

National Institute of Dental and Craniofacial Research - HNP

To improve and promote craniofacial, oral, and dental health through research: (1) develops disease prevention, diagnostic, therapeutic, and health promotion measures through the conduct and support of basic, translational, applied, and demonstration research; (2) develops and maintains an adequate research personnel pool through the conduct and support of training and career development programs; (3) promotes the timely transfer and appropriate adoption of research findings by the public, professional and research communities; (4) disseminates accurate information to the public, professionals and policy-makers; and (5) coordinates and collaborates with, and assists and fosters relevant research and research-related activities with, other public and private agencies and organizations.

Office of the Director - HNP1

(1) Provides leadership, direction, planning, evaluation, and coordination of NIDCR programs and policies; (2) advises the Director, NIH, on policy matters concerning dental, oral and craniofacial health research and research training; (3) represents NIDCR and NIH in meetings of the Chief Dental Officer, other PHS-wide, and Federal and non-Federal activities relevant to oral health; (4) directs special oral health projects, such as the National Oral Health Call to Action; (5) provides and/or oversees management and administrative services to the Institute; (6) provides program analysis and develops and maintains scientific data bases for reporting program activities; (7) administers career development, research infrastructure, and curriculum development activities in extramural institutions, and educational activities in the Institute's intramural laboratories and clinics; (8) provides leadership for collaborative efforts to implement strategies to capitalize on new knowledge and socioeconomic changes in the oral health sciences; (9) develops, coordinates and implements communication activities and clearinghouse projects; (10) establishes, maintains, and conducts programs to promote EEO; and (11) provides liaison with dental schools, research institutions, academic health centers, professional organizations related to dental, oral, and craniofacial activities, and lay organizations.

Office of Administrative Management - HNP13

(1) Provides leadership, direction, planning and coordination of NIDCR administrative management activities, including the areas of financial management, R&D acquisition management, management analysis, human resource-related activities, information technology, and general administration; (2) advises the Director, Deputy Director, Division Directors, and other key officials on ethics, managerial and administrative matters affecting the planning and execution of NIDCR programs; (3) interprets, analyzes, and implements legislation and/or Departmental and NIH directives affecting administrative policies, orders and new concepts affecting the overall mission of the NIDCR; (4) ensures Institute compliance with all applicable administrative regulations; (5) develops policies, guidelines, and procedures on matters relating to the administrative management activities of the Institute; and (6) serves as the Institute focal point for the coordination, preparation, and analysis of a wide variety of programmatic reports and other documents associated with NIH, DHHS, and other Federal agencies.

Administrative Management Branch - HNP132

Provides overall administrative advice and support to the Office of the Director (OD), the Division of Extramural Research (DER), and the Oral Health Promotion, Risk Factors, and Molecular Epidemiology Branch (OHPRFMEB) of the Division of Intramural Research (DIR); (2) assists in planning and directing the OD's and the Divisions' administrative management activities including budget, personnel, management analysis, procurement, space management, travel, property management, office services, timekeeping, etc.; (3) analyzes effects of changes in administrative policies and practices by organizational echelons above the NIDR; (4) advises OD and Division staff of ethics and administrative policies and practices; (5) develops, implements and/or provides advice on the development and implementation of regulations, policies and procedures for the Institute; (6) prepares staff papers and reports on general management issues in response to requirements from NIH and DHHS; (7) coordinates, analyzes, and provides advice on all organizational change proposals for the Institute; and (8) serves as the coordinating point in handling administrative and/or management issues/problems that cross NIDR program lines and that cannot be resolved at program levels, including property accountability, records management, payroll liaison, international travel, sponsored travel, etc.

Financial Management Branch - HNP133

Advises the Institute Director, Deputy Director, Executive Officer, and other senior staff in the financial management aspects of the planning, formulation, execution, and evaluation of the Institute's programs; (2) collaborates with program planning staff in the development and coordination of the Institute's programs with the budget process; (3) formulates and monitors the Institute's financial management program and establishes systems for effective control of funds; (4) compiles and prepares the Institute's budget; (5) devises or oversees development of financial data systems that provide information for management decisions, while remaining compatible with the central NIH data systems; (6) develops budget back-up material for OMB and Congressional appropriation hearings and assists in the briefing of witnesses in defense of the budget; and (7) serves as the focal point for the monitoring and clearance of all budgetary and fiscal data as the result of Congressional or other inquiries.

