

Contents

Initiatives at the National Institute on Drug Abuse	
C. Schuster.....	1
Presentation of Nathan B. Eddy Memorial Award	
W. Martin.....	6
Clinical Studies of Morphine Addiction	
Nathan B. Eddy Memorial Award Lecture	
C. Himmelsbach.....	8
Is Inpatient Medical Alcohol Detoxification Justified:	
Results of a Randomized, Controlled Study	
M. Hayashida, A. Alterman, T. McLellan, S. Mann, I. Maany, and C. O'Brien.....	19
Concurrent Alcohol and Tobacco Use by Women	
N. Mello, J. Mendelson.....	26
The Syndrome Concept of Alcohol and Drug Dependence:	
Results of the Secondary Analysis Project	
T. Babor, N. Cooney, R. Hubbard, J. Jaffe, T. Kosten, R. Lauerman, T. McLellan, H. Rankin B. Rounsville, and H. Skinner.....	33
Placebo Challenge: Effects Following Repeated	
Alcohol vs. Placebo Administration	
M. McCaul, J. Turkkan and M. Stitzer.....	40
Interactions Between Social Behavior and Smoked	
Marijuana	
R. Foltin, M. Fischman and J. Brady.....	47
Nicotine Replacement Effects on Post-Cessation	
Withdrawal Symptoms and Weight Gain	
M. Stitzer and J. Gross.....	53
Efficacy of Nicotine Gum in General Practice:	
One Year Follow-up	
J. Hughes, S. Gust, R. Keenan, K. Skoog, R. Pickens, D. Ramlet, M. Healy and S. Higgins	59

Effects of Secobarbital on Aggressive and Non-Aggressive Responding of Normal Male Subjects	60
D. Cherek, C. Sebastian and J. Steinberg.....	
Hyperprolactinemia During Cocaine Withdrawal	67
J. Mendelson, S. Teoh, U. Lange, N. Mello, R. Weiss and A. Skupny.....	
Conditioned Craving and Arousal in Cocaine Addiction: A Preliminary Report	74
A. Childress, R. Ehrman, A. T. McLellan and C. O'Brien.....	
A Pilot Trial of Amantadine for Ambulatory Withdrawal for Cocaine Dependence	81
C. Morgan, T. Kosten, F. Gawin and H. Kleber.....	
Behavioral and Neurochemical Effects of Repeated or Continuous Exposure to Cocaine	86
M. Kleven, W. Woolverton, C. Schuster and L. Seiden.....	
Neurochemical Basis a for Cocaine and Methamphetamine Interactions	94
G. Hanson, L. Matsuda and J. Gibb.....	
Chronic Cocaine Modifies Brain Benzodiazepine Receptor Densities	101
K. McAllister, N. Goeders and S. Dworkin.....	
Flurothyl Seizure Thresholds Associated with Acute and Chronic Chlordiazepoxide Dependence and Withdrawal	109
N. Boisse, G. Samoriski and J. Guarino.....	
The Discriminative stimulus Properties of Midazolam in Pigeons	115
S. Evans and C. Johanson.....	
Alcohol Effects on LH and FSH in Recently Ovari- ectomized Female Monkeys	122
N. Mello, J. Mendelson, M. Bree and A. Skupny.....	
Adrenal Enkephalin Biosynthesis Regulated by Glucocorticoid	129
C. Inturrisi, S. Franklin, J. Shapiro, S. Calvano, and B. Yoburn	
Neuroadaptation of Rats to Kappa Agonists U-50,488, and Tifluadom	136
C. Murray and A. Cowan.....	

