Rh Blood Types - Australian Aborigines


Given a summary of three main views on the origin of the Australian Aborigines - by Whitefells, by Griffith Taylor and by Bandella.

234 full-blood aborigines tested:

Coodnadatta 48; Woorabinda, 63;
Yarrabah, 35; Alice Springs, 23;
Lake Tyers & Point McLean 11 (the last remaining 'pure' aborigines). Rate: 34.

Negatives were anti-D (Rh0), anti-C (Rh'), anti-E (Rh1) and anti-H' (anti-e).

Most negatives were found
<table>
<thead>
<tr>
<th></th>
<th>CD =</th>
<th>CDEc</th>
<th>CD Ec</th>
</tr>
</thead>
<tbody>
<tr>
<td>112</td>
<td>24</td>
<td>20</td>
<td>64</td>
</tr>
<tr>
<td>70</td>
<td>47.9</td>
<td>10.3</td>
<td>85</td>
</tr>
</tbody>
</table>

\[
\begin{align*}
CDE - & \quad C - c \quad - D - - \\
7 & \quad 3 & \quad 4 \\
(3.0) & (1.3) & (1.7)
\end{align*}
\]

**Results Frequency**

\[
\begin{align*}
R_0^1 (CDE) & = 0.564 \pm 0.0367 \\
R_0^2 (cDE) & = 0.2009 \pm 0.0193 \\
R^1 (Cde) & = 0.1287 \pm 0.0324 \\
R^0 (cDE) & = 0.0852 \pm 0.0140 \\
R^2 (CDE) & = 0.0208 \pm 0.0079
\end{align*}
\]

_Does not think D^u if present since the anti-D nucleated best with D^u cells._
A blood group genetic study in Australian Aborigines.

<table>
<thead>
<tr>
<th>Location</th>
<th>Group</th>
<th>O</th>
<th>A</th>
<th>B</th>
<th>H</th>
<th>h</th>
<th>Rh</th>
<th>Rh</th>
<th>Rh</th>
<th>Rh</th>
<th>Rh</th>
<th>Rh</th>
<th>Rh</th>
<th>Rh</th>
<th>Rh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dandin N.T.</td>
<td>30</td>
<td>23</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>12</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Elsey Sc. N.T.</td>
<td>12</td>
<td>9</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Yuendumu N.T.</td>
<td>93</td>
<td>44</td>
<td>49</td>
<td>0</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Erakella S.A.</td>
<td>32</td>
<td>16</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>

Suggest: There is a gradient of Rh2 increasing north to south from Dandin (Bathurst Island) to Yuendumu and Erakella.

At Yuendumu \( R^1 = 576 \), \( R^2 = 0.08 \), \( R^0 = 0.016 \).
Australian Aborigines have shown that both Rho(D) variants, and their exist in these related. The differentiation was made by means of the anti-globulin test.

At Turundum there were 4 individuals whose blood agglutinated in variable strengths with potent anti-Rho sera. These 4 Rho(D) variants were therefore of "high-grade"

An example of Cw(cw) was detected in 67 samples:
91/140 were P+ (65.2%)
12/164 (7.3%) were Le(a+), and
4/124 (3.2%) were non-secretor of ABO system
49/59 Fy(a+)
0/58 K+.
77/152 (51.0%) tested.
A blood group genetical study in Australian
Aboriginals. Haast, Bluff, Central Australian

(Bluff is 150 miles west of Alice Springs).
76 Men were represented in the sample.
Atenda, Kukalga, Ngalina, Pintubi, Loitja,
Pitjandjara & Gamma.

90 A M. N.

125 56 70 6

Rh RH1 RH2 RH2 RH2 RH2 RH2

(105) 32 12 9 42 3 7

Genes: R1 = .570 R2 = .252 R0 = .119 R2 = .069.

No Variants RH 0/100

Dayt 0/12. 

23/100 23/100 23/100

Note: No Rho Variants were found in the present series.

