

ALCOHOLISM
AND
DRUG ABUSE
INSTITUTE

ANNUAL REPORT

November, 1973–September, 1974

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THE STAFF

G. Alan Marlatt, Ph.D. Acting Director
Research Coordinator

Albert S. Carlin, M.D. Community Coordinator

Roger A. Roffman Training Coordinator

Patty M. Murphy Secretary

Peggy Harris Student Helper

Professor G. Alan Marlatt, Associate Professor of Psychology, was Acting Director and Research Coordinator of the Institute during its first year of operation. He devoted half time to this position, while still maintaining his position as an Associate Professor in the Department of Psychology.

Dr. Albert S. Carlin, Research Associate Professor with the Department of Psychiatry and Behavioral Sciences, acted as Community Coordinator for the Institute during the year. Dr. Carlin is the full-time Director of the Polydrug Treatment Program in Seattle.

Professor Roger A. Roffman, Assistant Professor with the School of Social Work, acted as Training Coordinator for the Institute and editor of "Nepenthe", the Institute newsletter, while still maintaining his full-time position with the School of Social Work.

ALCOHOLISM and DRUG ABUSE INSTITUTE
3937 - 15th N. E.
University of Washington
Seattle, Washington 98195

INSTITUTE FACILITY

This past year, the Alcoholism and Drug Abuse Institute has been housed in temporary quarters. Professor Marlatt retained his office in the Psychology Department's Guthrie Annex I, while the Institute secretarial staff was housed in another small office in the Annex.

Renovation has begun on the Institute's new quarters at 3937 - 15th Avenue N. E. (just across the street from the west side of the University of Washington campus), and it is expected that the new facility will be completed around the 1st of October.

The new facility is a two-story older house, with a reception room, conference room, kitchen, and the Director's office on the first floor. There is space on the second floor for three offices, and space in the basement for one office. The new facility will house a library which will be available to all those interested in perusing current information on alcoholism and drug abuse.

The staff for the 1974-1975 year is as follows:

Acting Director and Training Coordinator.....Professor Roger A. Roffman
Research Coordinator.....Professor G. Alan Marlatt
Community Technologist.....Professor Albert S. Carlin
Secretary.....Jane I. Ramsey

The new telephone number for the Alcoholism and Drug Abuse Institute may be obtained by calling the main campus operator at 543-2100.

BACKGROUND

On November 2, 1972, Dean Joseph McCarthy of The Graduate School appointed an ad hoc Committee to Study State Needs in the Field of Research and Training in Relation to Alcoholism and Drug Addiction, co-chaired by Professors Luvern Rieke and Carl Eisdorfer. This committee was charged with the task of studying the needs of the agencies of the State of Washington for research and training in relation to alcoholism and drug addiction, particularly with regard to the impending enactment of Senate Bill 29, which provides for the recognition of alcoholism as a medical illness with the implication that public intoxication should not be treated as a criminal act. The committee submitted its report in January 1973. While this report did not specifically recommend the formation of an Institute, the possibility was discussed at one of the committee meetings.

In the meantime, an informal series of meetings was set up to further explore the possibility of a University Institute in the area of alcoholism and addiction. This group consisted of Professors Albert Carlin (psychiatry), Lawrence Halpern (pharmacology), Alan Marlatt (psychology [also a member of the ad hoc committee]), and Roger Roffman (social work). This group submitted a proposal outlining plans for the establishment of an Institute, which was submitted to Dean McCarthy, with a copy to Vice President Thomas Grayston, in April 1973. In the same month, Dean McCarthy discharged the ad hoc committee and appointed an Alcoholism and Drug Addiction Coordinating Council, co-chaired by Professors Eisdorfer and Rieke. This Council took up the Institute proposal for study and appointed a subcommittee chaired by Professors Marlatt and Roffman (members of the Council) to prepare a draft proposal for discussion purposes. The subcommittee consulted with Professors Carlin and Halpern in the course of developing this proposal, which was discussed by the Council during the period of May to July 1973. A final draft of the proposal to establish the Institute was forwarded to Vice President Grayston on August 15, 1973. Dr. Grayston received the document as chairman of the Alcoholism and Drug Abuse Board, appointed by the President of the University in June 1973.

The Board accepted the proposal and recommended the establishment of the Alcoholism and Drug Abuse Institute to the Board of Regents at their October 19 meeting. The recommendation was approved, and a search committee was appointed to seek candidates for the position of full-time director. A subcommittee of the Studies Board (Vice President Grayston, Dean Briar, and Associate Dean Smith) was also formed to seek candidates for the position of acting director, to serve in the interim period. This subcommittee recommended the appointment of Professor Marlatt, which was accepted by members of the Studies Board at their October 17 meeting. Dr. Marlatt accepted the appointment, effective November 1, 1973, to serve on a half-time basis until a permanent director is selected.