Precipitation of Spirally Mediated Withdrawal Signs by Intrathecal Administration of Naloxone and the Multiteceptor Antagonist CTP in Morphine-Dependent Mice	143
J. Shook, W. Kazmierski, V. Hruby and T. Burks	
Effects of 5,7-Dihydroxytryptamine Lesions of the Nucleus Accumbens in Rats Responding on a concurrent Schedule of Food, Water and Intravenous Morphine Se Administration	149
S. Dworkin, G. Guerin, C. Co, J. Smith and N. Goeders.....	
An Approach to the Paradoxes of Experimental Opiate Dependence	156
J. Villarreal, L. Salazar, J. Herrera and S. Cruz....	
Development of A Computerized System for Inventory of Controlled Drug Substances	163
W. Schmidt, G. Alberici and L. Cook.....	
Assessment of Opiate Tolerance and Dependence <u>In Vitro</u>	167
A. Rezvani and E. Way.....	
Chronic Opioid Treatment of Intractable, Non-Malignant Pain	174
Tennant, Jr., D. Robinson, A. Sagherian and R. Seecof.....	
The Role of β-Endorphin in Respiratory Disorders in Man	181
W. Dewey, D. Morris, D. Erase and E. Myer	
The Acquired Immunodeficiency Syndrome: Do Drug Dependence and Ethnicity Share a Cannon Pathway?	188
L. Brown, Jr., D. Murphy and B. Primm.....	
Acute Opioid Physical Dependence in Humans: Naloxone Dose Response Effects	195
S. Heishman and M. Stitzer.....	
Behavioral, Physiological and Hormonal Effects of a Naloxone Challenge Following Acute Morphine Pretreatment in Humans	202
S. Higgins, K. Preston, E. Cone, J. Henningfield and J. Jaffe.....	
Drug Discrimination in Human Post-Addicts: Agonist/ Antagonist Opioids	209
K. Preston, G. Bigelow, W. Bickel and I. Liebson	
Hormone Secretion in Methadone-Dependent and Abstinent Patients	216
G. Woody, A. T. McLellan, C. O'Brien, H. Persky, G. Stevens, I. Arndt and S. Carroff.....	

The Reduction of Intravenous Heroin Use, Non-Opiate Abuse and Crime During Methadone Maintenance Treatment Further Findings	
J. Ball, E. Corty, H. Bond, C. Myers and A. Tommasello.....	224
A 2.5 Year Follow-Up of Abstinence and Relapse to Cocaine Abuser in Opioid Addicts	
T. Kosten, B. Rounsville and H. Kleber.....	231
Treating Cocaine Abusing Methadone Maintenance Patients with Desipramine	
T. Kosten, F. Gawin and B. Schumann.....	237
Counselor Differences in Methadone Treatment	
A. T. McLellan, L. Luborsky, G. Woody and L. Goebel.....	242
Occurrence of Central Nervous Systems Defects in Fetal Alcohol Syndrome	
W. Rosenfeld, R. Jhaveri, F. Concepcion, M. Mahyuddin and C. Laqui-Pili.....	251
Prenatal Alcohol Exposure, Cognitive and Motor Development in the First Year	
I. Smith, C. Coles, A. Falek, C. Rubin, K. Platzman and J. Lancaster.....	252
Children Exposed to Methadone <u>In-Utero</u>: Cognitive Ability in Preschool Years	
K. Kaltenbach and L. Finnegan.....	253
A Retrospective Search for the Etiology of Drug Abuse: A Background Comparison of a Drug-Addicted Population of Women and a Control Group of Non-Addicted Women	
T. Hagan.....	254
The Detection of Heroin, Cocaine and Cannabinoid Metabolites in the Stools of Infants of Drug Dependent Mothers	
E. Ostrea, Jr., D. Asensio, A. Naluz, E. Abel, M. Subramanian and K. Simkowski.....	262
Variable Apnea in Term/Preterm Infants Born to Drug Dependent Mothers: A Prospective Study	
A. Spitzer, R. Nye, M. Simmons, W. Fox and L. Finnegan.....	263
Maternal Use of Cocaine, Methadone, Heroin and Alcohol: Comparison of Neonatal Effects	
W. Rosenfeld, I. Zabaleta, S. Sahdev, R. Jhaverji K. Vohra, A. Gatmaitan and L. Concepcion.....	264

