Matters arising

**Histocompatibility antigens on astrocytoma cells**

Sir: We have read with interest the article on histocompatibility antigens on astrocytoma cells by Hirschberg et al recently published in your journal. The authors state that dissociated cells from astrocytomas of various degrees of malignancy do not express HLA-D/DR determinants. We recently demonstrated that monoclonal anti-HLA-DR antibodies reacted with glioma cells from several established lines, as shown in an antibody-binding radioimmunoassay. Monoclonal anti-HLA-DR antibodies were shown to lyse specifically 51 Cr-labelled glioma cells in the presence of complement. Absorption of anti-HLA-DR antibodies by glioma cells abolished their cytotoxicity against blasts isolated from a common acute lymphoblastic leukaemia (c-ALL) line. Immuno-precipitation of solubilised 125I-labelled membrane proteins from glioma cells by monoclonal anti-HLA-DR antibodies revealed two polypeptide chains of 28 and 33 kilodaltons characteristic of HLA-DR antigens. It must be stressed, however, that not all glioma cell lines tested expressed HLA-DR antigens (three of eight tested).

Hirschberg et al point out that cell lines derived from solid tumours are probably not as suitable as primary tumour cell cultures in the study of representative antigenic determinants on the cell surface. This is true, but primary cultures are already a selection of the original cells. We have stained frozen glioma tissue with anti-HLA-DR monoclonal antibodies in an indirect immunoperoxidase assay and found that neoplastic cells were heavily stained, thus demonstrating that the antigen is also present on the tumour cells in vivo.

It may be noteworthy that Hirschberg et al have published the same results, with the same figures, same tables and identical summary in *Tissue Antigens*, at the same time as in the Journal of Neurology, Neurosurgery and Psychiatry.

N DE TRIBOLET,
Neurosurgical Department, University Hospital CHUV, 1011 Lausanne, S CARREL,
Ludwig Institute for Cancer Research, Lausanne Branch, 1066 Epalinges, Switzerland.

**Training for clinical practice**

Sir: The editorial commentaries by Dr Hopkins and Professor Marsden (December, 1981) raise issues of relevance to clinical neurosciences education. Dr Hopkins records that established clinical training is founded on specific nosological entities, which his table shows to be uncommon in practice. Moreover, as he and Dr Fitzpatrick report in their accompanying article, patients present to neurologists with complaints of disorders form and function. Professor Marsden concludes from Dr Hopkins' figures that the majority of common neurological problems in the United Kingdom will be managed by primary care physicians; it is important to know, therefore, whether current training equips practitioners with the requisite proficiencies to execute these responsibilities.

As part of a study to define educational objectives in undergraduate neurosciences and to establish competencies in clinical neuroscience relevant to future activities...