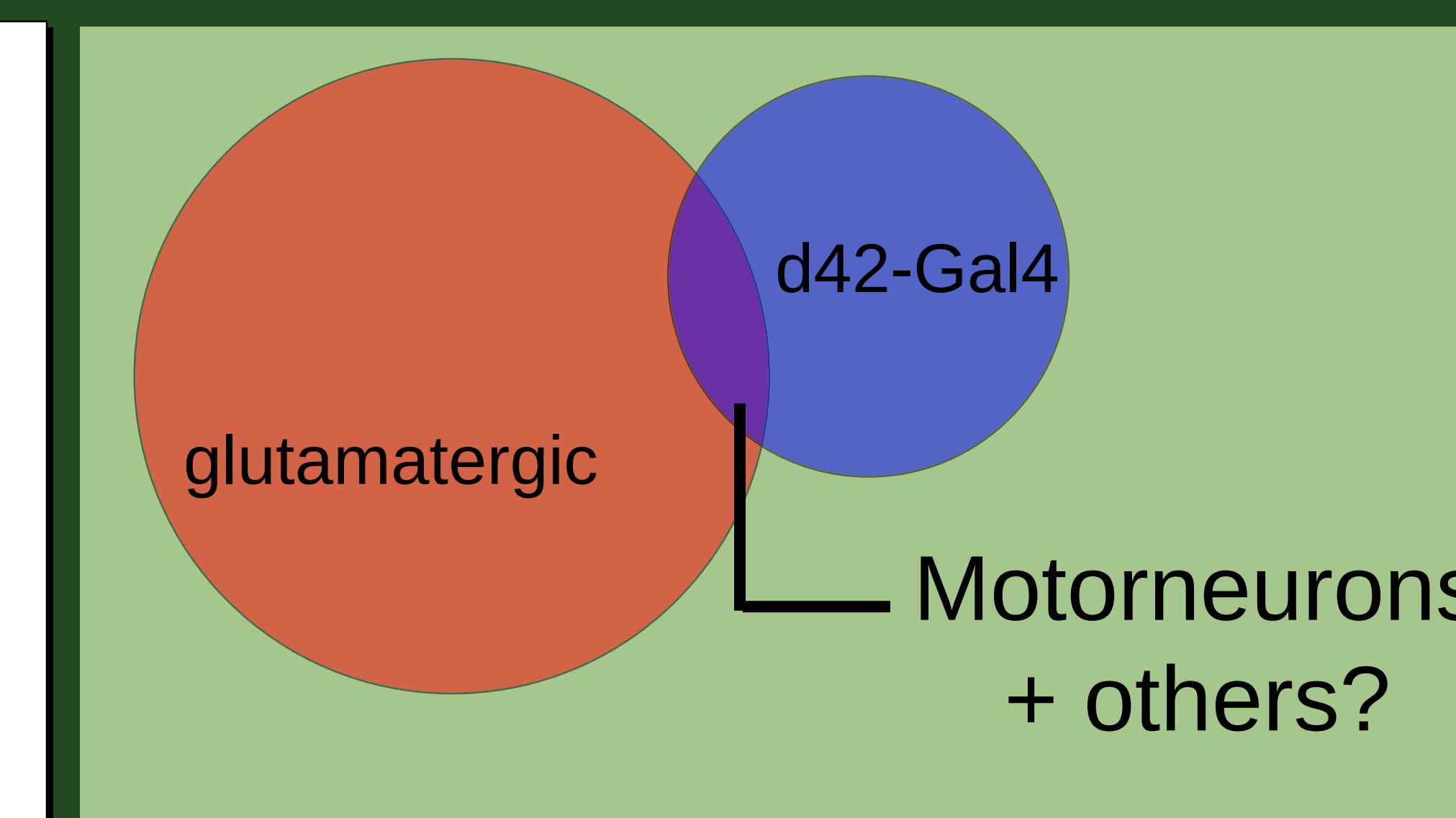
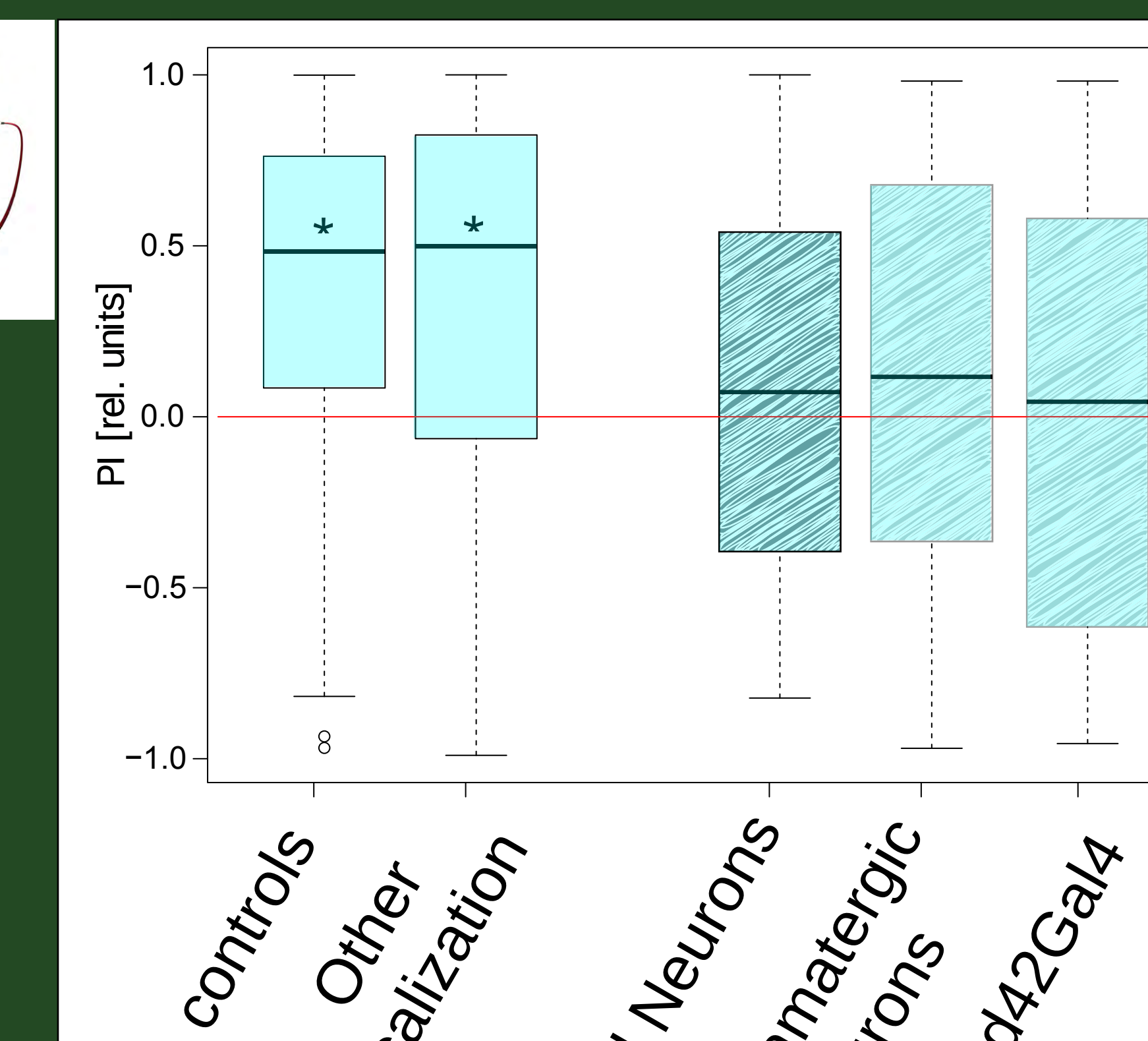
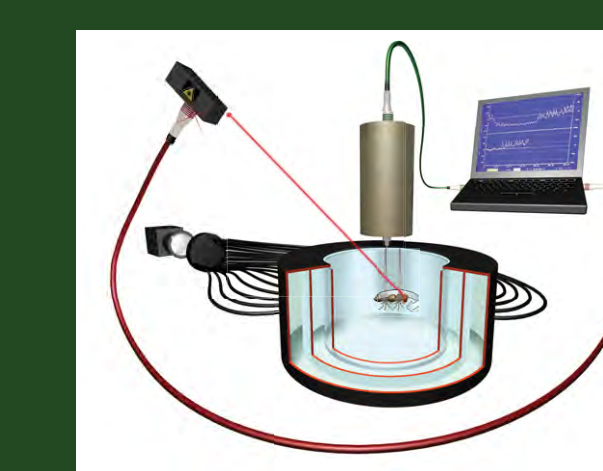


Language has evolved from an ancestral self-learning machinery



self-learning formation dependent on a classical PKC in motorneurons?