ADMINISTRATIVE STRUCTURE AND ADVISORY BOARDS

Executive responsibility for the operations of the Institute is held by the Alcoholism and Drug Abuse Studies Board, chaired by Dr. J. Thomas Grayston. The Board acts on the proposed budget and provides control over staff appointments, including the appointment of a director. Members of the Board also provide input concerning program objectives and the overall operations of the Institute. They also act as an "advisory council" in the allocation of research funds disbursed by the Institute. The initial scientific review of research proposals is conducted by members of the Research Proposal Study Section, who then forward their recommendations for funding to the Board for action. The Board also receives and evaluates any fiscal or annual reports prepared by the Institute staff.

Alcoholism and Drug Abuse Studies Board Membership

Dr. J. Thomas Grayston, Vice President for Health Affairs, Chairman
Dr. J. Scott Briar, Dean, School of Social Work
Dr. Robert W. Day, Dean, School of Public Health and Community Medicine
Dr. George W. Farwell, Vice President for Research
Dr. Ronald Geballe, Associate Dean, College of Arts and Sciences
Dr. Madeleine M. Leininger, Dean, School of Nursing
Dr. Joseph L. McCarthy, Dean, The Graduate School
Dr. Jack E. Orr, Dean, Pharmacy
Dr. Charles Z. Smith, Associate Dean, Law School
Dr. Robert L. Van Citters, Dean, School of Medicine

Institute operations and program objectives are also influenced by the recommendations of two advisory boards, the University Advisory Board and the Community Advisory Board. The University Advisory Board consists of University of Washington faculty who have demonstrated expertise or interest in the alcoholism or drug abuse field.

University Advisory Board Membership

Professor George N. Aagaard, Departments of Medicine and Pharmacology
Dean J. Scott Briar, School of Social Work
Dr. Carl Eisdorfer, Chairman, Department of Psychiatry & Behavioral Sciences
Dr. Maurice F. Freehill, Chairman, Department of Educational Psychology
Associate Dean James L. Gale, School of Public Health
Vice President J. Thomas Grayston, Health Affairs
Professor Roy Hammarlund, School of Pharmacy
Professor Edith Heinemann, Director, Alcoholism Nursing Training Program
Professor John S. Holcenberg, Medicine & Pharmacology
Dr. Earl B. Hunt, Chairman, Department of Psychology
Associate Dean Patricia J. Keller, Graduate School

University Advisory Board Membership (continued)

Professor Jerry L. Kelley, Director, Extension Services
Professor Ted A. Loomis, State Toxicologist, Department of Pharmacology
Professor Clarence C. Schrag, Department of Sociology
Associate Dean Charles Z. Smith, Law School
Mr. James W. Varnum, Administrator, University Hospital
Professor Walter Williams, Director of Research, Institute of Governmental
Research

The Community Advisory Board consists of members selected from representative community agencies and administrative departments at the city, county, and state levels. An attempt was made to appoint members to this Board from each of the important sectors of the community associated with drug and alcohol problems: treatment agencies, state service departments, legislative bodies, law enforcement, the school system, industry, and others. The Community Advisory Board met three times in the first year, and provided the Institute with advice and recommendations in terms of program objectives. It is hoped that the Institute will continue to develop a close working relationship with the community, and will establish policy and research projects which are responsive to community needs.

Community Advisory Board Membership

Dr. Lawrence Bergner, Seattle-King County Health Department
Chief James Coughlin, Bureau of Corrections
Mr. David Curts, Drug Abuse Prevention Office
Mr. Niles Doolittle, Burlington-Northern
Ms. Rae Farmer, Seattle Mental Health Institute
Dr. L. Frederick Fenster
Dr. Warren Garlington, Washington State University
Mr. Gordon Hampton, Pacific Northwest Bell Telephone
Councilman Tim Hill, Seattle City Council
Ms. Betty Hoague, Group Health
Judge Donald Horowitz, King County Superior Court
Mr. Charles Kester, Central Alcoholism Agency
Dr. Cole Jerome Kopet, House of Representatives
Ms. Jane Kuhlman, Alcoholism Treatment Clinic
Dr. E. Harold Laws, Medical Director, Harborview Hospital
Judge George Mattson, King County/Washington State Magistrates' Association
Ms. Eve McClellan, Studio Club
Dr. James Milam, Alcenias
Mr. Frank Miller, Children's Orthopedic Hospital
Mr. Glen Miller, Office of Alcoholism, Department of Social & Health Services
Mr. Philip Nudelman, Group Health
Sister Kathleen Pruitt, Seattle-King County Drug Commission
Dr. Ray Romine, Western Washington State College
Mr. Robert L. Rotchford, Chairman, Citizens Advisory Council to the
Department of Social & Health Services
Father James E. Royce, Ph.D., Seattle University, Chairman

Community Advisory Board Membership (continued)

Mr. Howard Senter, Spokane Drug Coordinating Council
Mr. Art Simmons, Center for Addiction Services
Dr. James Smith, Schick's Shadel Hospital, Inc.
Mr. Ernest Turner, Seattle Indian Alcoholism Program
Ms. Marilyn Ward, Department of Social & Health Services
Mr. Marvin Williams, Washington State Labor Council
Mr. Bruce Zielsdorff, Skid Road Community Council

The Research Proposal Study Section, also appointed by the Acting Director, consists of University faculty members who have demonstrated research competency in the alcoholism and/or drug abuse fields. This group met six times this past year to review research proposals submitted for Institute funding. The Study Section recommended funding levels and priorities, and forwarded these recommendations to the Studies Board for final approval and allocation of funds.

