

National Institutes of Biomedical Innovation, Health and Nutrition

to create, to challenge, to come true

～Aiming for a healthy longevity society～

NIBIOHN

National Institutes of Biomedical Innovation, Health and Nutrition

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Greetings



Director General
YONEDA Yoshihiro

optimizing diet and nutrition. Thus, the new center contains the terms "health" and "biomedical" in its name.

The organizational merger of NIBIO and NIHN opened the door to new domains of research that span the expertise of the two institutes. While the establishment of ArCHER is one such example, an ongoing project on gut bacteria is another. Before the organizational merger, NIHN was engaged in an ongoing prospective cohort study of Tokyo residents. In 2015, this study was expanded to include research of intestinal flora in the healthy population, and NIBIO scientists were assigned responsibility for the main analysis. In 2016, this program was further expanded to include residents of Shunan City, Yamaguchi, and Minamiuonuma City, Niigata, to elucidate the relationship between gut flora on the one hand and diet, exercise, and other lifestyle factors on the other.

We will remain committed to research on innovative medical products, world-class health care, and healthy longevity. We sincerely ask for your continued support.

The National Institute of Health and Nutrition (NIHN), under the umbrella of the National Institutes of Biomedical Innovation, Health and Nutrition (NIBIOHN), was originally established in 1920 with a long history of contributions to the development of nutritional science in Japan. NIHN celebrates its 100th anniversary in 2020.

The National Health and Nutrition Survey Program has yielded long-term annual data on nutritional consumption, physical activity, and other health-related factors in the Japanese population, providing a scientific basis for national programs promoting health and nutrition. NIHN pursues international cooperation as WHO Collaborating Centre for Nutrition and Physical Activity. In addition, NIHN's database of health foods, "HFNet," is the only database authorized to provide thorough, scientifically evaluated information to a wide range of health professionals. Another pillar of NIHN's function is the statutory task related to approval and withdrawal of foods and food supplements that make health claims. As a result of its mid- to long-term research strategy that started in 2015, NIHN has identified the following key research targets: (i) the interaction between physical activity and nutrition and its impact on healthy life expectancy in the Japanese population, (ii) the health impacts of dietary variation and administrative measures for improving dietary lifestyle among Japanese individuals, and (iii) the effectiveness and health impact of health foods. Blending legacy and innovation, NIHN has launched new research initiatives for healthy longevity under the industry-academia-government partnership. Specifically, new projects include a joint study with local government institutions for practical application of anti-frailty measures, disaster nutrition research, analysis of intestinal flora in healthy individuals, and artificial intelligence-based nutrition analysis.

We remain committed to investigations and studies that promote national health and longevity. We cordially appreciate your suggestions and support.



Executive Director
ABE Keiichi

1 History

The National Institute of Biomedical Innovation, Health and Nutrition (NIBIOHN) was founded on April 1, 2015 by integrating the National Institute of Biomedical Innovation (NIBIO) with the National Institute of Health and Nutrition (NIHN).

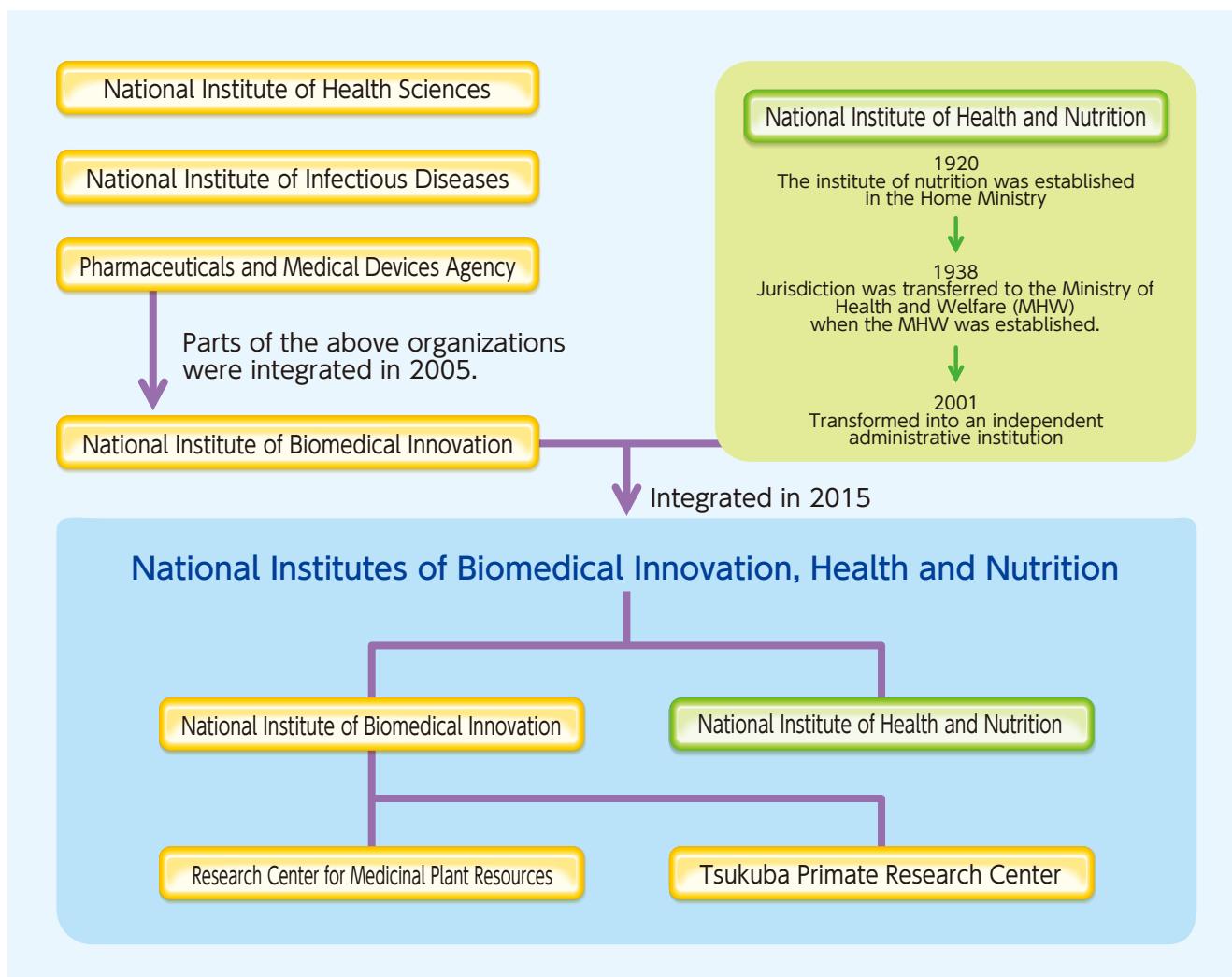
The establishment of NIBIOHN was a part of the effort to review independent administrative institutions under the "Basic policy regarding the reform of independent administrative institutions," approved by the Japanese Cabinet in 2013, for the purpose of promoting comprehensive research by integrating expertise in drugs, food, and other related fields.

