Augmentation of a wound response element accompanies the origin of a Hox-regulated *Drosophila* abdominal pigmentation trait

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Augmentation of a wound response element accompanies the origin of a Hox-regulated *Drosophila* abdominal pigmentation trait

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Abstract

A challenge for evolutionary research is to uncover how new morphological traits evolve the coordinated spatial and temporal expression patterns of genes that govern their formation during development. Detailed studies are often limited to characterizing how one or a few genes contributed to a trait's emergence, and thus our knowledge of how entire GRNs evolve their coordinated expression of each gene remains unresolved. The melanic color patterns decorating the male abdominal tergites of *Drosophila* (*D.*) *melanogaster* evolved in part by novel expression patterns for genes acting at the terminus of a pigment metabolic pathway, driven by *cis*-regulatory elements (CREs)