Research Proposal Study Section Membership

Professor Allan Blackman, Health Services
Professor Albert S. Carlin, Psychiatry and Behavioral Sciences
Professor Lawrence Halpern, Pharmacology
Professor Robert S. Hillman, Department of Medicine
Professor John M. Junker, Law School
Professor Ted A. Loomis, Pharmacology
Professor G. Alan Marlatt, Department of Psychology, Chairman
Professor Roger A. Roffman, School of Social Work
Professor Anne L. Woodson, Alcoholism Nursing Training

PROGRAM OBJECTIVES

Overview

For the first year of operation, an attempt was made to set up a limited, but realistic, number of program goals within each of the three areas of focus: research, training, and community consultation. Implementation of these goals are the responsibility of the area committee chairmen: Dr. Marlatt for research, Professor Roffman for training, and Dr. Carlin for community consultation. Projects within each area will serve as models for the future direction and growth of the Institute in subsequent years. Target goals for the first year are presented in the following section.

RESEARCH

The Institute encouraged submission of research proposals in the alcoholism and drug abuse areas. Proposals were accepted in both the "basic" and "applied" fields, provided they met basic criteria for good design and evaluation of outcomes. Proposals were accepted only from members of the faculty of the University of Washington. Non-faculty members may apply for funding only if the proposal is submitted under the name of a faculty representative who is collaborating or otherwise sponsoring the research project; this restriction has had the effect of integrating University and community interests in research problems.

The Institute provided "seed" money for new research investigations, and encouraged investigators to seek other funding from federal or private agencies to continue their work. The period of funding is restricted to one year for any funded proposal.

Descriptions of policy and instructions for submitting research proposals were forwarded to all members of the UW faculty, and were also announced in the Official Notices. Deadlines for submission of proposals were set at three-month intervals beginning November 1, 1973. The Research Proposal Study Section reviewed all applications and forwarded their recommendations to the Alcoholism and Drug Abuse Studies Board for funding.

RESEARCH PROPOSALS FUNDED

- (1) "Behavioral Approaches to the Treatment of Alcoholism"
Professor G. Alan Marlatt, Department of Psychology
July 1, 1973 - June 30, 1974 \$ 8,000

This study will compare the effectiveness of the following treatment conditions: behavioral training (increasing the alcoholic's ability to handle high-risk situations) as compared to two control conditions, a discussion group which would focus on identical problematic situations, but would not include the specific training procedures, and a no-treatment control group. All patients who volunteered to accept this form of treatment will be assigned randomly to one of these six conditions and will receive treatment while hospitalized. Follow-up assessment of the relative effectiveness of these treatment procedures will be conducted at periods of three and six months following discharge from the hospital.

- (2) "Acute Effects of Moderate Consumption of Alcohol upon
Cognition"
Professor Earl B. Hunt, Chairman, Department of Psychology
April 1, 1974 - October 31, 1974 \$ 4,400

The primary purpose of this study is to determine the effects of "social" levels of drinking upon rational problem solving, such as might be done by a computer programmer, a mathematician, or a businessman working on a difficult contract. This proposal is for a pilot study for a six-month duration; if the pilot study is successful, funding will be sought from Federal sources for a larger study. This investigation is to be coordinated with an ongoing research project in the development of theoretically based tests for the measurement of individual mental functioning. The ongoing project, sponsored by the National Institute of Mental Health, can make available extensive (and extremely expensive) computerized test facilities for the study of information processing, which would not otherwise be available for a pilot study. In addition, coordinating with work on individual differences studies will make possible the establishment of a theoretical bridge between the study of inter-individual variation in mental functioning and intra-individual differences in mental functioning due to drug state. To further a coordinated project, liaison will be established between our group and a group at Stanford University which is working on a similar screening battery to determine the effects of marijuana and aging upon cognitive functioning.

Research Proposals Funded (continued)

(3) "Alcohol Effects on Folate Storage"

Professor Robert S. Hillman, Department of Medicine
January 1, 1974 - June 30, 1974

\$ 5,200

The purpose of this proposal is to evaluate the influence of ethanol ingestion on specific metabolic pathways in order to better understand the mechanism(s) whereby ethanol causes depression of blood folate levels. Utilizing multiple groups of eight to ten rats, and by sacrificing animals at specific intervals after injection (e.g., 2, of H³PgA and labeling of storage pools 4, 8, 16 hours and 2, 4, 8, 12, 16 days), the amounts of folic acid metabolites present in blood and liver storage pools, the effects of ethanol on the sequence of metabolic conversions and fluxes between various tissue compartments can be ascertained. By elucidating the characteristics of these metabolic pathways of dietary folic acid and determining the effects of acute and chronic ethanol ingestion on these pathways, it is hoped to further our understanding of the deleterious effects of alcoholism on the individual patient.