Office of Science Policy and Analysis - HNP16

(1) Provides guidance and assistance in the development of science policy and program planning and evaluation for the Institute, including research agenda development, science priority setting for annual and future budgets, strategic planning, policy research coordination and development, science policy briefings, and special planning efforts on specific research issues or initiatives; (2) provides professional advice, technical assistance, and guidance in implementing the planning decisions made by senior Institute officials; (3) prepares reports, trend analyses, analytical and interpretive data, and provides epidemiologic and statistical expertise to the Institute; (4) responds to requests from various NIH entities and key stakeholders, including Congress, HHS, the White House, advocacy, and other interest groups; (5) serves as liaison with government, academic and private sector planning, evaluation, legislative, and science policy agencies and organizations; (6) develops, maintains and updates the Institute's science classification/coding system and other program data systems, including designing and preparing reports on NIDCR scientific, programmatic and funding activities; (7) develops and coordinates program evaluation and assessment activities to determine the content, significance and effectiveness of NIDCR's ongoing programs and activities, including the Institute's research, research training, and career development, programs to plan for future research and policy needs; and (8) coordinates a Residency Program in Dental Public Health.

Program Analysis and Reporting Branch - HNP164

(1) Plans, conducts, and directs activities in the area of program analysis; and provides analytic and interpretive data needed to formulate Institute goals and objectives; (2) conducts statistical analyses, coordinate reports and manuscripts for publication, and prepares reports and provides interpretation of human population data on trends in morbidity, mortality and care patterns for diseases within NIDCR's mission including current public health issues with program evaluation or health policy implications; (3) prepares or coordinates the preparation of ad hoc, and recurring reports on Institute activities (e.g., trans-NIH and HHS Collaboration Reports and the Biennial Report); (4) develops and maintains the NIDCR Databook and other reports needed by NIDCR leadership.

Science Policy and Planning Branch – HNP165

(1) Advises the Director and other senior Institute staff members concerning emerging scientific and program policy issues of significance to the Institute and recommends options for their resolutions; (2) provides leadership and guidance for strategic and operational planning within the Institute, to include development of annual program initiatives; (3) participates in NIH and HHS planning activities; (4) organizes and develops materials for the annual NIH Director's Briefing to Congress; (5) collects and analyzes programmatic and portfolio data to support the NIDCR strategic planning process; (6) develops, maintains and updates the Institute's science classification/coding system and other program data systems; (7) maintains expertise in NIH-wide systems used in the analysis and reporting of research program activities, such as Query View Report System (QVR), the Research Portfolio Online Reporting Tools (RePort) and Research, Condition, Disease, and Categorization (RCDC).

Office of Communications and Health Education - HNP17

(1) Develops, implements, and evaluates the Institute's science, health, and digital communication programs, which are designed to promote the timely transfer of knowledge gained from research and its implications for health to researchers, health professionals, patients, the general public, and the media; (2) manages scientific, NIH, and HHS clearance of NIDCR communications; (3) coordinates liaison with patient and professional organizations; and (4) advises the NIDCR Director, staff, and relevant outside groups on communication strategies and policies.

Health Information and Public Liaison Branch - HNP175

(1) Manages NIDCR's public inquiry and exhibit programs; (2) conducts social marketing and other audience research to guide health professional, patient, and public education; (3) develops, tests, and disseminates oral health information and campaigns; (4) translates and adapts oral health content for people with limited English proficiency; (5) coordinates liaison with health voluntary organizations; and (6) establishes strategic partnerships with other NIH Institutes, federal agencies, and outside organizations.

Science Communication and Digital Outreach Branch - HNP176

(1) Develops and disseminates information on NIDCR-supported research; (2) coordinates media training for NIDCR scientific staff; (3) handles media relations; (4) coordinates liaison with professional organizations; (5) conducts customer satisfaction research and digital analytics to guide website/social media strategy and measure effectiveness; and (6) manages the NIDCR website(s), social media, and related content and policies.

Office of Information Technology - HNP18

(1) Oversees and coordinates the Institute's information technology (IT) activities; (2) develops strategic IT plans, ensuring Institute compliance with all applicable regulations, and ensures that IT is used effectively throughout the Institute; (3) establishes and oversees the Institute's IT policies and guidelines and provides for appropriate security of IT systems; and (4) provides leadership, focus and operational support within the Institute for (a) implementation of IT policies and standards; (b) the management of IT projects; (c) development, operation and maintenance of state-of-the-art IT facilities and equipment; (d) Network infrastructure and operation; (e) internet and intranet services; (f) the development and maintenance of Institute- wide or program-specific databases and information systems; and (g) the design and implementation of continuing professional development programs of computer literacy and competency for Institute staff.

Office of Clinical Trials Operations and Management - HNP1A

(1) Supports the NIDCR extramural and intramural clinical research program by providing operational and management support to clinical research studies including clinical trials and epidemiological studies; (2) coordinates the implementation of clinical research studies across the NIDCR; (3) coordinates the training of investigators and support personnel for the conduct of interventional clinical trials and epidemiological studies; (4) provides operational, management and clinical trials conduct expertise to NIDCR in developing and implementing clinical research studies; (5) develops and maintains a pharmacovigilance program for the NIDCR clinical research program; (6) serves as liaison for access to FDA regulatory affairs services for the NIDCR clinical research program; and (7) serves as liaison for access to pilot lot production of investigational agents for clinical evaluation.

