#### National Institute on Drug Abuse - HN6

(1) The Institute provides national leadership and conducts and supports biomedical and behavioral research, health services research, research training, and health information dissemination with respect to the prevention of drug abuse and treatment of drug abusers; (2) plans, conducts, fosters, and supports a comprehensive program of research and research training relating to the causes, prevention, treatment, patterns, and consequences of drug abuse and addiction, through research performed in its own laboratories and through contracts and grants to scientific institutions and to individuals; (3) supports training in fundamental sciences and clinical disciplines relating to drug abuse by individual and institutional research training awards; (4) coordinates with other research Institutes and with other Federal health and other agencies in activities relevant to drug abuse and addiction; (5) conducts and fosters health information dissemination activities, including the collection and dissemination of research findings and related educational materials for health professionals and the lay public; (6) coordinates with institutions and professional associations and with international, national, State, and voluntary agencies working in these areas; and (7) collaborates with SAMHSA on services research issues.

# **Office of the Director - HN61**

(1) Provides leadership, direction, and policy in the development of Institute goals, priorities, policies, and programs, and (2) coordinates Institute interagency activities.

## Office of Management - HN612

(1) Provides all administrative and management support services to the Institute in such areas as: financial planning, analysis and management; administrative services; personnel management; information resources management; contracts management; and management analysis; (2) develops, implements, and monitors administrative management policies, procedures, and guidelines; (3) develops and monitors the implementation of program policies and plans, and evaluates progress in meeting established Institute objectives; (4) develops data requirements pertinent to short- and long-range program planning and develops the Institute's program evaluation policy; (5) administers the Institute's program evaluation system for all Institute employees; and (6) maintains responsibility for all management and administrative policy studies, reports, analyses, and program objectives.

## **Financial Management Branch - HN6122**

Manages a program planning process for resource allocating and monitoring to support policy development; (2) formulates and coordinates the planning and execution of the Institute's budget; (3) participates in congressional, OMB, and departmental hearings; (4) advises Institute staff in preparing budget estimates and justifications; (5) coordinates the development and operation of data systems for use in maintaining administrative and programmatic information about Institute research, training, and management activities; (6) coordinates the development and preparation of reports on research activities and accomplishments for use by Institute staff and managers; and (7) coordinates the development and preparation of quantitative information on Institute research and training activities prepared in response to inquiries by PHS, HHS, OMB, the Congress, outside organizations, and the general public.

#### **Administrative Management Branch - HN6125**

(1) Provides advice and/or recommendations on management and administrative policies for the Institute; (2) plans, directs, and provides centralized administrative services and management support for the IC Office of the Director and all IC extramural programs including travel, procurement, human resources, awards, training, space management, property management, time and attendance, and resource allocations; (3) provides coordination and oversight of the Institute-wide purchase card and travel card programs; (4) administers and coordinates the Institute-wide performance management and appraisal program; (5) provides advice and/or recommendationson administrative policy to the Institute Director, Deputy Director, Associate Director, as well as Office, Division and Center Directors; (6) serves as liaison for the Institute on a variety of other issues including HR, EEO, workforce diversity, and Quality of Work life; (7) coordinates and manages the Institute's special recognition programs including the NIH Director's Award and NIDA Director's Award nominations; (8) manages and acts as the point of contact for the NIH mandated training programs; (9) works with management to address and resolve administrative and operational issues which impact employees, performance, morale and the work environment; and (10) serves as IC NBS liaison.

#### **Information Resource Management Branch - HN6126**

Provides a focal point for Institute-wide information resource management by providing planning, procurement, systems design and development, and operational support for administrative and research information systems. Both strategic and operational plans are formulated and implemented to support a broad range of Institute programs. Included in the Branch's responsibility are: (1) provides ADP coordination between the Institute and other agency and governmental organizations; (2) develops ADP and office automation security plans consistent with departmental policy and practice; (3) formulates and executes strategic and operational plans designed to support office automation and information resource management activities; (4) provides policy, planning, and direction for systems design and development of information resources management related activities, including oversight and management of hardware and software design, selection, and implementation; and (5) develops, interprets, and implements administrative policy and procedures needed to conduct and support Institute IRM activities.

# Office of Acquisitions - HN6128

(1) Manages and conducts a comprehensive program of all research and development contracting, non-research and development contracting, station support contracting, commercial item acquisitions using simplified acquisition procedures, GSA Federal Supply Schedule acquisitions and simplified acquisitions for customer ICs. (2) Provides advice and assistance regarding all phases of the acquisition cycle from planning to closeout with the purpose of accomplishing all acquisitions needed for the scientific mission and all related acquisitions required by its customers.

#### Management Analysis Branch - HN612A

(1) Develops policies, practices, and procedures, and monitors implementation of management and administrative policies for the Institute; (2) prepares staff papers and reports on management and administrative issues at the request of Institute staff and in response to requirements from NIH and DHHS; (3) analyzes effects of changes in management and administrative policies and procedures by organizational levels above the NIDA and advises the Executive Officer of these effects; (4) coordinates the Institute's Risk Management Program; (5) designs, develops, and performs management studies, analyses, surveys, reports, and related activities to improve management efficiencies, resource allocations, and policy compliance; (6) plans, directs, and coordinates administrative initiatives; (7) serves as liaison for the Institute with respect to investigational reviews (e.g., GAO, OIG, OMA); (8) maintains manual issuance and delegation of authority systems; (9) plans, directs, and provides centralized administrative services and management support for the records management program; (10) coordinates, analyzes, and provides advice on all organization change proposals for the Institute; (11) serve as "change agent" to facilitate changes affecting the Institute; and (12) serves as the IC A-76 coordinator.

