The use of activity based protein profiling to study proteasome biology

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Stellingen

Behorende bij het proefschrift

The Use of Activity-Based Protein Profiling to Study Proteasome Biology

1. Multiple myeloma tumor cells can be effectively eradicated by proteasome inhibition, yet therapeutic intervention with proteasome inhibitors does not cure this disease.
Chapter 1

2. There is no such thing as a 'molecular kiss of death'.
Chapter 2
Hershko, A. and Ciechanover, A. A. Annu. Rev. Biochem. 1998, 67, 425-479.

3. No chemical reaction is truly bio-orthogonal.
Chapter 3

4. A single point mutation in the PSMB5 gene is not the key factor in proteasome inhibitor resistance adaptation mechanisms.
Chapter 5

5. Though proteasomes degrade virtually all cytosolic proteins, they themselves are likely degraded through autophagy.

6. Understanding post-translational modification mechanisms of proteasomes is imperative to fully understand the ubiquitin-proteasome system.

7. The formation of a covalent bond between an enzyme and an activity-based probe is essential for its *in vitro* use but limits its applications in living animals.

8. The complexity of a biological system is directly proportional to our understanding of this system.

9. High school is like studying a whole photobook, while at the university one focuses on a single photo and during a PhD one studies a single pixel of that photo.

10. Experiments in biology are like a box of chocolates: you never know what you are going to get.