**Processing Transfusion Reaction Cultures in Microbiology**

Presented by Tom Smith, HMC Microbiology Lead

**Once HMC TSL submits the blood bag with the appropriate form:**

1. **Extract Sample**
   1. Sometimes volume very limited. May have to add saline in order to get 0.1 - 0.5 mL per bottle.
   2. Do not use segments since they don’t represent the bag contents after spiking
2. **Inoculate 3 bottles**
   1. Aerobes
   2. Anaerobes
   3. 25C storage
3. **Prepare and perform Gram Stain**
   1. Call results STAT
   2. Results are recorded on the TRRX form and in SQ as a BBC comment
   3. *Nina working with Scott to create an add-on test*
4. **Load bottles into instrument** 
   1. Versatrak – incubation at 35C, continuous monitoring, 5 days
   2. System measures changes in gas pressure
   3. Results can be found in as little as 12-24 minutes
   4. Indication of potential growth is flagged
5. **25C bottle is visually checked**
   1. Recognizes that some bacteria like colder temperatures
   2. Blind cultures are plated
   3. Incubated 7 days

**So, what happens if there is possible microbial growth?**

1. Gram Stain
2. Set up appropriate culture plate media
3. *18-24 hours later*
4. Check plates for growth
5. Proceed to identification – biochemical and/or molecular
6. Once identified, antimicrobial susceptibility set up
7. *18 to 24 hours later*
8. Susceptibility results available

Thanks to Max for asking Tom to come to our Technical Meeting and special thanks to Tom for giving us a synopsis of Micro’s part in the investigation of suspected transfusion reactions.