Division of Intramural Research - HNP2

(1) Plans and conducts basic and clinical research programs directed toward increasing the fundamental knowledge of craniofacial/oral health and disease, including the development, structure, function and dysfunction of craniofacial/oral structures and tissues, the role of microorganisms and host immune responses in oral and systemic infectious and inflammatory diseases, craniofacial genetic disorders, oral and pharyngeal cancer, and acute and chronic pain and neurosensory mechanisms; (2) plans and conducts a translational, patient-oriented and community-based research and assessment program aimed at translating new knowledge into immediate gains in the diagnosis, prevention, and treatment of diseases and disorders and in the promotion of craniofacial/oral and general health; (3) develops, directs, and performs epidemiologic investigations of craniofacial/oral health and disease, as well as oral manifestations of systemic disorders; identifies and tests risk factors, disease markers, and clinical indices for craniofacial/oral diseases and conditions; (4) performs research in the areas of disease diagnosis, etiology, prognosis, and treatment; prevention and health promotion; delivery of care, utilization of services, risk-benefit assessment, and decision systems; (5) provides dental care and consults for selected iHNP patients and ambulatory patients from NIH Institutes conducting clinical research in the Warren Grant Magnuson Clinical Center; (6) evaluates research efforts and establishes program priorities; (7) allocates funds, space, and personnel ceilings to ensure maximum utilization of available resources in the attainment of Institute objectives and integrates new research activities into the program structure; (8) collaborates with other NIH Institutes and external research institutions and maintains an awareness of national research efforts in program areas; and (9) provides advice on intramural research and science in general to the Institute Director.

Office of the Scientific Director - HNP21

Plans, coordinates, and directs a wide range of activities of basic, translational and clinical scientific research programs conducted within the Division of Intramural Research (DIR); 2) maintains an awareness of national research efforts and provides advice to the NIDCR Director and Executive Staff regarding intramural research in scientific areas of interest to the Institute; 3) administers career development, research infrastructure, and educational activities for intramural scientists and scientist trainees; 5) promotes the Institute's efforts to foster research training and facilitate the development of a diverse and inclusive biomedical research workforce; 6) assists in the conducting of research within NIDCR laboratories by implementing all NIH and DHHS rules and regulations, and ensuring compliance to existing guidelines for laboratory safety, the responsible conduct of research, and related issues; 7) assists in allocating existing funds, space, and personnel, ensuring the optimal utilization of available resources while integrating ongoing and embarking on new research activities, with the advice of the Board of Scientific Counselors and oversight by the NIDCR Executive Staff; 8) provides senior level administrative support to the DIR programs.

Office of the Clinical Director - HNP212

(1) Oversees all intramural clinical and translational research activities related to the mission of NIDCR; (2) supports all intramural human subject research protocols through protocol development, scientific review, support for the Institutional Review Board, regulatory compliance (FDA and OHRP), database development, adverse events reporting, study coordination and research nursing support, and research quality oversight, subject safety and monitoring; (3) provides clinical evaluation and care for patients and subjects enrolled in protocols at the NIH Clinical Center; (4) encourages inter-IC clinical research collaboration and scholarly activity; (5) supports training in clinical and translational research (6) collaborates with the Office of the Scientific Director on intramural research related to the mission of NIDCR.

Dental Clinical Research Core - HNP2122

(1) Supports all intramural human subject research protocols through protocol development, scientific review, support for the Institutional Review Board, regulatory compliance (FDA and OHRP), database development, adverse events reporting, study coordination and research nursing support, and research quality oversight, subject safety and monitoring; (2) supports inter-IC clinical research collaboration through clinical research conducted by the NIDCR investigators and staff with partnerships beyond NIDCR.

Dental Clinical Research Fellowship Program - HNP2123

(1) Supports training in clinical and translational research for health professionals in the latest clinical research methodologies; (2) Facilitates the translation of basic science discoveries to the clinic through human subject research.

Dental Consult Service - HNP2124

(1) Provides clinical evaluation and care for patients and subjects enrolled in protocols at the NIH Clinical Center, including oral medicine, hospital dentistry and associated specialties; (2) facilitates consultation and on-call services for the NIH Clinical Center; (3) coordinates care with primary care givers and the medical team and triages appropriately for local or specialized treatment.

