**PlantSEED Workshop Outline**

**August 13-14**

Presentations

Hands-on

**Day 1: Annotation and Reconstruction**

Session A: Overview and Login (9am):

1. Introductions and General overview

(30 minutes)

1. Introduction to ModelSEED/PlantSEED website (trouble-shooting)

(15-30 minutes)

Coffee Break (10am)

Session B: Automated Annotation (10:30am):

1. Explanation of RAST, Subsystems, and PlantSEED K-mers

(40 minutes)

1. Explore annotation in PlantSEED and in user genomes

(50 minutes)

Lunch (12pm)

Session C: Editing functional annotation (1pm):

1. Explanation of false positives and false negatives in annotation process

(30 minutes)

1. Finding and fixing false positives and false negatives

(60 minutes)

Break (2:30pm)

Session D: Metabolic Reconstruction (3pm):

1. Overview of metabolic reconstruction process

(30 minutes)

1. Iterative reconstruction of draft metabolic models

(60 minutes)

Finish (4pm)

**Day 2: Metabolic Modeling**

Session E: Overview and Q&A:

1. Re-visit Annotation/Reconstruction process, answer questions, debug

(30 minutes)

1. Introduction to metabolic modeling

(30 minutes)

1. Exploring aspects of metabolic model & biomass. Gapfill models

(30 minutes)

Coffee Break (10:30am; Gapfilling)

Session F: Flux Balance Analysis and Gapfilling (11am):

1. Explanation of FBA and Gapfilling

(30 minutes)

1. Running and Exploring FBA results

(30 minutes)

Lunch (12pm)

Session G: Future of PlantSEED (1pm):

1. Future plans

(30 minutes)

1. Hands on exploration of genomes, metabolic models, and Q&A

(90 minutes)

Finish (3:00pm)