



**American  
Red Cross**

# **Antibody Adventures: A Donor Case Series**

**Presented by Jennifer Jung, MLS(ASCP), SBB<sup>CM</sup>**

**IRL Supervisor, Missouri-Arkansas Region, Maryland Heights, MO**

# Objectives

## The Adventure Begins: What We'll Unpack

- Describe the donor testing requirements for antibody detection and identification.
- Explain the testing performed by Creative Testing Solutions (CTS) and its role in donor antibody detection.
- Describe the Immunohematology Reference Laboratory (IRL) process used to verify CTS positive donor screens and identify antibodies.
- Discuss product utilization considerations when donor antibodies are identified.
- Review case studies that illustrate the application of donor antibody testing principles.

# Standards for Testing Donors

## 5.8.3 Detection of Unexpected Antibodies to Red Blood Cell Antigens for Allogeneic Donors

-  5.8.3.1 Serum or plasma from donors shall be tested for unexpected antibodies to red cell antigens.
- 5.8.3.2 Methods for testing shall be those that demonstrate clinically significant red cell antibodies.\*

\*21 CFR 606.151(d) A provision that, if the unit of donor's blood has not been screened by a method that will demonstrate agglutinating, coating and hemolytic antibodies, the recipient's cells shall be tested with the donor's serum (minor crossmatch) by a method that will so demonstrate.

# Labeling Regulations for Red Cells

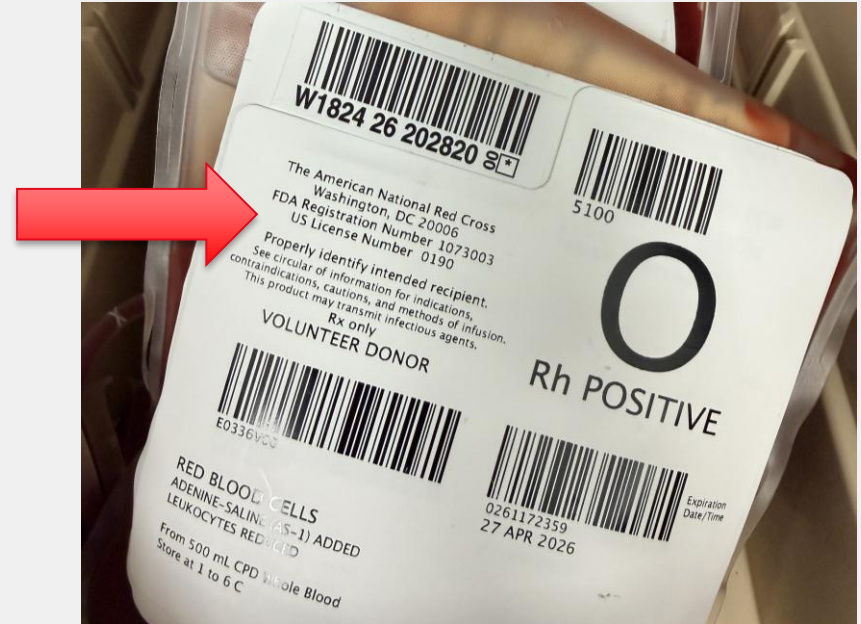
## CFR Title 21 606.121 Container label

- (e) (2) Except for frozen, deglycerolized, or washed Red Blood Cell products, Red Blood Cell labels must include:
  - (ii) If tests for unexpected antibodies are positive and the product is intended for transfusion, the statement: “Contains (name of antibody).”

# Product Licensure

## Donor antibody testing is a required test

- If any testing used during antibody identification requires unlicensed reagents or techniques, the product itself must be labeled as unlicensed.
- Examples of testing which will remove the products license:
  - Testing with expired or frozen/thawed reagent cells
  - Ruling out using adsorbed plasma
  - Ruling out using red cell treatments



# Blood Collection

## The Starting Point of the Antibody Adventure = Donation

- 5 tubes are collected:
  - Clot tube-red top
  - EDTA-purple
  - EDTA-pink
  - EDTA-purple (Region)
  - EDTA-PPT (Plasma Sample Manufacturing Facility)



# Blood Collection – Sample Tubes

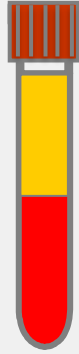
What are all those tubes used for?

- 3 tubes are routed to CTS



|   |         |
|---|---------|
| 1 | NAT HBV |
| 2 | NAT HCV |
| 3 | NAT HIV |
| 4 | WNV     |

Babesia

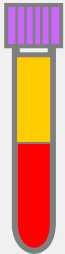


|    |                          |
|----|--------------------------|
| 5  | HIV Antibody             |
| 6  | HTLV Antibody            |
| 7  | HBsAg                    |
| 8  | HBc Antibody             |
| 9  | HCV Antibody             |
| 10 | <i>T. cruzi</i> Antibody |



|    |                 |
|----|-----------------|
| 11 | ABO/Rh          |
| 12 | Syphilis        |
| 13 | CMV (Optional)  |
| 14 | Antibody Screen |

- 1 tube (4mL) routed to the Red Cross collecting region for IRL testing based on CTS results



|                         |
|-------------------------|
| ABO/Rh testing          |
| Antibody Screen         |
| Antibody Identification |
| Antigen typing          |

# Blood Collection – Sample Tubes

## Statistics for the Charlotte CTS Donor Testing Laboratory

- Average Test Volume:
  - 4,800 Donor samples distributed over 2-3 shifts each day
  - Sun / Mon : 1900 – 2700
  - Tues – Sat : 6200 – 6800
  - Total Volume: 1.7 Million Annually

Testing begins with the receipt of approximately  
13,000 - 14,000 tubes of blood

## CTS testing

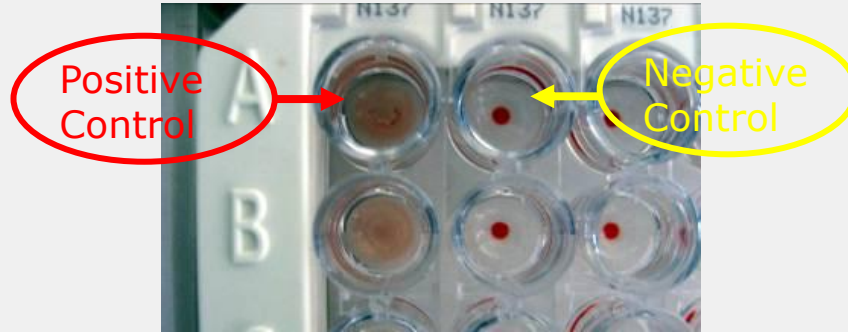
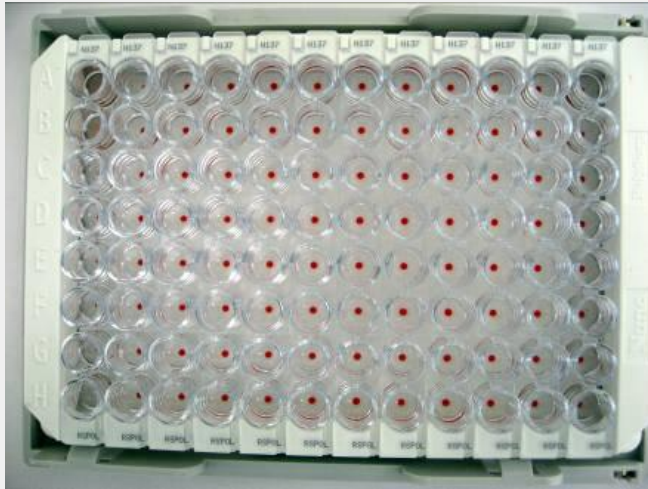
Initial Antibody Screening (IAT) is performed on the NEO IRIS



CTS screens by a sensitive automated method which may detect antibodies not detectable by tube method.

## CTS testing

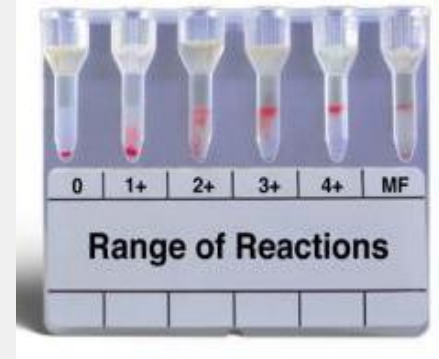
The NEO has a CCD (charge coupled device) camera that reads each well to determine if it is positive or negative.



The donor's plasma is tested against a pool of two group O cells using **Capture-R® Solid-Phase Technology**. The microplate wells are pre-coated with the red blood cells for antibody screening. If antibodies are present in the donor sample, they bind to the antigens on the well surface.

## CTS testing

A positive NEO IRIS screen is followed by supplemental antibody screening using a three cell screen performed on the Ortho Vision Swift with Column Agglutination Technology.



- CTS results are electronically transmitted to the Red Cross' Blood Establishment Computer System (BECS).
- The CTS result is either Positive or Negative. Antibody identification is not performed.

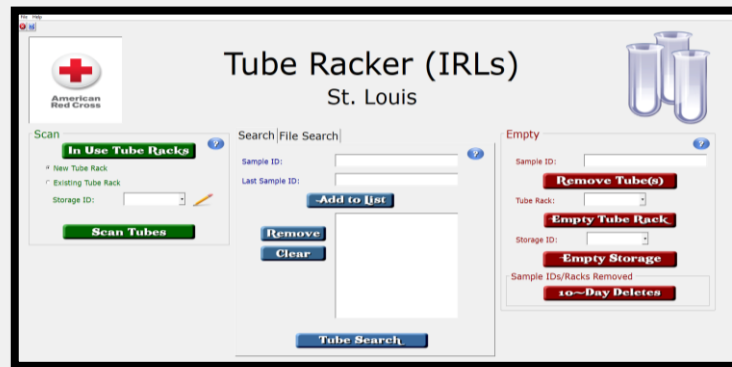
# IRL Testing

## Tube Management

- The IRL is responsible for managing the region retention tube (the 4mL EDTA tube).



- We rack about 400-800 tubes each morning using Tube Racker software and large specially designed racks.
- Each rack holds 200 tubes
- Each tower holds 16 racks



# IRL Testing

## Tube Screen

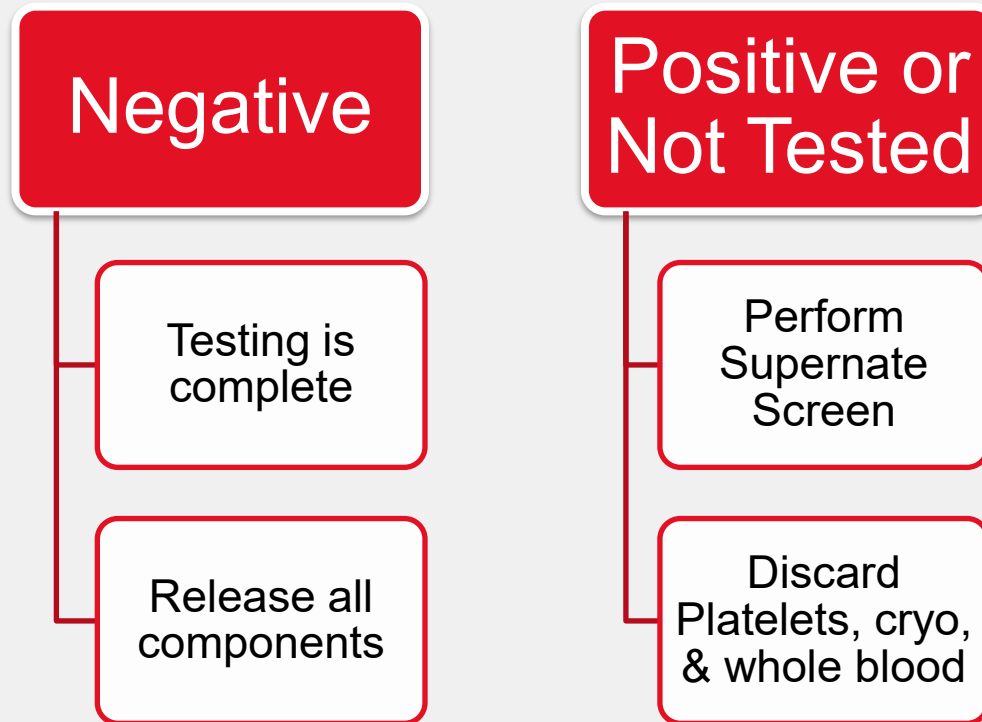
- Reports are queried daily M-F to identify donors with a positive Antibody Initial (result from CTS)

|          |          |
|----------|----------|
| ABY INIT | Positive |
|----------|----------|

- We locate the donor's tube using the Tube Racker program to perform an antibody screen using tube methodology
- Standard Test Method is:
  - Two drops of donor plasma and one drop of a pool of two group O cells
  - No enhancement = saline technique
  - Macroscopic reading at immediate spin (IS), 30' 37°C, and indirect antiglobulin test (IAT).

# IRL Testing

If Tube Screen is



# What is a Supernate Screen?

**An antibody screen performed on the supernatant from the packed cell segments**

- In 1999, the American Red Cross submitted a request to the FDA to vary from the requirements of 21 CFR 606.121(e)(2)(ii). The variance was approved.
- A screen is performed on the contents from segments.
- When segments are prepared after additive solution is added to the red cell, segments will reflect the unit contents.
- Segment screens are not performed on autologous collections.

# FDA Variance for Supernate Testing

**The variance reads as follows:**

- Under the variance approval, Red Blood Cells that are manufactured from a red blood cell antibody positive donation using an additive solution do not require special labeling to indicate the red blood cell antibody if the supernate of the additive solution unit has been directly tested using approved testing methods and found negative.
- The antibody labeling requirements of 21 CFR 606.121(e)(2)(ii) remain applicable to blood components other than red blood cells prepared from the red blood cell antibody positive donation, and to additive solution red blood cell units that test positive for a red blood cell antibody.