Cocaine Use During Pregnancy: Adverse Perinatal Outcome	
I. Chasnoff, S. MaoGregor and G. Chisum.....	265
The Use of Tricyclic Antidepressants in Methadone Maintained Pregnant Women and Infant Outcome	
L. Green, S. Ehrlich and L. Finnegan.....	266
Pediatric Surveillance of AIDS Among Infants of I.V. Drug-Using Mothers	
D. Kaplan, R. Kletter and J. Ferrara.....	273
Maternal Drug Abuse During Pregnancy and Pharmacotherapy for Neonatal Abstinence Syndrome	
L. Finnegan.....	274
POSTERS	
Separation of Opioid Receptor Blockade from Production of Functional Supersensitivity	
B.Yoburn and C. Intrurrisi.....	275
Colonic Opiate Receptors Change with Age: Preliminary Data	
J. Culpeper-Morgan, P. Holt and M. J. Kreek.....	276
U50,488H Differentially Blocks the Central Anticonvulsant and Bladder Motility Effects of Mu Agonists in the Rat	
F. Porreca and F. Tortella.....	277
Tolerance and Abstinence to Mu and Kappa Receptor Stimulation of the Hypothalamo-Pituitary-Adrenal Axis	
D.Ignar and C. Kuhn.....	278
Tolerance Develops to Naloxone-Induced LH Secretion in Neonatal Female Rats	
E. Field, M. Doron and C. Kuhn.....	279
Early Maturation of Mu and Kappa Opiate Control of Hormone Secretion and Effects of Perinatal Opiate Addiction	
C.Kuhn, D. Ignar, L. Bero, S. Lurie and E. Field.....	280
A Comparison of the Modes of Interaction of (+)- and (-) Opiates at PCP Receptors	
A. Newman, V. Bykov, R. Rothman and K. Rice.....	281
(+)-N-Allylnormetazocine Binding Sites: Characterization with <u>In Vitro</u> and <u>In Vivo</u> Methods	
D. Compton and B. Martin.....	282
Effects of Amfonelic Acid, A Dopamine Agonist, and Morphine on Brain Stimulation Reward	
S. Izenwasser and C. Kornetsky.....	283

Antidepressants in Mouse Narcotic Dependence Tests	284
W. Schmidt and L. Cook.....	
Calorimetric Analysis of ICV Morphine in the Rat	285
A. Zwil, T. lynch, R. Martinez, E. Geller and M. Adler.....	
Tolerance to Fentanyl and Cross Tolerance to Morphine in a Drag Discriminative Procedure	286
M. Emmett-Oglesby and A. Herz.....	
Regression Analysis as a Measure of Tolerance Develop- ment to Opioid-Induced Disruption of Food-Maintained Responding in Macaque Monkeys Macaque	287
S. Lukas, N. Mello, M. Bree and J. Mendelson	
Comparison Study of Oral Pentazocine, Pentazocine + Naloxone and Placebo in Postepisiotomy and Postoperative Pain	288
A. Sunshine, N. Olson, R. Axtmayer, I. Ramos and E. Laska.....	
Buprenorphine: Pilot Trials in Borderline Patients and Opiate Dependence - Treatment of a Cannon Disorder?	289
R. Resnick and F. Falk.....	
Serologic Investigations in Parenteral Drug Abusers	290
L. Brown, B. Primm and D. Murphy.....	
Clonidine and Naltrexone: Rapid Treatment of Opioid Withdrawal in the Outpatient Setting	291
E. Vining, T. Kosten and H. Kleber.....	
Doxepin Treatment of Depressed Opiate Addicts Undergoing Methadone Detoxification	292
S. Batki, S. Wheeler, R. Jones, J. Sorensen and K. Brennan.....	
From Methadone Maintenance to Abstinence: Evaluation of an Outpatient Tapering Network	293
J. Sorensen, S. Brummett, M. Gold, S. Batki, M. Trier and L. Wermuth.....	
LAAM Maintenance for Opioid Addicts Who Cannot Maintain with Methadone	294
F. Tennant, Jr.....	
Differences Among Treatment Clinic Types in Attitudes Toward Narcotic Addiction	295
D. Nurco, T. Hanlon, J. Shaffer, T. Kinlock K. Duszynski and P. Stephenson.....	
Treatment of the Dually Diagnosed Substance Abuser	296
H. Weiner and M. Wallen.....	

