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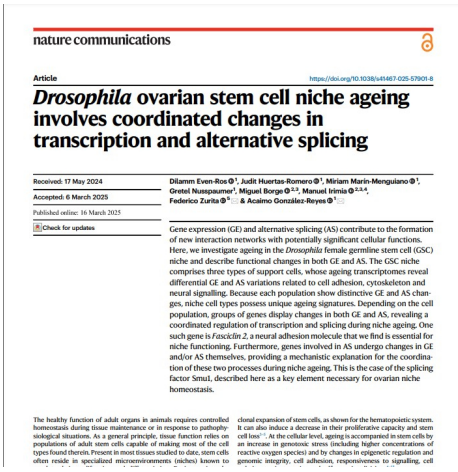
Federico Zurita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Article

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***Drosophila* ovarian stem cell niche ageing involves coordinated changes in transcription and alternative splicing**

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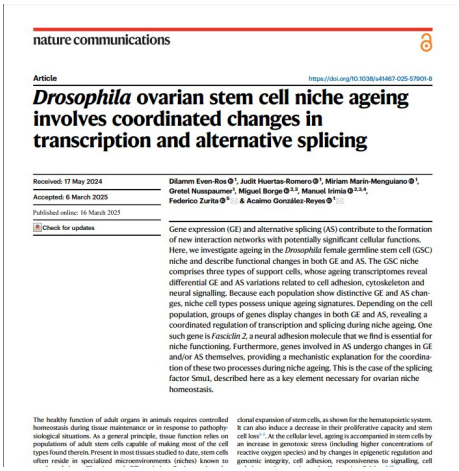
Check for updates

Dilamm Even-Ros, Judit Huertas-Romero, Miriam Marín-Menguiano, Gretel Nusspaumer, Miguel Borge, Manuel Irimia, Federico Zurita & Acaimo González-Reyes

Gene expression (GE) and alternative splicing (AS) contribute to the formation of new interaction networks with potentially significant cellular functions. Here, we investigate ageing in the *Drosophila* female germline stem cell (GSC) niche and describe functional changes in both GE and AS. The GSC niche comprises three types of support cells, whose ageing transcriptomes reveal differential GE and AS variations related to cell adhesion, cytoskeleton and neural signalling. Because each population show distinctive GE and AS changes, niche cell types possess unique ageing signatures. Depending on the cell population, groups of genes display changes in both GE and AS, revealing a coordinated regulation of transcription and splicing during niche ageing. One such gene is *Fasciclin 2*, a neural adhesion molecule that we find is essential for niche functioning. Furthermore, genes involved in AS undergo changes in GE and/or AS themselves, providing a mechanistic explanation for the coordination of these two processes during niche ageing. This is the case of the splicing factor Smu1, described here as a key element necessary for ovarian niche homeostasis.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Martínez, profesor del departamento de Genética y su equipo han publicado el siguiente articulo.

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