

## Introduction

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Despite the increase in our knowledge of the mechanisms of action of existing antipsychotic drugs, the discovery of new, more effective antipsychotic drugs has not yet been derived from our theoretical understanding of those mechanisms. The recent rediscovery of clozapine is no exception. Nevertheless, this knowledge is being applied both to improvements in the way antipsychotics are used and to the development of new agents.

The optimism and activity generated by the reintroduction of an interesting new drug was the stimulus for a research conference at the University of Calgary in the summer of 1991. The theme was the psychopharmacology of schizophrenia, and the topics ranged from basic science to clinical research and practice. The purpose was to show that understanding and knowledge in each of these areas were growing rapidly, and that each area contributes towards the goal of improving treatment. The following papers represent the proceedings of this conference.

The paper by Dr Roger Sunahara and his colleagues discusses the site of action of antipsychotics – the receptor. Knowledge of new receptors and the interactions between receptors is one of the fastest growing areas. Currently, existing theories are being tested on new agents. Furthermore, knowledge about receptor actions can now be tested in humans with the use of positron emission tomography using radioligand uptake studies. This is the topic of Professor Stephen List and Professor John Cleghorn's paper. They point to both the strengths and current limitations of this area.

Professor Jeffrey Lieberman contends that clozapine is "the most significant advance in antipsychotic pharmacotherapy since the advent of chlorpromazine". In his paper he summarises current theoretical models of the action of clozapine and the application of such models to the development of new antipsychotics. The importance of understanding the metabolism of antipsychotic drugs is proposed by Dr Hubbard *et al.* This is an area that is often overlooked in clinical research and practice.

Papers relevant to the design, conduct and interpretation of the results of clinical trials are included. Professor George Awad's overview includes several long-standing issues of clinical trial design, as well as issues that are arising from development of the new neuroleptics. These neuroleptics differ from conventional neuroleptics in both their mechanism of action and their side-effects. Professor Wolfgang Gaebel discusses in more detail the non-drug factors that influence the outcome and interpretation of drug trials. He asserts there is a need to collect data, to improve treatment planning for individual patients. Professor Donald Addington focuses on the development of an instrument designed to assess depression in schizophrenia, which is suitable for use in clinical trials.

The final papers address two important aspects of clinical practice: Dr Nina Schooler reviews the alternative drug strategies for maintenance treatment; Dr Samuel Siris the indications for adjunctive medications in schizophrenia.

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