enced firm. They agreed to put it in enteric capsules, but they reported having run into various difficulties and it was prepared only recently.

Debates and difference of opinion between research workers are invigorating, but hastily conceived enquiries based on a particular kind of design are liable to be misleading, and an important matter of this kind can only be settled when ample quantities of properly prepared material of known efficacy can be made available for general use. Unhappily, that situation does not yet obtain. Indeed, believing that ample quantities of stable potent NAD would be provided, we ourselves had planned long before Kline to undertake a double-blind experiment on a considerably larger scale than his. Our initial report had to be made upon a small series of cases because for a number of reasons ample supplies of NAD and placebo were not available.

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LITERATURE CITED

GALLANT, D. M., BISHOP, M. P., and STEELE, C. A. (1966). *Current Ther. Res.* **8**, 542.

GREINER, A. C., NICOLSON, G. A., and BAKER, R. A. (1964). *Canad. med. Ass. J.*, **91**, 636–638.

—— —— (1965). *Lancet, ii*, 1165–1167.

HOFFER, A. (1966). *Enzymes in Mental Health*. Ed. G. J. Martin and B. Kirsch. Philadelphia: Lippincott Co.

—— and OSMOND, H. (1966). *J. Neuropsychiat.*, **2**, 306.

—— —— (1966). *J. Psychopharm.*, **1**, 179.

KELM, H., HOFFER, A., and OSMOND, H. (1968). *Hoffer-Osmond Diagnostic Test Manual*. Modern Press, Saskatoon, Saskatchewan. In U.S.A., available from Bell-Craig, Inc., 41 14 27th Street, Long Island City, New York 11101.

PFEIFFER, C. (1967). Report to Brain Research Foundation Meeting, June, Chicago.

VESTERGAARD, P., ABBOTT, M. T., KLINE, N. S., and STANLEY, A. M. (1958). *J. clin. exp. Psychopath.*

BLOOD GROUPS IN PSYCHIATRIC ILLNESS

DEAR SIR,

A. B. Masters' recent article "The Distribution of Blood Groups in Psychiatric Illness" (*Journal*, November, 1967, p. 1309) is similar to one from our laboratory (Irvine and Miyashita, 1965). Readers may be interested in a comparison of results obtained by Masters in Lancashire with those obtained by us in Saskatchewan. The initial Saskatchewan work was based on 734 consecutive admissions to the Saskatchewan Hospital, North Battleford, a 1,100 bed public mental hospital serving a catchment area with a population of approximately 430,000. This preliminary work was primarily an attempt to replicate and possibly extend the findings of Lafferty, Knox and Malone (1957), and particularly those of Parker, Theilie and Spielberger (1961); this also seems to have been a primary aim of the work reported by Masters.

As we reported in 1965, our results tended to confirm the findings of Lafferty *et al.* and Parker *et al.*: Group A_1 tended to associate with schizophrenia; Group O with manic-depressive psychosis; Type E with neurotic-depressive reaction; and Kell with depressive diagnoses in general. In addition, we found a statistically significant positive association between involutional melancholia and blood Group O. Rather significantly, Masters further confirms Parker, Thielie and Spielberger's observation of an association between blood Group O and manic-depressive psychosis. The fact that such a relationship has been demonstrated in North Carolina, in Saskatchewan and in Lancashire strongly argues for its reality and pervasiveness, and hence for major research efforts to determine its mechanism and implications.

While our blind study tended to confirm all the expected trends based on Lafferty *et al.* and Parker *et al.*, there are several differences between Masters' findings and ours. Ultimately, this situation may be attributed to differences in diagnostic trends, and/or ethnic composition, between the Saskatchewan and the Lancashire studies. In any case, Masters' work did not confirm the associations between E-positivity and psychoneurotic depression, or between Kell-positivity and depression in general. Masters' failure to confirm a relationship between blood-type E and neurotic-depressive reaction is not surprising, since (1) this was the weakest trend in our cross-validational study of admissions, (2) we found no trace of such a relationship in a hospital-wide study of *in-patients*, and (3) a special study of depressives, undertaken in collaboration with Dr. G. Marjerrison, also failed to reveal such a trend. The failure of the Lancashire data to manifest the expected association between the Kell blood type and depression is more difficult to understand. Not only did our preliminary work show the expected trend among psychiatric admissions, but subsequent studies have revealed it among our hospital in-patients, and again in a group of concordantly diagnosed depressives (joint work with Dr. G. Marjerrison). Finally, we have demonstrated a statistically significant and specific positive association between the Kell blood-type and depression as

measured by the Minnesota Multiphasic Personality Inventory (joint work with K. Silzer); further work, including transcultural studies will be necessary to clarify the appearance of this relationship in North American populations, but its apparent absence in England.

