

**Table 3** Haemagglutination inhibition assays with an absorbed antiserum to untreated H chains of cold agglutinin Low showing cross-idiotypic specificity for reduced-dissociated H chains (red cell coat—Low H chains; antiserum dilution 1:32)

Inhibitors	Minimum concentration giving complete inhibition ( $\mu\text{g ml}^{-1}$ )
<i>Cold agglutinins</i>	
Low H chains	20
Low L chains	> 1,000
Low Fab	> 1,230
Low F(ab') <sub>2</sub>	> 1,238
Low IgM reduced-dissociated*	18
<i>Nic† H chains</i>	
Nic L chains	> 1,000
Nic IgM	> 1,000
Nic Fab	> 1,280
Nic F(ab') <sub>2</sub>	> 2,840
Nic IgM reduced-dissociated	60
<i>Step IgM reduced-dissociated</i>	
Da IgM reduced-dissociated	950
Sch‡ IgM reduced-dissociated	500
Den†‡ IgM reduced-dissociated	140
Ma IgM reduced-dissociated	> 1,750
<i>Non-cold agglutinins</i>	
Mi IgM reduced-dissociated	> 7,800
Gr IgM reduced-dissociated	> 5,000
Dav‡ IgM reduced-dissociated	> 8,850
Ham‡ IgM reduced-dissociated	> 8,000
Cohn Fr II reduced-dissociated	> 5,000

\*HL dissociation without chain separation was carried out by reduction, alkylation, dialysis against 1 M acetic acid followed by dialysis against distilled water, as previously described<sup>7</sup>.

†Anti-i cold agglutinin; all others had anti-I specificity.

‡IgM  $\lambda$  proteins; all others were IgM  $\kappa$ .

react against the intact cold agglutinins. The latter fail to react with dissociated H and L chains<sup>2</sup>. The findings with the anti-H chain sera strongly suggest that the H chains of this group of antibodies with related antigen bindings specificities have similarities in their hypervariable regions—the absorption procedures and the negative findings with the H chains of pooled human IgG would make V<sub>H</sub> subgroup specificities<sup>10</sup> in the absorbed antisera unlikely.

Similar studies now under way with the light chains of these antibodies may provide additional important information regarding the selection of hypervariable regions in these antibodies, some of which have selected  $\kappa$  chain subgroups and others  $\lambda$  chains<sup>2,3,12</sup>.

In highly inbred strains of mice the H and L chains of myeloma proteins with the same antibody activity and the same idiotype determinants usually have identical or very similar V regions, that is, identical V<sub>L</sub> and V<sub>H</sub> subgroups (framework regions) as well as identical or very similar hypervariable regions<sup>13,21</sup> (site determining regions). In partially inbred rabbits, however, occasional proteins with differing V region subgroups or allotypes have been reported which show cross-idiotypic specificity<sup>14-16</sup>; these have provided support for the insertional model<sup>17</sup> for the coding of the site determining regions of antibodies. This model proposes that separate genes code for the site-determining and the framework portions of the V region. The cold agglutinins and certain other antibodies with restricted specificities<sup>18-20</sup> in unrelated persons offer an excellent opportunity for studying the selection of site determining regions in relation to other V region structures on H and L chains. The availability of discriminating idiotype antisera against isolated chains should prove useful in the screening and selection of H and L chains and their fragments for variable region sequencing.