National Institute of Biomedical Innovation (NIBIO)

NIBIO was founded in 2005, based primarily on the Osaka branch of the National Institute of Health Sciences, by integrating parts of the National Institute of Infectious Diseases and Pharmaceuticals and Medical Devices Agency. NIBIO prepares the foundation for improvement of pharmaceutical and other related technologies by conducting universal research that contributes to the development of drugs and other products, as well as biological resources, and by promoting research and development in the private sector or other settings for the overall purpose of improving the health of Japanese people.

National Institute of Health and Nutrition (NIHN)

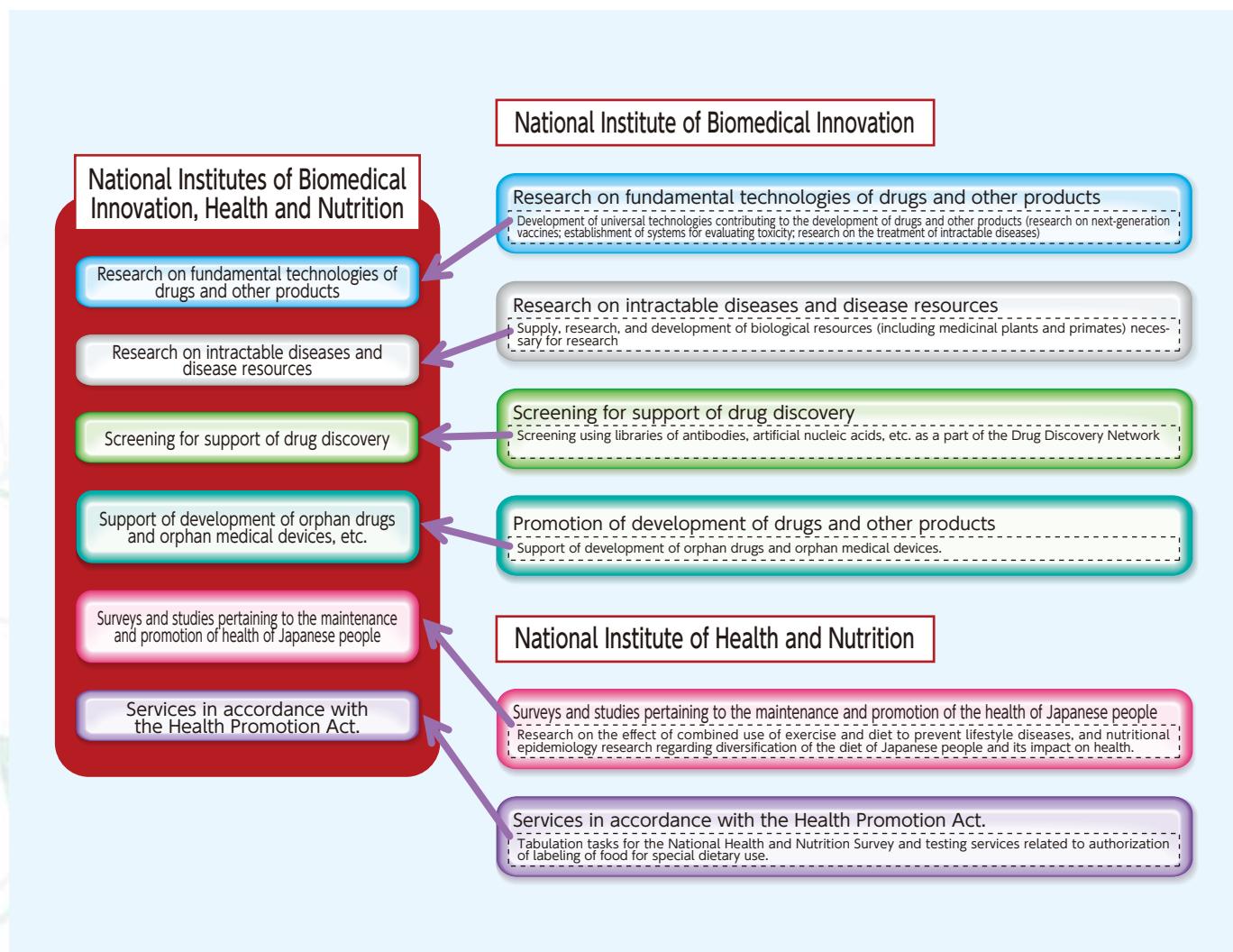
NIHN can be traced back to an institute of nutrition established in Home Ministry in 1920. After the Ministry of Health and Welfare was founded in 1938, oversight of NIHN was transferred from the Home Ministry to the Ministry of Health and Welfare; in 2001, the institute was transformed into an independent administrative institution. NIHN conducts surveys and studies regarding the maintenance and promotion of health of Japanese people, as well as surveys and studies regarding the nutrition and diet for the purpose of improving public health.



