

UNCC Biotechnology and Bioinformatics Camp

Dr. Jennifer Weller

Summer 2010

Contact and room information

- Dr. Jennifer Weller
 - Bioinformatics 353
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 - <http://webpages.uncc.edu/~jweller2/SummerCamp2010>
- Lab is in Bioinformatics 345 (a card key is required to get into the lab corridor)
- Classroom is Bioinformatics 301
- Computer classroom is Bioinformatics 104.

Overview of Today

- Preliminaries- Room 301
 - Introductions, backgrounds, skills
 - Outline of next two weeks
 - Lab and classroom walkthrough
- Lunch!
- Background
 - Scientific Method
 - Sample collection
 - Lab notebooks and documentation
 - The Study Organism
- Focus Area for Scientific Discovery: The American Chestnut

Preliminaries

- Get Acquainted – determine skills, etc.
 - goals for camp, current skills and knowledge

Outline of camp activities

- Overall: collect, process and perform molecular assays on samples of Chestnut trees and their pathogens
- Week 1: Basic Biotechnology Lab skills
 - Collect samples
 - Learn basic lab skills and devices
 - Process samples to purify DNA
 - Learn how to test your samples to see if the purification gave acceptable product (yield and purity).
 - Learn to keep a lab notebook and share your results
- Week 2: Molecular Biology assays and Bioinformatics Skills
 - Learn what molecular fingerprints are
 - Learn how to do PCR
 - Learn to design a PCR assay
 - Perform a PCR assay
 - Analyze the results of your assay

Lab and Classroom tour

- Where is....?