

Activity-based protein profiling of glucosidases, fucosidases and glucuronidases

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Stellingen

Behorende bij het proefschrift

Activity-based protein profiling of glucosidases, fucosidases and glucuronidases Jianbing Jiang, Leiden, June 2016

 Activity-based probes carrying nucleophiles are scarce compared to those carrying electrophiles

This thesis, chapter 1.

2. The reactivity of an electrophile in an activity-based retaining glycosidase probe needs to be tuned carefully.

This thesis, chapter 4.

 Future diagnosis of Pompe disease onset and progression and the efficacy of enzyme replacement technology may well be based on activity-based protein profiling.
 This thesis, chapter 5.

4. Whereas it is unlikely that *exo*-glycosidases would bind a glycosylated cyclophellitol, the opposite may actually happen more often.

This thesis, chapter 7.

5. Although some cellular molecules can be made visible individually, we are far from being able to image every single cellular molecule.

Bertozzi, C. R., et al., ACS Cent. Sci. 2016, 2, 1–3.

There is no unified design for activity-based glycosidase probes.
 Willems, L. I., et al., Chem. Eur. J. 2015, 21, 10861 – 10869.

- Perusal of reaction itineraries of retaining glycosidases may help in designing activity-based glycosidase probes, which in complex with the targeted enzyme may yield experimental evidence for the validity of this itinerary.
- 8. The relative importance of glycosyl transferases compared to that of glycosidases is not reflected in the number of inhibitors and probes known for these classes of glycoprocessing enzymes.
- 9. My English may be bad but your Mandarin is worse.
- 10. Great works are not performed by strength, but by perseverance.