the presently poorly defined epidemiology of *Campylobacter* infections.

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Immunocytochemical identification of breast carcinoma cells in effusions using a monoclonal antibody

It is widely recognised that the differential diagnosis between activated mesothelial and malignant epithelial cells in effusions may be very difficult.¹⁻⁴ The immunocytochemical approach to cytodiagnosis of malignancy is in its beginnings,^{5,6} but may be the answer to the need for a more sensitive and specific diagnostic tool in effusion cytopathology.

We wish to report encouraging results obtained in the discrimination of mammary carcinoma cells from mesothelial cells in effusions using a monoclonal antibody in a direct immunofluorescence assay. Murine monoclonal IgM MBR1 was prepared against the membrane fraction of the human breast cancer cell line MCF7 and was extensively characterised by solid phase radioimmunoassay, immunofluorescence and immunoperoxidase on tissue sections.⁷ The target antigen is a low molecular weight glycolipid which is strongly expressed in both malignant and benign mammary epithelium.^{7,8} Fresh effusion fluids (8 pleural, 1 peritoneal) from breast cancer patients were divided in two aliquots, one of which was routinely processed for cytopathologic examination. The cells obtained from the other aliquot were incubated in fluorescein labelled purified MBR1 (1 mg/ml) diluted 1/100 in Hanks' balanced salt solution (HBSS) with 2% fetal calf serum (FCS) (30 min at 37°C). Smears prepared after washing of the cells

with 2% FCS in HBSS were examined under a fluorescence microscope. Controls included target cell (MCF7) suspensions incubated with fluorescein labelled MBR1 (positive controls) or with murine monoclonal IgM⁹ unrelated to human mammary cancer (negative substitution controls).

The direct immunofluorescence results were correlated with the cytopathological findings. In all four cases cytologically positive for malignancy breast carcinoma cells could be clearly identified by strong membrane fluorescence. Mesothelial cells, polymorphonuclear leucocytes and red blood cells present in all nine cases were always negative by immunofluorescence.

We are currently extending our investigation to include effusions with atypical cells as well as cases of serous effusions from patients with extra mammary tumours. Our preliminary data indicate that immunocytochemical screening with monoclonal antibodies is of diagnostic use in the discrimination between mesothelial and breast carcinoma cells in effusions.

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Supported by CNR grant No 80.02371.96.

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Notices

NEQAS Autoimmune Serology and Special Immunochemistry

This new division of the National External Quality Assessment Scheme is currently inviting participation in two EQA circuits.

1 *Autoimmune Serology*: Antinuclear antibody, Rheumatoid factor, Thyroid antibodies.

A subsidiary circuit will also cater for EQA of other, less commonly requested auto-antibodies.

2 *AFP in amniotic fluid*

Any laboratory interested in enrolling in these EQA circuits should contact: Dr A Milford Ward or Mr PAE White, Protein Reference Unit, Royal Hallamshire Hospital, Sheffield S10 2JF.

acp Association of Clinical Pathologists: Course for non-medically qualified microbiologists

Following the format of previous courses and provided there is sufficient demand, the Association's Course for Non-Medically Qualified Graduate Microbiologists (Whitley A, University, MRC or PHLS posts) will be held in the Spring or early Summer of 1983 at Queen Charlotte's Maternity Hospital Goldhawk Road, London W6 0XG. The non-residential Course is limited to 15 persons, and the Course fee, covering 10 days of lectures, including site visits, is £90.00; this includes tea and coffee, but not luncheon.

Those who are intending to come should notify Mrs Paulette Mullings, Department of Microbiology, Queen Charlotte's