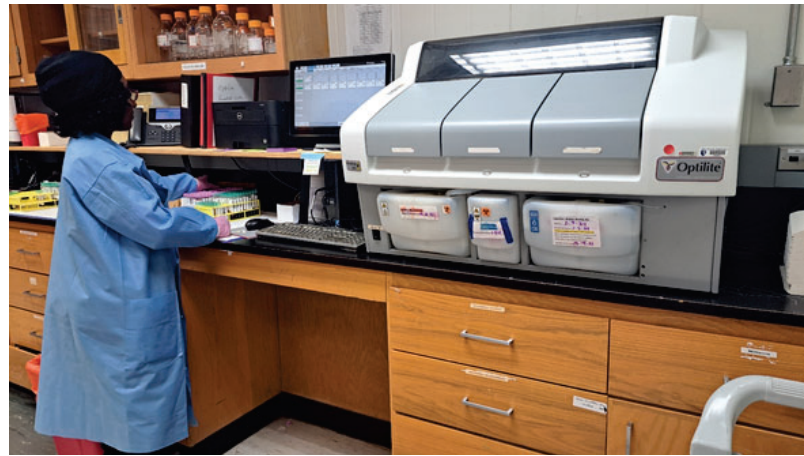
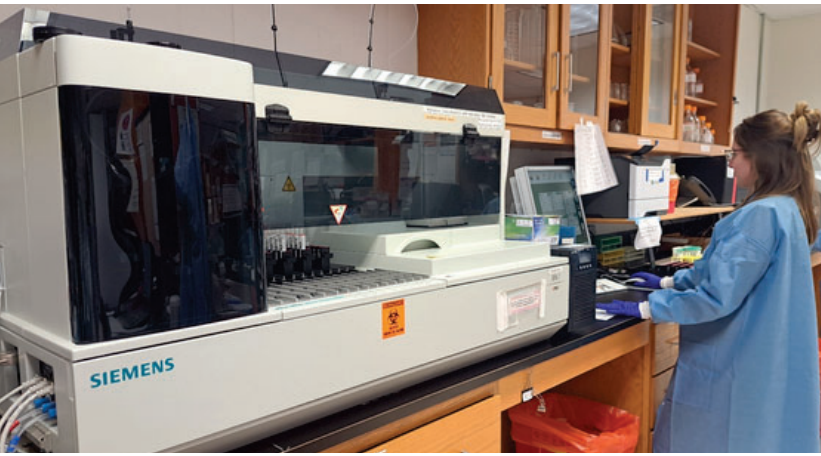




Clinical Immunology Laboratory



Jennifer McWhirt with the BNII Nephelometer and Teresa Johnson working on the Optilite analyzer

DESIGN BY: MEGHAN REID

Leadership and Team

Director(s):

Dr. John Sleasman and Dr. Terri Tarrant

Manager:

Laura Penrod

Number of lab team members: 11



Immunology Team: Sitting left to right: Laura Penrod, Mary Scala
Standing left to right: Raman Patchiyappan, Cynthia Smith, Debora Walker, Teresa Johnson, Jane Binz, Jennifer McWhirt, Hema Patel, and Monica Jarvis
Not Pictured: Hannah Chaffin and Bradley Carson

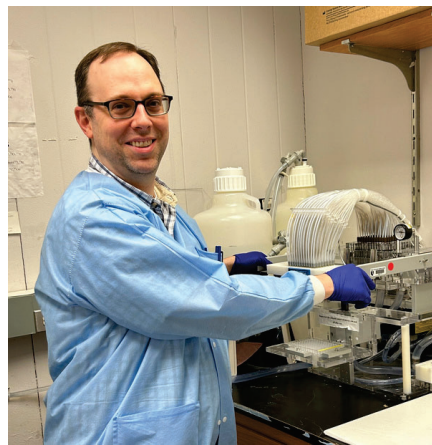
Focus and Volume

Lab Focus:

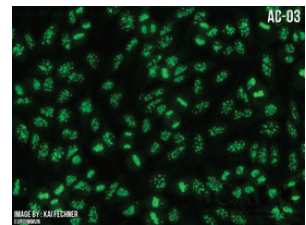
The area of focus for the clinical laboratory immunology is quite broad, with major implications for **infectious disease, rheumatology, allergy and asthma, transplantation, pediatrics, nephrology, pulmonology, gastroenterology, neurology, cardiology, hematology, and oncology.**

Average yearly volume:

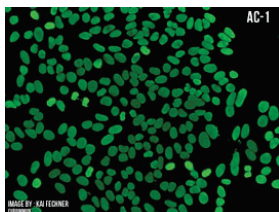
~175,000 tests per year



Bradley Carson



Centromere ANA pattern



Homogenous ANA pattern

Location and Hours

- RP3 building (Research Park 3) rooms 108 and 109
- 7:00 am – 6:30 pm; Monday – Friday



New in the Lab

2023 was an exciting year in the Immunology Lab. We transitioned 14 assays, previously performed by ELISA methodology to the **new BioPlex 2200 analyzer**; (9 assays performed using ELISA automation - DSX analyzer and 5 assays performed by manual ELISA).

We also transitioned our Extractable Nuclear Antigen Panel (ENA Panel), previously performed using the Luminex Multiplex Bead Immunoassay method, to the BioPlex 2200. With this transition, we were able to offer an expanded panel of analytes in the ENA Panel and we repatriated Anti-Glomerular Basement Membrane Antibody testing.



Mary Scala - Working on the BioPlex 2200

The BioPlex2200 is a fully automated, floor-standing, self-contained, analyzer employing multiplex flow immunoassay methodology. Reactions occur on the surface of fluoromagnetic beads, and all reagents needed are contained within panel-specific reagent packs that are stored on board with refrigeration. A series of control beads is evaluated in each reaction to ensure reliable results for each sample. The analyzer incorporates a dedicated software package for instrument control, data collection, results analysis, calibration, quality control, and service software. The BioPlex 2200 improves workflow with random access sampling and priority processing. Performing multiplex analysis on the BioPlex 2200 is easy: simply load a tray of primary tubes and walk away. The system can automatically process up to 100 samples per hour — for a maximum of 2200 reportable results (assay dependent) — with eight hours of walk-away capability. First results are available in approximately 40–60 minutes (assay dependent), with subsequent patient samples completed approximately every 30 seconds. The addition of the BioPlex has drastically improved workflow in the lab and decreased the number of aliquots needed for various benches.

The Immunology Lab owes a huge thank you to **Mary Scala**, who willingly became our subject matter expert on the BioPlex 2200. She took the lead by assisting with the validation, reviewing SOPs, and in helping determine the best workflow. She attended a week-long training in California and then brought back her new-found knowledge and became the primary trainer on the analyzer.



Raman Patchiyappan



Cynthia Smith - Processing

Fun Facts

- People may not realize where we are located – Research Park Building #3. We are not located in the hospital building.



Debora Walker - Working on the Phadia 250 Allergy Analyzer

Test Menu Update

The Immunology Lab also expanded our allergy test menu in 2023 with the addition of several new allergens. Our plan is to continue to expand the allergy test menu in 2024 with several new individual allergens and the addition of several panels.