2 Objectives and services

The objective of the NIBIOHN is to contribute to the improvement of the health of Japanese people. It does so by 1) preparing the foundation for the enhancement of technologies related to drugs, medical devices, and other products by conducting research on universal technologies that are useful for the development of these products, including biological resources such as medicinal plants, and implementing services such as promotion of research and development in the private sector and other settings; and 2) by improving public health by conducting surveys and studies pertaining to the maintenance and promotion of the health, nutrition, and diet of Japanese people. NIBIOHN is engaging in the following six projects and services under the Health Promotion Act.

- 1) Research and support of drug discovery related to fundamental technologies
- 2) Research and support of drug discovery related to biological resources
- 3) Promotion of development of drugs and other products
- 4) Surveys and studies pertaining to the maintenance and promotion of the health of Japanese people
- 5) Surveys and studies regarding the nutrition and diet of Japanese people
- 6) Nutrition physiology tests of food



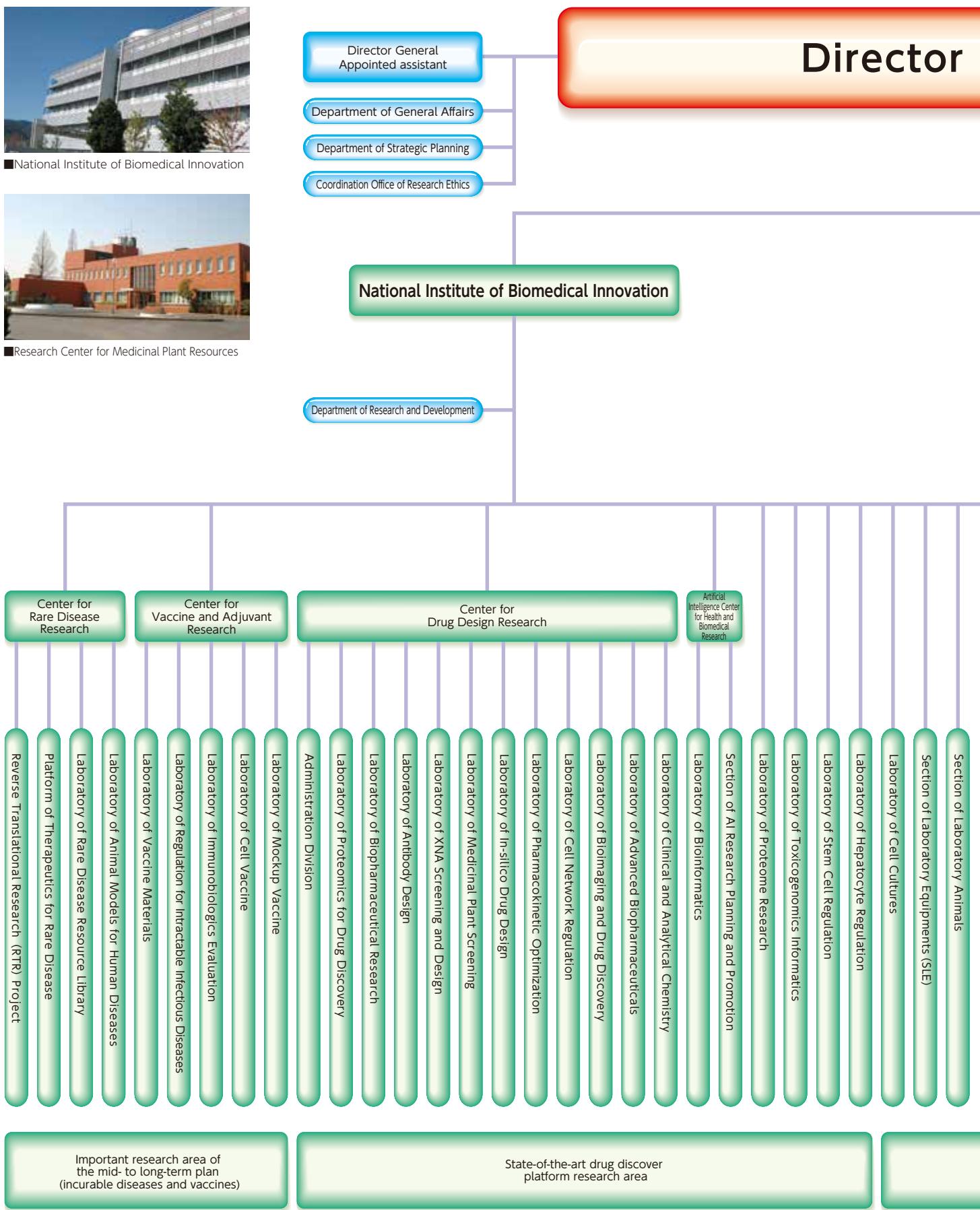
3 Organization chart



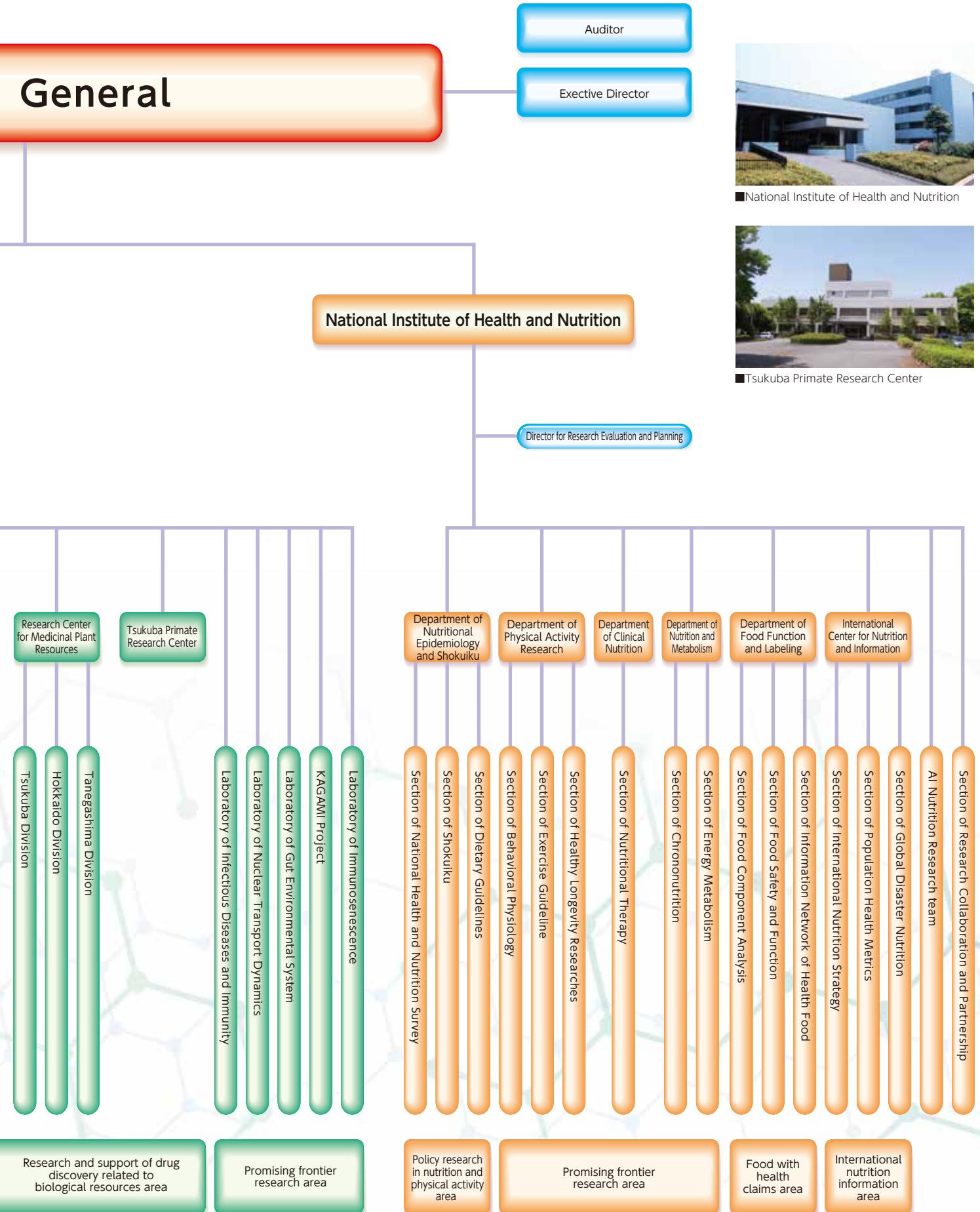
■National Institute of Biomedical Innovation

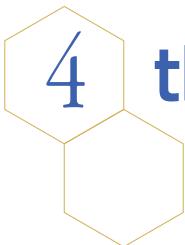


■ Research Center for Medicinal Plant Resources



General





the Organizational framework

The guiding principles for organizational restructuring include the following: clarification of research directions and visions, maximization of research output, and identification of social needs to make it possible to conduct policy-relevant research. NIBIOHN adapts its structure by identifying new research areas and consolidating multiple projects or laboratories into larger units (e.g., centers).

In 2019, the Artificial Intelligence Center for Health and Biomedical Research Center (ArCHER) was established to advance artificial intelligence (AI)-based research.

Identification of Research Interests