Intramural Management Branch – HNP21J

Serves as the focal point for information, advice, and programmatic support on matters related to administrative policies and practices, information technology, intramural training and technology transfer, internal controls, and regulations affecting the overall mission of the Division of Intramural Research (DIR) staff and research program, (2) Plans, coordinates and directs management functions of DIR including budget, financial management, personnel, procurement, contract management, and facilities management; (3) Directs and manages information technology infrastructure and resources to support all intramural research and administrative programs; (4) Support the training needs of intramural scientists, fellows, and students; (5) Coordinates and provides liaison support to scientists in the transfer and access to innovations.

Intramural Administrative Office- HNP21J2

(1) Advises the Scientific Director and other key officials on managerial and administrative matters affecting the planning and execution of DIR programs; (2) interprets, analyzes, and implements NIH and Departmental administrative and management directives; (3) develops policies on administrative management and prepares and issues procedures and guidelines for implementation of these policies; (4) plans, directs, coordinates, and provides comprehensive administrative and management support services for the Division of Intramural Research; (5) provides technical and advisory services in financial management, human resources, facility management, travel services, and other administrative functions, as necessary, to ensure the efficient and effective implementation and operation of programs; (6) plans, directs and coordinates acquisition activities for the intramural staff using efficient, timely and appropriate methods; and (7) plans, directs, and coordinates logistical support for the DIR .

Information Technology Core – HNP21J3

(1) Provides centralized computer and audio/visual support and maintenance for the research, clinical, and administrative staff in the Division of Intramural Research (DIR); (2) provides for networking services and data storage in support of the DIR's computer systems, and provides consultations to the DIR staff on a variety of computer and technology topics; (3) Manages security configurations for all DIR network resources, including DIR computers, specialized scientific equipment, servers, printers, and communications equipment, ensuring compliance with all applicable policies, standards, and regulations.

Office of Education - HNP21J4

(1) Supports the needs of intramural scientists, trainees, and students at all levels as related to their training and career development; (2) Serves as the central coordinating point for intramural training at NIDCR and offers a variety of resources to trainees; (3) Acts as NIDCR primary contact point and liaison for intramural trainee recruitment and training program implementation.

Office of Technology Transfer and Innovation Access - HNP21J5

Facilitates transfer of, and access to, innovations, including inventions, research materials, data, and information, by (1) establishing mutually beneficial technology transfer agreements, including material transfer, confidential disclosure, data transfer, license, and collaborative agreements; (2) evaluating innovations for intellectual property and commercial potential; (3) protecting inventions by planning, monitoring and guiding patent prosecution; (4) promoting conception of new inventions through education and outreach; (5) supporting product development and commercialization efforts by pursuing Orphan Drug Designation, patents, CRADA agreements, and license agreements; (6) serving as a focal point for information and advice on matters related to technology transfer, including policy, internal controls, and portfolios to NIDCR clients, NIDCR offices, and the NIH Technology Transfer community; (7) representing NIDCR to outside parties including external constituents, negotiating partners, and established partners; and (8) supporting executed technology transfer agreements by monitoring compliance, invoicing, and amending agreements as necessary; (9) Supports and protects the NIDCR mission, its staff and research program by ensuring Federal law, NIH, and NIDCR policy are followed

Basic, Translational, and Clinical Research Branch - HNP21K

(1) Plans and performs basic, translational and clinical research to advance the understanding of biological processes relevant to dental, oral, and craniofacial health; (2) Trains a diverse population of future researchers in these areas (3) Provides a supportive research environment and promotes increased interactions among DIR scientific staff, through staff meetings, seminar series, the annual NIDCR scientific retreat, and other programs.

Adeno-Associated Virus Section - HNP21K2

(1) Defines interactions of the adeno-associated virus (AAV) with its target cell; (2) studies delivery of therapeutic genes to the salivary glands, lung, Central Nervous System, inner ear, and eye for potential treatment.

Adult Stem Cell Section - HNP21K3

(1) Studies the mechanisms underlying the immune-suppressive properties of rodent and human mesenchymal stem cells from the bone marrow (BMSCs); (2) Studies how to utilize human BMSCs to treat human diseases using local and systemic application (such as airway application in chronic inflammation due to granulomatous disease); (3) Performs research on hematopoietic support by BMSCs in humans in order to use the findings to boost red cell production in patients with anemia.

Biological Chemistry Section - HNP21K4

(1) Conducts basic research on biosynthesis, structure and function of glycoproteins, placing a special emphasis on mucin-type O-glycans.

Cell Biology Section - HNP21K5

(1) Identifies and characterizes mechanisms required for cell interactions with extracellular matrix, signaling and cytoskeletal regulation, cell migration, and tissue morphogenesis involved in embryonic development, tissue remodeling, and disease; (2) Uses a variety of in vitro, organ culture, and in vivo approaches to understand the dynamics and regulation of cell interactions and tissue function.