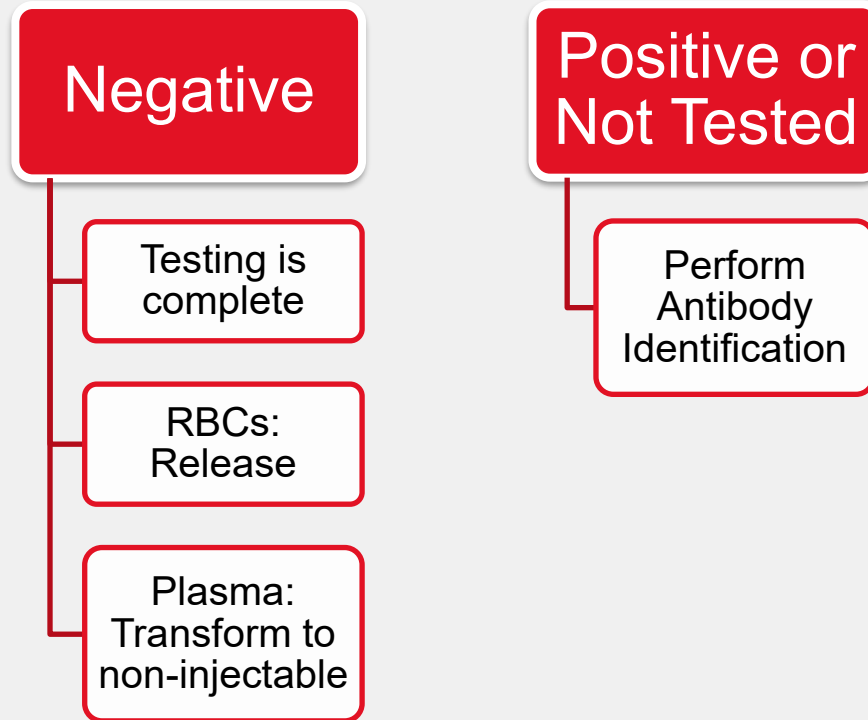
# IRL Testing

## Supernate Testing = Segment Screen

- We locate the red cells in the pending test location:
  - Two segments removed
    - Entire segment contents are placed in a test tube
    - Contents are hard spun and the supernatant is removed
- Standard Test Method is again used:
  - Two drops of red cell supernatant and one drop of pooled group O cells
  - No enhancement
  - Macroscopic reading at IS, 30' 37°C, and indirect antiglobulin test (IAT).

# IRL Testing

If the Segment Screen is



# Antibody Identification

## Determination step

- Each donor is evaluated to determine whether antibody identification is appropriate.
- Identification is typically performed when:
  - New donors – to support consistent notification practices and to identify new rare donors
  - Evaluating specificities for reagent use:
    - Red Cross' Diagnostic Manufacturing Division (DMD) develops licensed and unlicensed reagents
    - The DMD has criteria based on their desired antibody/reactivity requirements (specificity, test phase, and DMD acceptance thresholds)
    - Plasma containing antibodies that meet DMD requirements are sent for further manufacturing
    - Other plasmas are evaluated for local reagent needs when donor reactivity does not meet DMD acceptance criteria but is still useful for in-house testing

# Antibody Identification

## Initial Testing for identification using plasma from the 4mL EDTA region retention tube

- Test a full 11 cell panel and auto control at GEL/IAT
  - Uses approximately 6 drops or 300uL of plasma
    - Leaves plenty of volume for additional testing, if needed
  - Only 0.8% pre-diluted cells provided by the manufacturer can be used
    - Can't dilute 3% cells as that would be unlicensed testing

# Antibody Identification

## Ruling out antibodies

- Exclude the following commonly encountered red cell alloantibodies:  
D, C, E, c, e, K, k, Fy<sup>a</sup>, Fy<sup>b</sup>, Jk<sup>a</sup>, Jk<sup>b</sup>, S, s, M, N, P1, Le<sup>a</sup>, and Le<sup>b</sup>
- Single-dose cells may be used for exclusion

# Antibody Identification

## Specificity identification requires

- Reactive with at least two antigen positive
- Non-reactive with at least two antigen negative reagent cells
- Required for each specificity
- Antibodies must be reidentified on each donation to enter results in the BECS

# Antibody Identification

## Additional Testing

- Selected cells in Gel/IAT if a 0.8% cell matching the needed phenotype exists.
- If no 0.8% in date cell is available, then we will test a 3% cell in tube technique using LISS enhancement.
  - All tube testing includes reading at IS, LISS/37°C, and LISS/IAT
- We use a blend of both methods to identify and/or eliminate the required alloantibodies.

# Antibody Identification

## Testing the donor red cells

- The donor red cells are typed for the antigens corresponding to the identified specificities
  - For newly identified antibodies
  - No previous antibody history in the BECS
  - Not required on historic antibodies

# IRL Testing

If Antibody Identification is

Not Identified  
or Not Tested

RBCs: Discard

Plasma:  
Non-injectable

Antibody  
Specificity

RBCs: Label with  
antibody specificity

Plasma:  
Non-injectable

# Reagent use assessment

- Prior to discarding, we determine suitability for reagent use
  - Local or ARC regions (Transferase)
    - Red cells, if rare and not needing to be frozen for patient use
    - Plasma for screening
  - Reagent use for DMD
    - Only the plasma – might have to test at other phases not used in antibody identification
    - Results are compared against the DMD-provided table of required specificities and acceptance criteria.
    - Examples:

| Specificity     | Test Phase      | Typical DMD Acceptance Criteria |
|-----------------|-----------------|---------------------------------|
| Fy <sup>a</sup> | 15 min 37 C IAT | ≥ 1+ @ 1:8                      |
| M               | 15 min RT       | ≥ 1+ @ 1:4                      |
| C               | 15 min 37 C IAT | ≥ 2+ Undiluted                  |

# Donor Notification and Deferral

**Determined by the IRL; Letters mailed by the Donor Client and Support Center (DCSC)**

- **No notification**
  - History of antibodies with no new findings
  - Unable to test or identify the reactivity = result is Not tested or Antibody Unidentified
- **Notify and continue donation**
  - New antibody that meets DMD criteria or useful as local reagent
  - Donor receives a letter listing the antibody specificities
  - Donor is encouraged to continue donating
- **Notify and defer**
  - Antibody specificity not on the DMD desired list nor useful for local reagent use
  - Donor receives a letter explaining the antibody and the deferral

## Notify and Continue Donation Letter Template

During the routine donor testing of your blood, we detected the presence of antibodies to red blood cells. **This testing is not related to infections, and these antibodies have nothing to do with human immunodeficiency virus (HIV), hepatitis, or any other infectious disease for which donated blood is screened.**

The following red blood cell antibodies were detected: <insert *ABID1, ABID2, ABID3, ABID4*>

These antibodies are protein substances that may form naturally in response to exposure to foreign substances such as pollen or bacteria. Antibodies can also form following exposure to foreign red cells, which can occur during a pregnancy, transfusion or organ transplant at some time in the past.

It is important for you to share these results with your physician at your next visit as your physician may use these results in managing any future transfusions or pregnancies, if applicable.

This finding does not affect your eligibility to donate blood. You may continue donating whole blood or red blood cells by apheresis, and we hope you will do so on a regular basis. However, please do not donate plasma or platelets by apheresis since these donations contain the red cell antibody, and may not be able to be used for every patient. You may donate blood for your own use if needed.

## Notify and Defer Letter Template

During the routine donor testing of your blood, we detected the presence of antibodies to red blood cells. **This testing is not related to infections, and these antibodies have nothing to do with human immunodeficiency virus (HIV), hepatitis, or any other infectious disease for which donated blood is screened.**

The following red blood cell antibodies were detected: *<insert ABID1, ABID2, ABID3, ABID4>*

These antibodies are protein substances that may form naturally in response to exposure to foreign substances such as pollen or bacteria. Antibodies can also form following exposure to foreign red cells, which can occur during a pregnancy, transfusion or organ transplant at some time in the past.

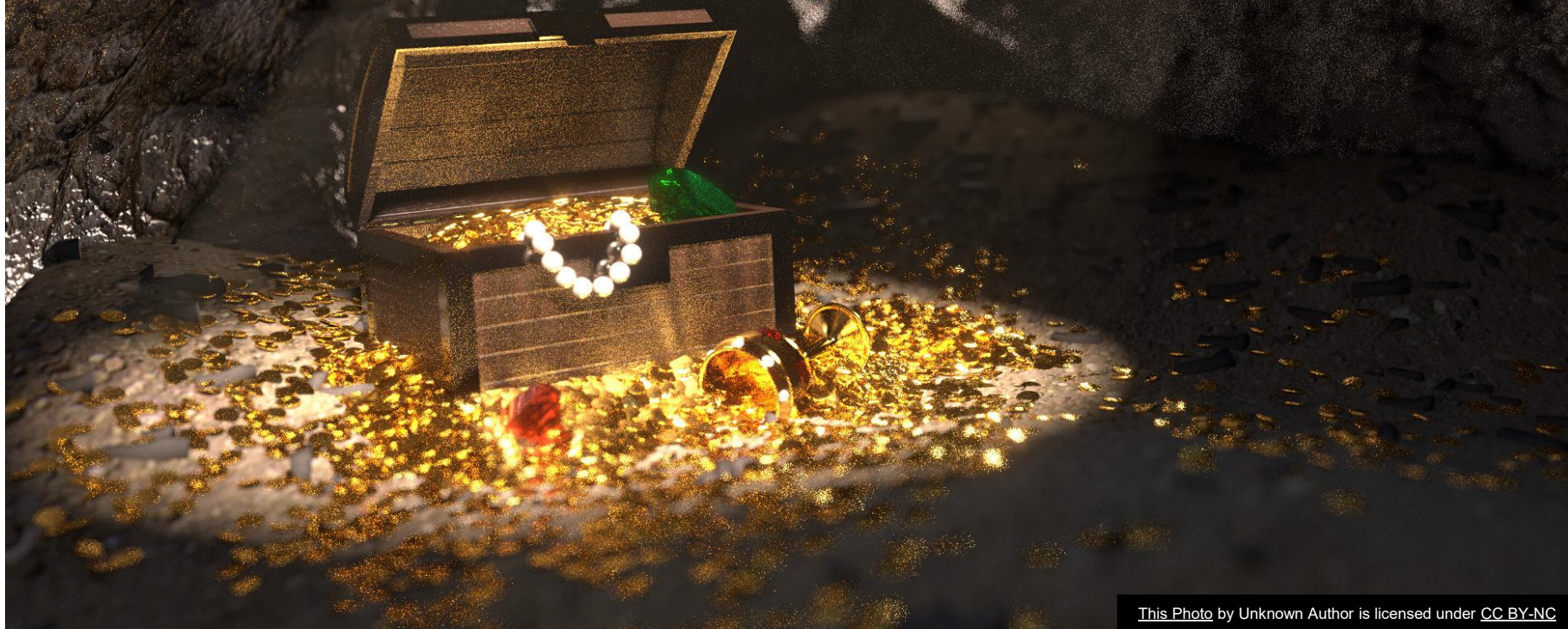
The red cell antibodies in your blood interfere with our ability to type and label your blood. Thus, hospitals will be unable to transfuse your blood to their patients. We are requesting that you refrain from donating blood for others in the future and have placed your name on our confidential list of deferred donors. We will not release this information without your permission, except when required by law. You may still be able to donate for yourself, if medically necessary.



# **The Antibody Adventures...**

## **(CASES)**

# The Hidden Treasure Expedition



# Donor Case #1

First Donation 04/16/2025

ABY INIT

Positive

| American Red Cross<br>Washington, DC 20006 |                                                                                                       | Tube Antibody Screen Form           |             |            |  American Red Cross |                          |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------|-------------|------------|------------------------------------------------------------------------------------------------------|--------------------------|
| WID: 5                                     |                                                                                                       | Tester Initials/Date: JJ 04/18/2025 |             |            |                                                                                                      |                          |
| Pos                                        | DIN                                                                                                   | IS Result                           | 37°C Result | IAT Result | Comments                                                                                             | Move for Labeling        |
| 1                                          | <br>W180725134264007 | 0                                   | 2+          | 3+         |                                                                                                      | <input type="checkbox"/> |

| American Red Cross<br>Washington, DC 20006 |                                                                                                        | Segment Antibody Screen Form        |                           |           |             |            |  American Red Cross |                   |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------|-----------|-------------|------------|--------------------------------------------------------------------------------------------------------|-------------------|
| WID: 5                                     |                                                                                                        | Tester Initials/Date: JJ 04/18/2025 |                           |           |             |            |                                                                                                        |                   |
| Pos                                        | DIN                                                                                                    | ABO/Rh                              | Historic Antibody Results | IS Result | 37°C Result | IAT Result | Comments                                                                                               | Move for Labeling |
| 1                                          | <br>W180725134264007 | O+                                  |                           | 0         | 0           | 0✓         |                                                                                                        | X                 |

# Donor Case #1

## First Donation Product Disposition



# Donor Case #1

Second Donation 06/23/2025

ABY INTT

Positive

| American Red Cross<br>Washington, DC 20006 | Tube Antibody Screen Form                                                                             |  American Red Cross |             |            |          |                          |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------|------------|----------|--------------------------|
| WID: 10                                    | Tester Initials/Date: JJ 06/26/2025                                                                   |                                                                                                      |             |            |          |                          |
| Pos                                        | DIN                                                                                                   | IS Result                                                                                            | 37°C Result | IAT Result | Comments | Move for Labeling        |
| 1                                          | <br>W18072509677600L | 0                                                                                                    | 2+          | 3+         |          | <input type="checkbox"/> |

| American Red Cross<br>Washington, DC 20006 | Segment Antibody Screen Form                                                                           |  American Red Cross |                           |           |             |            |          |                          |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------|-----------|-------------|------------|----------|--------------------------|
| WID: 10                                    | Tester Initials/Date: JJ 06/26/2025                                                                    |                                                                                                        |                           |           |             |            |          |                          |
| Pos                                        | DIN                                                                                                    | ABO/Rh                                                                                                 | Historic Antibody Results | IS Result | 37°C Result | IAT Result | Comments | Move for Labeling        |
| 1                                          | <br>W18072509677600L | O+                                                                                                     |                           | 0         | 0           | 1+         |          | <input type="checkbox"/> |

## Second Donation 06/23/2025

If the auto control is positive, we do not attempt to identify the autoantibody.

We enter the  
result Antibody  
not Identified.

No donor  
notification.

# Donor Case #1

## Second Donation Product Disposition



# Donor Case #1

Third Donation 01/05/2026

ABY INIT

Positive

| American Red Cross<br>Washington, DC 20006 |                                                                                                       | Tube Antibody Screen Form           |             |            |  American Red Cross |                          |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------|-------------|------------|------------------------------------------------------------------------------------------------------|--------------------------|
| WID: 12                                    |                                                                                                       | Tester Initials/Date: JJ 01/07/2026 |             |            |                                                                                                      |                          |
| Pos                                        | DIN                                                                                                   | IS Result                           | 37°C Result | IAT Result | Comments                                                                                             | Move for Labeling        |
| 1                                          | <br>W18072516338000U | 0                                   | 2+          | 3+         |                                                                                                      | <input type="checkbox"/> |

| American Red Cross<br>Washington, DC 20006 |                                                                                                        | Segment Antibody Screen Form        |                           |           |             |            |  American Red Cross |                          |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------|-----------|-------------|------------|--------------------------------------------------------------------------------------------------------|--------------------------|
| WID: 12                                    |                                                                                                        | Tester Initials/Date: JJ 01/08/2026 |                           |           |             |            |                                                                                                        |                          |
| Pos                                        | DIN                                                                                                    | ABO/Rh                              | Historic Antibody Results | IS Result | 37°C Result | IAT Result | Comments                                                                                               | Move for Labeling        |
| 1                                          | <br>W18072516338000U | O+                                  |                           | 0         | 0           | 2+         |                                                                                                        | <input type="checkbox"/> |

### Third Donation 01/05/2026

Now the auto control is negative, suggesting an antibody to a high prevalence antigen.

