The relation between dynamics and activity of phospholipase A/acyltransferase homologs

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Stellingen

Behorende bij het proefschrift

The relation between dynamics and activity of phospholipase A/acyltransferase homologs.

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1. The study of protein dynamics is essential to understand the structure-function relationship of PLAATs.
   This thesis, **Chapter 2**

2. Highly disordered loops influence the active sites in PLAAT3 and -4.
   This thesis, **Chapter 3** & *Nat. Chem. Biol.***2015**,11, 26–32

3. Salt-bridges determine activity in PLAATs.
   This thesis, **Chapter 4**

4. Composite pulse decoupling is better than single high power ^{1}H decoupling in ^{15}N relaxation dispersion experiments.
   This thesis, **Chapter 5**

5. NMR spectroscopy alone is never sufficient to obtain full understanding of protein dynamics.

6. MD rms fluctuations of principal components is a better way to gain dynamics insights than generic all-atom rms fluctuations.

7. Lifetime analysis provides more reliable information about the role of salt-bridges in protein structure than a crystal or solution structure does.

8. Full understanding of PLAAT function is not possible without studying the full-length proteins.

9. Thinking by analogy and by first principles complement each other in designing a hypothesis.