Craniofacial Anomalies and Regeneration Section - HNP21K6

(1) Studies craniofacial development and bone formation through human disorders that affect the normal development, growth and formation of the craniofacial skeleton; (2) investigates the genetic etiology and molecular changes in craniofacial disorders; (3) employs and develops predictive tools to guide clinical therapy and timing of intervention using methods in bioinformatics and biomedical imaging; (4) examines the regenerative ability of postnatal bone marrow stromal stem cells and other mesenchymal tissues to understand self-repair or autotherapies for models for stem cell therapy.

Developmental Glycobiology Section - HNP21K7

(1) Conducts basic research into the biological roles of a conserved protein modification (Oglycosylation) during development; (2) conducts basic research to elucidate how O-glycosylation influences secretion, secretory apparatus structure and ER tress, thereby influencing the composition of the cellular microenvironment; (3) conducts basic research into the hierarchical regulation of glycosylation and how this influences protein stability and function; (4) conducts basic research to understand how defects in O-glycosylation contribute to the development and progression of human diseases.

Epithelial Signaling and Transport Section - HNP21K8

(1) Directs research on mechanisms in salivary glands and the pancreas; (2) directs research on how the ducts of the salivary glands and pancreas secrete the buffer bicarbonate to regulate the acidity of the saliva and the pancreatic juice; (3) studies the causes of oral cavity and pancreatic diseases.

Experimental Medicine Section - HNP21K9

(1) Studies the identification of new autoantigens, the autoantibodies with which these autoantigens react and the value of autoantibodies in predicting the development of autoimmune diseases, such as type 1 diabetes; (2) Studies the role of microRNAs on gene expression especially as related to autoantigens and insulin synthesis and secretion.

Functional Genomics Section – HNP21KA

(1) Investigates molecular mechanisms underlying orofacial pain; (2) Seeks to identify and characterize regulation of pain signaling by cyclin dependent kinase-5 (Cdk5) in mice and humans; (3) Applies advanced transgenic technologies to alter gene expression and protein functions in order to determine effects on pain signaling in cells and mouse models; (4) Uses Cdk5 studies to identify novel analgesics.

Matrix Biochemistry Section - HNP21KB

(1) Researches the role of the small integrin-binding proteins in normal head and oral cavity development as well as their roles in a variety of human diseases.

Matrix and Morphogenesis Section - HNP21KC

(1) Studies drivers of organogenesis from the earliest stages of stem/progenitor cell commitment, maintenance, and differentiation, to growth, morphogenesis, and the formation of a functional organ; (2) Researches repair/regeneration of organs using development as a template

Molecular and Cellular Biochemistry Section - HNP21KD

(1) Studies molecular structure/biological function relationships; (2) Researches the enzymes involved in the hypusine modification of eIF5A; (3) Investigates the functions of polyamines and eIF5A in cellular proliferation, transformation and tumorigenesis; (4) Develops new ways to control aberrant cell growth by targeting the polyamine and hypusine pathways.

Molecular Biology of Bones and Teeth Section - HNP21KE

(1) Investigates the regulation and function of extracellular matrix genes expressed by bones, teeth and tissues associated with mineralized tissue; (2) Employs advanced molecular genetic technologies including gene isolation, mutation, and transfer into the cells and tissues from mouse and human mineralized tissues; (3) Uses methods for altering gene and protein production by selective gain and loss of function to determine effects on skeletal formation and integrity; (4) Uses transgenic technology to gain an understanding of matrix gene and protein functions in vivo during pre-natal and post-natal development and maturation.

Molecular Biology Section - HNP21KF

(1) Identifies and characterizes the structure and function of extracellular matrix molecules, the regulatory mechanisms of their expression, novel proteins important for tissue development, and their roles in acquired and genetic diseases; (2) Uses a variety of molecular and cellular approaches using in vitro and in vivo experimental systems to elucidate the role of the extracellular matrix and regulatory factors in development and disease.

Molecular Genetics Section- HNP21KG

(1) Researches somatosensory detection and processing in mammalian systems.

Mucosal Immunology Section - HNP21KH

(1) Researches the cellular and molecular mechanisms of immunoregulation of immune responses in mucosal and systemic lymphoid and non-lymphoid tissue; (2) Conducts basic research to understand the pathogenesis of autoimmunity and inflammation, cancer and infectious diseases; and (3) Develops potential therapies for relevant human diseases with special attention on Sjogren's syndrome and oral and head and neck cancers.

Oral Immunity and Infection Section - HNP21KJ

(1) Studies oral–barrier immunity with a focus on the common human inflammatory disease periodontitis; (2) Conducts clinical studies focused on the understanding of physiologic human oral immunity and susceptibility to periodontal diseases; (3) Trains fellows and students in basic and translational immunology.