Former laboratories have been reorganized to address seven focal research areas.

Important research area of the mid- to long-term plan (incurable diseases and vaccines)

- A research area for fast achievement of the research plan presented in NIBIOHN's mid- to long-term plan.

State-of-the-art drug discovery platform research area

- A research area that relates to gathering information on research and development needs and expanding drug discovery platforms, and discovery projects at NIBIO.

Research and support of drug discovery related to biological resources area

- This area covers research on drug discovery related to biological resources with other laboratories.

Promising frontier research area

- A research area that involves promoting future core topics anticipated based on mid- to long-term perspectives where synergy between NIBIO and NIHIN can be exerted.

Policy research in nutrition and physical activity area

- A research area that deals with research work that leads to, evaluates, or promotes national health interventions.

Food with health claims area

- A research area that addresses food functions based on nutritional needs among the Japanese population and implementation of the national legal systems on food labels.

International nutrition information area

- A research area that includes: promotion of collaborative research with overseas research institutes, fellowship/training programs for young foreign researchers, and organization of international symposiums. Furthermore, we provide dietary intake data from the National Health and Nutrition Survey.

Establishment of the Artificial Intelligence Center for Health and Biomedical Research

ArCHER was established to integrate and reinforce intramural resources, building on past AI-based drug discovery and development activities. Specifically, it will apply AI technologies in various scientific programs to exert a wide-ranging impact on health, medical, and pharmaceutical research.



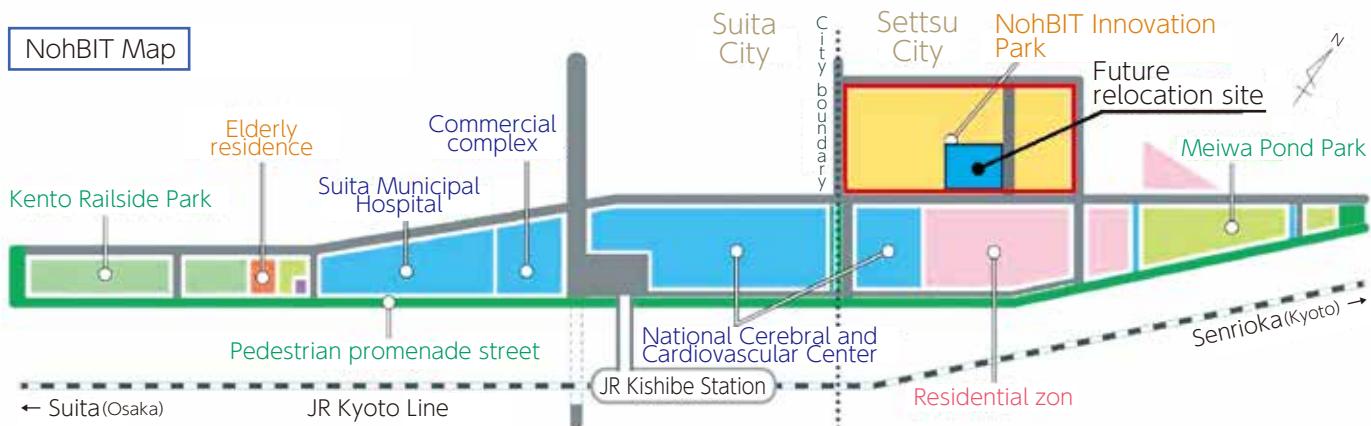
Upcoming Relocation of the National Institute of Health and Nutrition

