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## Exploring chemical space in covalent and competitive glycosidase inhibitor design

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# Propositions

Accompanying the thesis

## Exploring chemical space in covalent and competitive glycosidase inhibitor design

1. The position of the fluorophore on a glycosidase probe to a large extent determines its potency.  
This thesis, **chapter 2**.
2. Prior reduction of the azido group into an amine can be key for successful, reproducible palladium(0)-catalyzed hydrogenolysis of benzylated *epi*-cyclophellitols bearing a 4'-azidooctyl chain.  
This thesis, **chapter 2 and 3**.
3. Structurally simple molecules are often the most difficult ones to synthesize.  
This thesis, **chapter 5**.
4. The stability of fluorescent 1,6-*epi*-cyclophellitol cyclosulfate based probes needs to be further explored.  
This thesis, **chapter 6**.
5. X-ray crystallography studies can provide straightforward evidence to ascertain if a molecule is a 'true' enzyme inhibitor.  
This thesis, **chapter 5**.
6. Even the best glycosidase inhibitors are imperfect transition-state analogues.  
Bols *et al.*, *Chem. Rev.* **2002**, *102*, 515–553.
7. Transferring the structural characteristics of a highly potent glycosidase inhibitor to differently configured structural analogues may not yield covalent inhibitors of the targeted glycosidases with equal potency and selectivity.  
Artola *et al.*, *Chem. Sci.*, **2019**, *10*, 9233–9243.
8. Choosing appropriate protecting groups can save a lot of efforts in the process of synthesis.
9. Working efficiently is much more important than working hard.
10. Chemistry — Chem is to try.