

# Hindsight regulates photoreceptor axon targeting through transcriptional control of jitterbug/Filamin and multiple genes involved in axon guidance in *Drosophila*

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© 2015 Wiley Periodicals, Inc. During axon targeting, a stereotyped pattern of connectivity is achieved by the integration of intrinsic genetic programs and the response to extrinsic long and short-range directional cues. How this coordination occurs is the subject of intense study.

Transcription factors play a central role due to their ability to regulate the expression of multiple genes required to sense and respond to these cues during development. Here we show that the transcription factor HNT regulates layer-specific photoreceptor axon targeting in *Drosophila* through transcriptional control of jitterbug/Filamin and multiple genes involved in axon guidance and cytoskeleton organization. Using a microarray analysis we identified 235 genes whose expression levels were changed by HNT overexpression in the eye primordia. We analyzed nine candidate genes involved in cytoskeleton regulation and axon guidance, six of which displayed significantly altered gene expression levels in *hnt* mutant reti