

Molecular Diagnostics Rotation - Objectives

Medical Knowledge

A. Objectives:

1. The resident is expected to understand the utility and limitations of various molecular diagnostic tests used for managing patient care.

B. Plan:

1. **Week 1** Orientation
 - a. Review Molecular Methods 12-05 ppt
 - b. P:\training presentations
 - c. Real Time PCR animation
 - d. Thirdwave Invader animation
 - e. Snplex animation
 - f. Luminex animations
 - g. Review and signout molecular tests
2. **Week 2**
 - a. **Review molecular utility for infectious disease testing**
 - i. Observe Infectious Disease tests (HCV and HIV cobas), EBV and CMV assays.
 - b. **Review molecular utility for genetic tests associated with Thrombophilia**
 - i. Observe genetic disease tests (Factor V Leiden and Prothrombin)
 - ii. Review and sign out molecular tests
3. **Week 3**
 - a. **Review molecular utility for Hematology oncology testing**
 - i. Observe Hematology oncology tests translocations, STR and quantitative bcr-abl tests
 - ii. Review and Sign out molecular tests
4. **Week 4.**
 - a. Observe LOH 1p/19q, sequencing, beadbased arrays and other miscellaneous assays and platforms
 - b. Review and sign out molecular tests
5. Reading requirement for the rotation
 - a. Powerpoints and Color Atlas of Genetics and Killeens Molecular Pathology. Including the following links:
 - b. <http://www.universalarray.com/images/Univ-sm.mpg>
 - c. <http://medicine.iupui.edu/flockhart/table.htm>
 - d. http://www.appliedbiosystems.com/support/Taqman_dme.xls
 - e. <http://qpcr.gene-quantification.info/>
 - f. <http://www.bio.davidson.edu/Courses/genomics/chip/chip.html>
 - g. <http://clinicaloptions.com/>
6. The residents are expected to attend Clinical Pathology Rounds and the Pathophysiology conferences.

C. Assessment:

1. The residents medical knowledge base will be assessed during the didactic sessions with and by Molecular Diagnostic faculty and in their evaluation.