

ENG 21003 - Writing for the Sciences

This research article aims to illustrate the role that FAK(Focal Adhesion Kinase) and dynein proteins play on cell development and shape of mouse fibroblast cells(cells that are responsible for the formation of connective tissues). FAK is a type of enzyme that helps relay important intracellular information such as cell division/survival, gene expression, and gene response. Dynein are also proteins and they are responsible for proper cellular division and the transporting of cargo intracellularly. Dynein promotes the rearranging of cell microtubules/organelles, such as the Golgi Apparatus, during cell division. FAK are described as “anchoring sites” for dynein at the leading edges of fibroblasts migration. The research experimented on FAK’s relations with dynein and how it influences centrosome positioning during migration. FAK is particularly important in cancer research and subsequent cell mitosis of cancerous metastasis. The researchers' experiment specifically analyzed mouse fibroblast cells to determine the effect that FAK-dynein has on nucleus cellular migration and centrosome positioning. Their results indicate that although FAK-dynein does promote nuclear and centrosome mobility intracellularly, reducing FAK-dynein protein interaction only affected the nucleus’ individual polarization of the centrosome (Fructuoso et al., 2020).

References

Fructuoso M, Legrand M, Mousson A, Steffan T, Vauchelles R, De Mey J, Sick E, Rondé P, Dujardin D. FAK regulates dynein localisation and cell polarity in migrating mouse fibroblasts. *Biol Cell*. 2020 Feb;112(2):53-72. doi: 10.1111/boc.201900041. Epub 2020 Jan 9. PMID: 31859373.