American Rare Donor Program (ARDP)-
in 2011 - 82 members
51,576 rare donors in database
Shipped 2131 rare units; 16 international
Members maintain inventories; respond to requests
Rare criteria:

- Negative for high-incidence antigen (<1/1000)
- Negative for multiple common antigens
  
  Set 1—$R_1$, $R_2$, $R_0$, $rr$; $K-$; $Fy(a-)$ or $Fy(b-)$;
  
  $Jk(a-)$ or $Jk(b-)$, $S-$ or $s-$
  
  Set 2—$R_1$, $R_2$, $rr$; $K-$; $Fy(a-b-)$

- IgA deficient--<0.05mg/dL
Rare donor identification

- Members screen donors according to ethnicity, geographic location, etc—Tube, automation, molecular
- Antibody-positive donor on collection
- Antibody-positive patient; sibling testing

Shipping Outcome form--international shipments; developing form for national shipments
ISBT WORKING PARTY ON RARE DONORS

USA

% Unfilled Requests -- 2011
Use of molecular testing

- High-throughput platforms to screen donors – 2011-screens 17,750 donors*
- Gene sequencing to characterize hrB−, hrS−, U− and Uvar+ donors and patients
- Molecular test results to ‘match’ donors with patients

* Data courtesy of Margaret Keller, National Molecular Laboratory, American Red Cross
**USA**

Number of Rare Donors Found Through Screening by Molecular —2011*

N = 17,750

<table>
<thead>
<tr>
<th>Rare Phenotype</th>
<th># Donors</th>
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<tbody>
<tr>
<td>possible hrB-</td>
<td>489</td>
</tr>
<tr>
<td>Jo(a-)</td>
<td>102</td>
</tr>
<tr>
<td>Js(b-)</td>
<td>59</td>
</tr>
<tr>
<td>S-s-U^var+</td>
<td>49</td>
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<tr>
<td>S-s-U-</td>
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<tr>
<td>Jo(a-) Hy-</td>
<td>24</td>
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<tr>
<td>Lu(b-)</td>
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<tr>
<td>Co(a-)</td>
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</tr>
<tr>
<td>Di(b-)</td>
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</tbody>
</table>

* Data courtesy of Margaret Keller, National Molecular Laboratory, American Red Cross