

Contents

Plenary Session

In Memoriam: Joseph Cochin, M.D., Ph.D., 1916-1985 Louis S. Harris.....	1
Presentation of J. Michael Morrison Award William L. Dewey	2
J. Michael Morrison Award, 1986 Edward C. Tocus.....	4
Introduction of Nathan B. Eddy Award Recipient, 1986 Louis S. Harris.....	7
Nathan B. Eddy Memorial Award Lecture: Tolerance and its Significance for Drug and Alcohol Dependence Harold Kalant.....	9

Symposium

In Memoriam: Joseph Cochin Mechanisms of Opioid Tolerance and Dependence

Early Studies of Tolerance to Morphine Conan Kornetsky.....	20
Acute and Chronic Tolerance Relevance for Clinical Practice Carl Rosow.....	29
Recent Studies on Heterogeneity and Isolation of Opioid Receptors Eric J. Simon.....	35
Role of the Spinal Cord in the Development of Opiate Tolerance and Dependence A. E. Takemori; Gary E. DeLander; and P. S. Portoghese.....	42
Neural Substrates of Opioid Tolerance and Dependence George F. Koob.....	46
Tolerance and Dependence: Implications for the Pharmacological Treatment of Addiction Mary Jeanne Kreek.....	53
Mechanisms of Opioid Tolerance and Dependence: Symposium Summary Martin W. Adler.....	63

Poster Session

Morphine Antinociception in the Chronic Spinal Rat C. Advokat; J. Suiciak; and P. Burtone.....	69
Intrapartum Resuscitation of Infants Born to Drug- Dependent Women Barbara Berger; Saundra Ehrlich; Theresa Matteucci; and Loretta P. Finnegan.....	70
Adinazolam: Comparative Evaluation of Acute Behavioral and Subjective Effects Georae E. Bigelow; Roland R. Griffiths; Frank Funderburk; and Ira A. Liebson	71
Water Soluble Tetrahydrocannabinoids: Pharmacological and Radioligand Binding Studies David R. Compton; Patrick J. Little; and Billy R. Martin.....	72
Carbon Monoxide for Assessing and Treating Tobacco Dependence in COPD Thomas J. Crowley; A. E. Andrews; J. Cheney; G. Zerbe; and T. L. Petty.....	73
Effects of MDA and MDMA on Neurotensin and Substance P Systems in Rat Basal Ganglia G. R. Hanson; K. Merchant; A.A. Letter; D. M. Stone; and J. W. Gibb.....	74
Human Coffee Drinking: Reinforcing and Physical Dependence Producing Effects of Caffeine Roland R. Griffiths, George E. Bigelow; and Ira A. Liebson.....	75
Subjective Effect of Diazepam Withdrawal: Severity Depends on Chronic Diazepam Dose M. Emmett-Oglesby; D. Mathis; S. Idemudia; H. Lal; and C. Harris	76
Kappa and Mu Opiate Effects on Information Processing Ronald I. Herning; Wallace B. Pickworth; and Karen Kumor.....	77
The Effects of MDMA (Ecstasy) on Brain-Stimulation Reward and Detection Thresholds Michael P. Bird; Carol B. Hubner; Stefanie Rassnick; and Conan Kornetsky.....	78
Contribution of Personality Variables to the Subjective Effects Produced by Methaqualone and D-Amphetamine Martin Ionescu-Pioggia; George S. Welsh; and Johnathan O. Cole.....	80