More testing is needed.

# Donor Case #1

## Third Donation Results

|   | Supplier/<br>Lot     | Donor / RhHr<br>- Vial | Rh-Hr |   |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | X               | Additional<br>antigens | Test Results |              |             |            |
|---|----------------------|------------------------|-------|---|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|--------------|--------------|-------------|------------|
|   |                      |                        | D     | C | E | c | e | f | V | C <sup>w</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | P1 | K    | k | Kp <sup>a</sup> | Kp <sup>b</sup> | Js <sup>a</sup> | Js <sup>b</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> | Xg <sup>a</sup> |                        | IS           | LISS<br>37°C | LISS<br>IgG | Gel<br>IgG |
| 1 | ALBA-16<br>V287750   | 11068269<br>R1R1 #12   | +     | + | 0 | 0 | + | 0 |   | 0              | 0   | + | 0 | + | 0               | +               | 0  | 0    | + | +               | 0               | 0               | +               | +               | +               | +               | +               | 0               | +               | +               |                        | 0            | 0            | 0✓          |            |
| 2 | Imm-20<br>50315      | B9045<br>R1R1 #2       | +     | + | 0 | 0 | + |   |   | 0              | +   | + | + | + | +               | 0               | +  | 0    | + | +               | +               | 0               | +               | 0               | +               | 0               | +               | 0               | +               | 0               | Co(a-)                 | 0            | 1+           | 3+          |            |
| 3 | Imm-10<br>44266      | C1378<br>Ror #TC       | +     | 0 | 0 | + | + |   |   | 0              | 0   | + | 0 | 0 | 0               | 0               | +  | 0    | + | 0               | +               | 0               | +               | 0               | 0               | +               | +               | 0               | +               | +               | U-                     | 0            | w+           | 3+          |            |
| 4 | Ortho 0.8%<br>VRB345 | 320208<br>R1R1 #22     | +     | + | 0 | 0 | + | 0 | 0 | 0              | +   | + | + | 0 | 0               | +               | s  | +    | 0 | 0               | +               |                 | +               | +               | 0               | +               | +               | 0               | +               | +               |                        |              |              |             | 2+         |
|   | Auto<br>Control      |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        | 0            | 0            | 0✓          |            |

# Donor Case #1

## Third Donation Results

|   | Supplier/<br>Lot     | Donor / RhHr<br>- Vial | Rh-Hr |   |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | X               | Additional<br>antigens | Test Results |              |             |            |
|---|----------------------|------------------------|-------|---|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|--------------|--------------|-------------|------------|
|   |                      |                        | D     | C | E | c | e | f | V | C <sup>w</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | P1 | K    | k | Kp <sup>a</sup> | Kp <sup>b</sup> | Js <sup>a</sup> | Js <sup>b</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> | Xg <sup>a</sup> |                        | IS           | LISS<br>37°C | LISS<br>IgG | Gel<br>IgG |
| 1 | ALBA-16<br>V287750   | 11068269<br>R1R1 #12   | +     | + | 0 | 0 | + | 0 |   | 0              | 0   | + | 0 | + | 0               | +               | 0  | 0    | + | +               | 0               | 0               | +               | +               | +               | +               | +               | 0               | +               | +               |                        | 0            | 0            | 0✓          |            |
| 2 | Imm-20<br>50315      | B9045<br>R1R1 #2       | +     | + | 0 | 0 | + |   |   | 0              | +   | + | + | + | +               | 0               | +  | 0    | + | +               | +               | 0               | +               | 0               | +               | 0               | +               | 0               | +               | 0               | Co(a-)                 | 0            | 1+           | 3+          |            |
| 3 | Imm-10<br>44266      | C1378<br>Ror #TC       | +     | 0 | 0 | + | + |   |   | 0              | 0   | + | 0 | 0 | 0               | 0               | +  | 0    | + | 0               | +               | 0               | +               | 0               | 0               | +               | +               | 0               | +               | +               | U-                     | 0            | w+           | 3+          |            |
| 4 | Ortho 0.8%<br>VRB345 | 320208<br>R1R1 #22     | +     | + | 0 | 0 | + | 0 | 0 | 0              | +   | + | + | 0 | 0               | +               | s  | +    | 0 | 0               | +               |                 | +               | +               | 0               | +               | +               | 0               | +               | +               |                        |              |              |             | 2+         |
|   | Auto<br>Control      |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        | 0            | 0            | 0✓          |            |
|   | A<br>W089677E        | 303C                   | +     | + | 0 | 0 | + |   |   | 0              | 0   | + | + | + | 0               | +               | +  | 0    | + | +               | 0               |                 | +               | +               | +               | 0               | +               | 0               | +               |                 |                        | 0            | 0            | 0✓          |            |

# Donor Case #1

## Third Donation Results

|   | Supplier/<br>Lot     | Donor / RhHr<br>- Vial | Rh-Hr        |              |   |   |              |   |   |                | MNS          |              |              |   | Lewis           | P               | Kell |              |   |                 |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | X               | Additional<br>antigens | Test Results    |    |              |             |
|---|----------------------|------------------------|--------------|--------------|---|---|--------------|---|---|----------------|--------------|--------------|--------------|---|-----------------|-----------------|------|--------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|-----------------|----|--------------|-------------|
|   |                      |                        | D            | C            | E | c | e            | f | V | C <sup>w</sup> | M            | N            | S            | s | Le <sup>a</sup> | Le <sup>b</sup> | F1   | K            | k | Kp <sup>a</sup> | Kp <sup>b</sup> | Js <sup>a</sup> | Js <sup>b</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> |                        | Xg <sup>a</sup> | IS | LISS<br>37°C | LISS<br>IgG |
| 1 | ALBA-16<br>V287750   | 11068269<br>R1R1 #12   | <del>+</del> | <del>+</del> | 0 | 0 | <del>+</del> | 0 |   | 0              | <del>+</del> | 0            | <del>+</del> | 0 | <del>+</del>    | 0               | 0    | <del>+</del> | + | 0               | 0               | +               | <del>+</del>    | <del>+</del>    | <del>+</del>    | +               | 0               | +               | +               |                        | 0               | 0  | 0✓           |             |
| 2 | Imm-20<br>50315      | B9045<br>R1R1 #2       | +            | +            | 0 | 0 | +            |   | 0 | +              | +            | +            | +            | + | 0               | +               | 0    | +            | + | +               | 0               | +               | 0               | +               | 0               | +               | 0               | +               | 0               | Co(a-)                 | 0               | 1+ | 3+           |             |
| 3 | Imm-10<br>44266      | C1378<br>Ror #TC       | +            | 0            | 0 | + | +            |   | 0 | 0              | +            | 0            | 0            | 0 | 0               | +               | 0    | +            | 0 | +               | 0               | +               | 0               | 0               | +               | +               | 0               | +               | +               | U-                     | 0               | w+ | 3+           |             |
| 4 | Ortho 0.8%<br>VRB345 | 320208<br>R1R1 #22     | +            | +            | 0 | 0 | +            | 0 | 0 | +              | +            | +            | 0            | 0 | +               | s               | +    | 0            | 0 | +               |                 | +               | +               | 0               | +               | +               | 0               | +               |                 |                        |                 |    | 2+           |             |
|   | Auto<br>Control      |                        |              |              |   |   |              |   |   |                |              |              |              |   |                 |                 |      |              |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 | 0                      | 0               | 0✓ |              |             |
|   | A<br>W089677E        | 303C                   | +            | +            | 0 | 0 | +            |   | 0 | 0              | +            | <del>+</del> | +            | 0 | +               | <del>+</del>    | 0    | +            | + | 0               |                 | +               | +               | +               | 0               | <del>+</del>    | 0               | +               |                 |                        | 0               | 0  | 0✓           |             |

# Donor Case #1

## Third Donation Results

- Performed 1x adsorption at 37°C using untreated cells

|                                                   | Rh-Hr |   |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | Additional<br>antigens | Test Results |              |             |    |
|---------------------------------------------------|-------|---|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|--------------|--------------|-------------|----|
|                                                   | D     | C | E | c | e | f | V | C <sup>W</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | P1 | K    | k | Kp <sup>a</sup> | Js <sup>a</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> |                        | IS           | LISS<br>37°C | LISS<br>IgG |    |
| R <sub>1</sub> R <sub>1</sub><br>W18112545220700* | +     | + | 0 | 0 | + |   |   |                | +   | 0 | + | 0 | +               | 0               | +  | 0    |   |                 |                 | +               | +               | 0               | +               |                 |                 | Kp(b+)                 |              |              |             |    |
| R <sub>2</sub> R <sub>2</sub><br>W18112544918200G | +     | 0 | + | + | 0 |   |   |                | +   | + | 0 | + | 0               | +               | +  | 0    |   |                 |                 | +               | 0               | +               | 0               |                 |                 | Kp(b+)                 |              |              |             |    |
| rr<br>W18112544950200G                            | 0     | 0 | 0 | + | + |   |   |                | 0   | + | + | + | 0               | +               | 0  | 0    |   |                 |                 | 0               | +               | 0               | +               |                 |                 | Kp(b+)                 |              |              |             |    |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |    |
| R <sub>1</sub> R <sub>1</sub> adsorption          |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |    |
| W-20 C6867<br>47294 #9                            | +     | 0 | + | + | 0 |   |   | 0              | +   | + | 0 | + | 0               | +               | +  | 0    | + | 0               | 0               | +               | +               | +               | 0               | 0               | +               |                        |              | 0            | 0           | 0✓ |
| W-10 N3882<br>489286 #10                          | 0     | 0 | 0 | + | + |   |   | 0              | 0   | + | 0 | + | +               | 0               | +  | 0    | + | 0               | 0               | 0               | +               | +               | +               | +               | 0               | +                      |              | 0            | 0           | 0✓ |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |    |
| R <sub>2</sub> R <sub>2</sub> adsorption          |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |    |
| W-20 C11351<br>51918 #3                           | +     | + | 0 | 0 | + |   |   | 0              | +   | + | 0 | + | 0               | +               | 0  | 0    | + | 0               | 0               | 0               | +               | 0               | +               | 0               | +               |                        |              | 0            | 0           | 0✓ |
| W-10F H941<br>46281 #8                            | 0     | 0 | 0 | + | + |   |   | 0              | +   | 0 | + | 0 | 0               | +               | +  | 0    | + | 0               | 0               | +               | 0               | +               | 0               | 0               | +               |                        |              | 0            | 0           | 0✓ |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |    |
| rr adsorption                                     |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |    |
| W-20 B11111<br>47294 #2                           | +     | + | 0 | 0 | + |   |   | 0              | +   | + | 0 | + | 0               | +               | +  | 0    | + | 0               | 0               | +               | 0               | +               | 0               | 0               | +               |                        |              | 0            | 0           | 0✓ |
| W-20 R1783<br>47294 #10                           | +     | + | 0 | + | + |   |   | 0              | +   | 0 | + | 0 | +               | 0               | +  | +    | 0 | 0               | 0               | +               | +               | +               | +               | 0               | +               |                        |              | 0            | 0           | 0✓ |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |    |

# Donor Case #1

## Third Donation Results

- Performed 1x adsorption at 37°C using untreated cells

|                                                   | Rh-Hr |   |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | Additional<br>antigens | Test Results |              |             |
|---------------------------------------------------|-------|---|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|--------------|--------------|-------------|
|                                                   | D     | C | E | c | e | f | V | C <sup>W</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | P1 | K    | k | Kp <sup>a</sup> | Js <sup>a</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> |                        | IS           | LISS<br>37°C | LISS<br>IgG |
| R <sub>1</sub> R <sub>1</sub><br>W18112545220700* | +     | + | 0 | 0 | + |   |   |                | +   | 0 | + | 0 | +               | 0               | +  | 0    |   |                 |                 | +               | +               | 0               | +               |                 |                 | Kp(b+)                 |              |              |             |
| R <sub>2</sub> R <sub>2</sub><br>W18112544918200G | +     | 0 | + | + | 0 |   |   |                | +   | + | 0 | + | 0               | +               | +  | 0    |   |                 |                 | +               | 0               | +               | 0               |                 |                 | Kp(b+)                 |              |              |             |
| rr<br>W18112544950200G                            | 0     | 0 | 0 | + | + |   |   |                | 0   | + | + | + | 0               | +               | 0  | 0    |   |                 |                 | 0               | +               | 0               | +               |                 |                 | Kp(b+)                 |              |              |             |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |
| R <sub>1</sub> R <sub>1</sub> adsorption          |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |
| W-20 C6867<br>47294 #9                            | +     | 0 | + | + | 0 |   |   | 0              | +   | + | 0 | + | 0               | +               | +  | 0    | + | 0               | 0               | +               | +               | +               | 0               | 0               | +               |                        | 0            | 0            | 0✓          |
| W-10 N3882<br>489286 #10                          | 0     | 0 | 0 | + | + |   |   | 0              | 0   | + | 0 | + | +               | 0               | +  | 0    | + | 0               | 0               | 0               | +               | +               | +               | 0               | +               |                        | 0            | 0            | 0✓          |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |
| R <sub>2</sub> R <sub>2</sub> adsorption          |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |
| W-20 C11351<br>51918 #3                           | +     | + | 0 | 0 | + |   |   | 0              | +   | + | 0 | + | 0               | +               | 0  | 0    | + | 0               | 0               | 0               | +               | 0               | +               | 0               | +               |                        | 0            | 0            | 0✓          |
| W-10F H941<br>46281 #8                            | 0     | 0 | 0 | + | + |   |   | 0              | +   | 0 | + | 0 | 0               | +               | +  | 0    | + | 0               | 0               | +               | 0               | +               | 0               | 0               | +               |                        | 0            | 0            | 0✓          |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |
| rr adsorption                                     |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |
| W-20 B11111<br>47294 #2                           | +     | + | 0 | 0 | + |   |   | 0              | +   | + | 0 | + | 0               | +               | +  | 0    | + | 0               | 0               | +               | 0               | +               | 0               | 0               | +               |                        | 0            | 0            | 0✓          |
| W-20 R1783<br>47294 #10                           | +     | + | 0 | + | + |   |   | 0              | +   | 0 | + | 0 | +               | 0               | +  | +    | 0 | 0               | 0               | +               | +               | +               | +               | 0               | +               |                        | 0            | 0            | 0✓          |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |

# Donor Case #1

## Third Donation Results

- Performed testing with DTT treated cells

|   | Supplier/<br>Lot      | Donor / RhHr<br>– Vial | Rh-Hr |   |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | X               | Additional<br>antigens | Test Results |             |    |  |
|---|-----------------------|------------------------|-------|---|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|--------------|-------------|----|--|
|   |                       |                        | D     | C | E | c | e | f | V | C <sup>W</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | P1 | K    | k | Kp <sup>a</sup> | Kp <sup>b</sup> | Js <sup>a</sup> | Js <sup>b</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> | Xg <sup>a</sup> |                        | DTT          |             |    |  |
|   |                       |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        | LISS<br>37°C | LISS<br>IgG |    |  |
| 1 | Red Cross<br>DIF-25-7 | 45220700*<br>#1        | +     | + | 0 | 0 | + |   |   |                | +   | 0 | + | 0 | +               | 0               | +  | 0    |   |                 |                 |                 |                 | +               | +               | 0               | +               |                 |                 |                 |                        | 0            | 0✓          |    |  |
| 2 | Red Cross<br>DIF-25-7 | 44918200G<br>#2        | +     | 0 | + | + | 0 |   |   |                | +   | + | 0 | + | 0               | +               | +  | 0    |   |                 |                 |                 |                 |                 | +               | 0               | +               | 0               |                 |                 |                        |              | 0           | 0✓ |  |
| 3 | Red Cross<br>DIF-25-7 | 44950200G<br>#3        | 0     | 0 | 0 | + | + |   |   |                | 0   | + | + | + | 0               | +               | 0  | 0    |   |                 |                 |                 |                 |                 | 0               | +               | 0               | +               |                 |                 |                        |              | 0           | 0✓ |  |
|   |                       |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |             |    |  |

- DTT treatment destroys antigens in the KEL blood group system.