(4) "The Effects of Maternal Alcoholism on the Mental Functioning of the Offspring"

Professor Ann P. Streissguth, Department of Psychiatry and Behavioral Sciences
January 1, 1974 - April 30, 1974

\$ 2,961

Funds were requested to hire a Research Assistant (and related costs) to analyze already collected data on the mental functioning of a group of children, born to alcoholic mothers, and their matched controls. The applicant, in collaboration with other investigators, has previously described a relationship between a specific pattern of malformation in some children where mothers were chronically alcoholic during pregnancy. To further explore this relationship, Dr. Streissguth has obtained access to the Collaborative Study of the National Institutes of Neurological Diseases and Stroke in Bethesda, Maryland, where data was obtained on children born to a group of alcoholic women and matched controls. The Research Assistant further analyzed the data over a period of two quarters, to answer such additional questions as: (a) At what ages are the children, born to alcoholic mothers, significantly different from their matched controls in terms of mental and motor functioning?, plus six related questions.

(5) "Metabolites of Amanita"

Professor William S. Chilton, Department of Chemistry
March 16, 1974 - December 15, 1974

\$ 4,364

Funds were requested for a nine-month Research Assistant to work on a project involving the isolation and analysis of a possibly hallucinogenic substance, the Amanita Pantherina mushroom. A closely related mushroom, Amanita Muscaria, has been used for centuries for

Research Proposals Funded (continued)

hallucinogenic purposes in Siberia. It is possible that the Pantherina mushroom, which grows locally, has been used for its potential hallucinogenic effects (to the date of this proposal's submission this year, 20 hospitalizations had been reported due to Amanita poisoning). The applicant planned to analyze the metabolites of this mushroom to elucidate the poisonous and/or hallucinogenic substances. The urine of Amanita poisoning victims were also to be analyzed as part of this procedure.

- (6) "Exploratory Study of Family & Village Behaviors Impact on Health and Alcoholism"
Professor Joan C. Martin, Department of Psychiatry and Behavioral Sciences
July 1, 1974 - July 1, 1975 \$ 3,460

The purpose of this study is to investigate the effects of family and community interpersonal attitudes and behavior and their effect on health. The subjects are isolated Alaskan Athabascan Indian communities and the family units living there. Records from USPHS-Indian Health Service clinics will be abstracted for indications of physical and emotional illness, including alcoholism. These will then be correlated with interpersonal behavior as observed by raters familiar with the subjects. If there are significant relationships between attitudes and illness, then there will be detailed interviewing of selected families and village councils, in attempting to determine how families and villages maintain positive mental health in the face of rapid change.

- (7) "Chromatograph Purchase"
Professor Ted A. Loomis, Department of Pharmacology
March 1, 1974 - June 30, 1974 \$ 3,000

This instrument is being used to perform preliminary experiments to detect early toxicologic changes in liver and possibly central nervous system cells that may be induced by alcohol. The liquid chromatograph would be used in conjunction with current mass spectrometer equipment. After conducting preliminary studies, the applicant would then be in a favorable position to propose a request for a grant from the National Institute of General Medical Science for an extended study of these early changes in the liver and C.N.S. produced by alcohol and other drugs.

- (8) "Argon Laser Control of Alcohol-induced Bleeding of the Stomach"
Fred E. Silverstein, M.D., Department of Medicine
April 1, 1974 - November 30, 1974 \$ 5,500

The purpose of this project is to evaluate the feasibility of treating bleeding stomach abnormalities secondary to alcoholism. An

Research Proposals Funded (continued)

Argon laser beam will be transmitted via a quartz fiber through the operating channel of a flexible fiberoendoscope. In this manner, bleeding abnormalities can be laser-coagulated under direct visual control. This preliminary study will involve animals with bleeding abnormalities which have been experimentally induced by alcohol. Safety and effectiveness in control of bleeding will be evaluated. The necessary instrumentation will be assembled from available hardware and then tested.

- (9) "Brain Amines in Narcotic Drug Action"
Professor Akiro Horita, Department of Pharmacology
April 1, 1974 - March 31, 1975 \$ 3,000

This proposal is concerned with investigations on the role of the biogenic amines, serotonin, dopamine and norepinephrine, on the mechanism of narcotic drug actions. It is becoming apparent that these amines are somehow involved in narcotic tolerance and withdrawal phenomena. The work on the compound, apomorphine, a copaminergic agent, indicates that morphine not only shares part of the apomorphine-like actions, but also in part antagonizes apomorphine. Thus, we feel that morphine may act as a partial agonist to central dopamine receptors. The work is being carried out on rats and rabbits, and behavior and body temperature will be employed as end points. These will be correlated with the turnovers of the amines which will be measured by chemical means. The various aspects of the project will be undertaken by four graduate students in the Department of Pharmacology. The support requested is going toward supplies for these students.

- (10) "Teratogenicity of Ethanol in Rats"
Professors Starkey D. Davis and Thomas H. Shepard
Department of Pediatrics
June 1, 1974 - May 31, 1975 \$ 4,848

The teratogenicity of ethanol has not been adequately studied in experimental animals. The recent recognition of the fetal alcohol syndrome in infants makes the need for such studies urgent. This proposal is studying the teratogenicity of ethanol in the laboratory rat. Since diet may be a key factor in teratogenicity, the acute and chronic effects of ethanol will be evaluated in pregnant rats on a normal diet and in pregnant rats on a deficient diet. The results of this study may have important implications for the dietary management of pregnant alcoholic women and for the pathogenesis of the fetal alcohol syndrome.