The question of the exact diagnostic specificity and symptomatology associated with group O blood (homozygosity for gene I^0) also demands further clarification, particularly in respect to the inter-relationships between involutional melancholia and manic-depressive psychosis. Parker's group did not report on involutional melancholia; while we confirmed their relationship between group O and manic-depressive psychosis, we found and continue to find a more striking association between group O and involutional melancholia. Masters' data do suggest that involutional depression may also be associated with group O (his "Involutional-Senile Depression" group had the second-highest incidence of group O bloods among all his psychiatric categories), but his incidence of group O was still higher for manic-depressives. This is a recognized area of difficult differential diagnosis. What does seem assured is that at least some forms of psychotic depression *are* related to blood group O. Special studies, including a number now under way in Saskatchewan (Irvine, 1967) will be needed to provide a detailed clinical picture of the psychotic depression(s) found in I^0I^0 homozygotes, and to determine *inter alia* whether there may possibly be a valid "new" disease entity involving this genic structure.

We have published to date only on schizophrenia and various depressions in relation to blood groups, but detailed tabulations of blood-group frequencies have been prepared for practically all psychiatric diagnoses, not only for admissions but also for resident in-patients of the Saskatchewan Hospital, North Battleford. The salient features of these distributional tables will be reported in due course. But I would comment here on Masters' finding of an excess of D-negative subjects among the involutional and senile depressions and apparently among the older psychiatric admissions in general. Among 668 admissions, we found the highest incidence of D-negative blood (25·8 per cent.) among senile psychotics, and the second-highest incidence among involutional melancholics (20·6 per cent.), in good agreement with Masters. In contrast, the overall incidence for all admissions was only 16·9 per cent.

While the trends are not statistically significant, it is interesting that the excess incidence of group A blood among schizophrenics (reported earlier by Lafferty *et al.*) has also been seen in our Saskatchewan material, and now in the Lancashire data. Further work on A, A_1, and AD^+ blood groups in relation to schizophrenia and schizophrenic symptoms may be productive. In general, work on blood types in psychiatric illness appears promising; the present approaches should perhaps be extended to include more comprehensive grouping or patterning (especially Rh), use of more psychological and neurophysiological measures, and deliberate structuring of transcultural investigations.

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References

Irvine, D. G. (1967). "Specific Genetic Markers in Psychiatric Research: an ongoing series of studies jointly supported by the Saskatchewan Government (Department of Public Health), the Canadian Government (National Health Grant 607–7–108) and Ortho-Pharmaceutical (Canada) Ltd."

—— and Miyashita, H. (1965). "Blood types in relation to depressions and schizophrenia: a preliminary report." *Can. med. Assoc. J.*, 92, 551–554.

Lafferty, C. R., Knox, W. J., and Malone, M. C. (1957). "Schizophrenia in relation to blood groups ABO and blood types Rh.D. and MN." *Amer. J. Psychiat.*, 113, 1117.

Parker, J. B., Theilie, A., and Spielberger, C. D. (1961). "Frequency of blood types in a homogeneous group of manic-depressive patients." *J. ment. Sci.*, 107, 936–942.

TEACHING PSYCHIATRY BY CLOSED-CIRCUIT TELEVISION

Dear Sir,

Professor W. H. Trethowan, in a recent article in the *Journal* (April, 1968 p. 520) states that "closed circuit TV offers an opportunity for trainees to observe a series of psychotherapeutic sessions". Along with its undoubted advantages we have to bear in mind the limitations of this aid to teaching. Often I have wished that I could make tape recordings of psychotherapeutic interviews with my patients in order to use these educationally afterwards. It would be so much easier, and even more life-like, than having to write down conversations from memory; yet I have found no way of overcoming the objections. To persuade patients verbally to exteriorize their most intimate feelings in free association and to accept interpretations that are emotionally stressful requires every ounce of the therapist's capacity, and if the patient's co-operation were additionally taxed by the knowledge that recording was in progress the effectiveness of our techniques would be impaired. As therapist I should find it more difficult to be