

Stellingen behorend bij het proefschrift

Epigenetics in *MLL*-rearranged Infant Acute Lymphoblastic Leukemia

1. *MLL*-rearranged infant acute lymphoblastic leukemia is characterized by pronounced promoter DNA hypermethylation leading to silencing of a substantial number of genes. (*this thesis*)
2. Promoter DNA hypermethylation in t(4;11)-positive infant acute lymphoblastic leukemia encompasses methylation at microRNA loci resulting in aberrant expression of microRNA target genes. (*this thesis*)
3. Clofarabine reverses aberrant epigenetic regulation of tumor suppressor gene activity in *MLL*-rearranged acute lymphoblastic leukemia cells. (*this thesis*)
4. Histone deacetylase inhibitors induce leukemic cell death in *MLL*-rearranged infant acute lymphoblastic leukemia *in vitro*, which is in part due to down-regulation of the oncogenic *MLL*-AF4 fusion. (*this thesis*)
5. *MLL*-rearranged infant acute lymphoblastic leukemia is an epigenetic disease which requires treatment with epigenetic drugs. (*this thesis*)
6. The inherently Darwinian character of cancer is the primary reason for therapeutic failure, but it may also hold the key to more effective control. (*Mel Greaves, Nature, 2012*)
7. Genetic changes occur in the development of cancers, but there also are epigenetic changes, and those come first. (*Andrew P. Feinberg, Nature Reviews Genetics, 2006*)
8. Epigenomics is where genomics was 30 years ago, when everyone was working on part of the puzzle. Nevertheless, the field is currently moving forward at high speed. (*Peter A. Jones, Nature, 2006, and Stephen B. Baylin, Nature Reviews Cancer, 2011*)
9. The important thing in science is not so much to obtain new facts as to discover new ways of thinking about them. (*William L. Bragg, youngest Nobel Prize Winner*)
10. It takes two to tango in translational research: close collaboration of medical doctors and basic biologists is indispensable.
11. Vectatio iterque et mutata regio vigorem dant (Journeys and change of venues impart new vigor to the mind). (*Lucius A. Seneca*)

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