# Donor Case #1

## Third Donation Results

|   | Supplier/<br>Lot      | Donor / RhHr<br>– Vial | Rh-Hr |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | X               | Additional<br>antigens | Test Results |             |  |
|---|-----------------------|------------------------|-------|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|--------------|-------------|--|
|   |                       |                        | D     | C | E | c | e | V | C <sup>w</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | Pl | K    | k | Kp <sup>a</sup> | Kp <sup>b</sup> | Js <sup>a</sup> | Js <sup>b</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> | Xg <sup>a</sup> |                        | DTT          |             |  |
|   |                       |                        |       |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        | LISS<br>37°C | LISS<br>IgG |  |
| 1 | Red Cross<br>DIF-25-7 | 45220700*<br>#1        | +     | + | 0 | 0 | + |   |                | +   | 0 | + | 0 | +               | 0               | +  | 0    |   |                 |                 |                 |                 | +               | +               | 0               | +               |                 |                 |                 |                        | 0            | 0✓          |  |
| 2 | Red Cross<br>DIF-25-7 | 44918200G<br>#2        | +     | 0 | + | + | 0 |   |                | +   | + | 0 | + | 0               | +               | +  | 0    |   |                 |                 |                 |                 | +               | 0               | +               | 0               |                 |                 |                 |                        | 0            | 0✓          |  |
| 3 | Red Cross<br>DIF-25-7 | 44950200G<br>#3        | 0     | 0 | 0 | + | + |   |                | 0   | + | + | + | 0               | +               | 0  | 0    |   |                 |                 |                 |                 | 0               | +               | 0               | +               |                 |                 |                 |                        | 0            | 0✓          |  |
|   |                       |                        |       |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |             |  |

# Donor Case #1

## Third Donation Results

- Perform antigen typing on the donor's red cells to complete last step of antibody identification.

|               |                                                                                                       |                          |
|---------------|-------------------------------------------------------------------------------------------------------|--------------------------|
| Position<br># | DIN/WBN<br>Preliminary Type                                                                           | Anti-<br>Kp <sup>b</sup> |
| 1             | <br>W18072516338000U | 0✓<br>FE<br>SE           |

# Donor Case #1

## Third Donation Results

- We send a sample to the National Molecular Laboratory (NML) to obtain the full predicted phenotype

| Sample Name     | Check | ISBT 128 Barcode                                                                  | C | c | E | e | CX | CW | V | VS | hrB | Crawford | hrS | Big K | Little k | Kp(a) | Kp(b) | Js(a) | Js(b) | Jk(a) | Jk(b) | Fy(a) | Fy(b) | M | N | S | s | U | Lu(a) |
|-----------------|-------|-----------------------------------------------------------------------------------|---|---|---|---|----|----|---|----|-----|----------|-----|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|---|-------|
| W18072516338000 | U     |  | + | + | 0 | + | 0  | 0  | 0 | 0  | +   | 0        | +   | 0     | +        | +     | 0     | 0     | +     | +     | +     | +     | +     | + | + | 0 | + | + | 0     |

| Sample Name     | Check | ISBT 128 Barcode                                                                  | Lu(b) | Di(a) | Di(b) | Co(a) | Co(b) | Do(a) | Do(b) | Hy | Jo(a) | Lw(a) | Lw(b) | Sc1 | Sc2 | Yt(a) | Yt(b) |
|-----------------|-------|-----------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|----|-------|-------|-------|-----|-----|-------|-------|
| W18072516338000 | U     |  | +     | 0     | +     | +     | 0     | +     | +     | +  | +     | +     | 0     | +   | 0   | +     | 0     |

- We confirm the common antigens by serology and submit the donor to the American Rare Donor Program

# Donor Case #1

## Third Donation Results

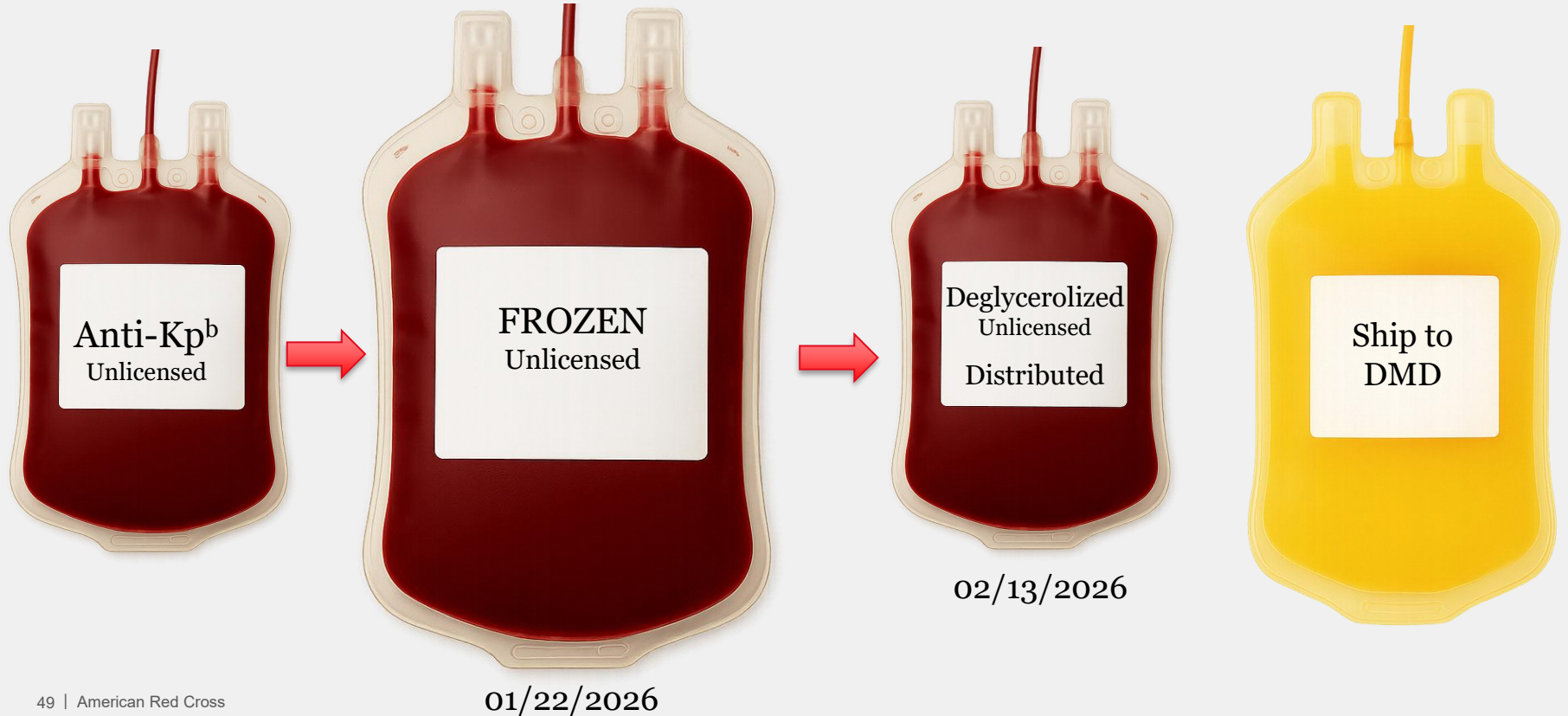
- To assess donor plasma for submission to DMD, we test a Kp(b+) cell at IAT following a 15 minute incubation at 37°C with no enhancement.

|   | Supplier/<br>Lot | Donor / RhHr<br>- Vial | Rh-Hr |   |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | X               | Additional<br>antigens | Test Results       |  |  |  |
|---|------------------|------------------------|-------|---|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|--------------------|--|--|--|
|   |                  |                        | D     | C | E | c | e | f | V | C <sup>w</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | P1 | K    | k | Kp <sup>a</sup> | Kp <sup>b</sup> | Js <sup>a</sup> | Js <sup>b</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> | Xg <sup>a</sup> |                        | 15'<br>37°C<br>IgG |  |  |  |
| 1 | Imm-20<br>47294  | C6867<br>R2R2 #9       | +     | 0 | + | + | 0 |   |   | 0              | +   | + | 0 | + | 0               | +               | +  | 0    | + | 0               | +               | 0               | +               | +               | +               | +               | 0               | 0               | +               | +               |                        | 3+                 |  |  |  |
| 2 | Imm-20<br>47294  | R1783<br>R1r #10       | +     | + | 0 | + | + |   |   | 0              | +   | 0 | + | 0 | +               | 0               | +  | +    | 0 | 0               | +               | 0               | +               | +               | +               | +               | +               | 0               | +               | +               |                        | 3+                 |  |  |  |
|   |                  |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                    |  |  |  |

- Anti-Kp<sup>b</sup> acceptance criteria is  $\geq$  2-3+ Undiluted
- Our sample meets acceptance criteria

# Donor Case #1

## Third Donation Product Disposition



# Donor Case #1

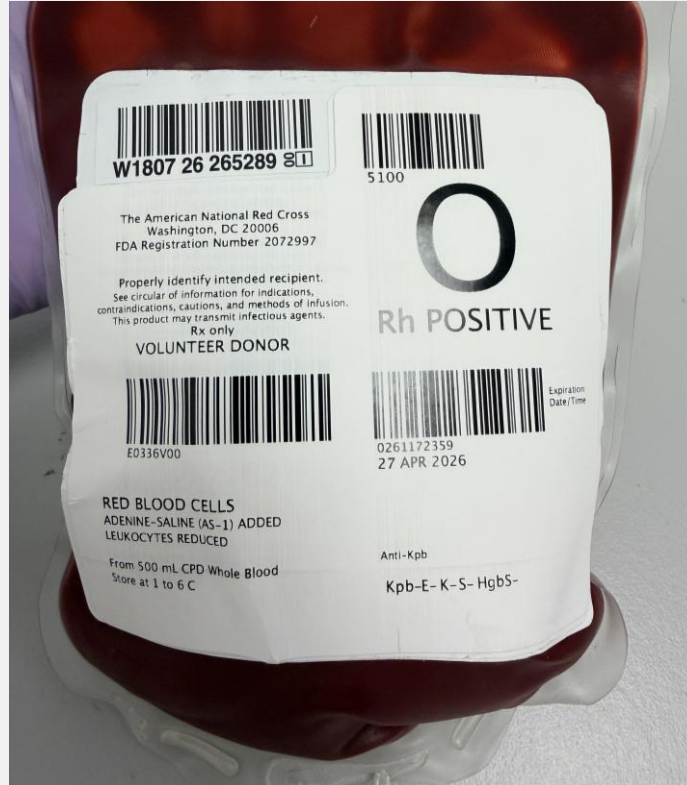
Fourth Donation 03/16/2026

|            |          |
|------------|----------|
| ABY INIT   | Positive |
| TUBESCREEN | Positive |
| SEGSCREEN  | Positive |
| ABID1      | Anti-Kpb |

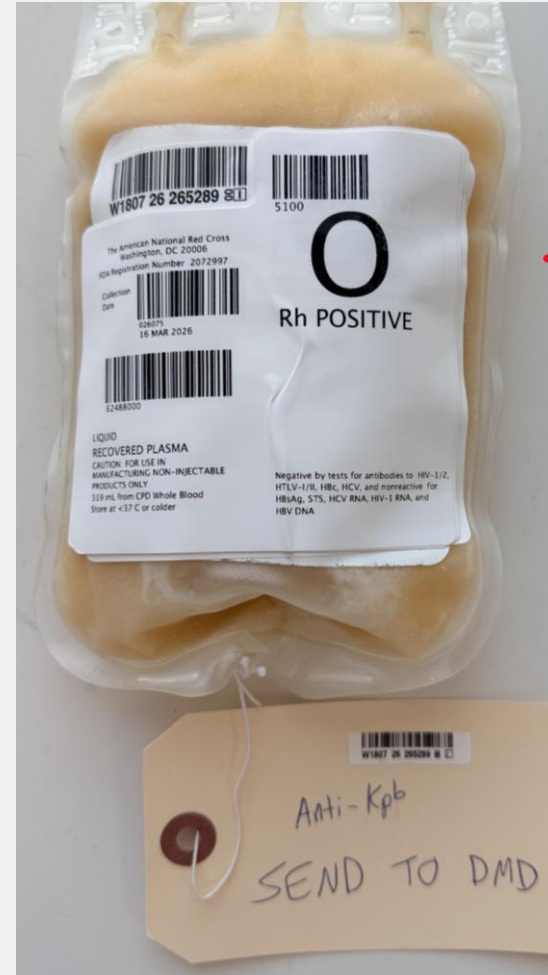
- Same testing to complete the investigation.

# Donor Case #1

## Fourth Donation Product Disposition



- Red Cells are in the IRL's inventory waiting to be frozen before expiration.

