Stellingen

Behorend bij het proefschrift

CTCF, A Crucial Regulator of Gene Expression in Lymphocytes

1. CTCF is essential at different stages of lymphocyte development as a regulator of genes involved in cellular proliferation, survival and differentiation.
This thesis

2. CTCF is not required for changes in immunoglobulin heavy chain locus topology associated with distal V gene segment recombination in pro-B cells.
This thesis

3. In the immunoglobulin κ light chain locus CTCF limits proximal V gene segment rearrangements and restricts enhancer interactions elsewhere in the genome.
This thesis

4. During T-cell activation CTCF controls the expression of genes involved in T cell receptor signalling but it is not required for T-cell proliferation *per se*.
This thesis

5. Inferred from the reported CTCF-dependence of T-bet in T helper 1 cells, CTCF controls T helper 2 cytokine expression through cooperation with the lineage-specific transcription factors Gata3 or Satb1.
This thesis, Hadjur et al, Nature 2009 Jul 16;460(7253):410-3 and Sekimata et al, Immunity 2009 Oct 16;31(4):551-64.

6. "CTCF may be a heritable component of an epigenetic system regulating the complex interplay between DNA methylation, higher-order chromatin structure, and developmentally regulated gene expression."
Phillips and Corces, Cell 2009 Jun 26;137(7):1194-211.

7. "It is the basic, curiosity-driven research on which eventual translational research depends. If there is no innovative fundamental research, there will be nothing to translate."
D. Vance in EMBO Rep. 2010 Feb;11(2):93-6.

8. Mobility is the core element in European scientific research development as the basis for excellence and competitiveness.
S. Morano-Foadi in "Scientific Mobility, Career Progression, and Excellence in the European Research Area", International Migration Vol. 43 (5), 2005.

9. Binding of Cohesin to Mediator, an essential component of the RNA polymerase II-mediated transcription machinery, is the mechanism that links cell-type specific enhancer–promoter interactions to the gene expression program of each cell.
Kagey et al, Nature 2010 Sep 23;467(7314):430-5.

10. "A scientist is happy, not in resting on his attainments but in the steady acquisition of fresh knowledge."
Max Planck

11. Voici mon secret. Il est très simple: on ne voit bien qu'avec le cœur. L'essentiel est invisible pour les yeux.
Antoine de Saint Exupéry in Le Petit Prince, 1943.

Claudia Ribeiro de Almeida
Rotterdam, 17th November 2010