Oral Immunobiology Unit- HNP21KK

(1) Investigates oral mucosal immunity through the lens of chronic graft-versus-host disease (cGVHD); (2) Elucidates the underlying immune process of cGVHD in the oral cavity with a focus on the salivary glands; (3) Translates this knowledge to improved monitoring and therapeutics in cGVHD patients.

Proteases and Tissue Remodeling Section - HNP21KL

(1) Researches the function of pericellular proteolysis in tissue development, tissue homeostasis, tissue repair, and physiological and pathological tissue remodeling; (2) Researches the role of endocytic turnover of extracellular matrix in physiological and pathological tissue remodeling; (3) explores the use of modified bacterial cytotoxins for the treatment of cancer.

Secretory Mechanisms and Dysfunction Section - HNP21KM

(1) Studies the (patho) physiological properties of salivary gland cells, with a particular emphasis on determining the molecular nature of the fluid secretion mechanism, and ultimately using the insight gained to treat salivary gland hypofunction.

Secretory Physiology Section - HNP21KN

Studies Ca^{2+} signaling mechanisms with focus on (1) identifying their molecular components, regulation, and involvement in salivary gland physiology; (2) elucidating physiological defects associated with salivary gland dysfunction; and (3) identifying novel targets and therapeutic strategies for correcting secretory defects leading to xerostomia.

Sjögren's Syndrome and Salivary Gland Dysfunction Unit - HNP21KP

(1) Investigates the mechanisms that lead to salivary hypofunction of the autoimmune disorder Sjögren's syndrome; (2) Runs clinical interventional and natural history clinical studies focused on Sjögren's syndrome; (3) Employs advanced technologies including deep sequencing, functional ex vivo human tissue imaging, and virally mediated gene delivery in cells and ex vivo human tissues (4) Designs experiments to modify the expression of non-coding RNAs to assess their mechanistic role in salivary gland dysfunction.

Skeletal Biology Section – HNP21KQ

(1) Studies the biological properties of adult stem cells in mineralized tissues and soft tissues of the craniofacial region, with emphasis on the role that they play in diseases, and how they can be used in tissue engineering and regenerative medicine.

Skeletal Clinical Studies and Mineral Homeostasis Section - HNP21KR

(1) Investigates disorders of the skeleton with an emphasis on diseases of calcium and phosphate homeostasis; (2) Employs natural history and interventional clinical trials that include approaches to both diagnosis and treatment, including early stage proof of principle studies as well as controlled clinical studies in subjects with these disorders; (3) Conducts in vitro and in vivo studies in model systems of the clinical disorders to better understand the underlying pathophysiology; (4) Is involved in mentoring the next generation of physician and dentist scientists.

Taste and Smell Section - HNP21KS

(1) Researches techniques to investigate the detection and perception of taste and smell stimuli in mammals.

Stem Cell Biochemistry Unit - HNP21KT

- (1) Identifies ubiquitylation enzymes important for human embryonic stem cell maintenance and differentiation and characterizes their underlying regulatory mechanism in normal and aberrant development.
- (2) Combines proteomic and biochemical approaches with human embryonic stem cell culture to determine the molecular mechanism of how ubiquitylation controls cell-fate choices, in particular, those involved in neural crest specification and whose mis-regulation leads to the craniofacial development disease Treacher Collins Syndrome.

Immune Regulation Unit - HNP21KU

- 1) Investigates the development of dendritic cells and the requirements that define the functional and molecular identities of different dendritic cell subsets in health, disease and after an immune insult.

Neural Crest Development and Disease Unit - HNP21KV

- (1) Investigates the molecular mechanisms that regulate neural crest stem cell development and cell fate decisions and investigates mechanisms underlying diseases and genetic syndromes affecting the formation of dental, oral and craniofacial structures.

Research Support Branch - HNP21L

(1) Provides guidance on data management and bioinformatics-related topics and informatics expertise to the Intramural Research Program investigators in their planning of research projects; (2) performs analysis of Omics datasets by using informatics methods; (3) provides database management support for IRP protocols to help implement data management plans that are compliant with IRB approvals (4) provides counsel to the Scientific Director regarding Scientific Information Management needs that span across individual research protocols.

Biomedical Research Informatics Office - HNP21L2

(1) Provides guidance on data management and bioinformatics-related topics and informatics expertise to the Intramural Research Program investigators in their planning of research projects; (2) performs analysis of Omics datasets by using informatics methods; (3) provides database management support for IRP protocols to help implement data management plans that are compliant with IRB approvals (4) provides counsel to the Scientific Director regarding Scientific Information Management needs that span across individual research protocols

Combined Technical Research Core - HNP21L3

(1) Provides state-of-the-art instrumentation and methodologies crucial to modern biomedical research to all scientists at NIDCR, serving to enhance the scope and quality of scientific research performed; (2) Technologies include Flow Cytometry and FACS Sorting, Image Cytometry, Sanger; Sequencing, Histology and Digital Imaging, WBC Elutriation, and Laser Capture Microdissection (3) Staffed by highly trained staff who offer research services, scientific expertise, and training necessary to effectively use these technologies.

