non-static universe, as it is done in relativity, by using gravitational equations which account for both the local causes and the distant causes.

One upshot of all these researches is that if Milne is right, a theory of gravitation must be, in the last analysis, divested of conceptional terms and that if there is anything like a law of gravitation it must be tautological with some fundamental uniformity postulate of an observer's measurements in his own neighbourhood; and, if Poincaré is right, a uniformity postulate of this nature should not restrict the geometry of space-time.

Note (added in proof). The attention of the reader may be drawn to the recent paper by Milne and Whitrand in *Z. für Astrop.*, **15**, 5, 342 where other important references will also be found.

ANNOUNCEMENT

ALL INDIA SYMPOSIUM ON BIOLOGICAL, MEDICAL AND SOCIAL GERONTOLOGY AND THE IV NATIONAL CONFERENCE OF THE ASSOCIATION OF GERONTOLOGY (INDIA)

(December 19 to 22, 1988, at the School of Life Sciences, Jawaharlal Nehru University, New Delhi)

A symposium entitled "All India Symposium on Biological, Medical and Social Gerontology" will be held during December 19 to 22, 1988 at the School of Life Sciences, Jawaharlal Nehru University, New Delhi. The IV National Meeting of the Association of Gerontology (India) will also take place. The symposium will concentrate on the current researches in all aspects (academic and applied) of the field of ageing (Gerontology-Senescence). This multidisciplinary symposium is intended to make positive attempt to integrate new knowledge about ageing and promote greater communication between the community of individuals engaged in various aspects of ageing research in the country. The focus will be on applications of emerging knowledge and understanding in the field of gerontology for the benefit of human society in which problems of ageing population deserve more attention. The meeting will provide a forum where academic excellence and practical measures can complement each other, and will also make an attempt to make general public aware of the potential of ageing research; to increase the span of healthy productive life and to minimize the social, biological and clinical problems of age (senescence).

Papers for presentation are invited from biological, clinical and social researchers to produce a truly multidisciplinary forum for discussion of a wide range of subjects dealing with any aspects of age and ageing process.

For information, contact the convener, Professor Rameshwar Singh, School of Life Sciences, Jawaharlal Nehru University, New Delhi 110 067, India.

SHORT COMMUNICATIONS

ISOLATION OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) IN INDIA

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In India, antibodies to HIV have been detected in about 122 among 45,000 persons screened by ELISA; however, only 14 cases of the acquired immunodeficiency syndrome (AIDS) have been reported (Dr S. P. Tripathy, personal communication). So far, all the patients who were tested at the NIV, were suffering from AIDS-related complex (ARC) or AIDS had travelled/lived abroad either in the USA, Middle East or Africa. Many of them had a history of receiving blood transfusion during operations or had received blood products; some were intravenous (IV) drug users (NIV unpublished data).

We describe the isolation of HIV in India from a 35-year-old European (HIV_{HC}) an IV drug user who was admitted with a history of diarrhoea, weight loss and oral candidiasis.

His plasma sample was positive for antibodies to HIV in ELISA (Electronucleonics and Wellcome). The western blot (WB) pattern showed antibodies strongly reactive with the viral proteins gp41, p55 and gp120/160 and more faint with p17, p24, p31 and p66 (figure 1). Burke *et al*[1] suggested that scores of 0, 0.5, 1 or 2 be assigned to individual WB bands for negative, faint, medium and strong intensities and a score of 2 and above be considered positive. In the present case the scores of these bands were eight. A WB specific for IgM antibodies was also done and found to be negative (data not illustrated).

Serum antibody assay to HIV recombinant exposed core and envelope antigens (Recombinant ELISA Abbott) demonstrated antibodies to envelope and not to the core antigen. Thus, the results of serological tests on this patient showed that antibodies to both core and envelope protein are present in the WB pattern, whereas in the Recombinant ELISA (Abbott) antibodies were detected only to the envelope antigen. It has been demonstrated that the Recombinant ELISA (Abbott) is more sensitive for the detection of envelope antibody and that the WB is more sensitive for the core antibody[2]. In addition, the disease state has been associated with a reduced incidence of detectable antibodies to the major HIV core protein, p24, in patients with AIDS compared with that in other people infected with HIV[3,4].

Interestingly, the patient's plasma was reactive for antigen in the HIV antigen detection Kit (Abbott) and the presence of HIV antigen was confirmed with 75% blocking in the Abbott "Neutralization" test.

For virus isolation, peripheral blood mononuclear cells (PBMC) were separated from the patient's heparanized blood by banding on Ficoll hypaque. Co-cultivation was carried out with phytohaemagglutinin (PHA-P) stimulated normal PBMC in growth medium containing interleukin-2 (IL-2)[5]. The cultures were fed fresh medium and PHA-P stimulated normal PBMC at weekly intervals. Super-

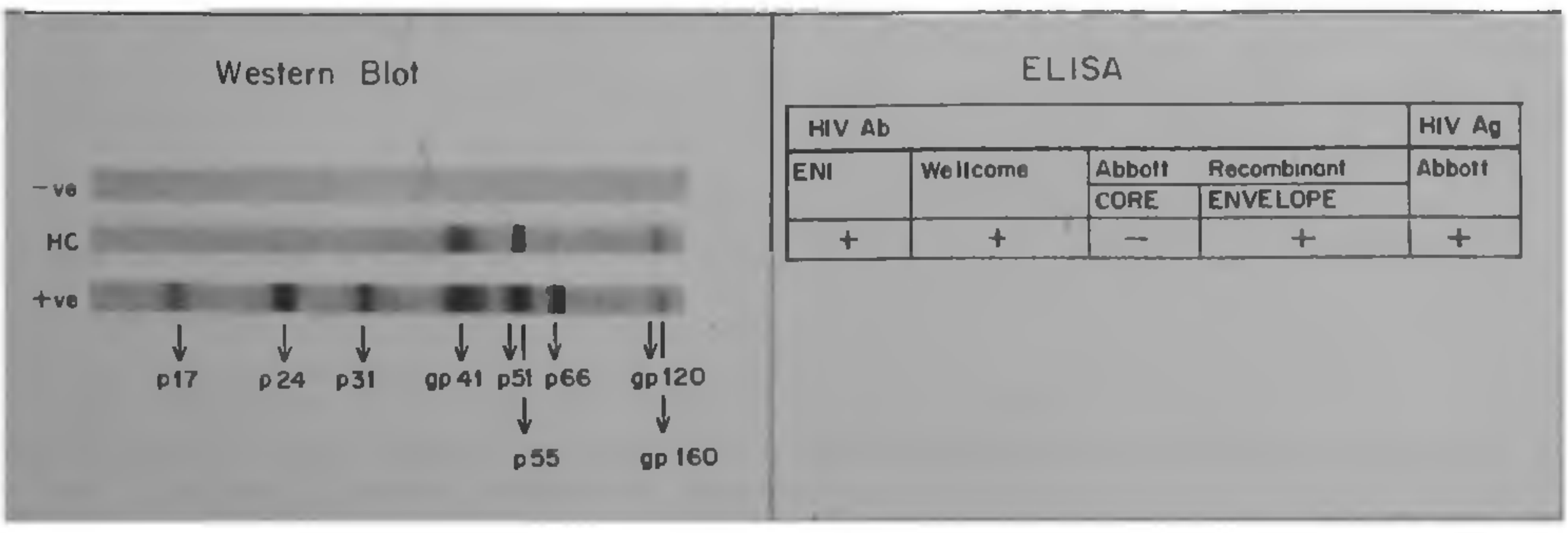

Figure 1. Serological profile of the patient.