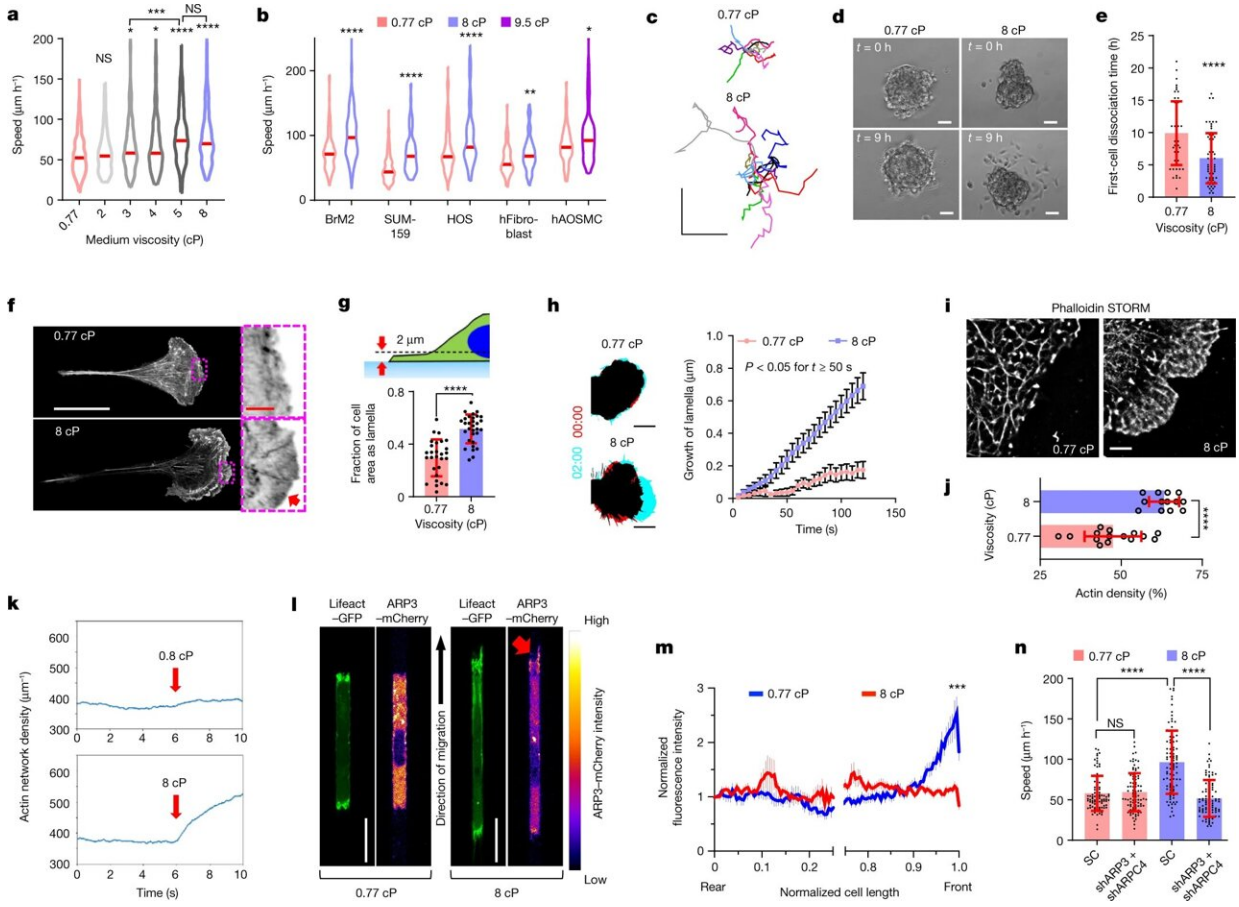
New clue discovered as to how and why cancer cells spread

December 5 2022, by Gillian Rutherford



Viscosity enhances cell migration and promotes an ARP2/3-mediated dense actin network at the leading edge. **a**,**b**, Speeds of MDA-MB-231 cells (**a**) and other indicated cell types (**b**) inside confining channels at prescribed viscosities. The red lines represent the median of ≥69 cells from ≥3 experiments. **c**, Cell trajectories on 2D collagen-coated surfaces after 10 h. **d**, Cells disseminating from 3D spheroids. **e**, The time required for the first cell dissociation from each

spheroid ($n \geq 53$) from 3 experiments. **f**, Airyscan images of phalloidin stained cells on collagen-coated substrates. The red arrow indicates high F-actin staining along the cell edge. **g**, The fraction of cell-projected area with a Lifeact–GFP-rich lamella for $n \geq 28$ cells from 3 experiments. **h**, The leading edge of Lifeact–GFP-expressing cells on collagen-coated surfaces at $t = 0$ min (red) and $t = 2$ min (cyan) (left). Right, leading-edge lamella growth in $n \geq 19$ cells from 3 experiments. Data are the moving average ± s.e.m. *P*