CDB SEMINAR

Donald F. Newgreen

Murdoch Children's Research Institute (Australia)

Tuesday, May 30

15:00~16:00 C1F CDB Auditorium

Look who's talking! Complex regulation of the epithelial-mesenchymal transition in neural crest and breast cancer cells.

Summary

EMT is a common preamble to cell migration/invasion in normal development and in carcinoma invasion. Typically EMT is seen as a complex process triggered by certain growth factors, which via signal cascades activate a suite of "EMT master genes" the best know of which are the SNAIL genes. These in turn control the expression of numerous other genes, and the outcome is a co-ordinated set of changes in cellular motor molecules that control cell social behaviour. Included in these motor molecules are motility/cytoskeleton molecules, cell-cell adhesion molecules, cell-ECM adhesion molecules etc.

This information flow is unidirectional and can be likened to a factory where the directors ("EMT master genes") take a market survey (via growth factor receptors), then make decisions to direct the workers of multiple production lines (motor genes and molecules) as to an integrated production target (EMT). Presented here is an additional model where the workers have more flexibilty to directly read the market survey, to discuss production targets among themselves, to make (provisional) integrated production target decisions, and to make recommendations back to the directors.

Host:
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