## NCATS Research and Development Contracts Management Branch - HN61286

## **Contracts Management Branch/Red Branch- HN61287**

## **Contracts Management Branch/Red Branch Section 1 - HN612872**

## **Contracts Management Branch/Red Branch Section 2 - HN612873**

## Contracts Management Branch/Red Branch Section 3 - HN612874

#### NIDA Contracts Management Branch/Blue Branch - HN61288

## **Contracts Management Branch/Blue Branch Section 1 - HN612882**

## Contracts Management Branch/Blue Branch Section 2 - HN612883

## Contracts Management Branch/Blue Branch Section 3 - HN612884

## **Contracts Management Branch/Green Branch - HN61289**

#### **Contracts Management Branch/Green Branch Section 1 - HN612892**

## Contracts Management Branch/Green Branch Section 2 - HN612893

## Contracts Management Branch/Green Branch Section 3 - HN612894

#### Office of Science Policy & Communications - HN614

(1) Provides leadership and direction in coordinating the Institute's strategic planning goals and objectives; (2) represents the Institute's research policies and programs to other government agencies, the Congress, scientific and professional organizations, and the public; (3) evaluates, analyzes, and develops policy options in regard to the Institute's scientific research and research training activities; (4) prepares briefing materials and testimony for congressional hearings, and serves as liaison with the Congress, the White House, and other significant Federal and governmental agencies; (5) prepares reports, develops responses, and provides information on legislative efforts, responds to congressional inquiries, and analyzes legislative proposals for the Director; (6) advises the Director on national drug use policy issues; (7) conducts relevant public affairs activities, research dissemination, and application activities, deals with the press, media, and other communications organizations, collaborates with a variety of public and private entities to enhance knowledge and awareness of NIDA's programs and findings; (8) leads the development, design and management of the Institute's digital dissemination and outreach; (9) provides liaison with scientific and professional groups and private organizations; (10) coordinates the Institute's Freedom of Information Act program; and (11) coordinates the Institute's science meetings program.

## **Communications Branch – HN6143**

Under the supervision of the OSPC Office of the Director and in collaboration with the other OSPC branches: (1) conducts NIDA's media outreach activities; (2) responds to information inquiries from the public; (3) leads NIDA's public information activities and public education campaigns, including National Drug and Alcohol Facts Week; (4) coordinates content development and review of all NIDA science-based messaging disseminated to the public; (5) assesses needs and designs materials for specific populations; (6) collaborates with other Federal agencies to promote dissemination and application of NIDA research; (7) leads the development, design and management of the Institute's digital dissemination and outreach (8) oversees the technical management, monitoring, maintenance, and coordination of NIDA's web, social media, and audiovisual-based operations (9) provides graphic support services to Institute staff to enhance dissemination of the science, including development of infographics; and (10) publishes NIDA Notes about NIDA-supported research activities.

## **Digital Communications Section - HN61432**

Under the supervision of the Chief, Communications Branch and in collaboration with the other OSPC branches: (1) manages technical operations of NIDA Web sites, social media platforms, and supporting technologies; (2) develops and maintains mobile applications and platforms for NIDA Web sites; (3) manages and maintains content management systems for all NIDA Web sites; (4) monitors Institute-wide Web sites and social media platforms to ensure consistency with NIH and Departmental policies and goals; (5) coordinates NIDA's audiovisual production of science-based messages for distribution through various multimedia platforms; (6) manages Section 508 (accessibility) compliance across all Institute digital communications platforms; (7) recommends and implements digital information policy, standards, guidance, and tools for the Institute; and (8) coordinates, manages and maintains Web content related to NIDA organizational structure role(s) with other service components of NIH to ensure effective coordination of procedures and services

## **Science Policy Branch – HN6145**

Under the supervision of the OSPC Office of the Director and in collaboration with the other OSPC branches: (1) synthesizes and disseminates information about NIDA-supported science and programmatic activities; (2) identifies, analyzes, and prepares briefing materials on behalf of the Institute; (3) provides timely responses to inquiries from Congress, other public agencies, professional organizations, and the public; (4) develops and provides scientific review of NIDA publications and multimedia initiatives; (5) monitors and coordinates NIDA's response to broad policy issues related to drug use and addiction; (6) directs and administers NIDA's science education program; and (7) coordinates NIDA's strategic planning, performance reporting, program evaluation, and OMB clearance for NIDA-sponsored data collections

## **Division of Epidemiology, Services and Prevention Research - HN63**

Plans, stimulates, develops and supports a broad extramural research program on drug abuse and addiction, including HIV/AIDS-related factors, on: (a) prevention of drug use, addiction, associated problem behavior such as delinquency and violence, and the medical/social/psychological sequelae of drug use; (b) innovative sampling, data collection and analytic methodologies designed to support epidemiologic and prevention and early intervention and services research; (c) the nature, patterns and consequences of drug use among general, special, community-based, and subpopulations; (d) behavioral and social science research in context and with defined populations; (e) services research on the impact of the organization, financing and management of prevention and treatment programs and service systems on quality, cost, access, and outcome of care; (f) research on the effectiveness and cost-effectiveness of prevention and treatment services; (g) economic modeling and configuration of the treatment system; (h) supports research training programs to ensure the quality and quantity of investigators in the areas of drug use/addiction prevention, epidemiology, and services research; and (i) provides analytic support in the areas of epidemiology, services, and prevention research.

## **Prevention Research Branch - HN635**

Plans, develops, and administers a national extramural program of research to (a) develop and test the efficacy and effectiveness of theory-based, developmentally appropriate and culturally sensitive universal, selective, and indicated preventive interventions for drug abuse, HIV and associated problem behaviors; (b) advances research focused upon school, media, family, workplace, and community, and multi-component prevention strategies; (c) develops and promotes research on the diffusion of innovative prevention practices and prevention services, (d) supports studies of prevention research methods and data analytic techniques; and (e) promotes research aimed at understanding the underlying causes for intervention effectiveness or failure.

