

Reflection #2

- Think about the broader implications of your topic. What implications does it have for society in general, not just for biologists like yourselves?  
I mean it is using living animals and it involves the ocean so there is always an environmental concern and an ethical concern when it comes to using living organisms for their natural products. In most cases, this does involve killing the marine invertebrate to extract the useful natural products. So, I guess the main concern would be is it ethical.
- Do you also see similar concerns, keeping broader impacts in mind, in the articles you've been reading?  
It what I have read so far, I have not seen my same concern with ethics, but I have seen some environmental concern in some of the research I have seen.
- Do expert scientists in the various fields that you've encountered seem to be thinking about the "big picture"? Give an example of such a case.  
In my opinion yes, the big picture being the future of invertebrates in medical research. With the increased publication of a large number of draft invertebrate genomes, more Kunitz-type inhibitor genes are likely to be identified by data mining and, with their subsequent biochemical characterization, more light will be shed on their biological function. In turn, this may lead to the identification of new vaccine and drug intervention targets against those invertebrate species that are parasitic (Ranasinghe 2013).

## References

- Ranasinghe, S., McManus, D. Structure and function of invertebrate Kunitz serine protease inhibitors, *Developmental & Comparative Immunology*, Volume 39, Issue 3, Pages 219-227, ISSN 0145-305X, (2013) <https://doi.org/10.1016/j.dci.2012.10.005>.  
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