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Faculty Member

Cell Biology / Cell Signaling

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Classified as

Interesting Hypothesis New Finding

This paper by Li and Wang provides interesting evidence that collective migration is not solely influenced by contact inhibition of locomotion (CIL). Their system indicates that in most cases CIL occurs upon head-on collisions between cells, and that cells migrate

toward their neighbors upon contact with tails. This response was given the moniker "contact following of locomotion" (CFL), and is found with both epithelial and

mesenchymal cells using micropatterned substrates to control the collisions. The authors went on to investigate a possible pathway involved in the behavior, and found that CFL requires the Wnt signaling pathway by using the specific small-molecule inhibitors NSC 668036 and 3289-8625, which block the Dishevelled interaction with the Wnt receptor Frizzled. It will be interesting to see further explorations testing cell context effects in vivo,

and whether Wnt/PCP proteins are involved, and what role chemotaxis may play in the

Disclosures

None declared

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whole scheme of collective migration.

Daar I: Faculty Opinions Recommendation of [Li D and Wang YL, Proc Natl Acad Sci USA 2018 115(42):10678-10683]. In Faculty Opinions, 05 Dec 2018;