## **Epidemiology Research Branch - HN637**

Plans, develops, and administers a national extramural epidemiology research program that incorporates both individual (including behavioral and biological) and social/environmental factors in the following study areas (a) rates (e.g., prevalence, incidence) and trends of drug use/abuse and associated behavioral, social, and health consequences (e.g., HIV/AIDS) in general and defined populations; (b) emerging and current patterns of drug use/abuse and associated adverse consequences; (c) origins of, and pathways to drug abuse including, but not limited to, developmental processes associated with the onset of drug use and the processes associated with the transition from drug use to drug addiction; and (d) methodologies to improve the accuracy, efficiency, scope, timeliness, and analytical yield of drug abuse epidemiologic data and research in the areas specified in parts a, b, and c.

## Services Research Branch - HN638

(1) Plans, stimulates, develops and administers a national program of services research focused on the effectiveness of drug abuse/addiction treatment programs, modalities, and systems including (a) effectiveness of existing treatment in real-world settings; (b) impact of organization, financing and management of services on quality, cost, access, and outcome of care; (c) effectiveness of services for treatment populations at risk of, or infected with HIV; (d) treatment careers; and (e) methods to evaluate drug abuse/addiction treatment programs.

## **Intramural Research Program - HN64**

(1) Plans, develops, and conducts intramural preclinical and clinical research on drug abuse and addiction, including HIV/AIDS-related factors, on the causes, hazards, treatment, and prevention of drug abuse and addiction, the nature of the addiction process, and the addiction liability of new drugs drawing on the biomedical, neuroscience, psychological, and behavioral sciences; (2) provides in-house research scientist training in a variety of disciplines for work in drug abuse-related research; and (3) develops preclinical and clinical research studies and procedures for protection of human subjects from research risks and monitors the provision of medical care to these subjects.

# **Office of the Director - HN641**

(1) Provides scientific, program, and administrative leadership for the Division of Intramural Research; (2)\ promotes an environment conducive to productive research; and (3) coordinates activities, establishes priorities, and analyzes and evaluates progress.

#### Administrative Management Branch - HN642

(1) Provides administrative services for the Division of Intramural Research to include: personnel management, budget planning and fiscal management, procurement and supply, contract management, occupational and environmental health and safety, housekeeping and janitorial, and design, fabrication, maintenance, and repair of scientific equipment; (2) is responsible for fiscal aspects of planning and program development, management, and day-today operations noted above and implementation of management policies governing the Division of Intramural Research program; (3) advises the Director, Division of Intramural Research, on administering the Division of Intramural Research program; (4) advises and represents the Director with respect to all program budgetary, fiscal, and management aspects of the Division of Intramural Research programs; and (5) advises the scientific peer review (Board of Scientific Counselors) of research plans and active research proposals.

## **Clinical Pharmacology and Therapeutics Research Branch - HN644**

(1) Conducts clinical trials evaluating the efficacy of pharmacological and nonpharmacological treatments of substance abuse; (2) conducts human behavioral pharmacology studies to determine the pharmacodynamics of drugs of abuse, screen the safety and potential efficacy of new pharmacotherapies and evaluate the abuse potential of new medications; and (3) conducts pharmacokenetic and toxicological studies to evaluate the metabolism and dispositional patterns of drugs of abuse and pharmacotherapeutics and develop new chemical methodologies for detecting drugs in body fluids and tissues.

## **Treatment Section - HN6442**

(1) Conducts clinical trials of pharmacological and behavioral treatments to reduce substance abuse and behaviors associated with HIV transmission; (2) develops new screening and assessment tools for testing potential treatments; (3) evaluates the effects of environmental factors and patient characteristics on treatment outcome; and (4) studies to develop and evaluate the efficacy and safety of new treatments for drug abuse, primarily in an outpatient treatment setting.

## **Chemistry and Drug Metabolism Section - HN6444**

(1) Conducts clinical research on the pharmacodynamics and pharmacokinetics of abused drugs; (2) conducts clinical studies of cannabinoid receptor antagonists as new drug treatments for marijuana dependence in humans; (3) conducts clinical research on the abuse liability of drugs and the affect of route of drug administration on such abuse liability; (4) conducts research on the development of accurate and effective drug testing technology for workplace drug testing, criminal justice, military, and treatment programs; (5) conducts research on the disposition of drugs into alternative biological matrices, e.g., hair saliva and nails; and (6) conducts clinical research studies on the development of effective treatment strategies for adolescent nicotine dependence.

# **Medicinal Chemistry Section - HN6454**

(1) Conducts studies to design novel and highly selective ligands for structural characterization of their molecular targets in the central nervous systems; and (2) conducts studies to synthesize specific tools such as irreversible and radio labeled ligands for receptor topological mapping studies and the elucidation of neurochemical mechanisms underlying the reinforcing effects of drugs of abuse, with a primary focus on cocaine.

## **Molecular Targets and Medication Discovery Branch - HN645**

Focused and interrelated studies on the design, synthesis and biological evaluation of novel molecules to be used as tools for both in vitro and in vivo investigation. Pharmacological evaluation in cell-based models through in vivo studies in rodents will be conducted in this branch to understand the mechanism underlying drug abuse and addiction and to move forward hypotheses regarding potential medications for treatment. These studies are designed to better understand the complex and ill-defined relationship of behavioral and pharmacological factors involved in drug abuse and addiction, with particular emphasis on psychostimulants.

## **Drug Design and Synthesis Section – HN6455**

(1) Plans, develops, and conducts research to obtain and evaluate new compounds for the treatment of drug abuse and other pharmacological activities; (2) develops synthetic routes and methodology as required for the design of new therapeutic agents or pharmacological tools; (3) develops ligands for positron emission tomography (PET) and single photon emission computed tomography (SPECT) imaging of drug receptors in the CNS of living animals and conscious humans; (4) promotes the use of molecular modeling and quantum chemistry to determine structure-activity relationships; and (5) collaborates with other laboratories in the evaluation of new compounds.