Research Proposals Funded (continued)

- (11) "The Measurement of Adaptive Abilities and Intellectual Functioning of Hospitalized Alcoholics"
Professor Michael R. O'Leary, Department of Psychiatry and Behavioral Sciences, and Seattle Veterans Administration Hospital
March 15, 1974 - September 15, 1974 \$ 5,724

Forty hospitalized alcoholics of the Alcohol Treatment Unit, Seattle Veterans Administration Hospital, and forty matched controls are being tested in order to determine the effects of heavy ingestion of alcohol on the organic condition of the brain. A single score value called a Brain-age quotient, based on a distribution with a mean of 100 and a standard deviation of 15, will be determined via the conversion for each alcoholic and control subject. The Brain-age quotient constitutes a measure of current adaptive ability and thus warrants comparison with the Wechsler-Bellevue IQ values, which are generally interpreted as measures of prior learning. The difference between the two measures, when group differences are considered, will represent a measure of the effects of alcohol on the organic condition of the brain for the alcoholic population considered in this study. A significant difference would seriously question the appropriateness of a heavy emphasis on insight oriented therapy for many alcoholics who appear verbally facile, yet demonstrate serious deficit in current adaptive ability.

- (12) "Patterns of Police Mobilization in Public Drunkenness Control"
Professor G. Alan Marlatt, Department of Psychology
April 1, 1974 - October 1, 1974 \$ 4,900

This project is seeking to determine the manner in which the police encounter and process cases of public drunkenness. It is assumed that various circumstances of police-citizen encounters will affect police decisions whether to invoke the legal process in such cases. It is proposed that this study will provide information which has heretofore been absent in commentary on public drunkenness decriminalization: a detailed, large-scale assessment of the role of the police in public drunkenness control based upon direct observation.

- (13) "The Effects of Adrenalcorticoid Hormones on Alcohol Consumption and Metabolism"
Professor Robert C. Bolles, Department of Psychology
April 1, 1974 - July 31, 1974 \$ 2,516

Recent experimental findings indicate that adrenocortical activity may effect both the rate of ethanol metabolism and the rat's preference for ethanol in acute and long-term consumption tests. The research proposal was designed to replicate and extend these findings, and therefore is considered categorically as an effort to further assess the role of adrenocortical hormones in (1) ethanol

Research Proposals Funded (continued)

metabolism, and (2) ethanol preference and consumption. In the first series of proposed experiments, the reported efficacy of adrenalcorticoids in enhancing ethanol metabolism will be further examined. The first experiment in the second series of proposed studies will investigate possible endocrinological and metabolic factors that may underlie a correlation between adrenocortical activity and ethanol preference observed in the laboratory. A second proposed experiment will examine the possible role of adrenocortical hormones in effecting the ethanol preferences of rats that consume abnormally large amounts of ethanol ("high drinkers"). Thus, the proposed experiments may greatly enhance our understanding of the interrelationships between the endocrine system, ethanol metabolism, and ethanol preferences and consumption.

- (14) "The Social Factors in the Etiology and Treatment of Alcoholism and the Relative Effectiveness of Alcohol-Related Media Messages"

Professors Claude M. Steele and John P. Keating
Department of Psychology
April 1, 1974 - March 31, 1975

\$ 6,589

Relying on the logic that social impugment evokes behavior aimed at restoration of a feeling of well-being, this proposal outlines six studies which examine the nature of that relationship relative to drinking behavior. In general it is hypothesized that character impugments ("you are drunk"), general in nature, will lead to immediate restoration of well-being by drinking and resistance to undertake therapeutic, constructive programs. Behavior-specific impugments ("you drink too much on Fridays") will lead to less drinking and greater willingness to engage in constructive counter-active programs. This rationale will be tested during the first phase of research in a laboratory setting which will involve explicit, personal impugments. A second phase of the research will examine this same logic relative to current educational efforts concerning alcoholism conducted through the mass media. It is predicted that the two types of impugment (character or behavior specific) transmitted by radio or television will have similar effects to that obtained by personal impugment, but that these effects will be emphasized by mode of presentation. The final study will attempt to unobtrusively assess the validity of the laboratory findings through a non-manipulated field study.

- (15) "Locus of Nicotine Effect on Intracranial Self-Stimulation in the Monkey"

Professor Douglas M. Bowden, Department of Psychiatry and Behavioral Sciences
August 1, 1974 - July 31, 1975

\$ 7,064

This project is based upon the presumptions that (1) the anatomical pathways which mediate electrical self-stimulation of the

Research Proposals Funded (continued)

brain are the neural substrate of "pleasure" or "reward", and (2) that the pleasurable and addictive effects of nicotine act to enhance intracranial self-stimulation (ICSS). Nicotine will be administered peripherally and its effects on ICSS evaluated at electrodes implanted in two major neural pathways to determine whether the enhancing effect on ICSS is primarily mediated by a noradrenergic pathway or a dopaminergic pathway. Once the pathway is identified, the drug will be administered directly to areas of the brain where the pathway originates and terminates to determine whether the site of action is at input synapses or output synapses. If successful, the methods developed and tested in this project will subsequently be applied to identify the sites of action of other psychoactive, addictive drugs on the reward pathways of the brain.