Opioid Profile of BW942C in Man Rolley E. Johnson and Donald R. Jasinski.....	81
A Calorimetric Analysis of Body Temperature Changes Produced in Rats by Morphine, Methadone and U50,488H Thomas J. Lynch; Rebecca P. Martinez; Michael B. Furman; Ellen B. Geller; and Martin W. Adler.....	82
Interactions Between Naloxone and T-Lymphocytes: Do They Indicate the Presence of Specific Opiate Binding Sites? J. J. Madden; R. M. Donahoe; J. Zwemer-Collins; and A. Falek.....	83
Discriminative Properties of Flupirtine, A New Centrally Acting Analgesic, in Rats Bernd Nickel; Suzanne E. Schell; Harlan Shannon; and Michael Swedberg.....	84
Flupirtine, A New Analgesic With a Novel Profile of Activity Bernd Nickel; Karen L. McCullough; and Bruce Vaupel.....	85
The effect of Chronic Maternal Drug Addiction on Placental Drug (Xenobiotic) Metabolism Enrique M. Ostrea, Jr.; Thomas Porter; and James N. Wardell.....	86
Infants with Slit-Like Ventricles: Incidence, Perinatal Factors, Birth Weight, and Neonatal Abstinence Matthew E. Pasto; Sandra Ehrlich; and Loretta P. Finnegan.....	87
THC Plasma Distribution in Rhesus Monkey Mother and Fetus Near Term Merle G. Paule; John R. Bailey; and W. Slikker, Jr.....	88
Local Cerebral Glucose Utilization Following Intravenous Cocaine Administration L. J. Porrino; F. R. Domer; A. Crane; and L. Sokoloff.....	89
Induction of Midazolam Dependence in the Rat Gary M. Samoriski; Norman R. Boisse; Nicholas Quaglietta; and John J. Guarino.....	90
Genetic Differences in the Development of Physical Dependence on Pentobarbital in Four Inbred Strains of Rats Tsumoto Suzuki; Yoko Koike; Saizo Yanaura; Frank R. George; and Richard A. Meisch.....	91

Tripelennamine Potentiation of Opioid Reinforcement (T's and Blues) Mediation by Central Histamine? Ellen M. Unterwald and Conan Kornetsky.....	92
Effect of Cigarette Rod Length on Smoking Topography Phillip P. Woodson and Roland R. Griffiths.....	93
An Eleven Year Study of Mortalities in Methadone Patients: The Growing Impact of AIDS Warren K. Bickel; William F. Knight; Ira Marion; and Joyce H. Lowinson.....	94

Alcohol Research

Effects of Diazepam on Human Laboratory Aggression: Correlations With Alcohol Effects and Hostility Measures D. R. Cherek; J. L. Steinberg; and T. H. Kelly	95
The Role of Temptation in Reactivity to Alcohol Stimuli Eric Corty; Charles P. O'Brien; and Stephan Mann.....	102
Alcohol Effects on Human Aggressive Behavior: Influence of Concurrent Fixed-Ratio Reinforcement Contingencies Thomas H. Kelly; Don R. Cherek; and Joel L. Steinberg	109
Naltrexone Stimulation of Pituitary,-Adrenal and Gonadal Hormones During the Luteal Phase of the Menstrual Cycle: Acute Effects of Alcohol Jack H. Mendelson; Nancy K. Mello; Ulrike Lange; Siew Koon Teoh; Alice S. T. Skupny; Susan Palmieri; and James Ellingboe.....	116
Alcohol Enhances LHRH Stimulated LH in Ovariectomized Female Rhesus Monkeys Nancy K. Mello; Jack H. Mendelson; Mark P. Bree; and Alice S. T. Skupny.....	124
Psychophysiological Effects of Alcohol-Related Stimuli Mary E. McCaul; Jaylan S. Turkkan; and Maxine L. Stitzer.....	131

Clinical - Opioids

Mood States Can Elicit Conditioned Withdrawal and Craving in Opiate Abuse Patients Anna Rose Childress; A. Thomas McLellan; Michael Natale; and Charles P. O'Brien	137
---	-----