Contingency Management with a Poly-Drug Abuse Methadone Maintenance Population: Take-Home and Dose Incentives	298
M. Iguchi, M. Stitzer, G. Bigelow and I. Liebson.....	
Identification of Personality Disorder Subtypes Among Drug Abusers Using the Minion clinical Multiaxial Inventory	299
D. Calsyn and A. Saxon.....	
Intrathecal Injections: Cat+ Causes Analgesia, Morphine Produces Hypoglycemia	300
F. Lux, D. Erase and W. Dewey.....	
Number of Risk Factors Predicts Three-Year Probabilities of Heavy Drug and Alcohol Use in Adolescents	301
B. Bry, M. Pedraza and R. Pandina.....	
Ethanol Self-Administration in Alcoholic Methadone Patients: Analysis of Drinking Patterns and Evaluation of Behavioral-Pharmacological Treatment	302
W. Bickel, W. Knight, P. Pangiosonlis, E. Mernit J. Klobas, R. Zieloney, L. Handelsman, I. Marion, P. Rizzuto and J. Lowinson.....	
Methodological Problems in Psychopharmacological Studies with Alcoholism and Drug Addiction	303
B. Mason and J. Kocsis.....	
Opioids' Modulation of Alcohol Intake	304
L. Reid and C. Hubbell.....	
Ethanol Withdrawal Anxiety: Characterization in an Animal Model	305
H. Lai, D. Benjamin, C. Harris, S. Bhadra and M. Emmett-Oglesby.....	
Effects of Ethanol Self-Administration and Withdrawal in Bats Responding for Food and Water	306
P. Beardsley, H. Kalant, and A. Stiglick.....	
Free Choice Consumption of Ethanol by AA and ANA Rats in a Operant Model	307
H. Kalant, and I. Woodworth.....	
The Effect of DL-Propranolol and its Enantiomers on Ethanol Induced Cardiac Hypertrophy in the Rat	
D. King and M. Hirst.....	
Naturalistic Monkey Environment for Studying Social Influences on Alcohol Self-Administration and Alcohol Effects on Social Behavior	
T. Crowley and A. Goebel.....	309

Symptoms of Intoxication and Hangovers Perceived to Modify Subsequent Alcoholic Beverage Consumption	
C. Smith.....	311
Acute Tolerance to Cocaine: Steady State Experiments	
J. Ambre, R. Smith-Coggins, S. Belknap, T. Ruo, A. Atkinson, and J. Nelson.....	312
The Cocaine Receptor: Reinforcing Potency Correlates with Dopamine Uptake Inhibition	
M. Ritz and M. Kuhar.....	313
Genetic Factors in Behavioral and Lethal Responses to Cocaine in Rats	
F. George, L. Porrino and S. Goldberg.....	314
Effect of Cocaine on Hippocampal Acetylcholine, Norepinephrine and Serotonin	
S. Robinson, K. Hambrecht and E. Pennell.....	315
Amantadine Treatment of Cocaine Abuse	
L. Handelsman, W. Bickel, T. Quesada, P. Chordia, I. Marion, I. Escovar and J. Lowinson.....	316
Step-Wise Withdrawal from Cocaine Dependence: Outcome of 106 Consecutive Cases	
F. Tennant, Jr. and A. Tarver.....	317
A Comparison of the Effects of Repeated Doses of MDMA (Ecstasy) on Biogenic Amine Levels in Adult and Neonate Rats	
J. Rosecrans, S. Robinson, G. Patrick and D. Mokler.....	318
MDMA (3,4-Methylenedioxymethamphetamine): Selective Neurotoxic Effects and Interactions with Brain Serotonin Systems	
G. Battaglia, S. Yeh and E. De Souza.....	319
Identification of 3,4 Methylenedioxyamphetamine (MDA) as a Major Urinary Metabolite of 3,4 Methylenedioxymethamphetamine (MDMA)	
R. Fitzgerald, R. Blanke, N. Narasimhachari, R. Glennon and J. Rosecrans.....	321
The Effect of MDA and MDMA ("ECSTASY") Isomers in Combination with Pirenperone on Operant Responding in Mice	
J. Rosecrans, P. Little, M. Yousif and R. Glennon.....	322
Survey of Medical Advice about Caffeine	
J. Hughes, G. Amori, J. Lewis, F. Lavigne and D. Hatsukami.....	323
Effects of Nicotine and Nicotinic Agonists on Calcium Influx into Brain Synaptosomes	
C. Hillard	324

