CDB SEMINAR

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16:00~17:00 A7F CDB Conference Room

Normal and Leukaemic Stem Cells: What's new?

Summary

Acute myeloid leukaemia (AML) is a clonal disorder defined by the accumulation of abnormally differentiated myeloid blasts. Because leukaemic blasts have very limited proliferative capacity, it is believed that leukaemic clone is maintain by a rare population of leukaemic stem cells (LSC) that have extensive proliferation and self-renewal capacities. Elucidating the nature of the target cell that undergoes leukaemic transformation and characterising the LSC is essential for both the understanding of the leukaemogenic process and for the design of effective therapies. The development of an *in vivo* model that replicates many aspects of human AML had provide a mean to identify leukaemic stem cells (termed the SCID-Leukaemia Initiating Cells, SL-IC). SL-IC is defined by the ability of that cell to initiate AML in NOD/SCID mice. This *in vivo* assay provides the foundation of an assay to define the biological and molecular properties of such leukaemic stem cells (LSC). Despite the clear importance of the LSC in the genesis and perpetuation of leukaemic disease, little is currently known about the biological and molecular properties that make LSCs distinct from normal haematopoietic stem cells. The presentation will summarise the work done using the xenograft system to characterise the nature of the leukaemic clone and will specifically highlights the advances made in phenotypically, molecularly and functionally defining LSC. If time allow, I will also present some new data on the complexity of the normal HSC compartment notably on the relationship between CD34neg and CD34+ stem cells.

Host:
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