

CONTENTS

PREFACE	V
(E. JACOBSEN)	

NEW APPROACHES TO THE DISCOVERY OF PSYCHOACTIVE DRUGS

(Editor: HANNAH STEINBERG)

A. PLETSCHER: New biochemical approaches to the discovery of psychoactive drugs	3
T. M. ITIL: Quantitative pharmaco-EEG — a new approach to the discovery of a psychotropic drug	13
JOYCE J. KAUFMAN: Quantum chemical and theoretical techniques for the understanding of action of psychoactive drugs	31
P. DENIKER et J. R. BOISSIER: Les échanges du pharmacologue et du psychiatre	43
P. ETEVENON and J. R. BOISSIER: Quantitative and computer EEG analysis in animal neuropharmacology	49
H. RENNERT und G.-E. KÜHNE: Beiträge der Pharmakopsychiatrie zur Entwicklung nosologischer Modelle	55

SOCIAL IMPLICATIONS OF PSYCHOPHARMACOLOGY

(Editor: H. E. LEHMANN)

R. JUNGK: Zukünftige Gesichtspunkte über die mögliche soziale Verwendbarkeit der Psychopharmakologie	59
M. SCHOU and P. C. BAASTRUP: Personal and social implications of lithium maintenance treatment	65
O. H. ARNOLD: Veränderungen des depressiven Erlebens unter Lithium-Dauertherapie	69
N. BOHAČEK: Social aspects of psychopharmacology	75
A. HORDERN: Tranquillity denied	81
Z. BÖSZÖRMÉNYI: Ego-strength changes during pharmacotherapy	85
R. ROPERT: Certains aspects sociaux de l'emploi des neuroleptiques à action prolongée: à propos d'une enquête auprès des psychiatres français sur l'introduction de ces médicaments	91

TRAINING MODELS IN PSYCHOPHARMACOLOGY

(Editor: T. A. BAN)

T. A. BAN: Psychopharmacology in the teaching of psychiatry	99
B. MÜLLER-OERLINGHAUSEN and H. HELMCHEN: Postgraduate training in psychopharmacology	105
P. KIELHOLZ: Training models in psychopharmacology	109

- O. J. RAFAELSEN: WHO training course in psychopharmacology for teachers in medical schools 113
- J. J. LOPEZ IBOR and J. J. LOPEZ-IBOR ALIÑO: Training models in psychopharmacology . . 115
- D. J. SMELTZER, W. KNOPP, D. L. HUNTER, R. MAKO and F. M. SMELTZER: A computer program to assist independent study of the clinical use of psychotropic drugs 119

DRUG EFFECTS IN NORMALS: CORRELATIONS WITH PHARMACOLOGICAL AND CLINICAL EFFECTS

(Editor: H. HEIMANN)

- H. HEIMANN: Methodological principles for psychobiological comparison of the effects of psychotropic drugs 127
- W. P. KOELLA: Neurophysiological foundation of behaviour 135
- G. STILLE und K. DIXON: Korrelation pharmakodynamischer Effekte in verschiedenen Höhen biologischer Organisation 143
- D. BENTE: Differentielle und generelle Wirkungen psychotroper Pharmaka auf das menschliche EEG 149
- W. JANKE: Methodologische Aspekte zur Relevanz von Psychopharmaka-Untersuchungen an Gesunden für die Pharmakotherapie 157
- H. P. HUBER: Zur persönlichkeitspezifischen Wirkung psychotroper Substanzen auf der Neurotizismusdimension 165
- P. DIETSCH, F. ALBRECHT und H. J. MÖNIKES: Versuch zur Darstellung einer neuroleptischen Behandlung mit EMD 16139 an gesunden Versuchspersonen 171
- Z. BÖSZÖRMÉNYI und GY. SOLTÍ: Eine neue Methode zur Auswertung der Psychotropenwirkung bei normalen Versuchspersonen 177

BIOCHEMICAL FINDINGS IN MENTAL ILLNESS. SCHIZOPHRENIC DISORDERS

(Editor: I. MUNKVAD)

- D. RICHTER: The nature of the schizophrenic psychoses 185
- E. H. ELLINWOOD, JR. and A. SUDILOVSKY: The relationship of the amphetamine model psychosis to schizophrenia 189
- ELISABETH BOCK and O. J. RAFAELSEN: Proteins in blood and cerebrospinal fluid in schizophrenic patients. A preliminary report 205
- H. H. BERLET: Tryptophan metabolism and schizophrenia 209
- K. INANAGA and M. TANAKA: Effects of L-DOPA on schizophrenia 229
- P. LADURON: N-methylation of biogenic amines in the brain with 5-methyltetrahydrofolic acid as the methyl donor: a possible implication in schizophrenia 235

