Questions for Jeremy

If you have your own questions that is even better, but here are some if you want to choose one instead!

1. **OHSU is at the forefront of a digital revolution in medicine**
   - **1.1.** What is different about Oregon Health and Science University (OHSU) and a regular university like Portland State University?
   - **1.2.** What is the difference between genetic sequencing and molecular sequencing?
   - **1.3.** How are computer algorithms used to help discover new drugs?
2. **My research: using physics and python codes to predict cell behavior by making cell-state maps**
   - **2.1.** What does predicting the behavior of one cell have to do with treating a patient?
   - **2.2.** Why does the cancer cell look so crazy?
   - **2.3.** What is complete or incomplete for prediction mean?
   - **2.4.** What is your dog doing right now?
3. **Cell-state maps are built from microscope images of cells which are analyzed using python code**
   - **3.1.** I see a class definition… what is a python class?
   - **3.2.** What are the green boundaries around the cells and why do some cells not have them?
4. **Cell-state maps from trajectories allow cell behavior to be predicted**
   - **4.1.** What are the orange arrows in the picture?
   - **4.2.** I see the shape of the cell changes a little. Does that mean anything?
   - **4.3.** Can you only predict cell behavior you have already seen?
5. **Current work: Combine cell-state maps with molecular information**
   - **5.1.** How do you know by looking at a picture of a cell what molecules are there?
   - **5.2.** You say molecular information… what types of molecules?
   - **5.3.** What is your dog doing right now?
6. **Future work: combine cell-state maps with computer-based models of cancer cells**
   - **6.1.** Are there people at OHSU working on computer models of cancer?
   - **6.2.** If scientists just share their code, does that mean people just come and steal their work?
   - **6.3.** How could little dots on a screen represent something as complex as a cell?
7. **Long-term future work: Can computer-based models predict the best way to treat a patient's cancer?**
   - **7.1.** What type of information about a patient's cancer could you use?
   - **7.2.** A tumor has millions of cells interacting with millions of other cells in the tissue and different organs. How do you know how what to put in a simplified model?
   - **7.3.** How do you know what different drugs will do to the cells?
8. **Acknowledgements**