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1. For the production of galanthamine from *Narcissus pseudonarcissus* bulbs, cultivation practices do not need to be changed from existing ornamental ones, but pesticide residues and mycotoxins need to be monitored (this thesis).

2. Fungicides leave a metabolic footprint in bulb plants in a way that is still detectable after harvest (this thesis).

3. Gums produced by bulb plants in response to pathogen attack are promising sources of bioactive small molecules (this thesis).

4. When conventionally cultivated plants are to be used for bioassays, the presence of pesticides and other agrochemicals has to be taken in to account (this thesis).

5. The large number of *Narcissus* cultivars with diverse and characteristic patterns of alkaloid accumulation is a useful and readily available set of plant material for discovering the genes involved in the biosynthesis of the different alkaloids.

6. Online databases coupled to automatic metabolite identification software show great promise for advancing NMR-based metabolomics, but will only be truly meaningful in plant science if extraction methods can be standardized (Tulpan et al. 2011, MetaboHunter: an automatic approach for identification of metabolites from 1H-NMR spectra of complex mixtures, BMC Bioinformatics 12, 400-422).

7. The most interesting enzymes for potential metabolic engineering or synthetic biology applications is likely to be found deep into secondary plant metabolite biosynthetic pathways, where building blocks derived from diverse metabolic pathways are combined. (Facchini et al 2012, Synthetic biosystems for the production of high-value plant metabolites, Trends in Biotechnology 30, 127-131).

8. Poly-pharmacology has potential to address complex diseases such as Alzheimer’s disease, but is not compatible with the current drug discovery paradigm which is based on a single target-single compound approach (Maudsley and Chadwick 2012, Hot Topic: Progressive and Unconventional Pharmacotherapeutic Approaches to Alzheimer's Disease Therapy, Current Alzheimer Research 9, 1-4).

9. In collaboration of PhD students with companies, careful supervision is needed to ensure that the relationship is beneficial to all parties. It should always be remembered that to the student, publishing is a major goal.

10. Patent applications should be as carefully and rigorously peer-reviewed as scientific papers.

11. In academic research projects there should always be space for following unexpected leads, and for pursuing curiosity-driven research. Grant proposals should be written to accommodate this.

12. Agricultural subsidies hamper the quick adaptation to climate and economic changes.