

which resemble WYR 69/10 in their interactions with differential varieties should be classified as race 104E137 type 1 and those resembling WYR 71/2 and 71/13 as race 104E137 type 2. Such genetic adaptations in the pathogen, which have the effect of increasing the rate of sporulation, could result in more rapid spread of the disease on certain varieties.

We thank G. M. B. Smith, L. R. L. Hudson and M. A. Brown for technical assistance.

R. JOHNSON
A. J. TAYLOR

*Plant Breeding Institute,
Trumpington, Cambridge*

Received January 19, 1972.

¹ Chamberlain, N. H., Doodson, J. K., and Johnson, R., *Pl. Pathol.*, **20**, 92 (1971).

² Johnson, R., Stubbs, R. W., Fuchs, E., and Chamberlain, N. H., *Trans. Brit. Mycol. Soc.* (in the press).

³ Tervet, I. W., and Cassell, R. C., *Phytopathology*, **41**, 286 (1951).

Female Homosexuality

ALTHOUGH the cause of female homosexuality is not fully understood¹, it is usually thought to have a psychological origin; however, an organic cause has not been excluded. Studies have been carried out in both male² and female³ homosexuals; as these results are not conclusive, we have studied a group of female homosexuals with this in mind. The subjects were forty-two volunteers who were members of a lesbian organization, whose ages ranged from 22 to 55 years with a mean of 36 years.

The following enquiries and investigations were carried out. A medical history was taken, with emphasis on obstetric and gynaecological features, such as age at menarche, frequency of menstruation, and so on; an external physical examination was carried out; a 24 h urine sample was collected with the day of the menstrual cycle, and any concurrent drug therapy noted, and analysed for the following constituents using standard methods: oestrone, oestradiol, pregnanediol, pregnanetriol, 17-hydroxycorticosteroids, 17-oxosteroids, testosterone and epitestosterone; any specimen yielding anomalous results was repeated. A buccal smear was taken, and karyotyping was performed if thought to be indicated. Somatotyping and anthropometric measurements were carried out, and thirty-seven of the volunteers were evaluated by the Eysenck personality inventory.

The results of these investigations were as follows. The history and physical examination revealed no significant abnormalities; secondary sexual characteristics and the external genitalia were normal. Hormonal concentrations in the 24 h urine samples were within the normal range, with allowance being made for any volunteers taking hormones; buccal smear examination also demonstrated the normal female pattern.

Seventeen anthropometric measurements were taken, and compared with those of a control group of similarly aged mothers of a sample of normal children. The lesbians were significantly greater in stature and shoulder width; but the latter difference disappeared when the difference in sheer size was allowed for. A discriminant score for androgyny⁴ showed a statistically significant though very minor difference of 1.4 units, the lesbians being greater in "masculinity"; but the difference between an average man and an average woman of this age on this score is 14 units. When size is allowed for, even this minor difference disappears. The somatotypes of the lesbians covered a wide range, and though we have no very suitable control group for this comparison, it is absolutely clear that there is no such thing as a lesbian physique. We have not been able to examine physique in relation to the sexual role adopted (even supposing this is invariant or meaningful) but the distribution shows no evidence of bimodality. About the only striking thing was the visual impression that the

subjects mostly looked older than their age and sometimes strikingly so. The age of recollected menarche was 13.4 yr, which does not significantly differ from that of the general population.

Thirty-seven patients were tested by the Eysenck personality inventory⁵, which measures two dimensions of personality, namely neuroticism (anxiety, restlessness, tension, vulnerability to stress) and extroversion (impulsiveness, sociability, empathy, gregariousness). The mean neuroticism score for the group was 13, and this is significantly higher than for a normal group. The mean extroversion score was 8.73 which is significantly low compared with a normal group, showing the lesbian group to be clearly dysthymic, that is, prone to anxiety and nervousness, with obsessive tendencies.

This study suggests that, apart from their sexual orientation, lesbians are more neurotic and less extrovert than average, but are apparently in all other respects normal. Female homosexuality may yet be found to have a significant physical cause, but this study failed to reveal any obvious organic difference between lesbians and heterosexual women.

A. J. EISINGER
R. G. HUNTSMAN
JENNY LORD

*St Thomas's and Lambeth Hospitals,
London SE1*

J. MERRY
P. POLANI

Guy's Hospital, London SE1

J. M. TANNER
R. H. WHITEHOUSE

*Institute of Child Health,
University of London*

P. D. GRIFFITHS

*Clinical Chemistry Department,
Dundee University*

Received March 9, 1972.

¹ Kenyon, F. E., *Brit. J. Hosp. Med.*, **3**, 183 (1970).

² Kolodny, R. C., Masters, W. H., Hendryx, J., and Toro, G., *New Engl. J. Med.*, **285**, 1170 (1971).

³ Loraine, J. A., Ismail, A. A. A., Adamopoulos, D. A., and Dove, G. A., *Brit. Med. J.*, **4**, 406 (1970).

⁴ Tanner, J. M., *Growth at Adolescence*, second ed. (Blackwell Scientific Publications, Oxford, 1962).

⁵ Eysenck, H. J., and Eysenck, B. G., *Manual of the Eysenck Personality Inventory* (Univ. of London Press, 1964).

Herbal Medicines to Avoid

IN East Africa, certain rare tumours, oesophageal, nasopharyngeal, liver, Burkitt lymphomas and the like, are concentrated in distinct localized pockets¹. The reason for this and the aetiology of these tumours are not known. More than one factor may be involved. Such agents as viruses, or microbial toxins present in food, however, are not easy to avoid. Is there some relation between these tumours and the plants that grow locally and are eaten as food or as medicine?

Poisonous plants are usually known as such by the local people; nobody, however, could be aware of the hazard of plants which do not show immediately toxic effects, but which act insidiously and can cause chronic disease and eventually death after a long latent period even with a single dose. Such insidious action has only recently come to be recognized, and can only be detected by screening the plant materials in long term experiments on animals including pregnant and lactating females². The vegetation of East Africa is known to be rich and varied, and some systematic studies on the distribution of various species have been published or are in preparation³. The type of vegetation depends on altitude, climatic and soil conditions, and these factors can affect the content and the particular structures of toxic plant constituents, even in closely related species. There are more than 200 species of Crota-