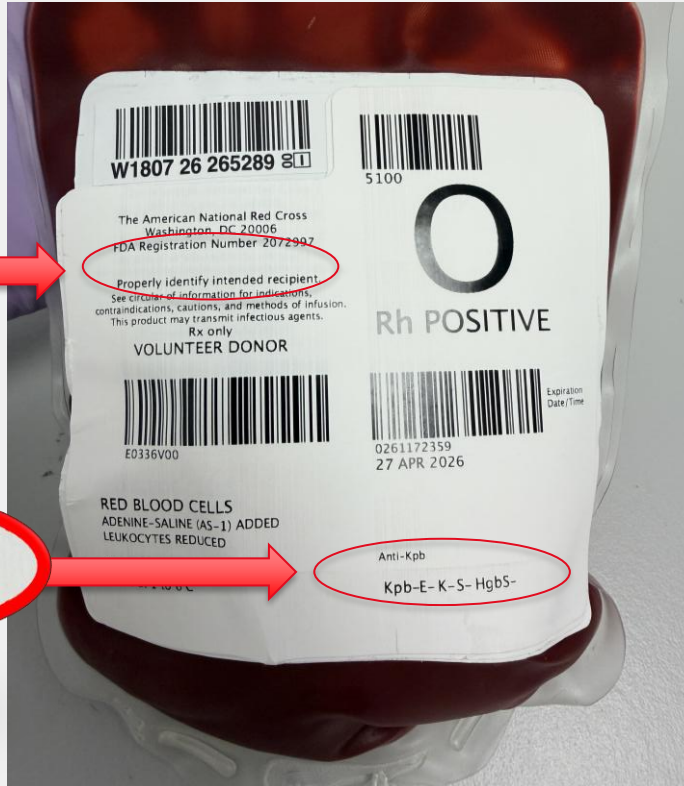


- Plasma is in distribution freezer waiting to be shipped to the DMD.

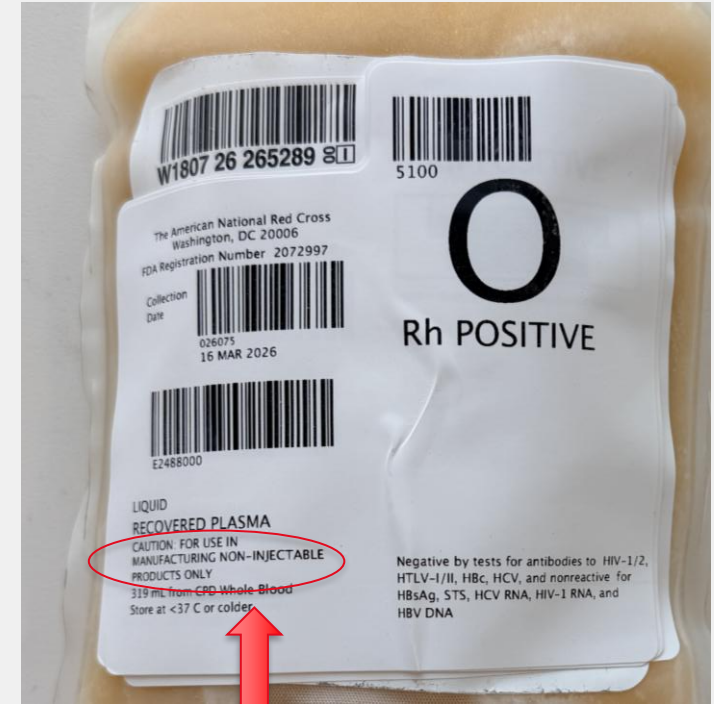
# Donor Case #1

## Fourth Donation Product Disposition

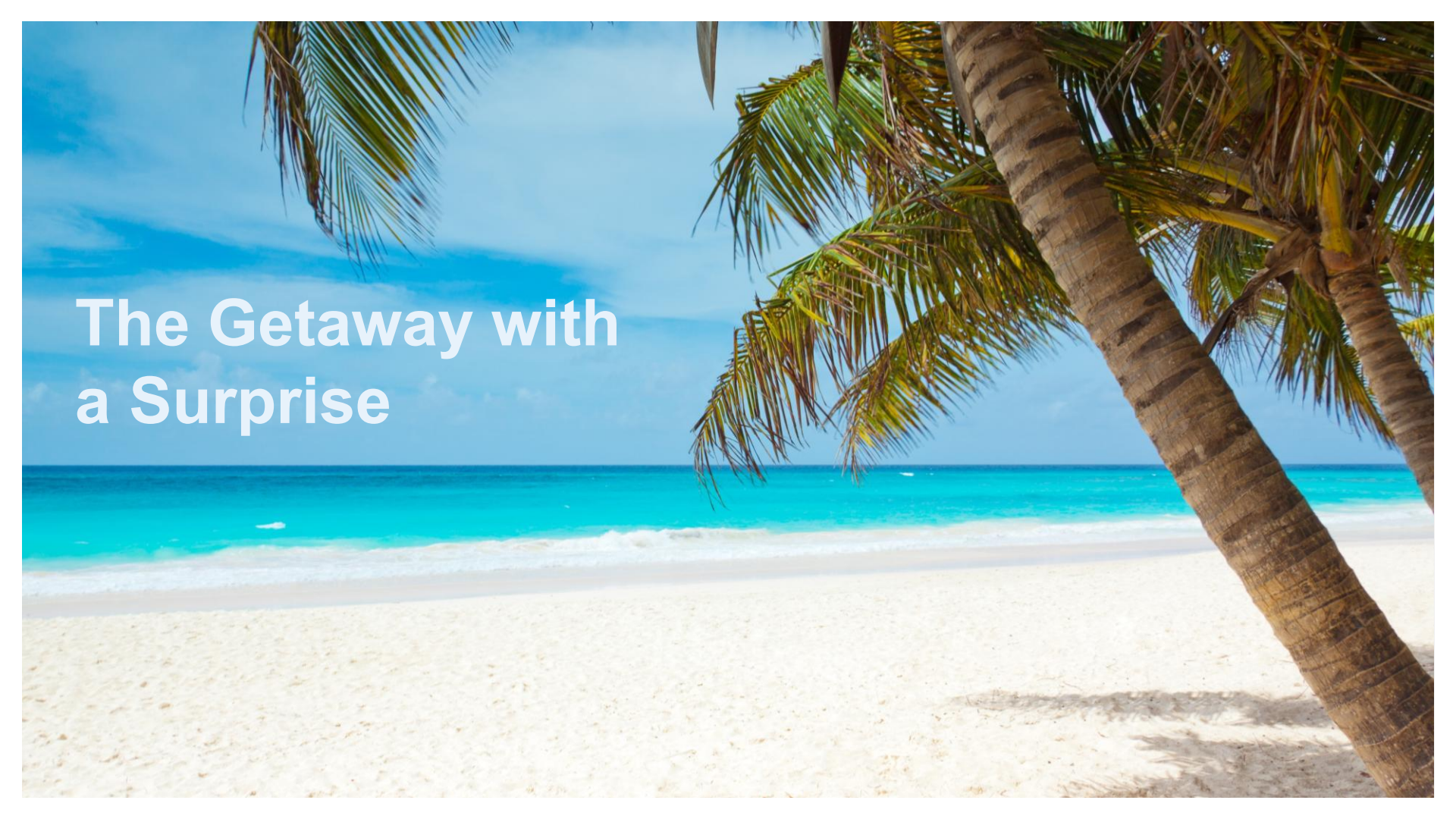
- Licensed has been removed  
= Unlicensed



- Label contains the antibody specificity



- Plasma is labeled as non-injectable for shipment to DMD

A tropical beach scene with a palm tree in the foreground, white sand, turquoise water, and a blue sky.

# The Getaway with a Surprise

## Donor Case #2

First donation = autologous 02/22/2017

- Since we saw this donor in 2015 as a patient we knew where to start with testing.

- Patient Report



| Serum/Plasma (S/P) and Eluate Studies: |                          |                                     |                          |
|----------------------------------------|--------------------------|-------------------------------------|--------------------------|
| Antibody:                              | Phase(s) of Reactivity:  | S/P                                 | Eluate                   |
| Anti-Jk3                               | PEG/IAT                  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Anti-E                                 | Not Evaluated-Historical | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

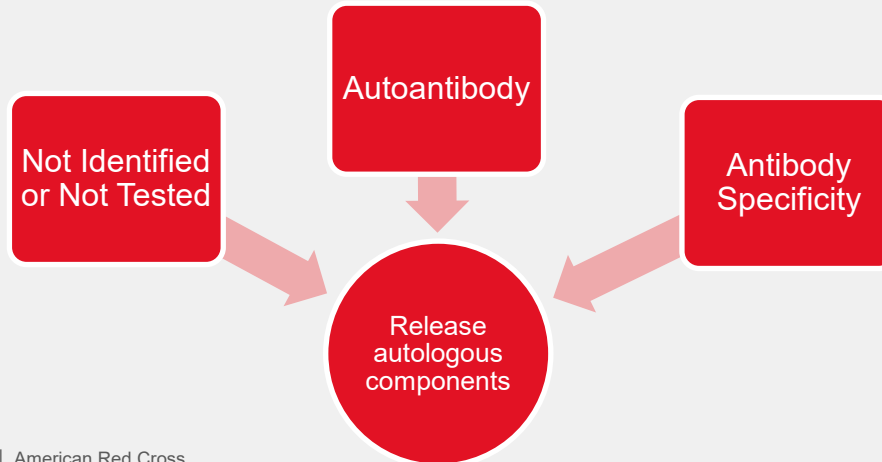
| Transfusion Recommendations and Remarks:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Select ABO/Rh Compatible units negative for:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Jk3, E |
| Percentage of Antigen Negative Donors:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <0.1%  |
| <p>Remarks:</p> <p>The patient's serum was adsorbed x2 with PEG using selected phenotyped red blood cells. No underlying alloantibodies were detected in the adsorbed serum. This method does not allow for the exclusion of antibodies to most high incidence antigens.</p> <p>Anti-Jk3 and anti-E are clinically significant antibodies. Red blood cell components negative for the Jk3 and E antigens should be selected for transfusion.</p> <p>Less than 0.1% of donors will be negative for the Jk3 high frequency antigen. Frozen, deglycerolized red blood cells are available from American Red Cross Blood Services. Approximately two hours is required to deglycerolize and process each unit for shipping. Red blood cells can also be obtained through the American Rare Donor Program. Additional time (24-48 hours) is required to identify and transport the components. Autologous donation and/or donation by siblings negative for the antigen may be an additional source of units. This patient and any siblings negative for the Jk3 antigen would be an asset to the American Rare Donor Program.</p> |        |

## Donor Case #2

First donation = autologous 02/22/2017

|            |          |
|------------|----------|
| ABY INIT   | Positive |
| TUBESCREEN | Positive |

- Segment screen is not performed for autologous donations.
- Positive tube screen reflexes to antibody identification.
- All autologous products always released regardless of antibody identification result.



- Donor's antibody Identification

|       |          |
|-------|----------|
| ABID1 | Anti-E   |
| ABID2 | Anti-JK3 |

## Donor Case #2

Second donation = autologous 11/29/2022

|          |          |
|----------|----------|
| ABY INIT | Positive |
|----------|----------|

| American Red Cross<br>Washington, DC 20006 |                                                                                                       | Tube Antibody Screen Form           |             |            |  American Red Cross |                          |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------|-------------|------------|--------------------------------------------------------------------------------------------------------|--------------------------|
| WID: 10                                    |                                                                                                       | Tester Initials/Date: MA 12/01/2022 |             |            |                                                                                                        |                          |
| Pos                                        | DIN                                                                                                   | IS Result                           | 37°C Result | IAT Result | Comments                                                                                               | Move for Labeling        |
| 1                                          | <br>W20112209576600Z | 0                                   | 0           | 2+         |                                                                                                        | <input type="checkbox"/> |

# Donor Case #2

Second donation = autologous 11/29/2022

Ortho Clinical Diagnostics

DIN



Lot No. VRA420

Exp. Date 2022-12-27

CCYY-MM-DD

Position Number

WID 6,8

Tester initials Fm

Testing Date 12/01/2022

Antibody Interpretation Anti-E, Anti-Jk3

Panel

A

Reagent Red Blood Cells

0.8% Resolve® Panel A

ANTIGRAM® Antigen Profile

© Ortho Clinical Diagnostics 2010

Cell B of this lot is designated with an A. Cell 9 of this lot is designated with an A.

635201221

|                    |       |              | Rh-ir             |   |   |   |   |   |                |   |   |   | KELL            |                 |                 |                 | DUFFY           |                 | KID             |                 | Lewis           |                 | MNS             |   | P    |   | LUTHERAN |                | Special Antigen Typing |                 | Test Results |         |      |      |      |      |      |      |
|--------------------|-------|--------------|-------------------|---|---|---|---|---|----------------|---|---|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|------|---|----------|----------------|------------------------|-----------------|--------------|---------|------|------|------|------|------|------|
| Cell               | Rh-ir | Donor Number | D                 | C | E | c | e | f | C <sup>w</sup> | V | K | k | Kp <sup>a</sup> | Kp <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Xg <sup>a</sup> | Le <sup>a</sup> | Le <sup>b</sup> | S | s    | M | N        | P <sub>1</sub> | Lu <sup>a</sup>        | Lu <sup>b</sup> |              | Cell    | Cell | Cell | Cell |      |      |      |
| 1                  | R1wR1 | 326140       | +                 | + | 0 | 0 | + | 0 | +              | 0 | 0 | + | 0               | +               | /               | +               | 0               | +               | 0               | +               | 0               | +               | +               | + | +    | + | +        | +              | +                      | 0               | +            | HLA+    | 1    | Cell | 1    | Cell |      |      |
| 2                  | R1R1  | 322995       | +                 | + | 0 | 0 | + | 0 | 0              | 0 | + | + | 0               | +               | /               | +               | +               | +               | 0               | +               | +               | +               | 0               | 0 | +    | + | +        | +              | +                      | 0               | +            | HLA+    | 2    | Cell | 2    | Cell |      |      |
| 3                  | R2R2  | 320995       | +                 | 0 | + | + | 0 | 0 | 0              | 0 | 0 | + | 0               | +               | /               | +               | 0               | +               | 0               | +               | 0               | 0               | +               | + | +    | + | +        | 0              | 0                      | +               |              |         |      | 3    | Cell | 3    | Cell |      |
| 4                  | Ror   | 326359       | +                 | 0 | 0 | + | + | + | +              | 0 | 0 | 0 | +               | 0               | +               | /               | +               | 0               | 0               | +               | +               | +               | 0               | 0 | 0    | + | +        | +              | +                      | +               | +            |         |      | 4    | Cell | 4    | Cell |      |
| 5                  | r'r   | 328634       | 0                 | + | 0 | + | + | + | +              | 0 | 0 | 0 | +               | 0               | +               | /               | +               | +               | 0               | +               | +               | +               | 0               | + | 0    | + | 0        | +              | +                      | +               | +            | @       |      | 5    | Cell | 5    | Cell |      |
| 6                  | r'r   | 329956       | 0                 | 0 | + | + | + | + | +              | 0 | 0 | 0 | +               | 0               | +               | /               | +               | 0               | +               | +               | +               | 0               | 0               | + | +    | + | 0        | +              | 0                      | 0               | +            | @       |      | 6    | Cell | 6    | Cell |      |
| 7                  | rr    | 307998       | 0                 | 0 | 0 | + | + | + | +              | 0 | 0 | + | +               | 0               | +               | 0               | +               | 0               | +               | +               | +               | 0               | 0               | 0 | +    | + | +        | +              | 0                      | +               | @            |         | 7    | Cell | 7    | Cell |      |      |
| 8                  | rr    | 330010       | 0                 | 0 | 0 | + | + | + | +              | 0 | 0 | 0 | +               | 0               | +               | /               | +               | 0               | +               | 0               | +               | +               | 0               | + | 0    | + | +        | +              | +                      | 0               | +            | @, HLA+ |      | 8    | Cell | 8    | Cell |      |
| 9                  | rr    | 329989       | 0                 | 0 | 0 | + | + | + | +              | 0 | 0 | 0 | +               | 0               | +               | /               | +               | +               | 0               | +               | 0               | +               | 0               | + | 0    | + | 0        | +              | +                      | 0               | +            |         |      | 9    | Cell | 9    | Cell |      |
| 10                 | rr    | 329976       | 0                 | 0 | 0 | + | + | + | +              | 0 | 0 | 0 | +               | 0               | +               | /               | +               | +               | +               | 0               | +               | 0               | 0               | + | +    | 0 | +        | 0              | +                      | +               | 0            | +       |      |      | 10   | Cell | 10   | Cell |
| 11                 | R1R1  | 326823       | +                 | + | 0 | 0 | + | 0 | 0              | 0 | 0 | + | +               | +               | /               | +               | 0               | +               | +               | +               | 0               | +               | 0               | 0 | +    | 0 | +        | 0              | +                      | +               | 0            | +       |      |      | 11   | Cell | 11   | Cell |
| Patient Cells      |       |              |                   |   |   |   |   |   |                |   |   |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |   |      |   |          |                |                        |                 |              |         |      |      | 12   | Cell | 12   | Cell |
| Mode of Reactivity |       |              | 37°C/Antiglobulin |   |   |   |   |   |                |   |   |   | Antiglobulin    |                 |                 |                 |                 |                 |                 |                 |                 |                 | Variable        |   | Cold |   | Var.     |                |                        |                 |              |         |      |      |      |      |      |      |

