characteristics of the conventional neuroleptics, in particular, at doses considerably lower than previously examined.

It has been proposed that the "atypical" properties of clozapine are explained by its simultaneous interaction with 5-HT2 and D2 receptors. We have demonstrated very high (85-90%) 5-HT2 receptor occupancy and low (20-67%) D2 receptor occupancy in patients treated with low to moderate doses of clozapine. This finding supports the position of the 5-HT2 receptor as potential mediator of atypical effects. The putative atypical antipsychotics risperidone and olanzapine induced high occupancy of both D2- and 5-HT2 receptors at clinically relevant doses. Further clinical characterization of such new compounds will thus provide valuable leads to the clarification of atypical antipsychotic action.

IN VIVO RECEPTOR SPET STUDIES OF ANTIPSYCHOTIC DRUG ACTION

L.S. Pilowsky 1, G.F. Busatto 1, D.C. Costa 2, S. Gacinovic 2, P.J. Ell 2, R.W. Kerwin 1, 1 Institute of Psychiatry, Denmark Hill, London SE5 8AF; 2 Institute of Nuclear Medicine, Middlesex Hospital, UCL, London, WIN 8AA

Nuclear medicine techniques (positron emission (PET) and single photon emission tomography (SPET)) now permit examination of brain receptors in living subjects. As these receptors are targeted by antipsychotic drugs, hypotheses concerning drug action may now be tested in vivo. In particular, schizophrenic nonresponders and responders to classic antipsychotic drugs show similar levels of D2 blockade by the drugs. The atypical antipsychotic drug clozapine has beneficial effects without high striatal D2 receptor blockade. We will report data showing the novel atypical drug, olanzapine occupies striatal D2 receptors to the same low extent as clozapine. However, another new atypical antipsychotic drug, serindole, like risperidone, shows high levels of striatal D2 blockade but few extrapyramidal side effects. These data will be discussed in the light of recent theories as to the neuropharmacology of schizophrenia.

GENETIC EPIDEMIOLOGY OF FUNCTIONAL PSYCHOSES

W. Maier.

The presentation will focus on schizophrenia and bipolar affective disorder.

During the last decades a broad variety of studies explored the patterns and the determinants of the familial aggregation of the major psychiatric disorders. As most other common diseases all functional psychoses are aggregating in families. The diagnostic specificity of the familial patterns of aggregation is low. Particularly with affective disorders occurring more frequently than expected by chance in families of probands with schizophrenia. The various subtypes of both disorders are not breeding true in families with the single exception of bipolar affective/schizoaffective disorders.

Family, twin and adoption studies clearly demonstrated that both disorders are of multifactorial origin. Although the specific nature of causes is widely unknown it is evident that genetic as well as environmental factors (familial as well as individual) are contributing as it has also been shown for other common diseases.