- (16) "Veterans' Interest Research Project"
Professor Roger A. Roffman, School of Social Work
April 1, 1974 - April 30, 1974 \$ 1,321

At the request of the Director of The Drug Abuse Prevention Office, Office of Community Development, State of Washington, Professor Roffman has undertaken a six months' research investigation of Vietnam-era veterans in Washington. The research findings are intended to supplement the State Master Plan for Drug Abuse Prevention through the generation of recommendations concerning levels of drug and/or alcohol involvement of Vietnam-era veterans and their patterns of utilization of existing human service resources provided in the public and private sectors. A stratified quota sampling technique has been applied in the selection of approximately a 1% sample of Vietnam-era veterans residing in the state. Variables pertaining to basic demographic characteristics, military experiences and discharge status, employment and educational statuses, utilization and evaluation of categorical veterans' benefits, drug and alcohol use patterns and problematic consequences, treatment resources utilized and assessments as to their effectiveness, and subjective reports concerning the relative ease of transition from military to civilian status comprise the major research instrument. In addition, a series of extensive interviews with Veterans' Administration personnel, representatives of the chartered veterans organizations, administrators of private treatment agencies, and leaders in the Vietnam-era political movements were conducted. Finally, an exhaustive review of the national literature combined with a mailing to over three-hundred veterans organizations, researchers, and spokespersons has enabled this investigation to be inclusive of all major work pertaining to Vietnam-era veterans in the United States.

- (17) "The Impact of Long-term Chronic Cannabis Use on Neuro-Psychological Functioning"
Professor Albert S. Carlin, Department of Psychiatry and Behavioral Sciences
April 1, 1974 - June 30, 1974 \$ 3,688

Research Proposals Funded (continued)

This investigation proposed to examine the impact of long-term chronic cannabis use on psychological functioning. Approximately twelve subjects were located who smoked cannabis at least daily for two years. They were interviewed regarding their pattern of drug use, use of other psycho-active drugs, occupational achievement, subjective observations of functioning, and observations of change in functioning over time. Following the screening, a life satisfaction and activity scale was administered, as well as a Mood Check List. The subjects were then administered the Halstead-Reitan Neuro-Psychological Test Battery and the MMPI. The data will be examined to determine: a) whether deficits in adaptive abilities related to neurological impairment are present and whether a particular profile of neuro-psychological functioning emerges, b) whether a particular personality configuration consistently emerges in this group, c) whether the so-called "amotivational syndrome" exists in this group. The Reitan interpretation will be based upon a comparison with normative age and sex matched samples. A screening interview, MMPI, and other questionnaire data will be collected from an age-equivalent sample who have not engaged in long-term chronic use of marijuana.

- (18) "Predisposition to Depression in Alcoholics"
Professor Joseph Becker, Departments of Psychiatry and Behavioral
Sciences and Psychology
May 15, 1974 - May 14, 1975 \$ 7,524

The basic hypothesis of this study is that some alcoholics are genetically predisposed to unipolar depression. The assumption to be tested is that such persons can be indexed by a neurophysiological anomaly ("reducer" type visual evoked potentials). In such persons, alcohol abuse may be related to efforts to reduce depression tendencies. This hypothesis is supported by recent psychopharmacological findings on detoxified alcoholics and by genetically oriented studies of the incidence of personality disorders in families of alcoholic probands.

- (19) "A Comparison of Relaxation Procedures in the Treatment of
Alcoholism"
Professors Robert R. Pagano and Richard M. Rose, Department of
Psychology
June 1, 1974 - March 31, 1975 \$ 5,986

The purpose of this study is to assess the effects of relaxation procedures on the drinking behavior of problem drinkers. Research on the tension-reducing properties of alcohol suggests that providing the alcoholic with an alternative method of coping with tension or anxiety may facilitate abstinence. In this study, college student volunteers who report a history of problem drinking will be asked to participate in the project, and will be randomly assigned to one of three groups: a progressive relaxation training group, in which subjects are trained to systematically relax their muscles to produce a state of deep relaxation; a meditation group, in which subjects are given instruction

Research Proposals Funded (continued)

in Transcendental Meditation, a procedure which has been found to effectively produce a state of deep rest or relaxation as assessed by a variety of physiological and psychological measures; and a control group condition designed to control for attention and placebo effects. Drinking behavior will be assessed by the use of self-monitoring procedures and a laboratory measure of drinking behavior administered prior to, during, and following treatment. Physiological measures related to the effects of relaxation training will also be administered to a subset of the subjects.

