

**Essentials of staphylococcal genetics and metabolism workshop**  
**July 10-15, 2022**

**Sunday July 10**

6:30 pm – 9:00 pm                      Introductory Dinner and Opening Remarks (International House)

**Monday July 11**

Location: DRCI 1004

9:00 am – 12:00 pm                      Design of allelic replacement vector  
Allelic replacement  
Sapil complementation

12:00 pm – 1:00 pm                      NTML and toolbox  
Lunch

Location: Lab DCR11 8052

1:00 pm – 2:00 pm                      Staphylococcal transduction  
2:00 pm – 5:00 pm                      Phage propagation and Phage titer  
A) Broth growth demonstration  
B) 4220/pJB38 (three groups)  
C) JE2/*sarA::Tn* (three groups)

**Tuesday July 12**

Location: Lab DCR11 8052

9:00 am – 11:30 am                      Phage transduction  
A) 4220/pJB38→4220  
B) 4220/pJB38→JE2  
C) 4220/pJB38→U1  
D) JE2/*sarA::Tn*→4220  
E) JE2/*sarA::Tn*→JE2  
F) JE2/*sarA::Tn*→U1  
Lunch

11:30 am – 1:00 pm                      Location: DRCI Commons

1:00 pm – 1:30 pm                      Group Photo

Location: DRC 1006

1:30 pm – 2:30 pm                      Complementation. Transcriptional fusion vectors and reporters and other tools  
2:30 pm – 4:30 pm                      Bacteriophage of the staphylococci/pathogenicity islands  
3:30 pm – 5:00 pm                      Open Discussion

**Wednesday July 13**

Location: DRCI 1004

9:00 am – 12:00 pm                      Growth and metabolism discussions  
A) Growth, medium and aeration  
B) Central metabolic reactions-following carbon  
C) Nitrogen metabolism  
D) CO<sub>2</sub> metabolism/trace nutrients

12:00 pm – 1:00 pm                      Lunch

Location: Lab DCR11 8052

1:00 pm – 6:00 pm                      The impact of growth medium and aeration on central metabolism and subsequent interpretation. Glucose, pH, ammonia, lactate, acetate, nitrate  
A) TSB aerobic  
B) TSB microaerobic  
C) TSB anaerobic  
D) CDMG 14mM aerobic  
E) BHI aerobic  
F) CDMG 3.5mM aerobic

**Thursday July 14**

Location: DRCI 1006

9:00 am – 10:00 am

10:00 am – 11:00 am

11:00 am – 12:00 pm

Transduction interpretation  
Restriction modification systems  
Open Discussion  
FREE AFTERNOON

**Friday July 15**

Location: DRCI 1004

10:00 am – 11:00 am

11:00 am – 1:00 pm

1:00 pm – 5:00 pm

Burden of staphylococcal disease discussion  
Lunch  
Student Presentations

6:30 pm

Farewell dinner - Meatball Blackstone – 3910 Harney Street Omaha, NE 68131