By the end of FY 2022, the National Institute of Health and Nutrition (NIHN) will move from its current location in Tokyo to the Northern Osaka Health and Biomedical Innovation Town (NohBIT), known as KENTO (健都) in Japanese. This relocation was officially announced in the Government plan entitled the “Basic Policy on the Transfer of Governmental Organizations to Regional Areas” (issued March 22, 2016, by the Headquarters for Overcoming Population Decline and Vitalizing Local Economy in Japan, Prime Minister’s Office).

About NohBIT

NohBIT, which extends over parts of Suita City and Settsu City, aims to provide advanced health care services. The National Cerebral and Cardiovascular Center and Suita Municipal Hospital have been relocated to NohBIT. A large commercial complex has been established northwest of JR (Japan Railways) Kishibe Station, providing access to everyday conveniences, healthcare amenities, and other services that offer healthy lifestyle choices.

NIHN will relocate to the 4-hectare NohBIT Innovation Park, which lies close to the facilities mentioned above. This park will be a hub for industry-industry and industry-academia collaboration to expand healthy longevity.



Significance of the Relocation to NohBIT

NIHN has conducted a wealth of scientific research on nutrition, physical exercise, and other health factors. Relocation to NohBIT will provide NIHN with greater opportunities to apply its knowledge and experience to practical life situations. NIHN will promote open innovation with the National Cerebral and Cardiovascular Center, Suita Municipal Hospital, other medical institutions, and private corporations.

As a national research institution with a wide range of expertise from the medical to health sciences, NIHN will be the leading center for health care and nutritional health research in NohBIT. The research resources of its twin institution, the National Institute of Biomedical Innovation (NIBIO, Ibaraki, Osaka), will be a valuable asset.



National Institute of Biomedical Innovation

Cutting-Edge Research and New Drug Discovery Platforms

In order to assist in innovative drug development, the National Institute of Biomedical Innovation (NIBIO) conducts research on biological resources and new technology platforms. Taking advantage of its research outputs, NIBIO also provides technical and administrative support for the creation of new therapeutics.

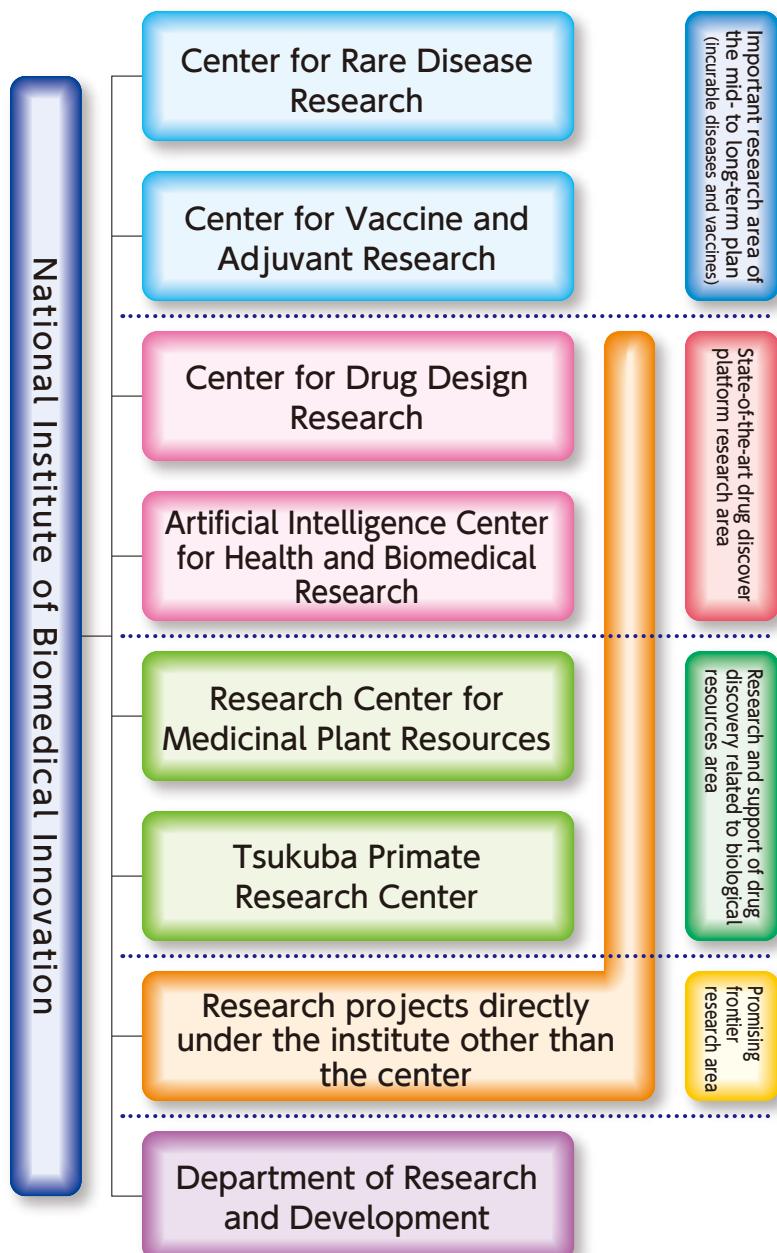
NIBIO's research focus spans the following interrelated areas that range from basic drug research to application: 1) "Important research of the mid- to long-term plan (incurable diseases and vaccines)," 2) "State-of-the-art drug discovery platform research," 3) "Research and support for drug discovery related to biological resources," and 4) "Promising frontier research." The first area relates to the Center for Rare Disease Research and the Center for Vaccine and Adjuvant Research. The second area relates to the Center for Drug Design Research and the Artificial Intelligence Center for Health and Biomedical Research. The third area relates to the Research Center for Medicinal Plant Resources and the Tsukuba Primate Research Center. The second, third, and fourth areas also include research projects and programs that are currently not under the umbrella of any of the above centers.

