Stellingen behorend bij het proefschrift

Chromosome Conformation Capture on Chip (4C) Meeting genomic neighbors

Marieke Simonis

- 1) In 4C microarray data DNA contacts are shown as genomic clusters of restriction fragments that have increased hybridization signals in replicate experiments. (*this thesis*)
- 2) Chromosomes fold into areas of active and areas of inactive chromatin. (this thesis)
- 3) 4C technology is expected to contribute to a comprehensive understanding of nuclear architecture, picking up interactions not previously anticipated and putting the frequency of interactions in perspective of all DNA contacts made by an investigated locus. (this thesis)
- 4) 4C technology detects balanced, unbalanced and complex genomic rearrangements at high resolution. (*this thesis*)
- 5) 4C has successfully been adapted from a microarray based technique to a sequencing based method, which will enable high throughput analyses. (*this thesis*)
- 6) The more we look into (histone) modifications, the more it will become clear that context is everything. *Kouzarides* (2007) Cell 128(4):693-705
- 7) Research is to see what everybody has seen and to think what nobody else has thought.

Albert Szent-Gyorgyi

- 8) The scientific community should be cautious not to let vain and daredevil handling of very complex material lead to the creation of unstable bubbles of air, as was seen in the financial sector.
- 9) The integration of informatics and biology will be a true enrichment for science if we let differences in knowledge and skills lead to curiosity rather than restraint.
- 10) The reconstruction of a house is like a scientific experiment; a straight plan quickly turns into a labyrinth of unexpected challenges in which you keep hoping for an astonishing result.
- 11) Prejudiced people enable you to exploit the element of surprise.