- (20) "Studies on the Mode of Action of Selected Hallucinogens"
Professor Donald C. Dyer, Department of Pharmacology
July 1, 1974 - June 30, 1975 \$ 4,131

Currently, it is impossible to predict if a drug will possess hallucinogenic activity prior to testing it in humans. The purpose, in part, of the proposed research is to ascertain the activity of selected hallucinogens on isolated umbilical vasculature and on the body temperature of the rabbit. Then, the correlation coefficient of the smooth muscle activity with the effect on body temperature and the correlation coefficient for the effect of each of these laboratory tests with the hallucinogenic activity in humans, where such information exists, will be determined. It is believed that a combination of these two simple laboratory tests may be useful for predicting the likelihood of a drug possessing hallucinogenic activity. In other experiments, the smooth muscle activity of a hallucinogen alone and in the presence of various concentrations of an antagonist will be used to determine the pA_2 value. Such a procedure will allow the researchers to conclusively establish whether or not the smooth muscle activity of the hallucinogen is via a 5-hydroxytryptamine (5-HT) receptor mechanism and if the various hallucinogens activate a common receptor.

- (21) "Thyroid Dysfunction in Patients with Acute and Chronic Alcoholism"
Professor William L. Green, Department of Medicine
July 1, 1974 - June 30, 1975 \$ 4,878

A high incidence of hypothyroidism among chronic alcoholics was reported over a decade ago. In some hypothyroid alcoholics, replacement therapy led to significant improvement in clinical symptoms and to curtailment of drinking. However, using similar methodology, others reported normal thyroid function in chronic alcoholism, and there has been little further study in this area. In view of recent advancements in diagnostic techniques, a reinvestigation of thyroid function in chronic and acute alcoholism is planned. The specific diagnostic tests employed will include radio-immunoassay of thyrotropin and of triiodothyronine in serum, competitive protein binding assay of serum thyroxine, assessment of thyroid hormone binding proteins in serum, and urinary triiodothyronine excretion. In selected subjects, the metabolism of

Research Proposals Funded (continued)

labelled thyroxine and triiodothyronine will be studied. Aims include:
a) to determine whether acute alcohol withdrawal syndromes (tremulousness, delirium tremens) involve altered thyroid hormone economy, b) to determine thyroid function in chronic alcoholics, c) to apply any new findings to the treatment of alcoholism.

(22) "Determinants of Alcohol Consumption in a Laboratory Taste-Rating Task"

Professor G. Alan Marlatt, Department of Psychology
July 1, 1974 - June 30, 1975

\$ 7,003

The purpose of this project is to investigate various determinants of alcohol consumption in humans. Three studies are proposed, all of which make use of the "taste-rating" task, an unobtrusive measure of drinking which can be administered in the laboratory setting. The purpose of the first study is to assess the relationship between perceived personal control in a stressful situation and subsequent consumption of alcohol. Here, it is hypothesized that problem drinkers are more likely to drink in a situation in which they feel deprived of a sense of personal control, and that alcohol provides them with an increased sense of control at an ideational level. The second and third studies are designed to provide further information about the validity and scope of application for the taste-rating task. Use of this task as an outcome measure of treatment effectiveness in an aversion therapy program will be assessed in the second study. Finally, in the third study, the use of the tasting task as a screening test for potential problem drinkers or alcoholics will be investigated.

(23) "Cultural Aspects of Yakima Drinking"

Professor Jay Miller, Department of Anthropology
May 15, 1974 - June 30, 1974

\$ 376

This research is concerned with identifying the cultural variables which affect the drinking of alcohol by Yakima Indians. A student researcher, working in the Yakima Indian National Alcoholism Outreach Program in Toppenish, will be recording her own observations on these variables and at the same time noting which of these variables are spontaneously mentioned by Yakima in volunteered conversations. The Principal Investigator will consider these data from an anthropological perspective in order to note significant variables and to specify differences between anthropological and Yakima perceptions of the relationship between the cultural variables and Yakima drinking.

(24) "Confirmed and Disconfirmed Expectancies of Interpersonal Success-Failure as Determinants of Loss of Control Drinking"

Professor Robert L. Weiss, Department of Psychology
June 15, 1974 - August 31, 1974

\$ 5,141

Research Proposals Funded (continued)

The purpose of this study is to establish the effects of interpersonal success or failure on the consumption of alcohol by persons categorized as "heavy drinkers." By creating an analogue of a dyadic relationship in which the behavior of one person defines the success or failure of the other, this proposal seeks to determine how confirmation of one's expectations as to outcome, and how counter-expectancy outcomes, produce out of control drinking as measured by an unobtrusive measure of consumption. College student males, classified as heavy drinkers will interact with a confederate partner whose rate of emitting criterial responses defines how successfully the subject is doing in the dyadic interaction. Measures of the emitted reinforcing behaviors of the subject himself, while attempting to influence the behavior of the confederate, will also be made. Subsequent to baseline and experimental dyad interaction sessions subjects participate in a "second study" involving a wine tasting discrimination task. The main comparisons involve alcohol consumption as a function of "explained" success or failure outcomes relative to control (unexplained) outcomes, and counter-expectancy outcomes involving success or failure relative to control outcomes. Conceptually, loss of control drinking would be predicted in both success and failure conditions when the success or failure is attributed by the person to himself. The study provides a means of bringing social learning concepts to bear upon the problems of alcohol consumption.

