



REGIONAL CENTRE FOR BIOTECHNOLOGY
Seminar series

**Plasmacytoid Dendritic Cell lineage
specification and maintenance: a story
of E, ETO and ID proteins.**

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11:00 AM
Seminar Room

Abstract

Dendritic Cells (DC) are an immune cell type, uniquely required for activating adaptive immune response by presenting antigens to T lymphocyte. DC are broadly classified into two classes, namely the 'classical' Dendritic Cell (cDC) and the 'plasmacytoid' Dendritic Cell (pDC). Although classified in the same category, cDC and pDC are very different, both structurally and functionally. DC development is an intense field of research in hematopoiesis, and much has been discovered in the past few years about the further variations in DC subtypes and their functions. However, questions remain regarding the molecular regulation that direct and maintain the lineage commitment of DC precursors into cDC or pDC fate. The E-protein transcription factor E2-2 was discovered by our group to be critically required for the development of pDC. This seminar will shed light on the molecular regulation underlying lineage specification and cell fate maintenance of pDC. Taking advantage of in vivo lineage tracing, transgenetics, transcriptome and genome-wide sequence analysis, the presented study will elucidate the fine interplay of E, Eto and Id proteins in cell fate commitment during DC differentiation pathway.