Abuse Liability Assessment of Buprenorphine-Naloxone Combinations George E. Bigelow; Kenzie L. Preston; and Ira A. Liebson.....	145
Effects of Passive Exposure to Marijuana Smoke Edward J. Cone; John D. Roache; and Rolley E. Johnson	150
Butorphanol-Precipitated Withdrawal in Opioid-Dependent Human Volunteers Kenzie L. Preston; George E. Bigelow; and Ira A. Liebson.....	157
Altered Dose Incentive Procedures: Effects on Polydrug Use Among Methadone Maintenance Patients Maxine L. Stitzer; Warren K. Bickel; and George E. Bigelow	162
Double-Blind Comparison of Parenteral Meptazinol and Morphine in Postoperative Pain Abraham Sunshine; Howard Richman; Robert Cordone; Napoleon Estrada; Norma Robissa; and Nancy Olson.....	168
Treatment Effectiveness: Medical Staff and Services Provided to 2,394 Patients at Methadone Programs in Three States John C. Ball; Eric Corty; S. Paul Petroski; Henrietta Bond; Anthony Tommasello; and Harold Graff.....	175
A Clinical Trial of Buprenorphine: I. Comparison With Methadone in the Detoxification of Heroin Addicts II. Examination of its Opioid Blocking Properties Warren K. Bickel; Rolley E. Johnson; Maxine L. Stitzer; George E. Bigelow; Ira A. Liebson; and Donald R. Jasinski	182
Extinction of Conditioned Responses in Abstinent Cocaine or Opioid Users Anna Rose Childress; A. Thomas McLellan; Ronald N. Ehrman; and Charles P. O'Brien.....	189
Source of Income as a Predictor in Opioid Addicts: 2.5 Year Follow-Up Thomas R. Kosten and Bruce J. Rounsaville.....	196
AIDS Virus Exposure Behavior in Long-Term Addicts: A Preliminary Study M. Douglas Anglin and Mary-Lynn Brecht	200
Social Support and Relapse to Tobacco, Alcohol and Opiates: Preliminary Findings Barbara E. Havassy; Sharon M. Hall; and Jeanne M. Tschann.....	207

Pharmacological - Behavioral

- The Discriminative Stimulus Properties of Histamine H1 Antagonists in α -Amphetamine-Trained and Midazolam-Trained Pigeons
Suzette M. Evans and C. E. Johanson 214
- The Effects of 12 Hour Limited Access to Cocaine: Reduction in Drug Intake and Mortality
Steven I. Dworkin; Nick E. Goeders; John Grabowski; and James E. Smith 221
- Effects of Diazepam and Delta-9-THC on the Discrimination of Speech Sounds in the Baboon
Robert D. Hienz and Joseph V. Brady 226
- Potentiation of Pentobarbital Sleeping Time by the Acute and Chronic Administration of Morphine
Robert N. Pechnick; Gregory W. Terman; and John C. Liebeskind..... 233
- Effects of Chlordiazepoxide in Intravenous Cocaine Self-Administration in Rats
Nick E. Goeders and Steven I. Dworkin 240

Clinical - Psychoactive Agents

- Diazepam Preference in Subjects Seeking Treatment for Anxiety
Harriet de Wit; S. M. McCracken; E. H. Uhlenhuth; and C. E. Johanson..... 248
- The Dependence Syndrome Across Different Psychoactive Substances: Revised DSM-III
Thomas R. Kosten; Bruce J. Rounsaville; Thomas F. Babor; Robert L. Spitzer; and Janet B. W. Williams 255
- Effects of Marijuana, Cocaine and Task Performance on Cardiovascular Responsivity
Richard W. Foltin; Richard M. Capriotti; Margaret A. McEntee, Marian W. Fischman; Joseph V. Brady; and Julia J. Pedroso..... 259
- Intravenous Cocaine Self-Administration by Human Volunteers: Second-Order Schedules of Reinforcement
Jack E. Henningfield; Ro Nemeth-Coslett; Jonathan L. Katz; and Steven R. Goldberg..... 266

Symposium

Developmental Effects of Drug Dependence (The Impact of Drugs of Abuse Upon the Perinatal Period)

- The Influence of Pharmacotherapy on the Neonatal Sleep Patterns of Infants Born to Opiate Addicted Mothers
M. Giulia Torriolo; M. Chiara Stefanini; P. Mariotti; S. Calzolari; C. Fundaro; and E. Tempesta 274