## Neuropsychopharmacology Section - HN6456

(1) Investigates the role of brain mechanisms in mediating addictive behaviors; (2) conducts neurobiological mechanism-based medication development for the treatment of addictive diseases; (3) tests putative anti-addiction medications for anti-addiction, anti-craving, and anti-relapse properties in preclinical animal models of addiction; and (4) screens putative anti-addiction medications for advancement to toxicological testing and/or phase I human trials. To accomplish these ends, behavioral, neurochemical, and electrophysiological paradigms are used in normal, experimentally altered, and genetically engineered laboratory animals.

## **Integrative Neurobiology Section – HN6457**

The Integrative Neurobiology Section conducts research at the molecular, cellular, microcircuit and systemic level on GPCR heteromers with the following goals: 1) Improve our understanding of the biochemical properties of GPCR heteromers; 2) Identification of functionally and pharmacologically significant GPCR heteromers (localized in brain circuits involved in SUD); and 3) Utilize GPCR heteromers as new targets for drug development in SUD and other neuropsychiatric disorders.

## **Office of the Clinical Director - HN646**

(1) Formulates, implements, and evaluates medical policy covering research on human subjects and the medical welfare of staff of the Division of Intramural Research; (2) provides management for clinical services supporting Division of Intramural Research research programs; (3) represents the Division of Intramural Research in the Institutional Review Branch; (4) manages the Division of Intramural Research's staff inservice training and clinical quality assurance programs; and (5) advises and represents the Director on matters regarding clinical care and protection of human subjects.

## **Neuroimaging Research Branch - HN647**

The NRB develops and applies noninvasive multimodal neuroimaging tools using both human and preclinical models of addiction to address questions of the neuroanatomical, genetic, cognitive and affective mechanisms underpinning drug dependence. Dysregulated plasticity within circuits and networks that process reward, executive control, stress, dysphoria and habits may help explain individual differences in the transition to and recovery from addiction. Defining these components and their interrelationships are expected to provide concrete, quantitative biomarkers of the disease in the service of novel therapeutic interventions.

## Magnetic Resonance Imaging and Spectroscopy Section – HN6472

(1) Develops magnetic resonance imaging and spectroscopy (MRI and MRS) techniques for understanding neural mechanisms of drug addiction. These techniques include image acquisition and analysis of BOLD fMRI, ASL perfusion imaging, diffusion based imaging, glutamate and GABA MRS, as well as graph-theory based brain network analysis; (2) Investigates the neurophysiological basis of functional MRI (fMRI) measures. Since fMRI signals indirectly reflect neurophysiological processes (such as synchronized fluctuations to reflect interactions between brain regions in resting-state fMRI), a thorough understanding of the neurophysiological basis of fMRI measures is of fundamental importance for interpreting imaging data, particularly for patients deviated from normal physiology. We assess the relationship between fMRI signals and well-established neurophysiological measures, such as regional cerebral blood flow (rCBF), neurotransmitter levels, and local field potentials; (3) Identifies system-level biomarkers of drug addiction using advanced neuroimaging technology combined with behavioral and genetic assessments. We search for imaging biomarkers that are associated with key drug-using behaviors and personality traits (such as compulsivity and impulsivity), predict relapse to drug use following treatment, and indicate acute drug abstinence effects on craving and cognitive functions; (4) Assesses neuroadaptations in translational animal models of psychiatric and neurological disorders. We develop animal imaging models in rodents and non-human primates that can be used for effective fMRI studies. We further incorporate animal imaging models with models of diseases to investigate underlying neural mechanisms of brain disorders in drug addiction and other psychiatric disorders.

## Cognitive and Affective Neuroscience of Addiction Section - HN6473

(1) Applies noninvasive multimodal imaging technologies (e.g. DTI, task based fMRI and resting state functional connectivity, MRS, EEG) to examine the neurobiological substrates of and circuit and network neuroadaptation to human drug abuse. Specifically, both the acute and long-term consequences of addictive drugs, including nicotine, cocaine and marijuana on such central executive system constructs as response inhibition, reward and reinforcement, decision-making, attention, working memory and habit development are studied; (2) Examines the influence of various genetic polymorphisms on the neurobiology of acute and chronic drug administration, dependence and treatment recovery; 3) Develops and applies computational methods (e.g. support vector machine learning) to create brain based imaging biomarkers of addiction. The long- term goal is to improve treatment outcome efficacy by developing clinically useful, quantitative measures of addiction severity. The ability to fractionate the addiction phenotype, including dual diagnosis and dual dependence, should inform individualized treatment strategies; 4) Apply noninvasive brain stimulation (e.g. transcranial magnetic stimulation-TMS, and direct current stimulation-tDCS) to modulate brain circuits and networks in the service of modifying chronic drug-induced dysregulated neuroplasticity

## Cellular Neurobiology Research Branch - HN64C

Conducts research on (1) mechanisms of degeneration, plasticity, and regeneration/survival of CNS elements in response to various toxic drugs and other insults, and (2) methods to induce survival and or regeneration of neural circuits employing transplants, genetic modifications and trophic factors to induce survival and or regeneration of neural circuits. Methods used include techniques of computational neuroscience, multiunit and single unit electrophysiology, in vivo electrochemistry, immunocytochemistry, biochemistry and electron microscopy. Mechanisms of all death in response to various drugs and their reversal are examined in normal and genetically modified rodents, as well as in isolated neural populations.

## **Synaptic Plasticity Section - HN64C6**

1. The Synaptic Plasticity Section uses state of the art electrophysiological, optogenetic and behavioral techniques to unveil the mechanistic basis of drug-induced behaviors and synaptic plasticity in the mesolimbic system. 2. The ultimate goal of these studies is to create novel therapeutic targets to reverse both the long-term synaptic effects and the pathological behaviors produced by chronic drug exposure. 3. The mesolimbic system plays a central role in the development and expression of substance use disorders.