Moreover, NIBIO's Department of Research and Development provides technical and administrative support for the development and marketing authorization of pharmaceuticals, medical devices, and regenerative medicinal products, leveraging their expertise, experience, and ties with various external partners and resources.



Director
KONDO Hirosato,
Ph.D.

Organization of the National Institute of Biomedical Innovation



State-of-the-art drug discover platform research area

[Laboratory of Proteome Research]

We have established a MS-based technologies for large-scale discovery, verification and validation of promising biomarker proteins from tissue samples and extracellular vesicles in blood. Using these technologies, we are trying to develop novel biomarkers for personalized medicine.

Project Leader ADACHI Jun, Ph.D.

[Laboratory of Toxicogenomics Informatics]

In our laboratory, we advance research related to safety biomarker, toxicity prediction system and mechanism of side effect by using Toxicogenomics data. To date, we have developed 4 toxicological systems (Open TG-GATES, DILI-cSEARCH, TOXPILOT, DILI-PANEL) and open.

Project Leader YAMADA Hiroshi, Ph.D.

[Laboratory of Stem Cell Regulation]

Efficient differentiation into functional cells (brain microendothelial cells) from iPS cells and its application for drug discovery and development.

Project Leader KAWABATA Kenji, Ph.D.

[Laboratory of Hepatocyte Regulation]

We are doing the pharmaceutical researches using hepatocytes and enterocytes differentiated from human pluripotent stem cells.

Adjunct Project Leader MIZUGUCHI Hiroyuki, Ph.D.

Promising frontier research area

[Laboratory of Infectious Diseases and Immunity]

We are going to elucidate the molecular pathogenesis by which pathogenic microbes induce infectious diseases whereas commensal organisms live together with us by using the novel analysis such as genomics and proteomics. Our goal is to provide the overwhelming medical strategies like as therapeutic antibodies, vaccines and biomarkers for saving the infectious disease patients.

Project Leader YASUI Teruhito, Ph.D.

[Laboratory of Nuclear Transport Dynamics]

The focus of our project is to elucidate the molecular mechanisms of the diseases that caused by abnormal nucleocytoplasmic transport of proteins (e.g. infectious disease, cancer, and so on). We are also trying to develop new drugs or treatments to cure those diseases.

Project Leader OKA Masahiro, Ph.D.

[Laboratory of Gut Environmental System]

We focus on gut environment created by commensal and fermented microbiota together with dietary components in the relationship with health and diseases. We obtain the data at molecular, cellular, living body, and environment levels from both cohorts and animal models, which allows us to apply them to the development of medicine, functional foods and healthcare products.

Project Leader KUNISAWA Jun, Ph.D.

[KAGAMI Project]

D-amino acids research.
KAGAMI Project has identified D-amino acids, long-term undetected enantiomers of L-amino acids, as key biomarkers for several diseases, and now advances to the clinical application. This project also aims drug discovery based on D-amino acids research.

Project Leader KIMURA Tomonori, M.D., Ph.D.

[Laboratory of Immunosenescence]

We aim to understand the underlying immune status of individuals by analyzing age-related changes in immune function at the molecular level and elucidating the mechanism of immunosenescence. We also try to identify novel surrogate markers against cancers and infectious diseases based on basic immunological information obtained from our research. As a goal, we would like to apply all our information to both patient stratification in clinical trials and developing new immunotherapies and/or vaccines in the future super-aging society.

Project Leader YAMAMOTO Takuya, Ph.D.

Promising frontier research areaResearch and support of drug discovery related to biological resources area

[Laboratory of Cell Cultures]

Our laboratory runs the JCRB (Japanese Collection of Research Bioresources) cell bank and human tissue bank. JCRB is the premier global provider of biological material resources with a focus on the acquisition, certification, production, storage, development and distribution of cell lines and other materials.

Section Leader KOHARA Arihiro, Ph.D.

[Section of Laboratory Equipments]

Operational Equipment Laboratory promotes the operation and sharing of research equipment that supports advanced research to respond to various needs of the facility.

Section Leader KAMADA Haruhiko, Ph.D.

[Section of Laboratory Animals]

We are engaged in (1) management of the laboratory animal facility, (2) support work of animal experiments, 3) support work of various committees.

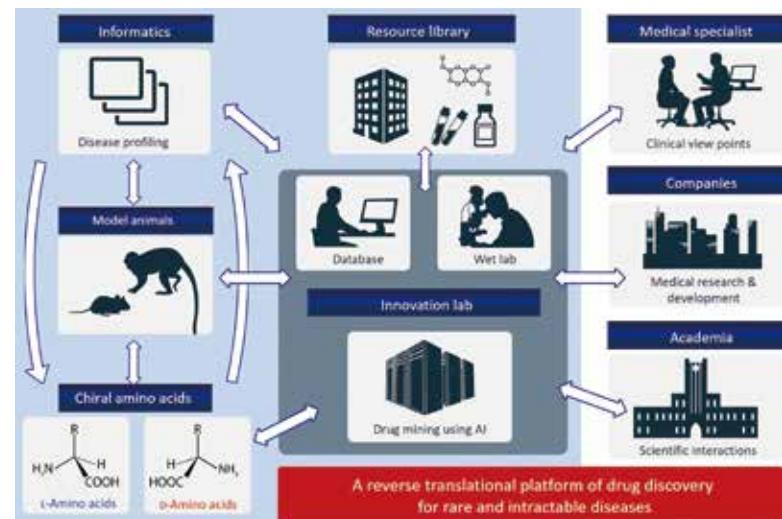
Section Leader SUZUKI Osamu, D.V.M, Ph.D.