Gene Transfer Core - HNP21L4

(1) Provides research and technical services to NIDCR investigators for the generation and preservation of genetically altered mouse models; (2) Employs advanced transgenic technologies including gene knockout and specific gene mutations using gene editing tools such as CRISPR; (3) Uses cryopreservation techniques to preserve and re-establish mouse models; (4) Provides consultations for developing strategies to generate transgenic mouse models

Veterinary Resources Core - HNP21L5

(1) Provides husbandry, veterinary care, animal research technical support, assistance in the writing of Animal Study Protocols, and education and assistance regarding interpretations of animal use regulations, and health and safety policies.

NIDCR Microscopy Core - HNP21L6

- 1) Provides a centralized resource for all DIR labs who are interested in learning about and applying a variety of imaging modalities in their research using the broad range of microscopy equipment within the DIR.
- 2) Oversees the maintenance, documents use and recommends upgrades of DIR microscopy resources. This facility will provide outreach, education and training to DIR labs and personnel so they are able to apply these resources towards their specific research projects. Assures that all instrumentation is fully functional and readily available for NIDCR DIR labs to use as needed.

Division of Extramural Research - HNP3

(1) Plans, develops and manages research supported by grants, cooperative agreements and contracts in developmental biology and mammalian genetics, epithelial cell regulation and transformation, pharmacogenetics, bone and tooth physiology and injury, and molecular and cellular neuroscience; oral microbiology and microbial pathogenesis; immunology and immunotherapy; and AIDS and oral manifestations of immunosuppression; (2) oversees plans for support of research to ensure maximum utilization of available resources in the attainment of the Institute's objectives; (3) determines program priorities and recommends funding strategies for achieving portfolio and program goals; (4) collaborates with intramural and extramural staff at NIDCR and NIH and maintains awareness of national trends and research directions in areas relevant to NIDCR's mission; (5) provides advice on extramural research and science in general to the Institute Director, staff and advisory groups by preparing reports and analyses to facilitate implementation; (6) acts as an interface between the research community and the Federal government; (7) establishes and maintains effective relationships with the extramural research community and with dental and biomedical research institutions, with behavioral, public health and voluntary health professional organizations and with other agencies involved in research and research training activities in order to promote programmatic goals and new research initiatives; (8) explores opportunities for research and new sources of research funding; (9) actively fosters cooperative efforts involving scientific collaboration with U.S. and foreign investigators and funding arrangements involving cooperative efforts by public and private sector agencies and organizations; (10) fosters the development of training environments and opportunities in the extramural community; and (11) provides data, reports and analyses to assist NIDCR staff and advisory groups in carrying out their responsibilities.

Integrative Biology and Infectious Diseases Branch - HNP32

(1) Coordinates the NIDCR basic and translational research programs in immunology and immunotherapy, epithelial cell regulation and transformation, molecular and cellular neuroscience, microbiology, developmental biology and genetics, mineralized tissue and salivary gland physiology, and AIDS and immunosuppression; (2) collaborates with NIDCR program staff in setting an overall agenda for basic and translational integrative biology and infectious diseases research related to the mission of NIDCR; (3) coordinates the implementation of this integrative biology and infectious diseases research agenda; and (4) maintains liaison for integrative biology and infectious diseases research with the NIDCR extramural research community.

Translational Genomics Research Branch - HNP33

(1) Coordinates the NIDCR basic and translational genomics research program that spans the extramural research program; (2) collaborates with NIDCR program staff in setting an overall agenda for basic and translational genomics research related to the mission of NIDCR; (3) coordinates the implementation of this genomics research agenda; (4) provides scientific expertise to NIDCR in designing and developing genomic technology application and development efforts and in identifying opportunities to expand the application of emerging technologies related to human and microbial genetics and genomics; and (5) maintains liaison for genomics research with the NIDCR extramural research community.

Behavioral and Social Sciences Research Branch - HNP34

(1) Coordinates the NIDCR behavioral and social sciences research program that spans the extramural research program; (2) collaborates with NIDCR program staff in setting an overall agenda for behavioral and social sciences research related to the mission of NIDCR; (3) coordinates the implementation of this behavioral and social sciences research agenda; (4) provides scientific expertise to NIDCR in designing and developing behavioral sciences application efforts and in identifying opportunities to expand and integrate this area into the NIDCR extramural research programs; and (5) maintains liaison for behavioral and social sciences research with the NIDCR extramural research community.