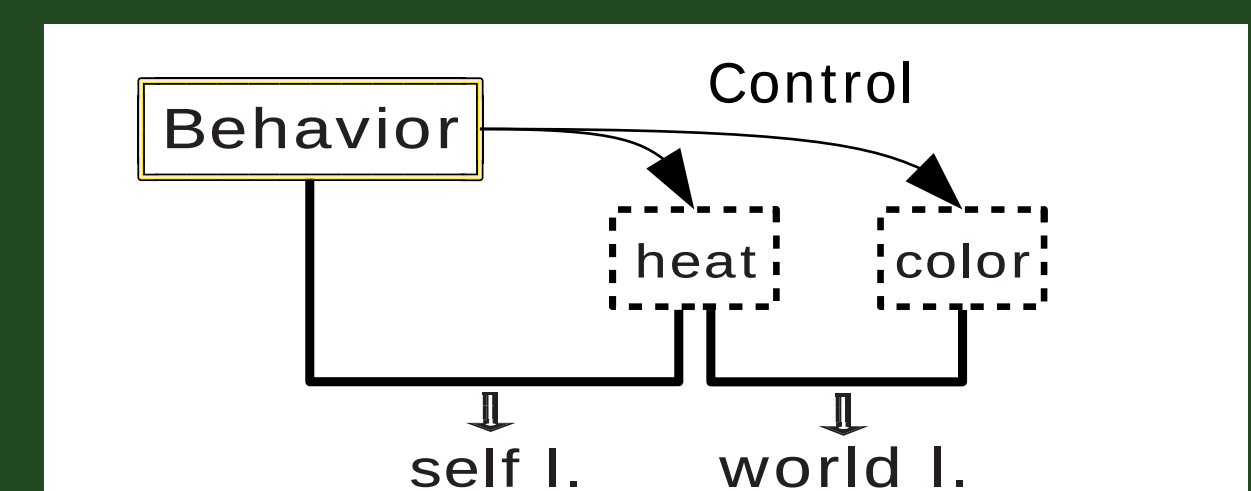
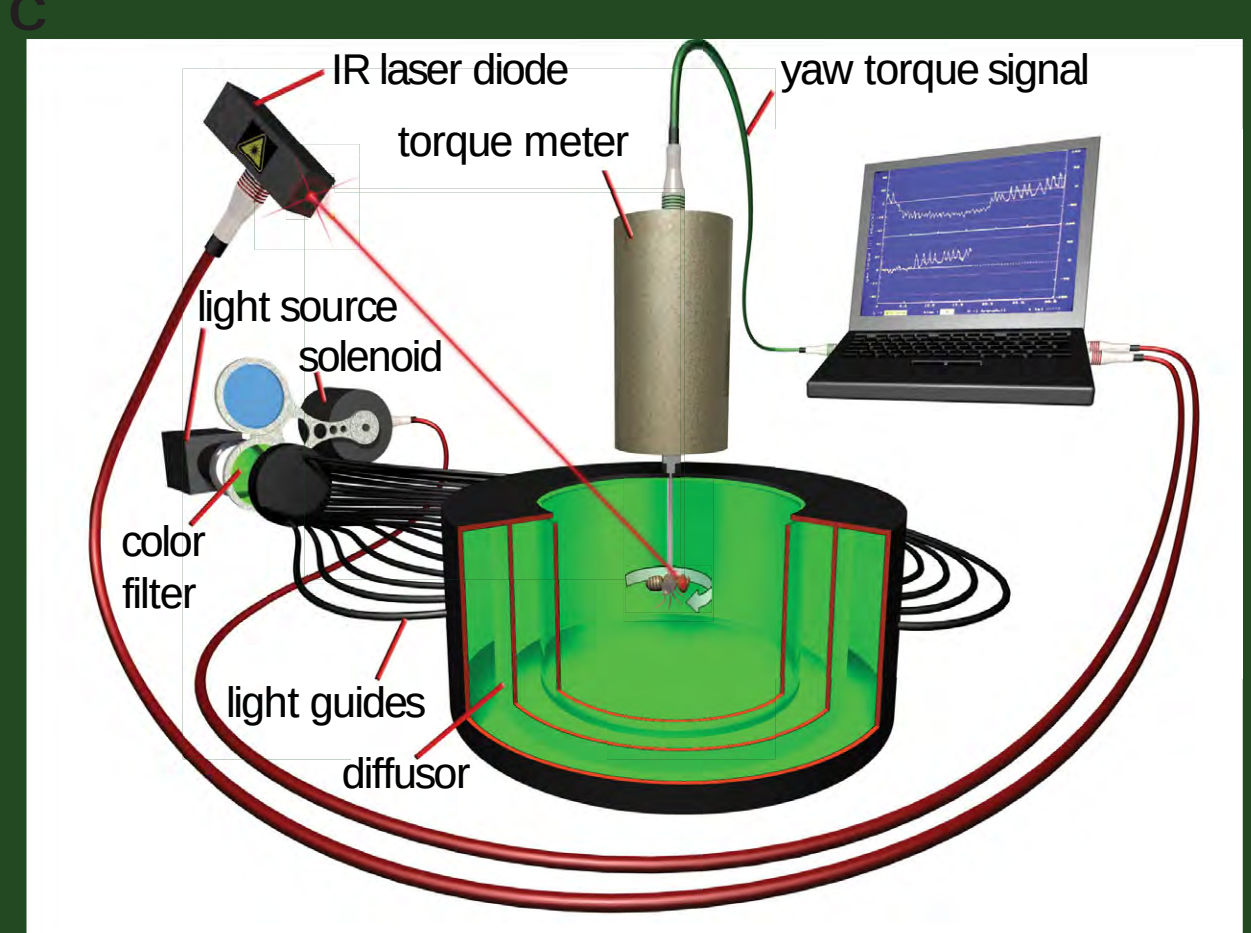
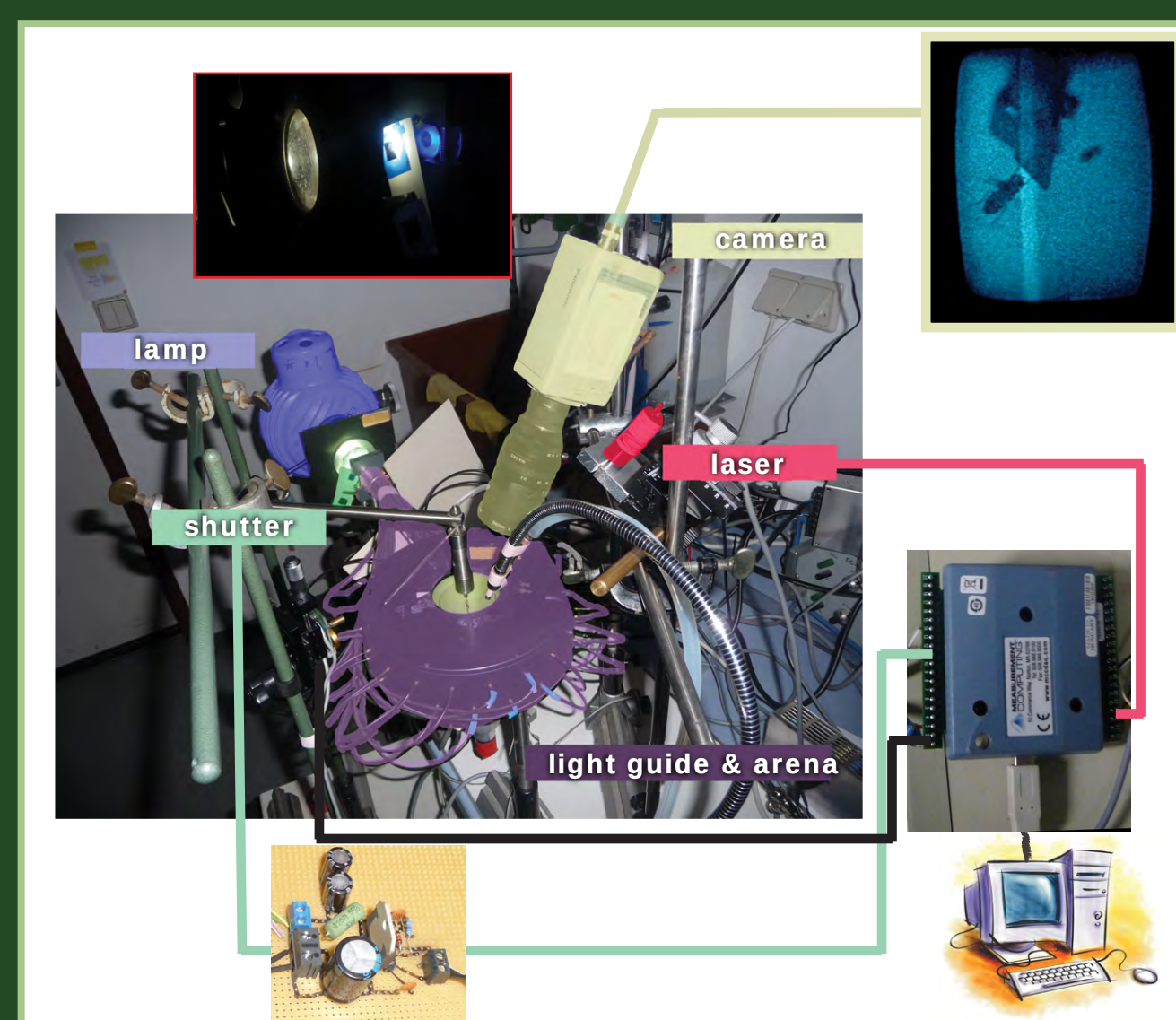
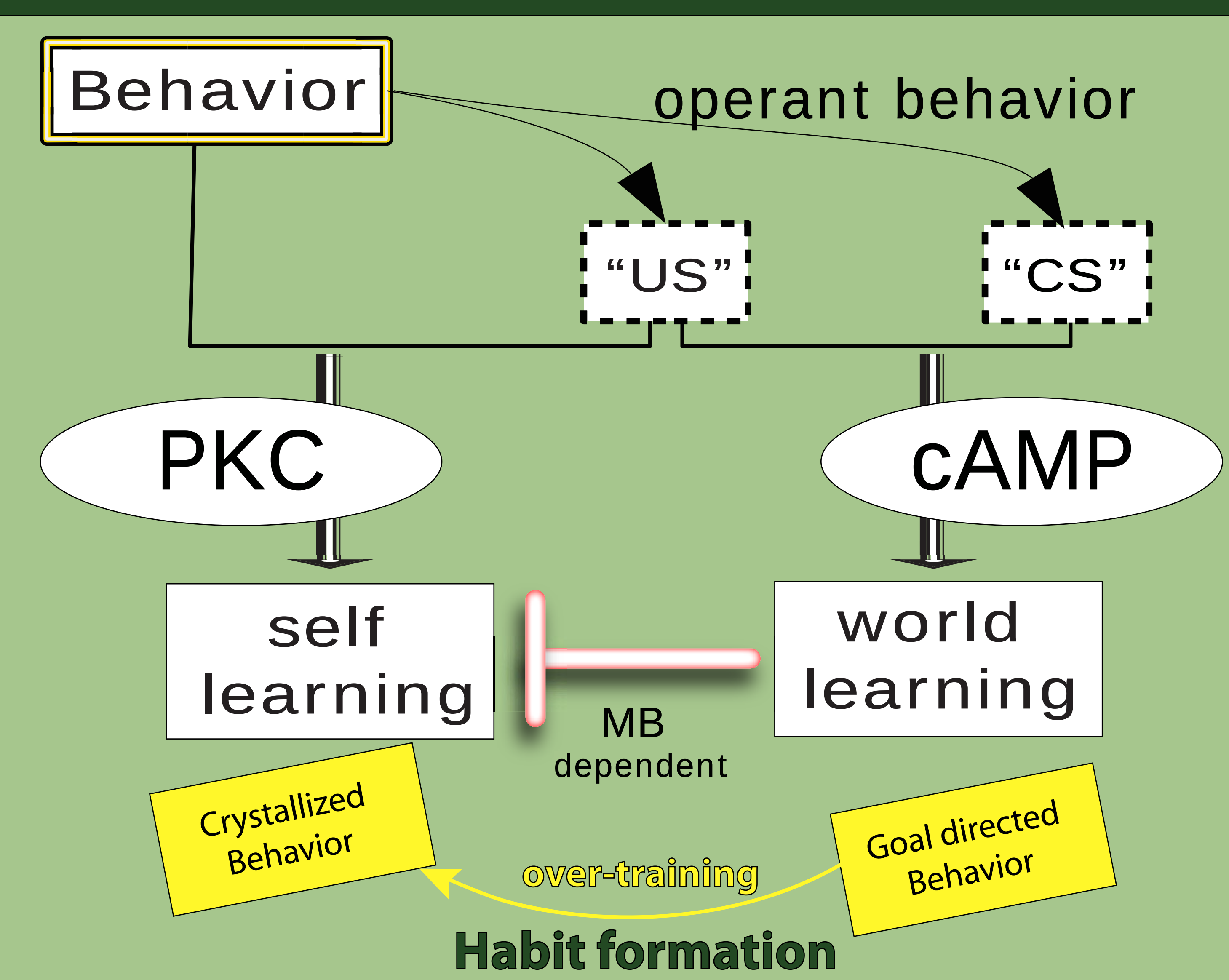