Center for Rare Disease Research

A reverse translational platform of drug discovery for rare and intractable diseases

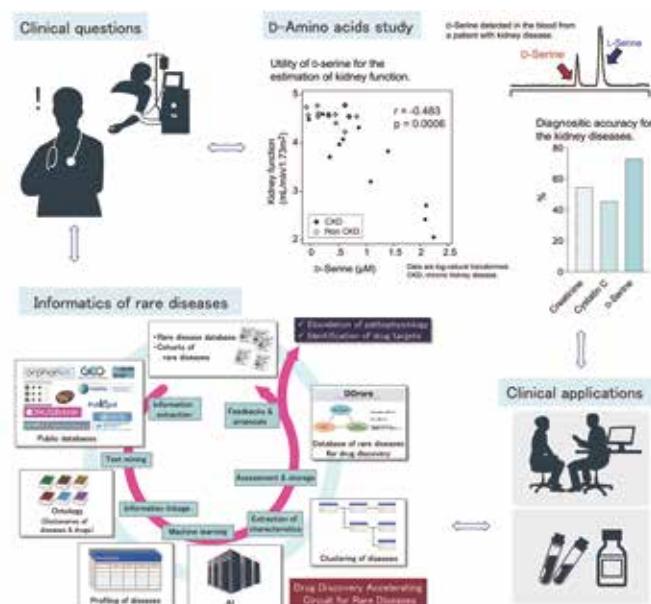
The Center for Rare Disease Research (CRDR) was established in 2017 as a platform for rare disease research and development. CRDR is an intellectual, technological, and informative hub that propels an industry-academia-government-clinic cooperation for the development of the nationwide research of rare diseases.

Due to their complex pathogenesis and rareness, it is very important to approach rare and intractable diseases from reverse translational research's (RTR's) points of views. From the observation of the patients in the real world, RTR researchers uncover the mechanisms of diseases and direct therapeutics research.



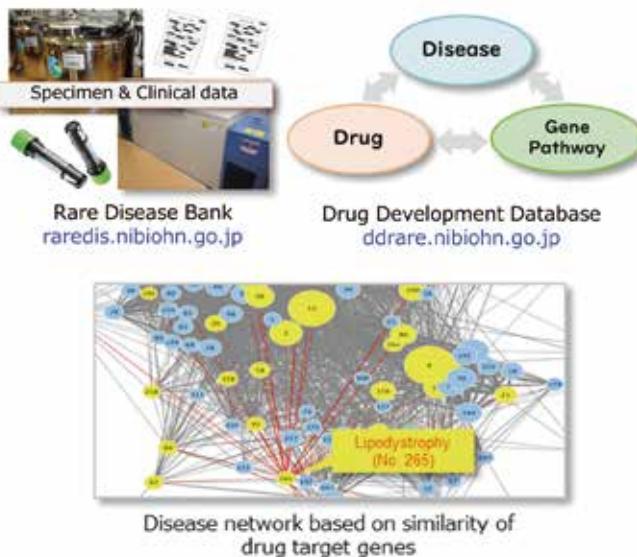
Reverse Translational Research (RTR) Project

We aim to solve clinical problems by pursuing basic research themes replaced from the clinical problems. In close collaboration within the CRDR center, with KAGAMI Project, and with research groups of rare diseases, RTR Project aims to develop the methods for the diagnosis or treatment of rare diseases.



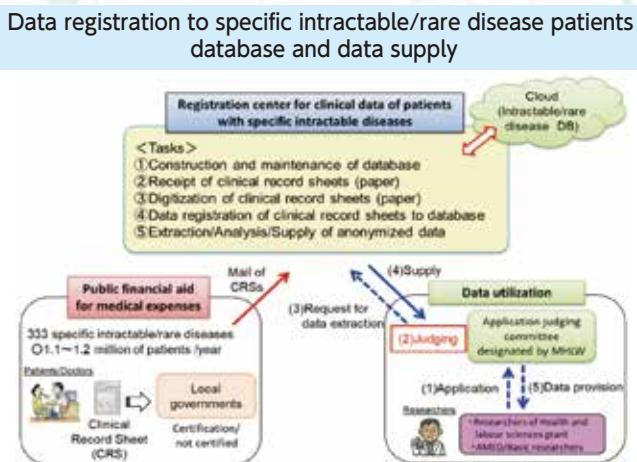
Laboratory of Rare Disease Resource Library

Taking advantage of our experience in operating a biobank (bioresource), we are focusing on data analysis (information resource) on rare diseases. We perform, across diseases, analysis of drug development data (clinical trials) by text mining and analysis of anonymized clinical data by machine learning (AI). In collaboration with national research groups and pharmaceutical companies, we aim to serve for diagnosis and drug development on rare diseases.



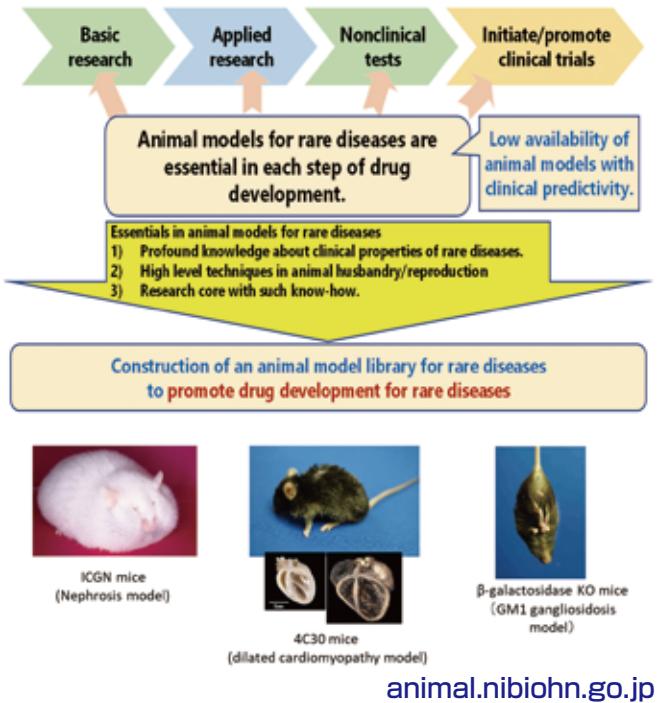
Platform of Therapeutics for Rare Disease

To promote research and survey for intractable and rare diseases, it is essential to organize clinical data in the real world. As a research platform, we annually register clinical data of 1.2 million patients with specific intractable / rare diseases designated by the Act on Medical Care for Patients with Intractable / Rare Diseases. After the medical certification reviews by local governments, clinical data are longitudinally registered to a cloud database. The anonymized data extracted from the database are supplied to the researchers in the field of intractable and rare diseases to find the therapeutics.



