

**Student Feedback on Medicinal Chemistry Online Exercises  
funded by 2005 Associated Colleges of the South – Mellon Technology Fellowship**

Of 17 students enrolled in Medicinal Chemistry (CHE 309) in the fall semester of 2005, nine students completed an evaluation form on the eight complete online exercises. Students were asked to evaluate each applet and then provide any general feedback. Many students grouped their answers across a number of exercises. These aggregate answers are noted below.

**Comments on specific exercises**

Please give any impressions that you have on each applet. The impressions may be specific and helpful or just disparaging.

1. **IV Bolus ( $C_p$  vs time)**
  - need to condense into one applet possibly (applies to 1 and 2)
  - many problems but I believe they have been fixed (applies to 1, 2, and 3)
  - I'm not sure which, but some of these were hard to figure out what you were getting at (applied to 1, 2, and 3)
  - good
  - good
  - good
  - some mistakes with data presented, but these were fixed (applies to 1 and 2)
  
2. **IV Bolus ( $\ln C_p$  vs time)**
  - good
  - good
  - good
  
3. **IV Infusion**
  - helpful discussion made between this one and bolus
  - good
  - good
  - fine
  - enjoyed being able to put pharmacokinetic properties into an applet and instantly see effects – helped a lot to understand the relationships represented by the equations (applies to 3 through 8)
  
4. **Oral Administration**
  - helpful discussion made between bolus, infusion, and oral
  - weird question at the end – what was the point?
  - good
  - good
  - good
  - all pretty well helpful; I can't remember individual exercises (applies to 4 through 8)

5. **Bioavailability/Area-Under-Curve**
- good intro, applets a bit tedious (applies to 5, 6, and 8)
  - particularly interesting, but particularly easy (applies to 5 and 7)
  - good
  - I thought the compound used was interesting and I liked it.
  - purpose of the last question?
  - good
6. **Michaelis-Menten**
- fine
  - good
  - helpful in condensing other parameters that play into enzyme kinetics
  - I didn't understand the 1<sup>st</sup> question... whether we were supposed to use an additional applet or not.
7. **Lineweaver-Burk**
- fine
  - good
  - This was very helpful in understanding roles that different types of inhibitors have.
  - very helpful in visualizing what curves do for different types of inhibitors – the explanation/literature part was particularly clear and instructive
8. **QSAR**
- NA
  - didn't do
  - I did not use this one.
  - very helpful in visualizing what curves do for different types of inhibitors – the explanation/literature part was particularly clear and instructive

### **General comments**

Are these applets helpful? Are there other course topics that could use an applet? Are these exercises better or worse than regular written homework questions?

- They are helpful. However, sometimes I think doing the math is more effective than the guess/check approach of the applets.
- Yes, especially questions like the inhibitor one that asked us what is could/could not be.
- Yes. I thought that all of the written comments were also helpful in understanding the material. I thought all were helpful.
- The applets were much more helpful and much more effective than regular written homework. The graphing function allowed for more questions. Applications and analysis rather than time spent plotting points on a graph.
- I thought they provided a good review. I wish all of them were not due at the end of the semester. I like them about the same as regular homework assignments. Each are due at a given time.
- Very well-written but sometimes too tedious in terms of data-input on applets.

- Yes. I like having an interesting drug discussion too at the start. Maybe put a few more questions at the end of each. Maybe even some tougher ones. If there's no answer to write down, a question doesn't need a number. It's more of an instruction.
- Overall, applets were pretty good at providing a sense of the effect each variable has on different aspects of parameter studied. While the questions asked were not the most probing, they did lead us to discover interesting correlations. The material presented before each applet was really concise and good though!
- Yes, I found the applets helpful. Online examples of other mathematical relationships of the drugs could be helpful. I liked these HW sets more than regular homework because of the visual interactive components.