## **Behavioral Neurophysiology Neuroscience Section – HN64C7**

The Behavioral Neurophysiology Neuroscience Section is interested in the neural circuits mediating associative learning and decision making and how alterations in those circuits contribute to maladaptive behaviors in neuropsychiatric disorders such as addiction. It uses rats as a model system to study behaviors and neural circuits that are believed to have direct relevance to understanding the human brain. Areas of particular interest include the orbitofrontal cortex, amygdala, striatum, and midbrain dopamine system. The lab uses behavioral tasks based on principles derived from learning theory, combined with single unit recording, lesions, pharmacological and genetic manipulations to test hypotheses about how these areas interact to support learning and adaptive behavior. The section uses established and boutique behavioral approaches combined with techniques ranging from single-unit recording to fast scan cyclic voltammetry to neurotoxic lesions to optogenetics. Experiments are designed to test hypotheses regarding the neural instantiation of empirically-derived mechanisms known to govern associative learning and decision making, in both normal and drug-experienced animals. The section's hypotheses are lifted from the rich traditions of animal learning theory, computational neuroscience, and economics.

## **Electrophysiology Research Section – HN64C8**

The Electrophysiology Research Section is invested in understanding specific cellular mechanisms in which drugs alter the activity of neurons in well-defined neural circuits. The circuits that we study are involved in both drug addiction and psychiatric illness and are implicated in a variety of maladaptive behaviors. We use a combination of neurobiological approaches in these studies, including whole-cell patch clamp electrophysiology, fast-scan electrochemistry, confocal microscopy, behavioral analyses of drug self-administration, and optogenetics and chemogenetics in a wide-array of rodent transgenic models. More recently, our studies have focused on the mechanisms in which cannabis and other synthetic cannabinoid drugs can change neuronal communication acutely, and how the long-term use of cannabis alters the balance of synaptic strength among brain areas. We are also interested in animal models of impulsivity and compulsive behavior and how this relates to addiction. The brain regions currently under investigation include the ventral tegmental area, the nucleus accumbens, the prefrontal cortex, the orbitofrontal cortex, the hippocampus and the lateral habenula.

#### **Behavioral Neuroscience Research Branch - HN64D**

Conducts research (1) to characterize the brain circuitry through which drugs of abuse and other rewards exert their habit-forming actions, and (2) to identify treatments with the potential to modify those circuits or modulate their function. Behavioral paradigms to be used include behavioral observations (locomotion, feeding, social interaction), intravenous and intracranial drug self-administration, intracranial self-stimulation, and conditioned place preference. These paradigms are used in conjunction with various neuroscience techniques such as in vivo mircrodialysis, chronoamperometry, electrophysiological recording, and immunohistochemistry, in normal, experimentally altered, and genetically engineered laboratory animals.

## Preclinical Pharmacology Section - HN64D3

(1) Conducts research in animals on the environmental, historical, and pharmacological determinants of the behavioral and physiological effects of drugs; (2) research focuses on the effects of drugs on ongoing, learned behavior sustained by food delivery or electric-shock avoidance, on the reinforcing (rewarding) and discriminative-stimulus effects of drugs, and on the cardiovascular and neuropharmacological consequences of acute or chronic drug exposure.

## **Neurocircuitry of Motivation Section - HN64D4**

Conducts research to characterize the brain circuitry through which drugs of abuse and other rewards exert their habit-forming actions. Behavioral paradigms to be used Include behavioral observations (locomotion, feeding, social interaction), Intravenous and intracranial drug self-administration, and conditioned place preference. These paradigms are used in conjunction with various neuroscience techniques such as in vivo microdialysis, voltammetry, chronoamperometry, electrophysiological recording, and immunohistochemistry, in normal, experimentally altered, and genetically engineered laboratory animals.

# Neurobiology of Relapse Section – HN64D5

Investigators in the Neurobiology of Relapse Section use rat models developed in the section to study cellular and neuroanatomical mechanisms that underlie relapse to drug and palatable food seeking induced by stressors and drug-associated or food-associated cues.

## Neuronal Ensembles in Addiction Section – HN64D6

(1) Investigates the role of brain mechanisms that potentially mediate addictive behaviors; (2) assesses the role of neuronal ensembles in the learned components of addictive behaviors; and (3) develops novel technologies for manipulating and characterizing neuronal ensembles in learning and memory. To accomplish these ends, we use behavior, molecular and cellular biology, as well as electrophysiology with normal, experimentally altered, and genetically engineered laboratory animals.

### **Molecular Neuropsychiatry Research Branch - HN64E**

The Molecular Neuropsychiatry Research Branch (MNRB) seeks to understand the genetic, epigenetic and cellular bases of substance use disorders by using animal models of addiction. The MNRB focuses its attention on models of cocaine, methamphetamine, methylone, and opiate abuse. These animal studies are providing critical insights into epigenetic and transcriptional changes that accompany the chronic use of specific licit and illicit substances. The molecular bases of drug-induced adverse consequences are also being investigated. These investigations also seek to identify specific brain reward pathways that are altered during the development and maintenance of drug addiction. The Branch mainly emphasizes research with significant translational potential. Current investigations support the working hypothesis that individual differences in drug-induced modulation of neuronal circuitries form the substrates of addiction. These individual differences including resilient factors also impact a patient's ability to develop abstinence. Environmental factors may also affect the developmental and clinical course of addiction. The Branch also investigates the role of pharmacological agents in producing abstinence in models of psychostimulant addiction. In order to accomplish these tasks, the MNRB is divided into two independent sections: (1) the Molecular Neuropsychiatry Section and (2) the Psychobiology Section.

## Psychobiology Section – HN64E2

(1) Conducts research on behavioral and pharmacological mechanisms responsible for the abuse of drugs, and potential therapeutic entities that might be of use in the treatment of drug abuse; (2) conducts studies on the pharmacological mechanisms that underlie the reinforcing (rewarding) effects of abused drugs; (3) conducts studies on the behavioral and central nervous system stimulant effects of abused drugs; (4) conducts the .subjective/interoceptive effects of abused drugs; and (5) conducts studies on the mechanisms contributing to adaptive changes (tolerance and sensitization) that occur with acute and chronic drug exposure.