BUDGET

Research Proposals Funded.....	\$111,574
Project Transferred from The Graduate School..	924
Institute Special Research Account.....	<u>3,000</u>
Total Funds Expended for Research.....	<u>\$115,498</u>

TRAINING

Regional Training Alliance

The Institute is continuing to explore the possibility of establishing a Regional Training Alliance in alcoholism and drug abuse training at the state level. The purpose of such an alliance would be to pool the training resources now available in the state, in an attempt to organize coordinated training programs which would meet state manpower needs in the alcohol and drug fields. Professor Roffman has a special interest in this project, and has already initiated contact with state officials for this purpose.

University Courses in Alcoholism and Drug Abuse

The Institute provides a centralized information and referral service for individuals seeking courses or training programs in alcoholism and drug abuse. An Institute Coordinator will be selected during the coming year, and part of this person's job will be to foster a close working relationship with the current training programs offered by the Schools of Nursing and Social Work. Attempts will also be made to establish new course proposals when necessary, and the Institute staff will serve as consultants for faculty members offering such courses.

Courses Offered:

University of Washington:	Nursing 488, "Effects of Alcohol and Its Relation to Health and Disease"
	Nursing 489, "Alcohol Problems in the Family and Society"
	Psychology 540-D, "Alcoholism Seminar"
	Social Work 423 and 424, "Chemical Addictions and Society"
	Social Work 505, "Self Help, Professionalism, and Paraprofessionalism"
	Social Work 551, "The Development of Alcohol Problems in Adulthood"
	Social Work 600, "Alcoholism Survey and Approaches to Treatment"
Seattle University: (Certificate Program in Alcohol Studies)	CS 400, "Survey of Alcoholism"
	CS 401, "Pharmacology, Detoxication, and Medical Treatment"
	CS 402, "Counseling Principles and Techniques"
	CS 403, "Personal and Social Rehabilitation"
	CS 404, "Agency Administration"
	CS 405, "The Law and Alcohol"
	CS 406, "Counseling Ethnic/Minority Alcoholics"
	CS 407 and 408, "Field Experience"
	CS 409, "Special Topics"
	CS 410, "Individual Research"

Training (continued)

Courses Offered (continued)

Washington State University: Alcohol Certificate Program for
undergraduates (Psychology and
Sociology majors)

Masters Degree Program in Alcoholism
Studies

Newsletter

Three issues of the newsletter, "Nepenthe", were published this past year. The University of Washington Alcoholism and Drug Abuse Institute and the Washington State University Alcoholism Training and Research Unit are co-publishers of this newsletter on drug and alcohol issues. Articles on Institute functions, state-wide drug and alcohol abuse information, courses and conferences, community news throughout the state, medical news, and special features are all a part of each issue. Anyone wishing to receive "Nepenthe" should contact Ms. Jane Ramsey at (206) 543-7414 [before October 1st], or at the new Institute office after October 1st.

First Annual Institute Conference

The Institute sponsored their first of what will be an annual conference on July 25 and 26, 1974. The aim of the conference is to bring together university and community individuals to engage in a discussion of topics of mutual interest. This year's conference was devoted to "Treatment Evaluation and Outcome Studies in Alcoholism and Drug Abuse", and featured as keynote speaker, Dr. Peter G. Bourne, former Assistant Director of the Special Action Office for Drug Abuse Prevention. The other main speakers were: Jack J. Crawford, Ph. D., American Institutes for Research; Frances R. Gearing, M. D., Columbia University; Peter G. Goldschmidt, M. D., M. P. H., Johns Hopkins University; Thomas J. Kirusek, Hennepin County Mental Health Center; Arnold M. Ludwig, M. D., University of Kentucky; and Stephen M. Pittel, The Wright Institute.

This conference was designed to inform professional clinicians, policy makers, planners, researchers and other treatment personnel about recent developments in program evaluation of alcoholism and drug abuse treatment programs. More than 200 people, from all areas of the United States and Canada, attended the conference.

BUDGET

	Allocation <u>November 1, 1973</u>	Projected to September 15, 1974	
		<u>Expenditures</u>	<u>Balance</u>
<u>Administrative</u>			
Supplies/Miscellaneous	\$ 2,800.00	\$ 407.57	\$ 2,392.43
Travel	2,500.00	1,264.24	1,235.76
Equipment/Books	11,766.00	4,787.40	6,978.60
Contractual Services	8,750.00	7,342.29*	1,407.71
Staff Benefits	5,698.00	5,198.00	500.00
Salaries	<u>29,539.00</u>	<u>25,753.36</u>	<u>3,785.64</u>
Total Administrative	<u>\$ 61,053.00</u>	<u>\$ 44,752.86</u>	<u>\$16,300.14</u>
<u>Research</u>	<u>\$115,498.00</u>	<u>\$115,498.00</u>	<u>-0-</u>
Grand Total	<u><u>\$176,551.00</u></u>	<u><u>\$160,250.86</u></u>	<u><u>\$16,300.14</u></u>

*Includes \$5,300 expenditure for renovation of new facility.