Role of Opioid Mechanisms in the Behavioral Effects of Nicotine	325
S. Herling and W. Corrigall.....	
Effect of Tobacco Withdrawal on Neurohormonal Function	326
J. Hughes, G. Amori, F. Stewart, G. Arana and R. Workman.....	
Replacement of Cigarette Smoking with Nicotine Gum: Effects on Information Processing	327
F. Synder, F. Davis and J. Henningfield.....	
After Chronic Nicotine or Diazepam, the Intensity of the Anxiogenic Effect of a GABA Depleter is Increased	328
C. Harris and H. Lai.....	
Diazepam Effects on the Spontaneous Electroencephalogram (EEG), Evoked Potentials, and Performance in Humans	329
W. Pickworth and R. Herning.....	
Differentiation of High Versus Low Dose Chronic Benzodiazepine Dependence in the Rat	330
J. Guarino, N. Boisse and M. Gay.....	
Discriminative Stimulus Produced by Diazepam Withdrawal is Increased by GABA Antagonists	331
S. Idemudia and H. Lai.....	
The Effects of Yohimbine on Triazolam Self-Administration in Subjects with Histories of Sedative Abuse	332
J. Roache, R. Meisch, J. Henningfield and J. Jaffe.....	
The Abuse Potential of Adinazolam: A Comparison with Diazepam, Lorazepam and Placebo	333
M. Bird, D. Katz, M. Orzack, L. Friedman E. Dessain, B. Beake, J. McEachern and J. Cole.....	
Stereoselectivity of 11-OH-Delta-8-Dimethylheptyl Tetrahydrocannabinol in the Mouse and Dog	335
P. Little, D. Compton, R. Mechoulam and B. Martin.....	
Serum Cannabinoids in Pregnant Rat and Fetus Following Acute and Chronic Administration of Tetrahydrocannabinol (THC)	337
M. Subramanian, D. Waselewsky, C. Zajac and E. Abel.....	
High Concentrations of Naloxone Lower Natural Killer (NK) Activity	338
M. Ochshorn, D. Novick, M. J. Kreek and E. Hahn.....	

Heterosexual Partners of IV Drug Abusers: Implications for the Next Spread of the AIDS Epidemic	
D.Murphy, L. Brown and B. Primm.....	339
Treatment of Heroin Addicts with Buprenorphine: Evaluation Over a Three-year Period	
M. Reisinger and I. Pelc.....	340
Benzodiazepine Dependence in Mice: Effect of Dose and Duration of Treatment	
E. Gallaher, S. Henauer, C. Jacques and L. Hollister.....	341
SYMPOSIA TITLES.....	342
Recent Advances in the Management of Pain	
Multiple Opioid Receptors	
Effects of Alcohol and Drugs on Fetal Development	
Psychiatric Aspects of Alcohol and Drug Abuse Drug and Alcohol Interactions	
Biopsychosocial Predictors of Heavy Substance Abuse	
Molecular Mechanisms Involved with the Actions of Abused Substances	
Self-Administration Models in Alcohol and Drug Abuse	
 SUBMITTED PAPERS FROM SYMPOSIA	
Opioid and Adrenergic Spinal Receptor Systems and Pain Control	
C. Stevens and T. Yaksh.....	343
Multiple Opioid Receptors	
T. Burks.....	353
FAS: The Need for an Interface	
L. Weiner.....	363
Growing Up with Fetal Alcohol Syndrome	
M. Russell.....	368
The Dilemma of Cocaine Exposure in the Perinatal Period	
L. Finnegan.....	379

Petal Alcohol Effects: Central Nervous System Differentiation and Development	
J. West.....	380
Genetics and the Specific Dimensions of Risk for Alcoholism	
M. Schuckit.....	387
Progress in Understanding the Conditioning Aspects of Drug Dependence	
C. O'Brien, A. Childress, A. McLellan, R. Ehrman and J. Ternes.....	395
Psychiatric Diagnoses and Substance Abuse in the General Population: The EGA Data	
J. Helzer.....	405
The Symptomatic and Prognostic Implications of Psychiatric Diagnoses in Treated Substance Abusers	
T. Kosten.....	416
Behavioral Concomitants of Ethanol and Drug Reinforcement	
S. Lukas and J. Mendelson.....	422
Opiate-Ethanol Interactions: Implications for the Biological Basis and Treatment of Combined Addictive Diseases	
M. J. Kreek.....	428
The Reinforcing Functions of Drugs and Assessment of Abuse Liability	
J. Brady.....	440
A Critique of Drug Self-Administration as a Method for Predicting Abuse Potential of Drugs	
E. Iwamoto and W. Martin.....	457
ANNUAL REPORTS	
Biological Evaluation of Compounds for Their Physical Dependence Potential and Abuse Liability. XI. Drug Testing Program of the Committee on Problems of Drug Dependence, Inc. (1987)	
A. Jacobson.....	466
Dependence Studies of New Compounds in the Rhesus Monkey, Rat, and Mouse, 1987	
M. Aceto, E. Bowman, L. Harris, and E. May.....	485
Evaluation of New Compounds for Opioid Activity 1987 Annual Report	
J. Woods, F. Medzihradsky, C. Smith, G. Winger and D. Gmerek.....	543

Subject Index.....	591
Author Index.....	617
List of NIDA Research Monographs.....	624