## **Molecular Neuropsychiatry Section – HN64E3**

The aims of the Molecular Neuropsychiatry Section are to conduct studies to identify cellular and molecular substrates of methamphetamine (METH) addiction. These studies will provide critical insights into various aspects of METH-induced epigenetic and transcriptional changes in the brain. These investigations will also demonstrate how molecular alterations might trigger dysfunctions in brain pathways that mediate the development and maintenance of METH addiction and its neuropsychiatric sequelae. To reach these goals, the section is conducting studies investigating 3 interrelated projects.

## Integrative Neuroscience Research Branch - HN64H

The Integrative Neuroscience Research Branch conducts research at the molecular, cellular, and systems levels to identify: the neural substrates upon which drug of abuse act to produce long term alterations in brain function and behavior, the neurobiological bases for altered motivational states associated with drug addiction, relationship between pain and emotional systems, neurocircuits that convey negative emotional states that contribute to the motivation to seek drugs, and novel targets for the treatment of addiction and pain.

## Cellular Pathobiology Section - HN64H3

Explore and elucidate fundamental mechanisms underlying the cellular biological alterations of neurons caused by abused drugs with a specific focus on how abused drugs might affect interorganelle signalings between the endoplasmic reticulum, plasma membrane, mitochondrion, and nucleus that in turn result in long-term alterations favoring the addictive processes; (2) Create, implement, and apply biochemical, molecular biological, cellular biological and imaging methodologies as required to meet the goals as such.

## **Behavioral Neuroscience Section – HN64H4**

(1) Conducts research into the neural mechanisms underlying the habit-forming actions of drugs of abuse; (2) conducts research to identify and characterize reward-relevant inputs and outputs of the mesolimbic dopamine system; (3) conducts research to determine the relative importance of D2, D3, and D4 receptor actions in the habit-forming actions of opiates and psychomotor stimulants; (4) conducts research to identify the neural circuitry through which stress reinstates drug-seeking responses; (5) conducts research to determine the neurotransmitter fluctuations that accompany drug self-administration, drug tolerance, and drug sensitization; and (6) conduct studies to determine the neural correlates of genetically determined differences in addiction susceptibility.

### Neurobiology of Addiction Section – HN64H5

The Neurobiology of Addiction Section conducts research towards understanding the neurobiological bases for altered motivational states associated with drug addiction at the neurocircuitry, cellular and molecular level and using these studies as a heuristic approach to the study of emotions. In addition, the section conducts research on the relationship between pain and emotional systems in the context of the same neurocircuitry. The neurocircuitry under study involves specific elements of the basal forebrain involving the elements of the extended amygdala: central nucleus of the amygdala, bed nucleus of the stria terminalis and elements of the ventral striatum including the shell and core of the nucleus accumbens. The sections also conducts research on the identification of molecular factors that load such circuits and neurotransmitter system function, on identification of cellular interactions between such brain stress systems, and on identification of the role of outputs such as the hypothalamus in expressing such negative emotional states. Such research will provide key information not only about the neurobiology of addiction, pain and stress but also key information about the neurobiology of motivational systems in general. The ultimate goal of the section is to understand how cellular and molecular changes produce changes in particular neurocircuits to convey negative emotional states that contribute to the motivation to seek drugs.

## Translational Addiction Medicine Branch (TAMB) - HN64J

The mission of the Translational Addiction Medicine Branch includes the following goals: (1) Conduct addiction-related translational research that spans pre-clinical, animal benchwork to humans in clinical research settings, into practice and eventually across diverse patient populations. (2) Develop novel effective addiction treatments and precision medicine approaches, including work on the intersect between addiction, health disparities and with patients with mental health and other medical comorbidities (e.g. liver disease, HIV) (3) Identify novel targets and develop new medications toward safe and effective therapies for patients with alcohol and substance use disorders (4) Develop innovative treatments that integrate evidenced-based research with novel methods and emerging technology targeting patients with alcohol and substance use disorders. (5) Translate cutting edge research into novel treatments for addiction using predictive analytics, biosensors, mobile treatments and personalized medicine

#### Clinical Psychoneuroendocrinology and Neuropsychopharmacology Section – HN64J2

The mission of the Clinical Psychoneuroendocrinology and Neuropsychopharmacology Section includes the following goals: (1) Conduct clinical and translational inpatient and outpatient studies to identify possible novel medications for addiction. (2) Design and test innovative bio behavioral, imaging and pharmacological procedures performed under well-controlled human laboratory conditions. (3) Investigate the role of the microbiome-gut-liver-brain axis in alcohol- and drug-seeking behaviors and how this work may lead to identifying new neuropharmacological targets for the treatment of alcohol and substance use disorders. (4) Investigate the role of neuroendocrine pathways and mechanisms in alcohol- and drug-seeking behaviors towards the development of novel treatments for alcohol and substance use disorders.

#### **Division of Neurosciences and Behavior – HN65**

(1) Develops and administers a national basic to clinical research program to advance our understanding of brain and behavior mechanisms in drug abuse and addiction, including (a) chemistry, pharmacology, and physiological systems; (b) genetics, epigenetics, and developmental neuroscience; (c) integrative and functional neuroscience; (d) behavioral and cognitive neuroscience; and (e) cross-cutting priorities, such as co-morbid conditions, HIV/AIDS, pain, and sex-gender studies; (2) identifies translational research that directly impacts the development of drug abuse medications, treatment and prevention interventions, and related technologies; (3) supports research training to increase the skills, number, and diversity of drug abuse researchers in the biobehavioral neurosciences, and (4) evaluates scientific developments and sponsors related symposia and workshops to help disseminate the discoveries supported by DNB.

