

# ADVANCED RESEARCH AND DIAGNOSTICS LABORATORY (ARDL)

- **Overview & Mission**

- ARDL serves as a central laboratory that bridges the gap between academic research and clinical diagnostics.

- **Core Competencies**

- **Observational/Clinical Trial Support.**
- **Specialized Testing:** Biomarkers for cardiovascular disease, diabetes, kidney function, aging, dementia and nutrition.
- **Method Development.**
- **Quality & Compliance:** CLIA certification and CAP accreditation, ensuring data integrity for FDA submissions.

| Feature                        | Description   |
|--------------------------------|---|
| <b>Technology Applications</b> | Automated chemistry analyzers, immunoassays, LC-MS/MS, genomics, proteomics, cell culture and flow cytometry. |
| <b>Specimen Management</b>     | Long-term biorepository storage and global logistics handling.  |
| <b>Data Integration</b>        | Seamless data management and reporting tailored to epidemiological studies and longitudinal research.         |

# New Laboratory Assays

- **Implementing novel assays in population studies**
  - **Novel proteomics assays** (e.g.) NuLISA assays, Olink Reveal
  - **New sequencing platforms** (e.g.) Nanopore sequencing
  
- **Need to move from discovery to translation**
  - Targeted panels/assays that are accurate and reproducible
  
- **Address the limitations of current biomarker strategies**
  - Develop assays related to the 12 hallmarks of aging
  - Blood based biomarkers do not detect changes in organs of interest
    - Exosome based approaches
    - iPSC based assays