4b Comment: Hatfield in '48 Survey (2/3 from Queensland)
Since R1 (=.0.129) was greatly in excess many of these
must represent Rho Variants of "low-grade."

Note: No Rho Variants were found in the present series.
Simmons, Graydon, & Gajdusek (1958).

A Blood Group Generalized Survey in Australian Aboriginal Children on the Cape York Peninsula.


More than 500 samples from children in Cape York collected. 267 Random samples were blood grouped.

100 from Mitchell River, 100 AURUKUN, 50 from Edward River & 17 from Weipa and Hapoon.

- Thursday Island,
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</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>15.98</td>
<td>15.81</td>
<td>15.94</td>
<td>15.87</td>
<td>15.94</td>
<td>15.87</td>
<td>15.94</td>
<td>15.87</td>
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<tr>
<td>3</td>
<td>15.82</td>
<td>15.64</td>
<td>15.77</td>
<td>15.69</td>
<td>15.77</td>
<td>15.69</td>
<td>15.77</td>
<td>15.69</td>
<td>15.77</td>
</tr>
<tr>
<td>4</td>
<td>15.67</td>
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<td>15.62</td>
<td>15.54</td>
<td>15.62</td>
<td>15.54</td>
<td>15.62</td>
<td>15.54</td>
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</tr>
<tr>
<td>5</td>
<td>15.53</td>
<td>15.35</td>
<td>15.48</td>
<td>15.40</td>
<td>15.48</td>
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<td>15.40</td>
<td>15.48</td>
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<tr>
<td>6</td>
<td>15.39</td>
<td>15.21</td>
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<td>15.36</td>
<td>15.44</td>
<td>15.36</td>
<td>15.44</td>
<td>15.36</td>
<td>15.44</td>
</tr>
<tr>
<td>7</td>
<td>15.25</td>
<td>15.07</td>
<td>15.20</td>
<td>15.12</td>
<td>15.20</td>
<td>15.12</td>
<td>15.20</td>
<td>15.12</td>
<td>15.20</td>
</tr>
</tbody>
</table>

Note: The table shows the results for various categories, with each category having different values.
that Rh variants occur in Australian Aborigines and Melanesians, particularly in New Britain, but no group native has predominantly been encountered by us in which such large numbers of variants have been detected, and with so many Rh antigens involved

50/50 random samples were 74 (a+)
0/50 D1 (a) negative.

"Duffy results are consistent with those found in Australia and the Pacific peoples generally."

See important discussion pp. 70 ff on introduction of B gene into Cape York and the presence of R2 in Melanesians only in Dain Island. "It would seem fair to say that the chief external influence on Aboriginal Cape York people was undoubtedly seen from New Guinea due to the exchange of artists. It is possible that just one man, or just a few men were
Summary of selected gene Todale.

<table>
<thead>
<tr>
<th>Author, Place, N. T.</th>
<th>Noted D&lt;sup&gt;+&lt;/sup&gt; R&lt;sup&gt;1&lt;/sup&gt; R&lt;sup&gt;2&lt;/sup&gt; R&lt;sup&gt;0&lt;/sup&gt; R&lt;sup&gt;2&lt;/sup&gt; R&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sumner et al. 58</td>
<td></td>
</tr>
<tr>
<td>Gardner, 48</td>
<td>34</td>
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<tr>
<td>Sumner et al. 54</td>
<td>80</td>
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<tr>
<td>Serper et al. 51</td>
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<tr>
<td>Chenbourge</td>
<td>201</td>
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<tr>
<td>Sumner et al. 57</td>
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<tr>
<td>Haast, Ruff</td>
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<tr>
<td>Sumner et al. 58</td>
<td>164</td>
</tr>
<tr>
<td>Cape York</td>
<td>0.021</td>
</tr>
<tr>
<td>Sumner 58, &quot;Pure&quot;</td>
<td>1698</td>
</tr>
</tbody>
</table>

Rho(D<sup>+</sup>) Variants: High grade 0.41%, Low grade 0.18%.

And see Table in Sumner 1958 Revised.