Hsp90-mediated regulation of DYRK3 couples stress granule disassembly and growth via mTORC1 signaling: implications for ALS/FTD

L. Mediani, F. Antoniani, J. Vinet, M. Cimino, C. Cereda, O. Pansarasa, J. Mandrioli, J. Buchner, A. Goswami, J. Sternecker, S. Alberti, Serena Carra

1. Hsp90 inhibition delays stress granule (SG) disassembly

2. Hsp90 stabilizes DYRK3 outside of SGs

3. Partitioning into condensates protects DYRK3 from aggregation

5. Upon Hsp90 inhibition, persisting SGs sequester raptor and restoration of translation fails

4. ALS motor neurons and fibroblasts show reduced DYRK3 expression

DYRK3 stabilization: SG disassembly

DYRK3 destabilization: SG persistence, failure to restore mTORC1 signaling

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