### Cours 1-Condensats biologiques

J.F. Joanny

Cours 1, Collège de France, 07 novembre 2022

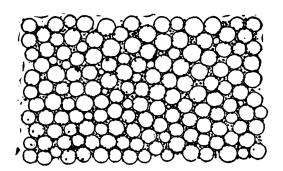




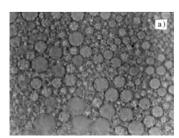
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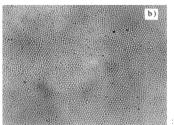
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# Energides, Modèle d'émulsion du cytoplasme E. Wilson



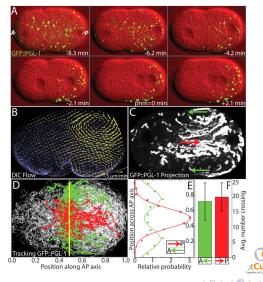






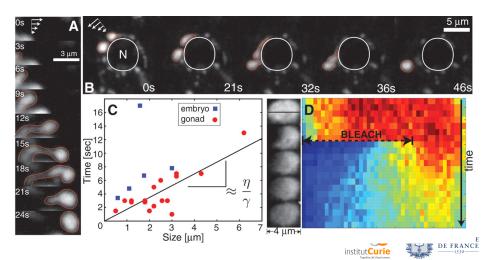
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# Condensation des P. Granules C. Brangwynne et al.



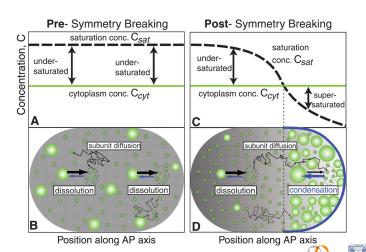


## Comportement liquide des Pgranules



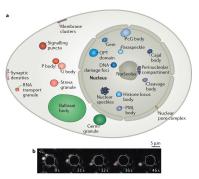
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### Modèle Pgranules



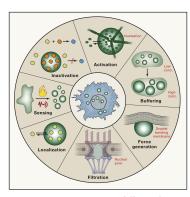
institut Curie

# Condensats biologiques, fonctions





Banani et al.

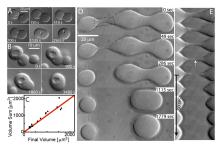


Alberti

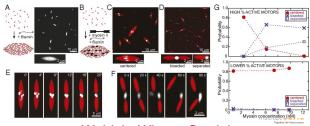




### Condensats biologiques



Brangwynne et al. Nucléoles



Weirich, Witten, Gardel -

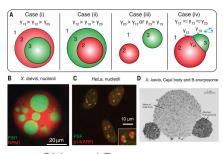


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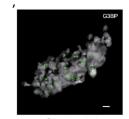
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# Wetting effects



Shin and Brangwynne



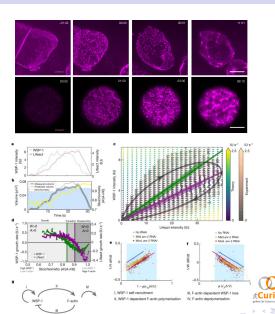




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Mitrea et al.

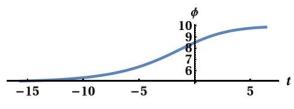
#### Actin Condensates Yan et al.

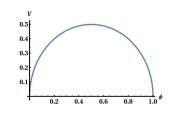


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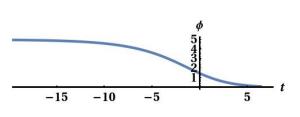
#### Evolution des condensats d'actine

• Paramètres,  $\alpha > 0$ ,  $\alpha + \beta > 0$ ,  $k_d$  petit

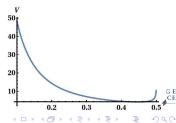




• Paramètres,  $\alpha <$  0,  $\alpha + \beta >$  0,  $k_d$  grand



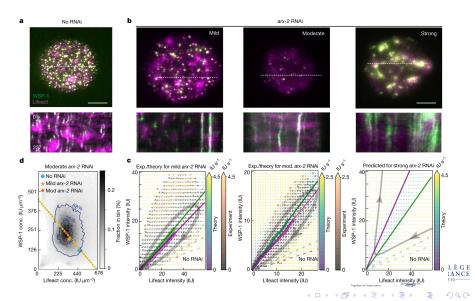
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#### Croissance non limitée des condensats



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