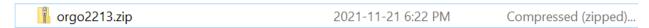
## **HOW TO USE**

1. The download will include a .zip file called orgo2213.



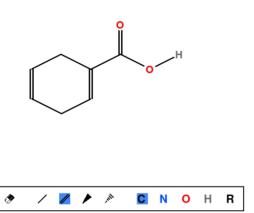
2. Simply right click, and press "Extract All".



3. Double click either "Molecule Builder" or "Chiral Practice" to test these programs out.



## **MOLECULE BUILDER**



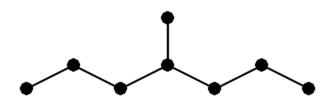
- 1. Molecule Builder is a program that allows you to create your own organic molecule.
- 2. At the bottom left, select the "pencil" tool to start adding carbon atoms and bonds.



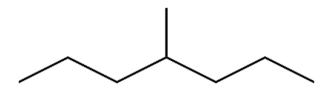
3. Click and drag on the center carbon molecule to draw a new bond to one of the gray dots that will appear.



4. Keep clicking and dragging from carbon atoms to expand your molecule.



5. Use the selector tool to view the molecule without the dots.



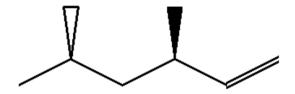
- 6. Use the eraser tool to remove carbons and bonds.
- 7. In the bottom middle you can select between different types of bonds, including single bonds, double bonds, wedges coming out of the page, and dashes going into the page.



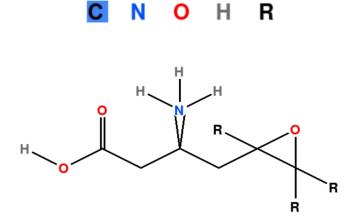






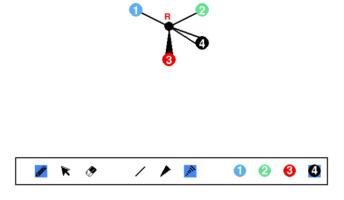


8. You can also select between a few different elements to spice up your molecules.



9. Finally, there is a reset button in the top left corner to start over from scratch.

## **CHIRAL PRACTICE**



1. "Chiral Practice" works in the same way as "Molecule Builder" except it can be used to determine S and R configurations of chiral carbon atoms.

- 2. On the bottom you can select between 4 different hypothetical atoms. The numbers represent their priorities in the Cahn, Ingold, and Prelog system.
- 3. Enter 4 different hypothetical groups around the central carbon and the program will tell you whether the central carbon is in the S or R configuration.