Expression of the PKC inhibitor in specific cells, using the UAS/Gal4 system



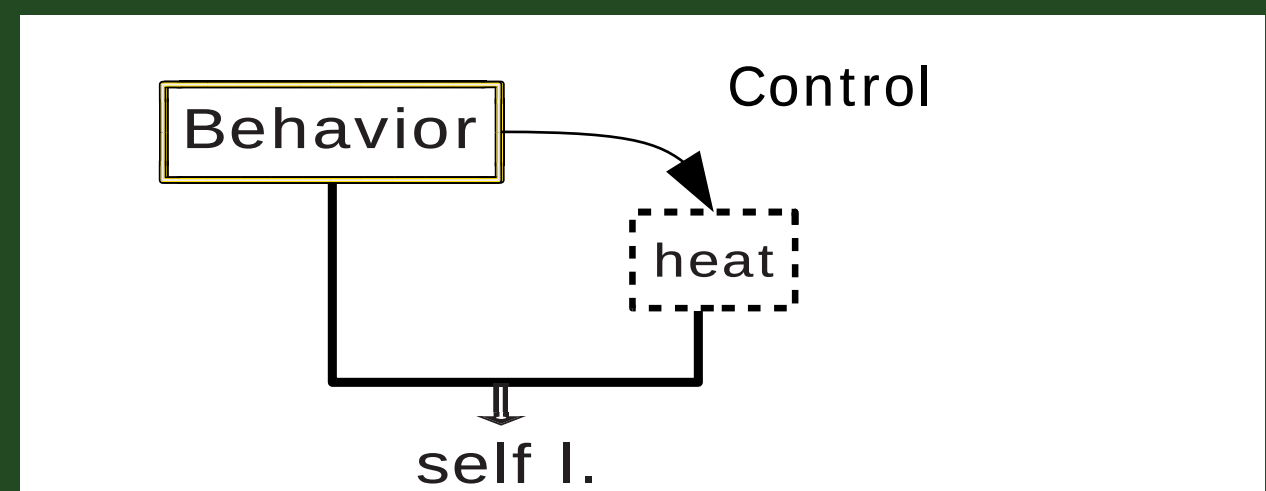
