

## Molecular Testing

Four molecular tests are available: **HEA** (Human Erythrocyte Antigen), **RHD** (RHD Variant), **HPA** (Human Platelet Antigen), **HLA** (Human Leukocyte Antigen)

### Immucor BioArray™:

#### **Precise Type™ HEA Test: (Davenport and Springfield Locations)**

- First ever FDA approved red cell genotyping test available.
- Includes a complete phenotype including many high and low frequency antigen in the following blood groups:
  - Rh, Kell, Duffy, Kidd, MNS, Lutheran, Dombrock. Landsteiner-Weiner
  - Diego, Colton, Scianna
- Used to build donor database to provide antigen negative units for client hospitals.

#### **HEA testing is recommended for the following:**

- Sickle Cell Patients
- Warm autoantibody Patients
- Patient's with difficult antibodies:
  - Antibody to high frequency antigen
  - HTLA antibodies
  - Possible autoantibodies
- Recently transfused patients when a phenotype is necessary



#### **RHD Variant Assay: (Springfield Location ONLY)**

- Detection and classification of altered RHD antigen, represented by weak and partial gene expression.
- Particularly useful with prenatal patients and determining eligibility for Rh Immune Globulin.
- Recommended when obtain serologic weak RhD typing or a discrepant RhD typing on a patient.

## Molecular Testing, *Continued*

### **HPA BeadChip Assay: (Springfield location ONLY)**

- Includes a phenotype for 22 human platelet antigens.
  - Tested on patients where HPA antibodies have been detected.
  - May help in the diagnosis and management of neonatal alloimmune thrombocytopenia, post-transfusion purpura and platelet refractoriness.
  - Also performed on platelet donors to provide HPA matched platelet products.
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### **LifeCodes HLA Test: (Springfield location ONLY)**

- Performed on patients that have had HLA antibodies identified.
- Also performed on platelet donors to provide HLA matched platelet products.
- HLA-A and HLA-B test performed to provide HLA phenotype.

HLA test utilizes the LifeCodes SSO (Sequence-Specific Oligonucleotides) method which is analyzed with the Luminex instrument.