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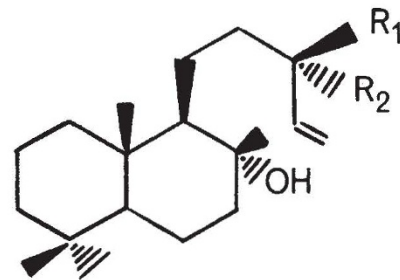
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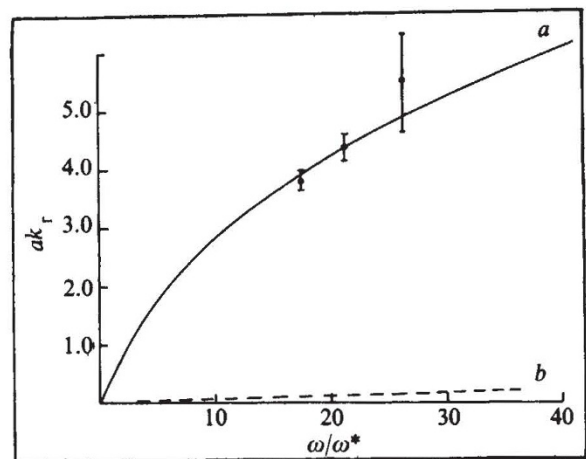
- Williams, R. C., Jr, Kunkel, H. G., and Capra, J. D., *Science*, **161**, 379-381 (1968).
- Feizi, T., Kunkel, H. G., and Roelcke, D., *Clin. exp. Immun.*, **18**, 283-293 (1974).
- Lecomte, J., and Feizi, T., *Clin. exp. Immun.*, **20**, 287-302 (1975).
- Williams, R. C., Jr, *Ann. N.Y. Acad. Sci.*, **190**, 330-341 (1971).
- Boyden, S., *J. exp. Med.*, **51**, 107-120 (1951).
- Takatsky, G., *Acta Microbiol. Hung.*, **3**, 191-202 (1955).
- McLaughlin, C. L., and Solomon, A., *J. Immun.*, **113**, 1369-1372 (1974).
- Feizi, T., Kabat, E. A., Vicari, G., Anderson, B., and Marsh, W. L., *J. Immun.*, **106**, 1578-1592 (1971).
- Feizi, T., and Kabat, E. A., *J. exp. Med.*, **135**, 1247-1258 (1972).
- Gergely, J., Wang, A. C., and Fudenberg, H. H., *Vox Sang. (Basel)*, **24**, 432-440 (1973).
- Capra, J. D., Kehoe, J. M., Williams, R. C., Jr, Feizi, T., and Kunkel, H. G., *Proc. natn. Acad. Sci. U.S.A.*, **69**, 40-43 (1972).
- Feizi, T., *Science*, **156**, 1111-1112 (1967).
- Carson, D., and Weigert, M., *Proc. natn. Acad. Sci. U.S.A.*, **70**, 235-239 (1973).
- Kindt, T. J., Klapper, D. G., and Waterfield, M. D., *J. exp. Med.*, **137**, 636-648 (1973).
- Braun, D. G., and Kelus, A. S., *J. exp. Med.*, **138**, 1248-1265 (1973).
- Thunberg, A. L., and Kindt, T. J., *Eur. J. Immun.*, **4**, 478-483 (1974).
- Wu, T. T., and Kabat, E. A., *J. exp. Med.*, **132**, 211-250 (1970).
- Kunkel, H. G., Agnello, V., Joslin, F. G., Winchester, R. J., and Capra, J. D., *J. exp. Med.*, **137**, 331-342 (1973).
- Kunkel, H. G., Winchester, R. J., Joslin, F. G., and Capra, J. D., *J. exp. Med.*, **139**, 128-136 (1974).
- Capra, J. D., and Kehoe, J. M., *Proc. natn. Acad. Sci. U.S.A.*, **71**, 4032-4036 (1974).
- Rudikoff, S., and Potter, M., *Biochemistry*, **13**, 4033-4038 (1974).

## Errata

In the article "Control of rust diseases by diterpenes from *Nicotiana glutinosa*" by J. A. Bailey, G. A. Carter, R. S. Burden and R. L. Wain (*Nature*, **255**, 328; 1975) Fig. 1 was incorrect. The correct form is reprinted below.



In the article "Observations of a nonlinear interaction involving three electromagnetic waves in a laboratory magnetoplasma" by P. J. Christiansen, M. J. Giles, G. Martelli and N. D. Wells (*Nature*, **254**, 685; 1975) there was an error in Fig 3. The correct figure and legend are reprinted below.



**Fig. 3** Experimental data fitted to the theoretical dispersion curve (a) of low frequency whistlers (helicon waves<sup>6</sup>). In the axes labels  $a$  is the tube radius,  $k_r$  is the real part of the wavenumber and  $\omega^* = B_0/4\pi n e a^2$ . The inferred value of the plasma frequency,  $n$  ( $\sim 1.2 \times 10^{12} \text{ cm}^{-3}$ ) is in good agreement with independent Langmuir probe measurements<sup>1</sup>.  $b$ . Dispersion curve for quasistatic waves.