## Genetics, Epigenetics, & Developmental Neuroscience Branch - HN652

(1) Administers a national research program to examine the genetic and epigenetic factors leading to and resulting from drug abuse and addiction; influence of brain development on the vulnerability of substance abuse across the lifespan; influence of substance abuse on brain development across the lifespan; (2) participates in the development of emerging genomic, transcriptomic, and molecular technologies that may be applied to the study of drug abuse, development, and related issues; and (3) reviews and evaluates national and international developments in these areas.

### **Integrative Neuroscience Branch – HN653**

(1) Administers a national research program to: identify the structural and functional neuroadaptations of repeated drug exposure and their modification by additional factors such as stress, sex, and neuroprotective factors or neuropathologies such as HIV/AIDS and pain; map the circuits within the brain that contribute to chronic substance abuse, that increase abuse liability in treating pain or that exacerbate the neuropathology and cognitive effects of HIV/AIDS; measure the fluctuating patterns of electrical and chemical activity that lead to morphological and behavioral changes and understand how they interact throughout the trajectory of the addictive process; and facilitate and enhance the understanding of the neurobiology of addiction through neurocomputational modeling and Big Data approaches and (2) evaluates scientific developments and sponsors related symposia and workshops.

## **Chemistry and Pharmacology Branch-HN656**

(1) Administers a national research program on: the effects of drugs on central nervous system and chemical mechanisms involved in the development of addiction; endogenous systems, molecules, and pathways relevant to drug action and behavior; metabolism, pharmacodynamics, pharmacokinetics, synthesis, analysis and structure-function relationships of drugs of abuse and compounds used to study their action; development of tools and technologies for structural determination of receptors and transporters and related systems; identifies target discoveries for translating to drug development; (2) administers drug supply and related services program; (3) evaluates national and international developments and sponsors related symposia and workshops.

## **Behavioral & Cognitive Neuroscience Branch – HN658**

(1) Administers a program of animal and human research on: behavioral, cognitive, and environmental factors in vulnerability as antecedents to all phases of drug abuse and addiction including acquisition, escalation, abstinence, relapse and recovery; behavioral and cognitive consequences of drug abuse; and understanding the neurobiological substrates of these behaviors including transition to and recovery from compulsive, uncontrollable addiction; and (2) reviews, evaluates scientific developments in the program area and sponsors related symposia and workshops.

#### **Division of Therapeutics & Medical Consequences – HN66**

(1) Plans and directs studies necessary to identify, evaluate, develop, and obtain the FDA marketing approval for new medications and devices for the treatment of Substance Use Disorders (SUD) and related medical and psychiatric conditions; (2) develops and administers a program on basic and clinical research to (a) develop innovative pharmacological and non-pharmacological therapeutic approaches for SUDs and related medical and psychiatric conditions and (b) investigate the medical consequences of drug abuse, including HIV/AIDS; (3) supports research to identify valid and reliable outcome measures for clinical trials of therapeutics for SUDs; (4) supports training in the pre-clinical and clinical research of therapeutics for SUDs; (5) collaborates with: (a) the pharmaceutical and chemical industry in the United States and other Nations, and (b) Federal therapeutics development programs; (6) works closely with FDA in assuring that research designed to show the clinical efficacy of new compounds is evaluated and approved in the most expeditious manner possible; and (7) disseminates the knowledge acquired by the DTMC's funded research.

# Medical Consequences Branch – HN662

Plans and supports extramural research programs on the medical consequences of drug abuse, including HIV/AIDS, as well as its relation to the development of new therapeutics for SUDs.

# **Chemistry & Pharmaceutics Branch – HN663**

(1) Directs a national research program in medicinal chemistry, molecular modeling and biopharmaceutics; (2) plans, designs and implements the chemical synthesis, formulation development, and pharmacokinetic and pharmacodynamic studies directed at the development of pharmacotherapeutics for SUDs and related conditions.

# Medications Discovery & Toxicology Branch – HN665

Plans, implements, and coordinates comprehensive preclinical discovery programs and preclinical toxicology programs, to identify and develop potential medications to treat SUDs and related conditions.

# **Regulatory Affairs Branch – HN666**

(1) Oversees medications development activities which contribute to the filing of Investigational New Drug and New Drug applications (2) negotiates research and development agreements and contracts; (3) ensures compliance with research regulations; and (4) supports the advancement of regulatory science for SUDs.

# **Clinical Research Research Grants Branch – HN667**

Plans and supports extramural research to test therapeutic (pharmacological and non-pharmacological) interventions for SUDs and related conditions.

# **Clinical/Medical Branch – HN669**

Plans, designs, monitors, and implements a comprehensive clinical trials program to evaluate the safety and efficacy of therapeutic interventions for SUDs and related conditions.

## **Center for the Clinical Trials Network - HN67**

(1) Plans, directs and manages a national program to translate drug abuse treatment research from academic laboratories to drug abuse treatment practice in community-based treatment programs; (2) establishes and maintains a stable infrastructure of universities and treatment centers to blend research and practice in rigorous, multi-site clinical trials across a broad range of community settings and patient populations on drug abuse and addiction, including HIV/AIDS- related factors; (3) collaborates with the NIDA Medications Development Program and other behavioral and clinical programs in NIDA and elsewhere at NIH; and (4) disseminates research findings to the field.

