the information in the *Colour Index* of possible interest to histologists is available in the 9th edition of *Conn’s Biological Stains* by Lillie.²

Lillie provides for each dye used or likely to be used by biological scientists, the common synonyms including brand names, the formula, and its five figure number in the *Colour Index*, part II. Also with this he gives the group category of the dye, based on the practical application to textiles—for example, acid dyes, direct dyes, basic dyes, mordant dyes, and so on. Thus on page 121, for example, Acid Red 44, variously known as Ponceau 6R, Scarlet 6R, Bordeaux G with brand name suffixes, has its formula and its number 16250, along with molecular weight and comments on its use and users. The group coding Acid Red 44 is just as specific as the CI number; in addition, it signifies a red anionic dye and is more memorable. Similarly, Pararosanilin, Magenta O, the chief constituent of the mixture called basic fuchsin is Basic Red 9, and Celestin Blue, Coreine 2R, Gallo Sky Blue is Mordant Blue 14.

Writers of technical texts³⁴ and laboratory suppliers are gradually taking notice of this nomenclature. I would plead with editors that they insist on the use of group number, and with authors that they ask the suppliers to use the group number and to state the manufacturer of the dye they supply.

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References


**Factor VIII concentrate as a source of fibronectin for replacement therapy**

Dr JT Reilly and others¹ have advocated the use of factor VIII concentrates as a source of fibronectin for clinical use, chiefly because they are said to contain more fibronectin per gram total protein than cryoprecipitate.

**Letters to Editor**

Fibronectin antigen and specific fibronectin content of 20 batches of NHS factor VIII concentrate

<table>
<thead>
<tr>
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<th>Mean value (SD)</th>
<th>Range</th>
</tr>
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<tbody>
<tr>
<td>Fibronectin antigen</td>
<td>5.2 mg/ml (1.5)</td>
<td>2-4-8.8 mg/ml</td>
</tr>
<tr>
<td>Total protein</td>
<td>43 mg/ml (8)</td>
<td>25-57 mg/ml</td>
</tr>
<tr>
<td>Mean % fibronectin</td>
<td>12.5% (3-1)</td>
<td>7-21%</td>
</tr>
</tbody>
</table>

Fibronectin antigen was assayed by the Laurell method of rocket immunoelectrophoresis using chromatographically purified plasma fibronectin, extinction coefficient E₁% = 1-28. With this system, normal plasma controls contained about 300 μg/ml fibronectin antigen.

The proportion of fibronectin to total protein in the NHS concentrate is substantially lower than that stated by Reilly et al. In addition, we believe that it is unlikely to be 50-60% higher than that in commercial factor VIII concentrates, as suggested.

Fibronectin antigen was measured in a series of batches of factor VIII concentrate made in Blood Products Laboratory during 1982; total protein (biuret) was measured in every batch as part of routine quality control. Twenty such batches, redissolved according to instructions on the label, were assayed (Table).

In the course of preparing factor VIII concentrate from cryoprecipitate on a large scale, fractionators deliberately remove much of the fibronectin from the factor VIII. On average, the total fibronectin content of 1 litre of fresh frozen plasma would be 300 mg. The cryoprecipitate from 1 litre of plasma contains around 200 mg fibronectin. The same amount of cryoprecipitate yields only 78 mg fibronectin when processed further to give 15 ml (one vial) of factor VIII concentrate. Although factor VIII concentrate contains fibronectin at a higher specific activity than in cryoprecipitate, it is a wasteful source of fibronectin.

Infusion of any of these concentrates into patients would carry a risk of transmitting virus infections, particularly non-A, non-B hepatitis, which would have to be weighed against any benefit predicted. In our opinion, the published case for intravenous supplementation of fibronectin is circumstantial and the use of a crude source of supplementary fibronectin in the complex circumstances prevailing—for example, in extensive burns, abdominal sepsis—would be inconclusive. With the advent of virus inactivation methods, the element of risk might be reduced sufficiently to justify a clinical trial of fibronectin concentrates. Concentrates of purified fibronectin derived from this source are available from Blood Products Laboratory for laboratory study. Meanwhile, we hope that scarce resources of NHS factor VIII concentrate will not be diverted as a trivial and potentially hazardous source of fibronectin in uncontrolled trials which are unlikely to prove or disprove its efficacy.

J K SMITH
RA BROWN
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MJ HARVEY

Research and Development Department, Blood Products Laboratory, Dagger Lane, Elstree, Herts WD6 3BX

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**Reference**


Dr Reilly and others comment as follows:

We would like to comment on the several points raised by Dr Smith and his colleagues. Firstly, our mean value for the proportion of fibronectin to total protein in the NHS concentrate (16%) is not, as suggested, substantially higher than their value (12-5%) and lies well within their quoted range. Secondly, at no point in our paper did we advocate the routine use of factor VIII concentrate for fibronectin replacement therapy in patients with sepsis, shock, etc. Although we quoted data suggesting that replacement therapy may be beneficial in certain cases, we appreciate that these studies, carried out on relatively few patients, require confirmation. Furthermore, we clearly emphasised in our paper the well known potential hazards of infusing such concentrates into patients.

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BA MCVERRY
MJ MACKIE

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Factor VIII concentrate as a source of fibronectin for replacement therapy.

J K Smith, R A Brown, D K Harvey and M J Harvey

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