# Donor Case #2

Second donation = autologous 11/29/2022

|   | Supplier/<br>Lot    | Donor / RhHr<br>- Vial | Rh-Hr |   |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | X               | Additional<br>antigens | Test Results |              |             |  |
|---|---------------------|------------------------|-------|---|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|--------------|--------------|-------------|--|
|   |                     |                        | D     | C | E | c | e | f | V | C <sup>w</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | P1 | K    | k | Kp <sup>a</sup> | Kp <sup>b</sup> | Js <sup>a</sup> | Js <sup>b</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> | Xg <sup>a</sup> |                        | IS           | LISS<br>37°C | LISS<br>IgG |  |
| 1 | Imm-10F<br>43328    | B8295<br>#1            | +     | + | 0 | 0 | + |   |   | 0              | +   | 0 | + | 0 | 0               | +               | 0  | 0    | + | 0               | +               | 0               | +               | 0               | +               | +               | 0               | 0               | +               | +               |                        | 0            | 0            | 2+          |  |
| 2 | Imm-10<br>43327     | C5256<br>R2R2 #10      | +     | 0 | + | + | 0 |   |   | 0              | +   | 0 | 0 | + | 0               | +               | 0  | 0    | + | 0               | +               | 0               | +               | +               | 0               | 0               | +               | 0               | +               | 0               |                        | 0            | 0            | 2+          |  |
| 3 | Quotient<br>V255017 | 1068-388-6<br>R1r #13  | +     | + | 0 | + | + | + |   | 0              | +   | + | + | + | 0               | +               | +  | +    | 0 | 0               | +               | 0               | +               | +               | +               | +               | 0               | 0               | +               | +               |                        | 0            | 0            | 2+          |  |
| 4 | Ortho A<br>RA202    | 319678<br>Rr #8        | 0     | 0 | 0 | + | + | + | 0 | 0              | 0   | + | 0 | + | +               | 0               | 0  | 0    | + | 0               | +               |                 | +               | +               | +               | +               | 0               | +               | +               | +               |                        | 0            | 0            | 2+          |  |
|   | Auto<br>Control     |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        | 0            | 0            | 0✓          |  |
|   | A<br>1S2TBOX        | 672C                   | +     | + | 0 | 0 | + |   |   |                | +   | + | 0 | + |                 | +               | +  | 0    |   |                 |                 |                 |                 | +               | 0               | 0               | 0               |                 |                 |                 |                        | 0            | 0            | 0✓          |  |
|   | A<br>5288898        | 601C                   | +     | + | 0 | 0 | + |   |   |                | +   | + | 0 | + | +               | 0               | 0  | 0    | + |                 |                 |                 |                 | +               | 0               | 0               | 0               |                 |                 |                 |                        | 0            | 0            | 0✓          |  |
|   |                     |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |  |

# Donor Case #2

Second donation = autologous 11/29/2022

|   | Supplier/<br>Lot    | Donor / RhHr<br>- Vial | Rh-Hr |   |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | X               | Additional<br>antigens | Test Results |              |             |  |
|---|---------------------|------------------------|-------|---|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|--------------|--------------|-------------|--|
|   |                     |                        | D     | C | E | c | e | f | V | C <sup>W</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | P1 | K    | k | Kp <sup>a</sup> | Kp <sup>b</sup> | Js <sup>a</sup> | Js <sup>b</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> | Xg <sup>a</sup> |                        | IS           | LISS<br>37°C | LISS<br>IgG |  |
| 1 | Imm-10F<br>43328    | B8295<br>#1            | +     | + | 0 | 0 | + |   | 0 | +              | 0   | + | 0 | 0 | +               | 0               | 0  | +    | 0 | +               | 0               | +               | 0               | +               | +               | 0               | 0               | +               | +               |                 | 0                      | 0            | 2+           |             |  |
| 2 | Imm-10<br>43327     | C5256<br>R2R2 #10      | +     | 0 | + | + | 0 |   | 0 | +              | 0   | 0 | + | 0 | +               | 0               | 0  | +    | 0 | +               | 0               | +               | +               | 0               | 0               | +               | 0               | +               | 0               |                 | 0                      | 0            | 2+           |             |  |
| 3 | Quotient<br>V255017 | 1068-388-6<br>R1r #13  | +     | + | 0 | + | + | + | 0 | +              | +   | + | + | 0 | +               | +               | +  | 0    | 0 | +               | 0               | +               | +               | +               | +               | 0               | 0               | +               | +               |                 | 0                      | 0            | 2+           |             |  |
| 4 | Ortha A<br>RA202    | 319678<br>Rr #8        | 0     | 0 | 0 | + | + | + | 0 | 0              | 0   | + | 0 | + | 0               | 0               | 0  | +    | 0 | +               |                 | +               | +               | +               | +               | 0               | +               | +               | +               |                 | 0                      | 0            | 2+           |             |  |
|   | Auto<br>Control     |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 | 0                      | 0            | 0✓           |             |  |
|   | A<br>1S2TBOX        | 672C                   | /     | / | 0 | 0 | / |   |   | /              | /   | 0 | / | / | /               | /               | 0  |      |   |                 |                 |                 | /               | 0               | 0               | 0               |                 |                 |                 |                 | 0                      | 0            | 0✓           |             |  |
|   | A<br>5288898        | 601C                   | +     | + | 0 | 0 | + |   |   | +              | +   | 0 | + | / | 0               | 0               | 0  | /    |   |                 |                 |                 | +               | 0               | 0               | 0               |                 |                 |                 |                 | 0                      | 0            | 0✓           |             |  |
|   |                     |                        |       |   |   |   |   |   |   |                |     |   |   | / |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |  |

# Donor Case #2

Second donation = autologous 11/29/2022

- Performed 3x adsorption at 37°C using papain treated cells

|                                                   | Rh-Hr |   |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | Additional antigens | Test Results |    |  |
|---------------------------------------------------|-------|---|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------------|--------------|----|--|
|                                                   | D     | C | E | c | e | f | V | C <sup>W</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | P1 | K    | k | Kp <sup>a</sup> | Js <sup>a</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> |                     | LISS IgG     |    |  |
| R <sub>1</sub> R <sub>1</sub><br>W201122078786006 | +     | + | 0 | 0 | + |   |   |                | +   | 0 | + | 0 | 0               | 0               | +  | 0    |   |                 |                 | +               | 0               | +               | 0               |                 |                 |                     |              |    |  |
| R <sub>2</sub> R <sub>2</sub><br>W20112206204200T | +     | 0 | + | + | 0 |   |   |                | +   | + | 0 | + | 0               | +               | +  | 0    |   |                 |                 | 0               | +               | 0               | +               |                 |                 |                     |              |    |  |
| rr<br>W20112207882300S                            | 0     | 0 | 0 | + | + |   |   |                | 0   | + | 0 | + | 0               | +               | +  | +    |   |                 |                 | +               | +               | 0               | +               |                 |                 |                     |              |    |  |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                     |              |    |  |
| R <sub>1</sub> R <sub>1</sub> adsorption          |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                     |              |    |  |
| I-10<br>43327<br>C2815<br>#3                      | +     | 0 | + | + | 0 |   |   | 0              | +   | 0 | 0 | + | +               | 0               | +  | 0    | + | 0               | 0               | 0               | 0               | +               | 0               | 0               | +               |                     |              | w+ |  |
| I-10F<br>43328<br>H1998<br>#8                     | 0     | 0 | 0 | + | + | + |   | 0              | 0   | + | 0 | + | 0               | +               | +  | 0    | + | 0               | 0               | +               | 0               | 0               | +               | 0               | +               |                     |              | 0✓ |  |
| O<br>RA202<br>324737<br>#11                       | +     | + | 0 | 0 | + | 0 | 0 | 0              | +   | 0 | 0 | + | +               | 0               | s  | 0    | + | 0               |                 | 0               | +               | 0               | +               | 0               | +               |                     |              | 0✓ |  |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                     |              |    |  |
| R <sub>2</sub> R <sub>2</sub> adsorption          |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                     |              |    |  |
| Q<br>V255017<br>6039854<br>#2                     | +     | + | 0 | 0 | + | 0 | 0 | 0              | +   | + | 0 | + | 0               | +               | 0  | +    | + | 0               | 0               | 0               | +               | +               | 0               | 0               | +               |                     |              | 0✓ |  |
| Q<br>V255017<br>52171241<br>#7                    | 0     | 0 | 0 | + | + | + |   | 0              | +   | + | + | 0 | 0               | +               | +  | +    | + | 0               | 0               | +               | 0               | +               | +               | 0               | +               |                     |              | 0✓ |  |
| Q<br>V255017<br>10683886<br>#13                   | +     | + | 0 | + | + | + |   | 0              | +   | + | + | + | 0               | +               | +  | +    | + | 0               | 0               | +               | +               | +               | 0               | 0               | +               |                     |              | 0✓ |  |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                     |              |    |  |
| rr adsorption                                     |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                     |              |    |  |
| I-10F<br>43378<br>B8275<br>#1                     | +     | + | 0 | 0 | + |   |   | 0              | +   | 0 | + | 0 | 0               | +               | 0  | 0    | + | 0               | 0               | 0               | +               | +               | 0               | 0               | +               |                     |              | 0✓ |  |
| Q<br>V255017<br>276802891620<br>#2                | +     | 0 | + | + | 0 | 0 |   | 0              | +   | + | 0 | + | +               | 0               | +  | 0    | + | 0               | 0               | +               | +               | +               | +               | 0               | +               |                     |              | w+ |  |

# Donor Case #2

Second donation = autologous 11/29/2022

- Performed 3x adsorption at 37°C using papain treated cells

|                                                   | Rh-Hr |   |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | Additional antigens | Test Results |    |  |  |
|---------------------------------------------------|-------|---|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------------|--------------|----|--|--|
|                                                   | D     | C | E | c | e | f | V | C <sup>W</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | P1 | K    | k | Kp <sup>a</sup> | Js <sup>a</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> |                     | LISS IgG     |    |  |  |
| R <sub>1</sub> R <sub>1</sub><br>W201122078786006 | +     | + | 0 | 0 | + |   |   |                | +   | 0 | + | 0 | 0               | 0               | +  | 0    |   |                 |                 | +               | 0               | +               | 0               |                 |                 |                     |              |    |  |  |
| R <sub>2</sub> R <sub>2</sub><br>W20112206204200T | +     | 0 | + | + | 0 |   |   |                | +   | + | 0 | + | 0               | +               | +  | 0    |   |                 |                 | 0               | +               | 0               | +               |                 |                 |                     |              |    |  |  |
| rr<br>W20112207882300S                            | 0     | 0 | 0 | + | + |   |   |                | 0   | + | 0 | + | 0               | +               | +  | +    |   |                 |                 | +               | +               | 0               | +               |                 |                 |                     |              |    |  |  |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                     |              |    |  |  |
| R <sub>1</sub> R <sub>1</sub> adsorption          |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                     |              |    |  |  |
| I-10<br>43327<br>C2815<br>#3                      | +     | 0 | + | + | 0 |   |   | 0              | +   | 0 | 0 | + | +               | 0               | +  | 0    | + | 0               | 0               | 0               | 0               | +               | 0               | 0               | +               |                     |              | w+ |  |  |
| I-10F<br>43328<br>H1998<br>#8                     | 0     | 0 | 0 | + | + | + |   | 0              | 0   | + | 0 | + | 0               | +               | +  | 0    | + | 0               | 0               | +               | 0               | 0               | +               | 0               | +               |                     |              | 0✓ |  |  |
| O<br>RA202<br>324737<br>#11                       | +     | + | 0 | 0 | + | 0 | 0 | 0              | +   | 0 | 0 | + | +               | 0               | s  | 0    | + | 0               |                 | 0               | +               | 0               | +               | 0               | +               |                     |              | 0✓ |  |  |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                     |              |    |  |  |
| R <sub>2</sub> R <sub>2</sub> adsorption          |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                     |              |    |  |  |
| Q<br>V255017<br>6039854<br>#2                     | +     | + | 0 | 0 | + | 0 | 0 | 0              | +   | + | 0 | + | 0               | +               | 0  | +    | + | 0               | 0               | 0               | +               | +               | 0               | 0               | +               |                     |              | 0✓ |  |  |
| Q<br>V255017<br>52171241<br>#7                    | 0     | 0 | 0 | + | + | + |   | 0              | +   | + | + | 0 | 0               | +               | +  | +    | + | 0               | 0               | +               | 0               | +               | +               | 0               | +               |                     |              | 0✓ |  |  |
| Q<br>V255017<br>10683886<br>#13                   | +     | + | 0 | + | + | + |   | 0              | +   | + | + | + | 0               | +               | +  | +    | + | 0               | 0               | +               | +               | +               | 0               | 0               | +               |                     |              | 0✓ |  |  |
|                                                   |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                     |              |    |  |  |
| rr adsorption                                     |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                     |              |    |  |  |
| I-10F<br>43378<br>B8275<br>#1                     | +     | + | 0 | 0 | + |   |   | 0              | +   | 0 | + | 0 | 0               | +               | 0  | 0    | + | 0               | 0               | 0               | +               | +               | 0               | 0               | +               |                     |              | 0✓ |  |  |
| Q<br>V255017<br>276802891620<br>#2                | +     | 0 | + | + | 0 | 0 |   | 0              | +   | + | 0 | + | +               | 0               | +  | 0    | + | 0               | 0               | +               | +               | +               | +               | 0               | +               |                     |              | w+ |  |  |