Center for Clinical Research - HNP35

Supports and conducts patient-oriented and population based research, data analysis, and related activities aimed at improving the oral, dental and craniofacial health of the nation. Specifically, the Center (1) develops, implements and oversees plans for the support of clinical research including clinical trials, practice-based networks, epidemiology, and health disparity research in all areas of programmatic interest to NIDCR; (2) determines program priorities and recommends funding strategies for clinical research; (3) collaborates with other NIH Institutes and Centers and other Government agencies involved in clinical research; (4) establishes and maintains effective relationships with the extramural research community, including academic health centers and their individual schools, professional dental organizations, biomedical and behavioral research organizations, and public and private institutions and community organizations to promote the Institute's goals and to implement new initiatives to support clinical research opportunities; (5) explores opportunities and needs in clinical research and complementary sources of funding; (6) actively fosters collaborations between investigators, institutions, and agencies in the United States and abroad to enhance cooperative efforts by public and private sector organizations; (7) develops, implements and supports programs designed to foster diversity in the scientific workforce and clinical research activities to study the health of vulnerable and special needs populations; (8) generates and provides data, reports, and analyses to assist NIDCR staff and advisory groups in their responsibilities; and (9) provides statistical expertise and support to both NIDCR extramural Divisions and assists in the planning, design, statistical evaluation, implementation, monitoring of genetic and clinical research.

Division of Extramural Activities - HNP7

Provides leadership and advice in developing, implementing, and coordinating extramural programs and policies, including training and career development mechanisms; (2) provides advice and guidelines to the Director and other Institute officials on issues related to policy and procedures for extramural affairs, training and career development; (3) represents the Institute on extramural program and policy issues within the NIH, the Department and with outside organizations; (4) provides reports and statistics related to Institute grant programs; (5) provides essential initial scientific review for applications assigned to the Institute, including program projects, research grants in response to RFAs, training, fellowship and career development grants, cooperative agreements, clinical research grants, new investigator grants, conference grants and R&D contracts, and ensures effective and proper grants management; (6) oversees Institute grants management activities; (7) oversees the Institute's programmatic functions in training and career development; (8) manages and monitors all business aspects of grants and provides information and guidelines for grant applications; (9) coordinates and oversees the closed session of the National Advisory Dental and Craniofacial Research Council; (10) in conjunction with the Division of Intramural Research, coordinates and oversees review of intramural programs by the Board of Scientific Counselors; (11) undertakes program evaluation and planning in conjunction with the Division of Extramural Research, and the Office of Science Policy and Analysis; and functions as the liaison between the NIDCR and the NIH Office of Extramural Research and the Center for Scientific Review.

Grants Management Branch - HNP72

(1) Formulates, interprets, and applies Institute grants management policies and procedures; (2) conducts fiscal and administrative reviews of grant applications; (3) assists extramural scientific staff in grant negotiations; (4) reviews expenditure reports, proposed audit exceptions, etc., and takes action to resolve questions and problems; (5) provides grants processing and recording services; and (6) serves as liaison between the Institute's Division of Extramural Research, Division of Extramural Affairs and Budget Office in responding to a variety of issues concerning the use of extramural funds.

Scientific Review Branch - HNP73

(1) Provides the initial scientific and technical peer review of all Institute applications for grants, cooperative agreements, fellowship awards, and R&D contracts not reviewed by the Center for Scientific Review. These include applications for program projects, clinical trials, center grants, conference grants, research project grants in response to RFAs, institutional training and career development grants, fellowship awards, cooperative agreements, loan repayment contracts, and R&D contracts; (2) identifies and recruits qualified individuals to serve as members of scientific review groups (study sections), manages conflicts of interest, serves as the Designated Federal Official on study sections, and reports the outcome of review; (3) conducts scientific peer review according to all applicable federal laws, regulations and policy, (4) serves as a resource on NIH peer review to the Director and other Institute officials, and (5) maintains liaison for the Institute with other scientific peer review activities at NIH.

Research Training and Career Development Branch - HNP74

Oversees and coordinates the Institute's programs for extramural fellowships, training grants, career development awards, NIH loan repayment awards and diversity supplements in accordance with the NIH and NIDCR policies and procedures; (2) plans and facilitates the development of research training programs to ensure an adequate number of talented, well- prepared and diverse investigators to conduct dental, oral and craniofacial research in the Institute's scientific priority areas; (3) serves as the liaison between NIDCR and potential and current grantees concerning program areas, research priorities, and grant applications and review procedures; and (4) disseminates research training and career development information at scientific meetings and conferences to foster long-term growth in the dental, oral and craniofacial research workforce.