

## **Experimental Design Scenarios**

### Scenario 1:

You have been diagnosed with hypertension and are considering taking medicine to reduce your high blood pressure. Both Company A and Company B make drugs that reduce high blood pressure, and each company claims that their drug is better than the other company's drug. Design an experiment to help you decide which drug you should take for your high blood pressure. Please include a formal statement of the hypothesis you are testing, as well as all the variables that could potentially have an effect on the results of your experiment.

### Scenario 2:

Your biology professor has a room in Hitchcock that houses turtles. She goes away on vacation while she is waiting for incubating turtle eggs to hatch in the room. When she returns, she notices something strange about the hatched turtles. Instead of the turtles being roughly half males and half females, all of the hatched turtles are males! Your professor also happened to notice that the temperature in the room is about 5° C cooler than normal, and thinks this may have something to do with the phenomenon. Your professor asks you to design an experiment to explain why the hatched turtles are all males. Please include a formal statement of the hypothesis you are testing, as well as all the variables that could potentially have an effect on the results of your experiment.