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# Nuclear structure and dynamics

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Studying Brahma remodeler functions in long-range interactions

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Brahma remodeler plays an important role in maintaining chromatin structure genomewide. We are focused on its role in activated transcription. For this aim we have generated the construct carrying reporter gene under control of *lexA*-binding sites. The construct was integrated into different loci of *Drosophila* genome in proximity to different endogenous enhancers.

The reporter gene expression was under control of these enhancers and *lexA* fusions with different Brahma subunits. Only the cells carrying both active enhancer and *lexA* fusions show reporter expression. Thus, tethering of Brahma subunit at promoter could mediate enhancer-dependent transcriptional activation. Using tissue-specific knockdowns, we are studying the contribution of different transcription factors into activity of the reporter. The system will allow us to study the role of Brahma in transcription activation and its cooperation with transcription machinery in this process.

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