#### **Division of Extramural Research – HN69**

(1) Provides leadership and advice to the Director, NIDA, in developing, implementing, and coordinating extramural programs, policies, grants, contract reviews, fellowships, training grants and funding opportunities; (2) provides scientific analyses of the Institute's extramural research program, assessing the breadth and scope of the Institute's research activities; (3) represents the Institute on committees/workgroups related to extramural programs and extramural review, procedures, and policy issues within NIH, and with outside organizations. Coordinates resultant policies and procedures within the institute; (4) provides scientific and technical peer and objective review of applications for grants, and contracts; (5) oversees Institute grants management activities ensuring that all awards are made in accordance with applicable statutes, regulations, and policies; (6) oversees and coordinates the National Advisory Council on Drug Abuse functions; (7) provides data, reports and analyses to assist NIDA staff and advisory groups in carrying out their responsibilities; (8) maintains effective relationships with other NIH institutes and divisions, the research community, other federal agencies, and professional societies; (9) coordinates with the Center for Scientific Review (CSR) the review of NIDA grant applications; (10) oversees and coordinates NIDA's research training and early career development programs; (11) coordinates NIDA's operations planning activities and FOA development process; and (12) provides leadership and oversight for trans-NIH initiatives that include: the Collaborative Research on Addiction at NIH (CRAN); Adolescent Brain Cognitive Development (ABCD) study; and Brain Research through Advancing Innovative Neurotechnologies (BRAIN).

#### **Office of the Director – HN691**

(1) Provides leadership and advice to the Director, NIDA, in developing, implementing, and coordinating extramural programs, policies, grants, contract reviews, fellowships, training grants and funding opportunities; (2) advises Institute and Agency officials with respect to review and grants management policy and procedures; (3) provides outreach to Institute staff and the scientific community related to extramural policies and programs; (4) provides scientific analyses of the Institute's extramural research program, assessing the breadth and scope of the Institute's research activities (5) coordinates and implements all personnel functions necessary to the Office including recruitment, review, promotion, and award functions, and other functions as assigned by the Institute Director; (6) coordinates and assures the development of program policies and rules relating to the Institute's extramural activities, including Institute responsibility for inquiries and investigations into misconduct in science; (7) leads and coordinates trans-NIH initiatives that include: the Collaborative Research on Addiction at NIH (CRAN); the Adolescent Brain and Cognitive Development (ABCD) National Longitudinal Study; and the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative at NIH; (8) coordinates NIDA's operations planning activities and oversees extramural program activities across NIDA; (9) maintains effective relationships with the research community, other Institutes, federal agencies, and professional societies in areas of extramural policy, planning and procedures; (10) coordinates Institute extramural research training policies, procedures, and programs; and (11) provides advice, information, and guidelines for grant applications, contracts, and new program development.

### **Grants Management Branch – HN692**

(1) Provides advice and guidance to the Director regarding the Institute's developments, implementations, and coordinating the application of Institute standards, methods, and procedures for the management of grants and cooperative agreements; (2) interprets grants management and cooperative agreement policies for Institute personnel; (3) provides guidance to Institute staff, applicants, and grantees on the management and administrative aspects of grant and cooperative agreement programs; (4) reviews grant and cooperative agreement applications, grantee reports of expenditures, and active grant projects to ensure compliance with NIH, PHS, and DHHS policies and procedures; (5) executes grant award and cooperative agreement documents; (6) prepares recurring and special reports and maintains records relating to grant applications and awards; (7) maintains the Institute's grant and cooperative agreement activities; (8) reviews audit reports submitted by higher levels; (9) performs data input activities for NIH management information systems; and (10) represents the Institute in meetings relating to policies affecting grants management.

## **Office of Extramural Policy & Review – HN694**

(1) Coordinates with the Center for Scientific Review (CSR) for the assignment and locus of review of NIDA grant applications; (2) coordinates with other ICs overlap referral guidelines and reassignment of applications and grants; (3) provides IC level grant referral operations related to programmatic assignments and study section assignments; (4) represents the Institute on committees focusing on extramural peer review procedures and policy issues within NIDA and across the NIH, (5) coordinates Institute activities under the Privacy Act, including supervision of issuance of Certificates of Confidentiality; (6) coordinates and assures the development of program policies and rules relating to the Institute's extramural activities, including Institute responsibility for oversight of financial Conflict of Interest rules at grantee organizations as they relate to NIDA grants; (7) responsible for inquiries and investigations into research misconduct; (8) establishes special review committees for a subset of extramural grant applications in the NIDA research portfolio; and (8) manages DER and NACDA budgets/CANs.

## Scientific Review Branch – HN6942

(1) Coordinates the review of grant applications submitted in response to RFAs, and PARs, including those for center grants, CEBRA R21s and I/START R03s; (2) coordinates the review of training and career development grant applications, including K99/R00, T32 and R25s; (3) coordinates the review of multi-site clinical applications as well as those involving time-sensitive research with a need for rapid review; (4) coordinates the receipt and review of applications for scientific meeting grants; (5) coordinates the reviews of R&D contract proposals; (6) coordinates the review of Loan Repayment Program contracts; (7) coordinates the review of contract concepts; and (8) provides orientation and training for individuals serving as peer reviewers.

## Extramural Activities & Initiative Development Branch – HN6943

(1) Coordinates the preparation and publication in the NIH Guide of the Institute's program announcements, notices, and requests for applications; (2) administers the Institute's committee management function under the National Advisory Council Act; (3) coordinates and manages all activities surrounding National Advisory Council on Drug Abuse (NACDA) meetings, including requesting, collating, distributing materials to be used by staff and Council members in preparation for and during the Council meetings; (4) oversees all aspects of NACDA meeting logistics; (5) manages all Electronic Council Book functions; uploading all applications for Council review and concurrence, ensuring conflict of interest (COI) information is updated, overseeing Early Concurrence panel set up; (6) manages all post Council close-out functions, including Council Sweep, creating packets for grant application folders for budget and grants management leadership for MERITs, MERIT Extensions, Administrative Supplements, Foreign and Special Council Review applications; (7) ensures that all contracted services have been paid out according to FAR efficient spending regulations.

## **Neuronal Networks Section – HN64H6**

Conducts Research (1) Investigate the molecules, cells and neuronal networks central to the neurobiology of drug addiction; (2) Apply neuroanatomical, cell molecular, cell biological and electrophysiological experimental approaches; and (3) Research focuses on two issues; i) What are the brain networks through which addictive drugs have their habit-forming actions; and ii) What are the neuroadaptations in these networks that accompany the transition from recreational to compulsive drug-taking?