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| 1/22 | 1 |  | IntroductionsLaboratory safetyWhat is a model system? Answering the right questions with the right "tools" (organisms)."Model systems" as a result of molecular biology revolution. Molecular tools overview.  | Group contracts |
| 1/24 | 2 |  | Microscopy boot camp |  |
| 1/29 | 3 | Forum 1: Cloning | Subcloning Bootcamp 1: (Digest+CIP, column purify, ligation, transformation). Flowcharts+review+revision | Flowchart on cloning(original + reviews +revisions) |
| 1/31 | 4 |  | *Naegleria* 101: Differentiate cells, watch amoebae (phase microscopy), look at flagellates. Pick colonies for cloning. Transfer Naegleria to HT115. | Collect images for your final presentation. Microscopy, photos of Ng plates. |
| 2/5 | 5 |  | Molecular Cloning Bootcamp 2. Miniprep, analytical digest, agarose gel. Transform dsRNA expressing bacteria + controls.  | Data analysis 1: Results of cloning (photo plates, # colonies). Image and label gel. Figure legend and analysis. |
| 2/7 | 6 | Forum 2: RNAi | Plan your RNAi experiment. Flowcharts + review+revision. Set up O/N cultures of dsRNA expressing bacteria. Prepare Naegleria cultures. | Flowchart on RNAi(original + reviews +revisions) |
| 2/12 | 7 | Forum 3: Molecular toolbox | Grow bacteria during class. Plate dsRNA expressing bacterial lawns on induction media. Outline your presentation on *Naegleria* module.Plan for Naegleria transfer. Flowcharts + review+revision.  | Flowchart on toolbox |
| 2/14 | 8 |  | Differentiate fed amoebae + controls, take samples for iodine time course + count. Watch and image cells.  | Data analysis 2: Differentiation (% cells with flagella at 3 time points) |
| 2/21 | 9 |  | Wrap up *Naegleria* RNAi section, presentations. | Presentations:Summarize module, include next steps and conclusions.  |