STRATEGY OF TREATMENT OF CHRONIC PATIENTS (PHARMACOLOGICALLY)

(Editor: O. VINAŘ)

O. VINAŘ: Whom do neuroleptic drugs help?	247
F. ECKMANN: Langjährige Behandlung mit Neuroleptika bei chronisch schizophren kranken Männern	257
R. P. DE BUCK: Relative safety and efficacy of high and low dose administration of fluphenazine-HCl to psychotic patients	265
K. J. LINDEN, M. KNAACK und W. EDEL: Die Kombination von Rating Scales und Handschrifttest zur Objektivierung und Quantifizierung neuroleptischer Effekte. Eine Doppelblindstudie mit Fluspirilene und Penfluridol	273
J. SIMEON, B. SALETU, G. VIAMONTES, M. SALETU and T. ITIL: Clinical and neurophysiological investigations of combined thioridazine—d-amphetamine maintenance therapy and withdrawal in childhood behavior disorders	279
T. A. BAN and H. E. LEHMANN: Niacin in the treatment of schizophrenias: alone and in combination	293
R. R. FIEVE, J. MENDLEWICZ and J. L. FLEISS: Dominant X-linked transmission in manic-depressive illness: linkage studies with the XGa blood group	301
J. MENDLEWICZ, R. R. FIEVE and F. STALLONE: Genetic aspects of lithium prophylaxis in bipolar manic-depressive illness	309
E. T. MELLERUP, P. PLENGE and O. J. RAFAELSEN: Lithium effects on carbohydrate and electrolyte metabolism	319
P. GROF, E. LOUGHREY, B. SAXENA, L. DAIGLE and J. QUESNELL: Lithium stabilization and weight gain	323
W. WERNER: "Technical failures" in lithium prophylaxis	329
S. KANOWSKI and B. MUELLER-OERLINGHAUSEN: Need for additional medication in outpatients during three years of prophylactic lithium treatment	335

LONG-TERM EFFECTS OF PSYCHOTROPIC DRUGS

(Editor: HANNAH STEINBERG)

HANNAH STEINBERG and M. TOMKIEWICZ: Long term after-effects of psychoactive drugs on animal behaviour	343
J. P. von WARTBURG, M. M. RIS and T. G. WHITE: A possible role of biogenic aldehydes in long-term effects of drugs	355
O. TESAŘOVÁ: The role of personality factors in the development of depressive conditions in the course of psychopharmacotherapy	363
J. COCHIN: Tolerance to the narcotic analgesics. A long-term phenomenon	369
Z. VOTAVA: Tolerance and withdrawal effects after one week administration of perphenazine in rabbits	377
I. MØLLER-NIELSEN, B. FJALLAND, V. PEDERSEN and M. NYMARK: Development of tolerance in animals by repeated administration of neuroleptics	383

- J. METYŠOVÁ: Changes in central effects of several neuroleptics after their repeated administration 387
- V. HANSEN, J. RAVN and C. RUD: Long-term treatment of psychiatric patients with clopen-thixol. Analysis of laboratory investigations 391

STRIATUM AND NEUROLEPTICS

(Editor: J. R. BOISSIER)

- J. R. BOISSIER et E. BAUM: Anatomie et physiologie comparées du système extra-pyramidal. Aspect cholinergique 395
- N.-E. ANDÉN, H. CORRODI, K. FUXE and U. UNGERSTEDT: Action of neuroleptics on the nigro-neostriatal dopaminergic pathway 407
- R. PAPESCHI and I. MUNKVAD: Relation of the effect of neuroleptics in animals to pharmacological parkinsonism and antipsychotic action in man 415
- A. VILLENEUVE, K. JUS, A. JUS and J. GAUTIER: Neuroleptics and dyskinesias 431
- P. DENIKER et D. GINESTET: Effets thérapeutiques et effets extra-pyramidaux des neuroleptiques chez l'homme 441

DRUGS FOR TREATMENT OF SEXUAL DISORDERS

(Editor: G. L. GESSA)