Contributions of Maternal Alcohol, Caffeine and Cigarette Use to Neonatal Status Juliana S. Lancaster; Claire D. Coles; Kathleen A. Platzman; Iris E. Smith; and Arthur Falek.....	275
Perinatal and Developmental Outcome of Infants Exposed to Methadone <u>In-Utero</u> Karol Kaltenbach and Loretta P. Finnegan.....	276
Prenatal Cocaine Use Associated with Down Regulation of Receptors in Human Placenta Ching H. Wang and Sidney H. Schnoll.....	277
Cocaine- and Methadone-Exposed Infants: A Comparison Ira J. Chasnoff.....	278
Sexual Activities in Drug Dependent Women Robert Smith; Dianne Regan; Sandra Ehrlich; and Loretta P. Finnegan.....	279
Cocaine Abuse in Pregnancy: Effects on the Fetus and Newborn Lynn Ryan; Sandra Ehrlich; and Loretta P. Finnegan.....	280

Pharmacological - Chemical

The Law of Hyperbolas: A Model of Drug Action Applied to Opiate Dependence and Abstinence Julian E. Villarreal; Luis A. Salazar; Jorge E. Herrera; and Silvia L. Cruz.....	281
New Approaches to the Evaluation of Opioid Agonists and Antagonists Upon the Isolated, Electrically Stimulated Mouse Vas Deferens Preparation Charles B. Smith.....	288
A Cyclic Somatostatin Analog that Precipitates Withdrawal in Morphine-Dependent Mice J. E. Shook; J. T. Pelton; W. Kazmierski; P. K. Lemcke; R. G. Villar; V. J. Hruby; and T. F. Burks	295
Comparison of the Effects of Cocaine and D-Amphetamine on the Pharmacological Actions of Methadone Shean-Jang Liu and Richard I. H. Wang.....	302
Analgesics 4. Studies on the Effects of the Introduction of Methyl at C-17 of N-Cyclopropylmethyl-Normorphine: Synthesis, Receptor Binding, <u>In-Vivo</u> Activity, Conformation Energies John A. Lawson; Lawrence Toll; Gilda H. Loew; Gernot Frenking; Joseph I. DeGraw; Edward T. Uyeno; Willma Polgar; Norman Camerman; Arthur Camerman; and D. Adhikesavalu.....	309

The Effects of Amphetamine-Like Designer Drugs on Monoaminergic Systems in Rat Brain J. W. Gibb; D. M. Stone; D. C. Stahl; and G. R. Hanson.....	316
Apparent Lesser Physical Dependence Potential of Nor-Diazepam Compared to Diazepam in the Rat Norman R. Boisse; John J. Guarino; and Gary M. Samoriskil.....	322
Chronic Nicotine Exposure: Studies on Water Intake, Body Weight, Blood Pressure and Behavior M. D. Aceto; S. M. Tucker; J. R. Hinson; and G. S. Ferguson.....	327
Cocaine Inhibition of Locus Coeruleus Neurons D. K. Pitts and J. Marwah.....	334
Opiate Receptor Mediated Regulation of the Immune Response <u>In-Vivo</u> R. J. Weber; B. Ikejiri; K. C. Rice; A. Pert; and A. A. Hagan.....	341
Novel Biochemical Determinants in the Preclinical Evaluation of Opiates Fedor Medzihradsky.....	349
Synthesis and Biochemical Characterization of Two Novel Irreversible Ligands Specific for "Peripheral" Benzodiazepine Receptors Amy Hauck Newman; Hartmut W. M. Lueddens; Phil Skolnick; and Kenner C. Rice.....	356
Developmental Toxicity of Prenatal Delta-9-Tetrahydrocannabinol: Effects on Maternal Nutrition, Offspring Growth, and Behavior Donald E. Hutchings; Stephen Brake; Brian Morgan; Elizabeth LaSalle; and Thomas M. Shi.....	363

Annual Reports

Biological Evaluation of Compounds for Their Physical Dependence Potential and Abuse Liability. X. Drug Testing Program of the Committee on Problems of Drug Dependence, Inc., 1986 Arthur E. Jacobson.....	370
Dependence Studies of New Compounds in the Rhesus Monkey, Rat, and Mouse, 1986 M. D. Aceto; E. R. Bowman; L. S. Harris; and E. L. May.....	392

Evaluation of New Compounds for Opioid Activity 1986 Annual Report James H. Woods; Charles B. Smith; Fedor Medzihradsky; Gail D. Winger; and Debra E. Gmerek	448
Subject Index.....	485
Author Index.....	512
List of NIDA Research Monographs	517