Stellingen
Behorende bij het proefschrift

The effect of bacterial isochorismate synthase on the *Brassica rapa* metabolome

1. The isochorismate derived product salicylic acid induces its competitive biosynthetic pathways leading to phenylalanine and tryptophan (this thesis).
2. Different plant species may have a different response of their metabolism to the introduction of the same structural gene encoding an enzyme at a key metabolic branching point (this thesis).
3. The initial screening for a genotype that is amenable for tissue culture regeneration is the first limiting step for *Agrobacterium*-mediated transformation of *Brassica rapa* (this thesis).
4. Untargeted metabolic profiling is required to view the effect of the defense response against bacterial infections in plants (this thesis).
5. The future of ‘omics’ relies on single cell screening since some cells may behave differently from others even when they are in the same environment (Hall and Yeoman, Temporal and spatial heterogeneity in the accumulation of anthocyanins in cell cultures of *Catharanthus roseus* (L.) G.Don. J. Exp. Bot. 37 (1986) 48-60).
8. Analysis of substantial equivalence should not focus on GMO plants only, but also on new plants varieties from conventional breeding.
9. Application of NMR and multivariate data analysis in metabolomics is proof that ‘old’ techniques can be used to make a technological breakthrough.
10. For biologists, chemistry is often neglected in the main stream of research even though our life is based on and surrounded by chemistry.
11. We are all humans but we can never be equal, that is why we have to work in teams and show solidarity for the betterment of ourselves, others and the world.
12. In developing countries, the brain drain in science and technology is the result of the ‘flight or fight’ response.
13. The Netherlands is the best example that the agricultural sector can be modernized and advanced by optimized use of the limited land and available resources.
14. Science is based on evidence but scientists need imagination.

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