- G. L. GESSA and A. TAGLIAMONTE: Role of brain monoamines in controlling sexual behaviour in male animals 451
- B. J. MEYERSON, M. ELIASSON, L. LINDSTRÖM, A. MICHANEK and A. Ch. SÖDERLUND: Monoamines and female sexual behaviour 463
- W. LICHTENSTEIGER: Interactions between tubero-infundibular dopamine neurons and the pituitary-gonadal axis 473
- C. KORDON: Effect of drugs interfering with central neurotransmitters on pituitary gonadotropic regulation 481
- O. BENKERT: Pharmacological experiments to stimulate human sexual behaviour 489
- URSULA LASCHET and L. LASCHET: Antiandrogens in sexual disorders: influence of cyproterone acetate on the human neuro-endocrine system 497
- H. STEINBECK and F. NEUMANN: Regulation of sexual behavior 503
- M. DA PRADA, M. CARRUBA, A. SANER, R. A. O'BRIEN and A. PLETSCHER: The action of 5,6-dihydroxytryptamine and L-DOPA on sexual behaviour of male rats 517

CHOLINERGIC MECHANISMS IN THE CENTRAL NERVOUS SYSTEM

(Editor: A. SUNDWALL)

- B. KARLÉN, G. LUNDGREN, I. NORDGREN and B. HOLMSTEDT: Ion pair extraction in combination with gas phase analysis of acetylcholine 525
- J. SCHUBERTH and A. SUNDWALL: Biosynthesis and compartmentation of acetylcholine in the brain 533

- M. ISRAEL: Synthesis and release of acetylcholine in nerve electroplaque junctions from *Torpedo marmorata* 547
- E. HEILBRONN: Release of low molecular substances from cholinergic vesicles as a consequence of phospholipase A₂ attack 551
- P. C. EMSON and F. FONNUM: Application of microchemical analysis to the characterization of neurons from the brain of *Helix aspersa* 555
- G. PEPEU and A. NISTRI: Effects of drugs on the regional distribution and release of acetylcholine: functional significance of cholinergic neurons 563

METABOLISM OF CNS STIMULATING DRUGS

(Editor: F. SULSER)

- L. G. DRING and J. CALDWELL: The metabolism of the amphetamines in man and laboratory animals 577
- F. CATTABENI, G. RACAGNI and E. COSTA: Methamphetamine, fenfluramine and their metabolites: identification and subcellular localization in rat brain homogenates 585
- T. B. VREE, J. Th. M. van der LOGT, P. Th. HENDERSON and J. M. van ROSSUM: Metabolism of cyclohexylisopropylamines in man in comparison with amphetamines 595
- ELAINE SANDERS-BUSH and F. SULSER: *p*-Chloramphetamine: studies on the biochemical mechanism of its action on cerebral serotonin 607
- R. W. FULLER, B. B. MOLLOY and C. PARLI: The effect of β,β -difluoro substitution on the metabolism and pharmacology of amphetamines 615
- T. LEWANDER and J. JONSSON: Drugs and certain conditions interfering with the metabolism and excretion of amphetamine in the rat 625
- E. COSTA: Pharmacological implications of the changes of brain monoamine turnover rates elicited by (+) amphetamine and some chemically related compounds 637
- A. RANDRUP, I. MUNKVAD and J. SCHEEL-KRÜGER: Mechanisms by which amphetamines produce stereotypy, aggression and other behavioural effects 659
- J. M. DAVIS, D. S. JANOWSKY, M. KHALED EL-YOUSEF and H. J. SEKERKE: The psychopharmacology of methylphenidate in man 675

PSYCHOPHARMACOLOGY OF CANNABIS

(Editor: L. HOLLISTER)

- R. D. MILLER, R. W. HANSTEEN, H. E. LEHMANN, L. REID, L. LONERO, C. ADAMEC, L. THEODORE and B. JONES: The commission's experimental studies of acute effects of marijuana, Δ^9 -THC and alcohol in humans 685
- O. J. RAFAELSEN, P. BECH, J. CHRISTIANSEN and L. RAFAELSEN: Cannabis and alcohol: effects on simulated car driving and psychological tests. Correlation with urine metabolites 689
- D. LADEWIG and V. HOBI: The effects of Δ^9 -THC on simulated driving performance 693
- S. FISHER, R. C. PILLARD and R. W. BOTTO: Hypnotic susceptibility during cannabis intoxication 699

A. DITTRICH and B. WOGGON: Experimental studies with Δ^9 -tetrahydrocannabinol in volunteers — subjective syndromes, physiological changes and after-effects	701
M. FINK, J. VOLAVKA, R. DORNBUSH and P. CROWN: Effects of cannabis on human EEG and heart rate — evidence of tolerance development on chronic use	703
L. E. HOLLISTER: Human pharmacology of marihuana: what next?	705
S. SZARA: Δ^9 -Tetrahydrocannabinol — potential precursor of “False Hormones”?	707
AUTHOR INDEX	711
SUBJECT INDEX	713