

## Stellingen

Behorend bij het proefschrift

### Microarray Bioinformatics and Applications in Oncology

- I. Exon level expression profiling can be used to molecularly classify histological subgroups of tumors and to identify differentially regulated splice variants leading to identification of causative genetic changes, which can be important information for refined diagnosis and prognosis and can lead to novel treatment targets (*this thesis*).
- II. *CHEK2* 1100delC mutated breast cancers are of luminal subtype (*this thesis*).
- III. Evidence for two biologically distinct modes of E-cadherin inactivation challenges the paradigm that mutational inactivation and epigenetic silencing of tumor suppressor genes are functionally similar (*this thesis*).
- IV. Genomics aims to provide biologists with the equivalent of chemistry's Periodic Table - an inventory of all genes used to assemble a living creature, together with an insightful system for classifying these building blocks. (*E. Lander: Array of Hope: Nat. Genet. 1999 Jan;21:3-4*).
- V. Life is necessarily a delicate balance between genomic stability and instability - and of mutation and repair (*B. Alberts: Nature 2003 Jan;421:431-5*).
- VI. Stability genes (MMR, NER) represent a separate class of cancer-related genes (*B. Vogelstein & K. Kinzler: Nat. Med. 2004 Aug;10:789-99*).
- VII. Cancer is a multi-step process requiring both genetic changes and environment influences; including lifestyle.
- VIII. Future individualized medicine could entail a single experiment to determine disease type, susceptibility, treatment response, and survival prognosis on a single chip.
- IX. Bioinformatics is still at an early stage. High throughput genome technologies utilizing bioinformatics are fast evolving, as are the analysis tools. Future perspectives may involve high throughput full genome sequencing instead of microarray technology to answer biological questions.
- X. The number of questions derived from a microarray dataset is only bounded by the imagination of the bioinformatician.
- XI. They all talked at once, their voices insistent and contradictory and impatient, making of unreality a possibility, then a probability, then an incontrovertible fact, as people will when their desires become words (*W. Faulkner, The sound and the fury, 1929*).

Justine K. Peeters

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