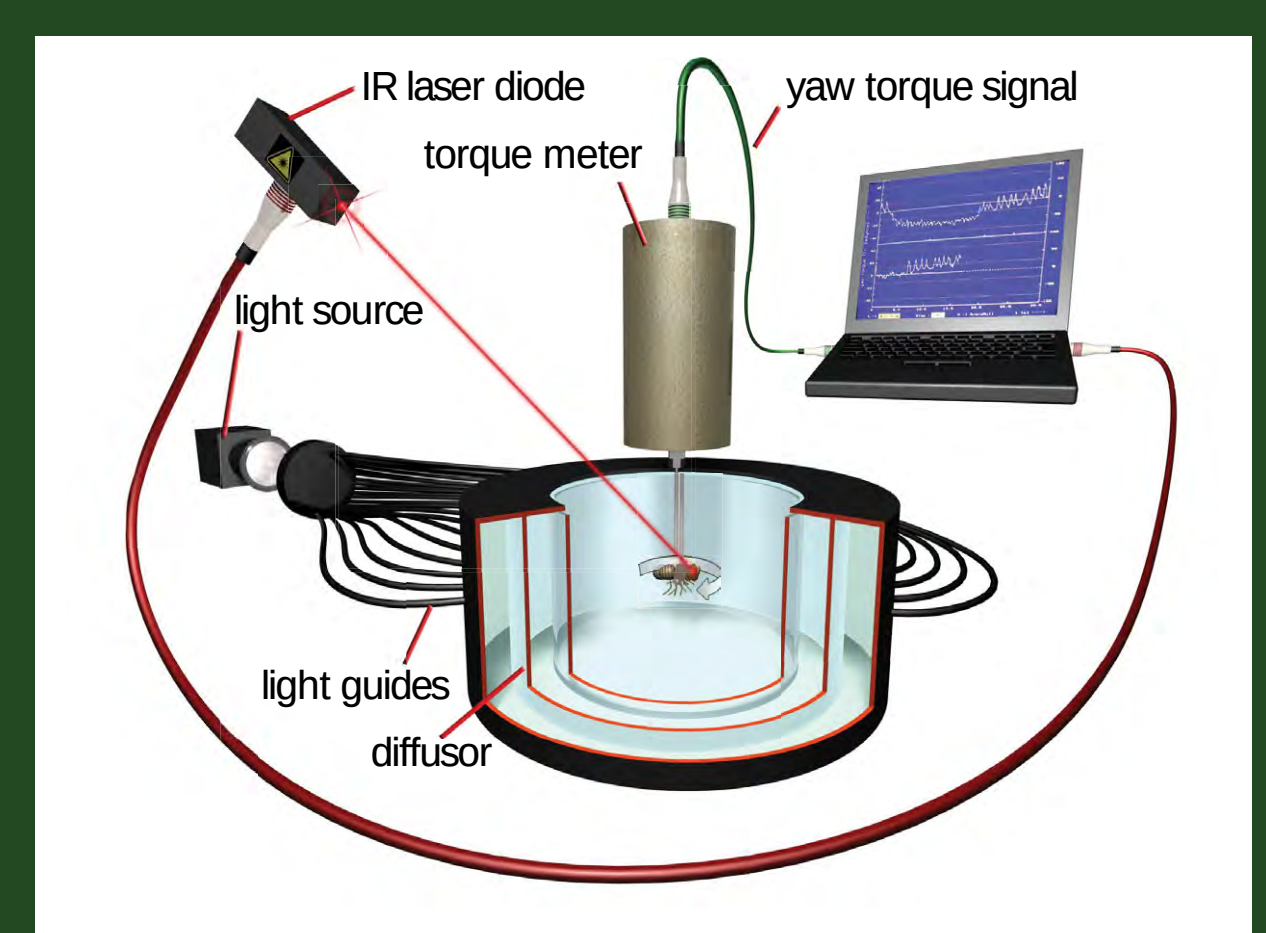
RNAi against the classical PKC53e, but not PKC-Inac, appears to prevent self-learning formation. The RNAi reporter (UAS) seem to work even in absence of inducer (GAL4) at high temperature.

world- and self-learning interact during operant conditioning

Colomb J, Brembs B. The biology of psychology: "Simple" conditioning? Communicative & Integrative biology. 2010;3(2):142-5



adenylate cyclase type I dependent



PKC dependent