## Donor Case #2

Second donation = autologous 11/29/2022

- Perform antigen typing on the donor's red cells to complete last step of antibody identification.

| Position # | DIN/WBN<br>Preliminary Type                                                                           | Anti-<br>E | Anti-<br>Jk <sup>a</sup> | Anti-<br>Jk <sup>b</sup> | Anti-<br>Jk <sup>3</sup> |
|------------|-------------------------------------------------------------------------------------------------------|------------|--------------------------|--------------------------|--------------------------|
| 1          | <br>W20112209576600Z | O          | O                        | O                        | O✓                       |
|            |                                                                                                       | FE         | FE                       | FE                       | FE                       |
|            |                                                                                                       | SE         | SE                       | SE                       | SE                       |

## Donor Case #2

Second donation = autologous 11/29/2022

- We send a sample to the NML to obtain the full predicted phenotype



| Sample Name     | Check | ISBT 128 Barcode                                                                  | C | c | E | e | CX | CW | V | VS | hrB | Crawford | hrS | Big K | Little k | Kp(a) | Kp(b) | Js(a) | Js(b) | Jk(a) | Jk(b) | Fy(a) | Fy(b) | M | N | S | s | U | Lu(a) |   |
|-----------------|-------|-----------------------------------------------------------------------------------|---|---|---|---|----|----|---|----|-----|----------|-----|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|---|-------|---|
| W20112209576600 | Z     |  | + | 0 | 0 | + | 0  | 0  | 0 | 0  | +   | 0        | +   | +     | +        | 0     | +     | 0     | +     | +     | +     | 0     | +     | 0 | + | + | + | 0 | +     | 0 |

| Sample Name     | Check | ISBT 128 Barcode                                                                  | Lu(b) | Di(a) | Di(b) | Co(a) | Co(b) | Do(a) | Do(b) | Hy | Jo(a) | Lw(a) | Lw(b) | Sc1 | Sc2 | Yt(a) | Yt(b) |
|-----------------|-------|-----------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|----|-------|-------|-------|-----|-----|-------|-------|
| W20112209576600 | Z     |  | +     | 0     | +     | +     | +     | 0     | +     | +  | +     | +     | 0     | +   | 0   | +     | 0     |

- Well, this is something unexpected!
- HEA testing predicts the donor's phenotype to be Jk(a+b-)
  - So now we have a discordant type between serology and molecular that needs investigation

## Donor Case #2

### Second donation = autologous 11/29/2022

- Investigation includes sending a new request to the NML for Genotyping for Kidd (*JK*) variants.
- The NML performed amplification and sequencing of all *SLC14A1* (*JK*) coding exons (4 through 11) and their respective splice sites.
- NML report

#### RESULTS:

| Gene or Region                  | Method    | Analyte | Result                | Interpretation       |
|---------------------------------|-----------|---------|-----------------------|----------------------|
|                                 |           |         | Nucleotides detected* | Predicted Amino Acid |
| <i>SLC14A1</i><br>( <i>JK</i> ) | gDNA seq* | Exon 3  | No changes            | N/A                  |
|                                 |           | Exon 4  | No changes            | N/A                  |
|                                 |           | Exon 5  | No changes            | N/A                  |
|                                 |           | Exon 6  | <b>582G</b>           | <b>194X</b>          |
|                                 |           | Exon 7  | No changes            | N/A                  |
|                                 |           | Exon 8  | 838G                  | D280( <i>JK</i> *A)  |
|                                 |           | Exon 10 | No changes            | N/A                  |

\*Only nucleotides which differ from consensus sequence are listed.

**Probable Genotype:** *JK*\*01N.03 / *JK*\*01N.03



**Predicted Phenotype:** Jk(a-b-)

**COMMENTS:** High-resolution testing of all coding exons of *JK* revealed the sample to be homozygous for the c.582C>G single nucleotide variant (SNV). This SNV results in substitution of tyrosine for a stop codon at residue p.194, resulting in early termination and is associated with a null phenotype. The predicted phenotype of this high-resolution testing is concordant with serology.

## Donor Case #2

**Third donation and fourth donations = autologous**

- Recent donations with previous identifications so we don't identify again since autologous collections are released without identification

- 01/17/2023

|            |                     |
|------------|---------------------|
| ABY INIT   | Positive            |
| TUBESCREEN | Positive            |
| ABID1      | Antibody_Not_Tested |

- 03/14/2023

|            |                     |
|------------|---------------------|
| ABY INIT   | Positive            |
| TUBESCREEN | Positive            |
| ABID1      | Antibody_Not_Tested |

## Donor Case #2

### Autologous donation product dispositions

- All plasmas were discarded with reason code “Autologous unit not used”
- Four frozen autologous red cells are in MH IRL inventory



## Donor Case #2

### Allogeneic product dispositions

- After four frozen autologous donations, the donor began annual allogeneic donations
- Has since donated four additional times
  - 11/13/2023 – red cells frozen, sent to Richmond, VA and deglycerolized for patient 07/24/2025
    - ABY INIT, Tube & Seg screen are POSITIVE; Antibody Identification = anti-E, anti-Jk3
  - 01/08/2024 – red cells frozen, sent to Richmond, VA and deglycerolized for patient 09/24/2025
    - ABY INIT, Tube & Seg screen are POSITIVE; Antibody Identification = anti-E, anti-Jk3, anti-Jk<sup>a</sup>
  - 07/24/2025 – red cells sent to Baltimore, MD 08/05/2025 and sent to hospital in Virginia
    - ABY INIT, Tube & Seg screen are POSITIVE; Antibody Identification = anti-Jk3, anti-Jk<sup>a</sup>
  - 03/16/2026 – red cells frozen within six days, licensed and in MH IRL frozen inventory
    - ABY INIT & Tube screen are POSITIVE; Seg screen is NEGATIVE – no Antibody Identification required

## Donor Case #2

### Allogeneic product dispositions

- Plasma components from the allogeneic collections were
  - Transformed to non-injectable
  - “Shipped” to the IRL for local reagent use.



**C-E- Fyb-Jka-Jkb-S-HgbS-**

# The Trail That Turned into a Climb



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## Donor Case #3

### A Donor Advocating for Appropriate Use of Their Rare Units

- Long time Vel- donor previously giving at another blood center
- Knew their units were routinely discarded due to antibody presence and inability to resolve
- New local Red Cross collection sites made donating feasible
- Contacted Red Cross medical director to ask if their blood could be used
  - Medical director checked with the IRL
  - MH IRL should be able to complete the testing
- Donor transitioned with the goal of ensuring their rare units benefit patients

## Donor Case #3

First donation = 11/12/2024

|          |          |
|----------|----------|
| ABY INIT | Negative |
|----------|----------|

- YAY – the anti-Vel isn't detected by CTS
- We will be able to manage this donor's collections simply
- UNTIL...

## Donor Case #3

First donation = 11/12/2024

- UNTIL... we see the ABO/RH result from CTS

|        |                          |
|--------|--------------------------|
| ABO/RH | NTD (no type determined) |
|--------|--------------------------|

- Remember CTS is performing antibody detection on automated platforms only at IAT
  - The anti-Vel is not detected by IAT
  - The anti-Vel is potentially interfering with the ABO testing which is performed at IS

## Donor Case #3

First donation = 11/12/2024

- So even though the antibody screen is negative, the ABO testing requires antibody identification for resolution of the ABO type
- The donor appears to forward type as Group A, Rh(D) Positive
- The reverse grouping detects extra reactions in the back type at IS, if the donor is an A

| Donation Identification Number<br>(DIN)<br>Add Product Code, if necessary                             | Antisera |   |      |           |                   |                 |                    | Cells          |                |    |
|-------------------------------------------------------------------------------------------------------|----------|---|------|-----------|-------------------|-----------------|--------------------|----------------|----------------|----|
|                                                                                                       | A        | B | A, B | D<br>(IS) | D Control<br>(IS) | Weak D<br>(IgG) | D Control<br>(IgG) | A <sub>1</sub> | A <sub>2</sub> | B  |
| <br>W18072407985100R | 4+       | 0 | 4+   | 3+        | 0                 |                 |                    | 1+             | w+             | 2+ |

# Donor Case #3

First donation = 11/12/2024

- In order to resolve the donor's back type, we need to perform antibody identification at IS
- We start with a three cell screen and the auto control in tube.

|   | Supplier/ Lot                | Donor / RhHr<br>- Vial | Rh-Hr |   |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | X               | Additional<br>antigens | Test Results |              |             |  |
|---|------------------------------|------------------------|-------|---|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|--------------|--------------|-------------|--|
|   |                              |                        | D     | C | E | c | e | f | V | C <sup>w</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | P1 | K    | k | Kp <sup>a</sup> | Kp <sup>b</sup> | Js <sup>a</sup> | Js <sup>b</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> | Xg <sup>a</sup> |                        | IS           | LISS<br>37°C | LISS<br>IgG |  |
| 1 | Biotest Screen<br>9442011-00 | 904564<br>R1R1 #1      | +     | + | 0 | 0 | + |   | + | 0              | +   | 0 | + | 0 | +               | +               | 0  | +    | 0 | +               |                 |                 | 0               | +               | 0               | +               | 0               | +               | 0               |                 |                        | 1+           | 0            | 0✓          |  |
| 2 | Biotest Screen<br>9442011-00 | 904565<br>R2R2 #2      | +     | 0 | + | + | 0 |   | 0 | +              | +   | + | + | + | 0               | +               | 0  | +    | 0 | +               |                 |                 | +               | +               | +               | 0               | 0               | +               | +               |                 |                        | 1+           | 0            | 0✓          |  |
| 3 | Biotest Screen<br>9442011-00 | 904566<br>rr #3        | 0     | 0 | 0 | + | + |   | 0 | +              | 0   | + | 0 | 0 | +               | +               | +  | +    | 0 | +               |                 |                 | +               | 0               | +               | +               | 0               | +               | 0               |                 |                        | 1+           | 0            | 0✓          |  |
|   | Auto Control                 |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 | 0                      | 0            | 0✓           |             |  |
|   |                              |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |              |              |             |  |

# Donor Case #3

First donation = 11/12/2024

- Next we test a few Vel- cells

|   | Supplier/ Lot                | Donor / RhHr<br>- Vial | Rh-Hr |   |   |   |   |   |   | MNS            |   |   |   | Lewis |                 | P               | Kell |   |   |                 |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | X               | Additional<br>antigens | Test Results    |    |              |             |    |  |
|---|------------------------------|------------------------|-------|---|---|---|---|---|---|----------------|---|---|---|-------|-----------------|-----------------|------|---|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|-----------------|----|--------------|-------------|----|--|
|   |                              |                        | D     | C | E | c | e | f | V | C <sup>W</sup> | M | N | S | s     | Le <sup>a</sup> | Le <sup>b</sup> | P1   | K | k | Kp <sup>a</sup> | Kp <sup>b</sup> | Js <sup>a</sup> | Js <sup>b</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> |                        | Xg <sup>a</sup> | IS | LISS<br>37°C | LISS<br>IgG |    |  |
| 1 | Biotest Screen<br>9442011-00 | 904564<br>R1R1 #1      | +     | + | 0 | 0 | + |   |   | +              | 0 | + | 0 | +     | 0               | +               | +    | 0 | + | 0               | +               |                 |                 | 0               | +               | 0               | +               | 0               | +               | 0                      |                 |    | 1+           | 0           | 0✓ |  |
| 2 | Biotest Screen<br>9442011-00 | 904565<br>R2R2 #2      | +     | 0 | + | + | 0 |   |   | 0              | + | + | + | +     | +               | 0               | +    | 0 | + | 0               | +               |                 |                 | +               | +               | +               | 0               | 0               | +               | +                      |                 |    | 1+           | 0           | 0✓ |  |
| 3 | Biotest Screen<br>9442011-00 | 904566<br>rr #3        | 0     | 0 | 0 | + | + |   |   | 0              | + | 0 | + | 0     | 0               | +               | +    | + | + | 0               | +               |                 |                 | +               | 0               | +               | +               | 0               | +               | 0                      |                 |    | 1+           | 0           | 0✓ |  |
|   | Auto Control                 |                        |       |   |   |   |   |   |   |                |   |   |   |       |                 |                 |      |   |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                 |    | 0            | 0           | 0✓ |  |
|   | A<br>T1667000C               | 586C                   | +     | 0 | + | + | + |   |   | 0              | + | + | + | 0     | 0               | +               | +    | + | + | 0               |                 |                 |                 | 0               | +               | +               | +               |                 |                 |                        | Vel-            | 0  | 0            | 0✓          |    |  |
|   | A<br>DID2432                 | 460C                   | +     | + | 0 | + | + |   |   | 0              | + | + | + | +     | +               | 0               | 0    | 0 |   | 0               |                 |                 |                 | 0               | +               | +               | 0               |                 |                 |                        | Vel-            | 0  | 0            | 0✓          |    |  |
|   | A<br>P01758867               | 433C                   | +     | + | 0 | + | + |   |   | 0              | + | 0 | + | 0     | 0               | +               | +    | 0 | + | 0               |                 |                 |                 | +               | +               | +               | 0               |                 |                 |                        | Vel-            | 0  | 0            | 0✓          |    |  |

