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**Title:** Classical and paramagnetic NMR spectroscopy techniques applied to different protein systems  
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Stellingen

1. The binding of different ligands heavily influences the NMR spectra of P450cam, even when significant structural changes are not observed.
   This thesis, Chapter 3

2. The conformational changes that occur when Avr2 binds to Rcr3 at pH 5 requires by protonation of the H50.
   This thesis, Chapter 4

3. Contrary to recently published crystallographic and EPR data, P450cam remains in the closed form when Pdx binds, indicating that formation of a water mediated H-bonded network, is not required for proton-coupled electron transfer.
   This thesis, Chapter 5
   Tripathi et al. Science, 2013, 340, 1227-1230
   Myers et al. J. Am. Chem. Soc. 2013, 135, 11732-11735

4. Despite the complex fitting space involved, protein nuclei can be assigned using PCS from multiple paramagnetic centres.
   This thesis Chapter 6

5. The presence of a thioredoxin-like domain in EiAPR provides further evidence that electron transfer in this system has evolved not to include free thioredoxin, which is also present in chloroplasts.
   This thesis Chapter 2

6. Paramagnetic tagging in NMR spectroscopy provides an avenue to circumvent difficulties that are not easily overcome by classical NMR spectroscopy, such as assignment of methyl groups in large complexes.
   This Thesis Chapter 6
   Ubbink and Keizers, Prog Nucl Magn Reson Spectrosc, 2011, 58, 88-96

7. Selective isotope labelling using CHD₂ methyl groups or ¹⁵N Leu amides in proteins enables detailed studies of large systems to be carried out in a facile manner.
   This thesis Chapters 3 and 5
8. Avr2 exists in two distinct conformations at pH 7 and hence an equilibrium must exist between the two forms within the host organism. Arguably, this indicates that when it is secreted into the apoplast, the pH gradient through which diffuses stabilises one of the two forms to enable binding to PIP1 and/or Rcr3.

This thesis Chapter 4

9. You cannot teach a man anything; you can only help him discover it in himself (Galileo) – One of the hardest lessons to learn as a PhD.

10. Although every researcher should aim to disprove their hypotheses, many aim to find proof for their ideas.

11. Every science is logical, although some sciences are more logical than others.