# Donor Case #3

First donation = 11/12/2024

- All common specificities are ruled out by donor testing requirements

|   | Supplier/ Lot                | Donor / RhHr<br>- Vial | Rh-Hr          |                |                |                |                |                |                | MNS            |                |                |                | Lewis                        | P                            | Kell                        |                |                |                 |                 |                 | Duffy           |                             | Kidd                        |                              | Luth                         | X               | Additional<br>antigens | Test Results    |                 |    |              |             |  |
|---|------------------------------|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------------------|------------------------------|-----------------------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------------------|-----------------------------|------------------------------|------------------------------|-----------------|------------------------|-----------------|-----------------|----|--------------|-------------|--|
|   |                              |                        | D <del>u</del> | C <del>u</del> | E <del>u</del> | e <del>u</del> | f <del>u</del> | V <del>u</del> | C <sup>w</sup> | M <del>u</del> | N <del>u</del> | S <del>u</del> | s <del>u</del> | Le <sup>a</sup> <del>u</del> | Le <sup>b</sup> <del>u</del> | F <sup>1</sup> <del>u</del> | K <del>u</del> | K <del>u</del> | Kp <sup>a</sup> | Kp <sup>b</sup> | Js <sup>a</sup> | Js <sup>b</sup> | F <sup>a</sup> <del>u</del> | F <sup>b</sup> <del>u</del> | Jk <sup>a</sup> <del>u</del> | Jk <sup>b</sup> <del>u</del> | Lu <sup>a</sup> |                        | Lu <sup>b</sup> | Xg <sup>a</sup> | IS | LISS<br>37°C | LISS<br>IgG |  |
| 1 | Biotest Screen<br>9442011-00 | 904564<br>R1R1 #1      | +              | +              | 0              | 0              | +              |                | +              | 0              | +              | 0              | +              | 0                            | +                            | 0                           | +              | 0              | +               |                 |                 | 0               | +                           | 0                           | +                            | 0                            | +               | 0                      |                 | 1+              | 0  | 0✓           |             |  |
| 2 | Biotest Screen<br>9442011-00 | 904565<br>R2R2 #2      | +              | 0              | +              | +              | 0              |                | 0              | +              | +              | +              | +              | +                            | 0                            | +                           | 0              | +              | 0               | +               |                 |                 | +                           | +                           | +                            | 0                            | 0               | +                      | +               |                 | 1+ | 0            | 0✓          |  |
| 3 | Biotest Screen<br>9442011-00 | 904566<br>rr #3        | 0              | 0              | 0              | +              | +              |                | 0              | +              | 0              | +              | 0              | 0                            | +                            | +                           | +              | +              | 0               | +               |                 |                 | +                           | 0                           | +                            | +                            | 0               | +                      | 0               |                 | 1+ | 0            | 0✓          |  |
|   | Auto Control                 |                        |                |                |                |                |                |                |                |                |                |                |                |                              |                              |                             |                |                |                 |                 |                 |                 |                             |                             |                              |                              |                 |                        |                 |                 | 0  | 0            | 0✓          |  |
|   | A<br>T1667000C               | 586C                   | <del>+</del>   | 0              | <del>+</del>   | <del>+</del>   | +              |                | 0              | +              | <del>+</del>   | <del>+</del>   | 0              | 0                            | <del>+</del>                 | <del>+</del>                | +              | 0              |                 |                 |                 | 0               | <del>+</del>                | +                           | <del>+</del>                 | <del>+</del>                 |                 |                        | Vel-            | 0               | 0  | 0✓           |             |  |
|   | A<br>DID2432                 | 460C                   | <del>+</del>   | <del>+</del>   | 0              | +              | <del>+</del>   |                | 0              | +              | +              | +              | <del>+</del>   | <del>+</del>                 | 0                            | 0                           | 0              | 0              |                 |                 |                 | 0               | +                           | <del>+</del>                | 0                            |                              |                 | Vel-                   | 0               | 0               | 0✓ |              |             |  |
|   | A<br>P01758867               | 433C                   | +              | +              | 0              | +              | +              |                | 0              | <del>+</del>   | 0              | +              | 0              | 0                            | +                            | +                           | 0              | <del>+</del>   | 0               |                 |                 |                 | <del>+</del>                | +                           | +                            | 0                            |                 |                        | Vel-            | 0               | 0  | 0✓           |             |  |

# Donor Case #3

First donation = 11/12/2024

- Performed 1x adsorption at 4°C using papain treated Vel+ allogeneic treated cells

|   | Supplier/ Lot                | Donor / RhHr<br>- Vial | Rh-Hr |   |   |   |   |   |   |                | MNS |   |   |   | Lewis           |                 | P  | Kell |   |                 |                 |                 |                 | Duffy           |                 | Kidd            |                 | Luth            |                 | X               | Additional<br>antigens | Test Results       |
|---|------------------------------|------------------------|-------|---|---|---|---|---|---|----------------|-----|---|---|---|-----------------|-----------------|----|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|--------------------|
|   |                              |                        | D     | C | E | c | e | f | V | C <sup>W</sup> | M   | N | S | s | Le <sup>a</sup> | Le <sup>b</sup> | P1 | K    | k | Kp <sup>a</sup> | Kp <sup>b</sup> | Js <sup>a</sup> | Js <sup>b</sup> | Fy <sup>a</sup> | Fy <sup>b</sup> | Jk <sup>a</sup> | Jk <sup>b</sup> | Lu <sup>a</sup> | Lu <sup>b</sup> | Xg <sup>a</sup> |                        | Adsorbed<br>Plasma |
|   |                              |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        | IS                 |
|   |                              |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                    |
| 1 | Biotest Screen<br>9442011-00 | 904564<br>R1R1 #1      | +     | + | 0 | 0 | + |   | + | 0              | +   | 0 | + | 0 | +               | +               | 0  | +    | 0 | +               |                 |                 | 0               | +               | 0               | +               | 0               | +               | 0               |                 | 0                      |                    |
| 2 | Biotest Screen<br>9442011-00 | 904565<br>R2R2 #2      | +     | 0 | + | + | 0 |   | 0 | +              | +   | + | + | + | 0               | +               | 0  | +    | 0 | +               |                 |                 | +               | +               | +               | 0               | 0               | +               | +               |                 | 0                      |                    |
| 3 | Biotest Screen<br>9442011-00 | 904566<br>rr #3        | 0     | 0 | 0 | + | + |   | 0 | +              | 0   | + | 0 | 0 | +               | +               | +  | +    | 0 | +               |                 |                 | +               | 0               | +               | +               | 0               | +               | 0               |                 | 0                      |                    |
|   |                              |                        |       |   |   |   |   |   |   |                |     |   |   |   |                 |                 |    |      |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                    |

- Test previously tested screen cells to show anti-Vel reactivity is adsorbed to exclusion.

## Donor Case #3

First donation = 11/12/2024

- Repeat reverse grouping with adsorbed plasma

| Donation Identification Number<br>(DIN)<br><br>Add Product Code, if necessary                         | Antisera |   |      |           |                   |                 | Cells<br>Adsorbed plasma 1x4°C |                |                |   |
|-------------------------------------------------------------------------------------------------------|----------|---|------|-----------|-------------------|-----------------|--------------------------------|----------------|----------------|---|
|                                                                                                       | A        | B | A, B | D<br>(IS) | D Control<br>(IS) | Weak D<br>(IgG) | D Control<br>(IgG)             | A <sub>1</sub> | A <sub>2</sub> | B |
| <br>W18072407985100R | 4+       | 0 | 4+   | 3+        | 0                 |                 |                                | 0              | 0              | 0 |

- Now we encountering another discrepancy – missing reactions in the reverse typing.

## Donor Case #3

First donation = 11/12/2024

- Reverse grouping with adsorbed plasma at 15 minutes room temperature

|        | Reverse grouping using adsorbed plasma x4°C |                |    |   |    |
|--------|---------------------------------------------|----------------|----|---|----|
| 15' RT | A <sub>1</sub>                              | A <sub>2</sub> | B  | O | AC |
|        | 0                                           | 0              | 3+ | 0 | 0  |

## Donor Case #3

First donation = 11/12/2024

- ABO testing is now resolved. The donor is A Positive and results can be entered in the BECS. Since unlicensed testing was used to resolve the ABO, the product must be labeled without the license.

| Donation Identification Number (DIN)<br>Add Product Code, if necessary                                | Antisera |   |      |        |                |              | Cells                 |                |   |
|-------------------------------------------------------------------------------------------------------|----------|---|------|--------|----------------|--------------|-----------------------|----------------|---|
|                                                                                                       |          |   |      |        |                |              | Adsorbed plasma 1x4°C |                |   |
|                                                                                                       | A        | B | A, B | D (IS) | D Control (IS) | Weak D (IgG) | A <sub>1</sub>        | A <sub>2</sub> | B |
| <br>W18072407985100R | 4+       | 0 | 4+   | 3+     | 0              |              | 0                     | 0              | 0 |

|        | Reverse grouping using adsorbed plasma x4°C |                |    |   |    |
|--------|---------------------------------------------|----------------|----|---|----|
|        | A <sub>1</sub>                              | A <sub>2</sub> | B  | O | AC |
| 15' RT | 0                                           | 0              | 3+ | 0 | 0  |

ABO/Rh Interpretation:

A POS

## Donor Case #3

**First donation = 11/12/2024**

- This is how the donor's results appear in our BECS once our testing is complete.

|            |            |
|------------|------------|
| ABO/RH     | A +        |
| ABO/RH RES | Complete   |
| ABY INIT   | Negative   |
| TUBESCREEN | Not Tested |
| SEGSCREEN  | Not Tested |
| ABID1      | Anti-Vel   |

## Donor Case #3

First donation = Product disposition



## Continued donation

- 
- Val-C-K-Fya-Jka-N-Lea-Hgbs-

## Donor Case #3

Most recent collection – 04/02/2026

- Just when we think we have everything figured out...

...another adventure is on the horizon.

|          |          |
|----------|----------|
| ABO/RH   | A +      |
| ABY INIT | Positive |

- The donor's initial presentation has changed
  - CTS obtains blood type = A Positive
  - ABY INIT is Positive

## Donor Case #3

Most recent collection – 04/02/2026

- IRL Testing – segment screen results

| WID: |                                                                                                       | 10         | Tester Initials/Date:           |              | CPM 04/06/2026 |               |          |
|------|-------------------------------------------------------------------------------------------------------|------------|---------------------------------|--------------|----------------|---------------|----------|
| Pos  | DIN                                                                                                   | ABO/<br>Rh | Historic<br>Antibody<br>Results | IS<br>Result | 37°C<br>Result | IAT<br>Result | Comments |
| 1    | <br>W18072626927000D | A +        | Anti-Vel                        | 0            | 1+             | 1+            |          |

- Antibody identification testing is in progress...

# IRL Frozen inventory

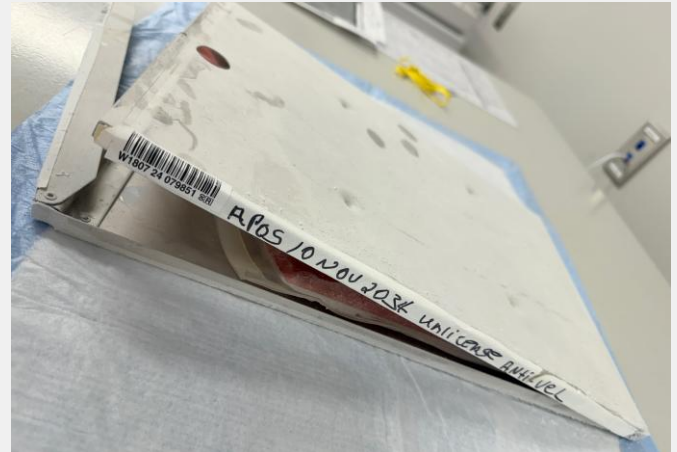
- MH has 3 chest freezers and one upright freezer



- Inside the chest freezer are two rows of five bins containing frozen units.

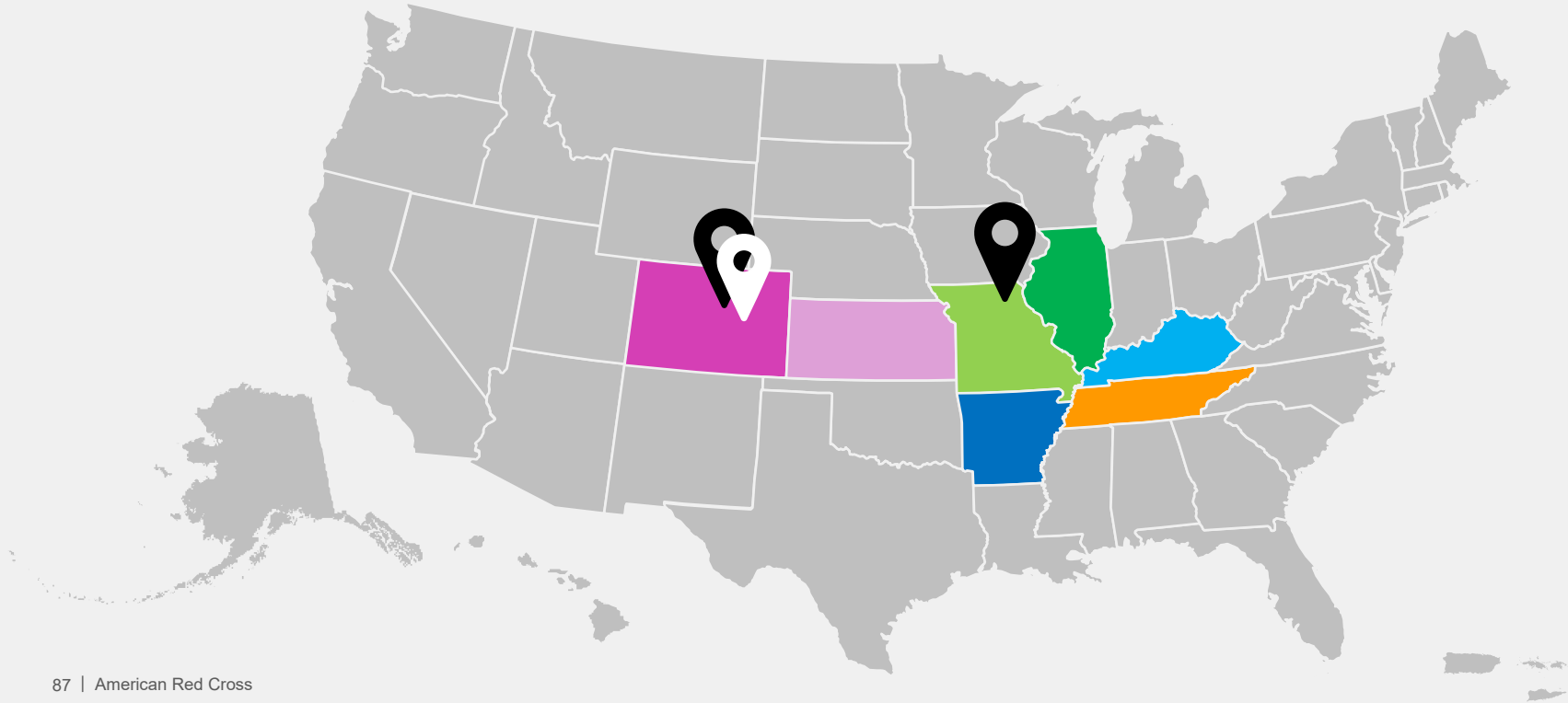


- Each bag of glycerolized cells is placed inside the metal canister and kept flat until frozen.



## Where our adventures came from

Collections from the states colored below are tested by MOAR, MH IRL.



**Thank you for joining this adventure — no passport required, just a few good antibody panels and the donors who set the adventures in motion.**



Thank you



**American  
Red Cross**