Laboratory of Animal Models for Human Diseases

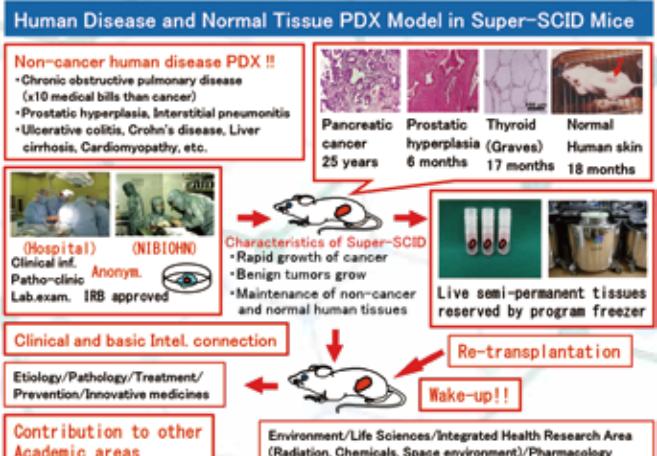
Small animals with diseased phenotypes play an important role in the development of therapy. We support the drug discovery by developing diseased small animals with spontaneous onset or with gene-modification, maintaining / preserving / supplying animal models, and developing related technologies.



Animal and Human Model Project for Healthcare and Drug Development

This project studies (i) Transgenerational health effects of radiation and chemicals (cancer, malformation, mutation, and life-style related diseases) and its prevention (Osaka Report, Nature, 1973, 82, 90, etc.), (ii) Analysis of new animal models of human diseases, and (iii) PDX's (Patient-Derived Xenografts) of cancer and various diseases. Especially, we are establishing PDX of normal human tissues and patients' tissues of non-cancerous diseases, which are currently big concerns in the national healthcare system due to huge expenses (10-folds more than those for cancer). 2020 National Academy of Science, Japan

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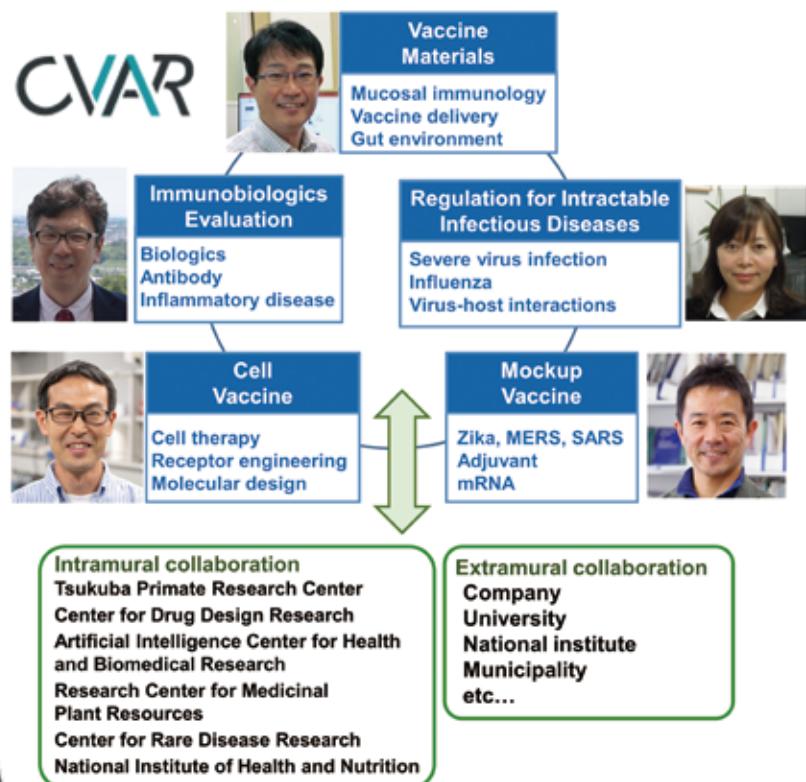
Center for Vaccine and Adjuvant Research

Aiming to develop innovative vaccines from Japan

In April 2017, Center for Vaccine and Adjuvant Research (CVAR) was established as Japanese research and development base for innovative research into next-generation vaccines and adjuvants, which have globally expanded, as well as the comprehensive promotion and support for the gathering of knowledge by industry, academia, and government. In addition to research projects that can contribute to the development of the innovative vaccines and adjuvants, we have worked on studies for the formulation of antibodies, cell-based vaccine, the construction of an immunological assessment system, clinical study designs, and the development of a side effect prediction system.



Director
KUNISAWA Jun,
Ph.D.



Laboratory of Vaccine Materials

(Project Leader KUNISAWA Jun, Ph.D.)

This laboratory focuses on the immune system in the intestine, where numerous kinds and numbers of immune cells are present for the immunosurveillance and the maintenance of homeostasis. In vaccine development, we aim to design and develop vaccines against infectious diseases, especially food poisoning by using protein engineering and antibody library. We are also interested in the commensal bacteria and its components, or dietary metabolites as an adjuvant to enhance the vaccine effects by regulating host immune responses. These studies will lead to the development of prospective vaccines, immunotherapies and functional foods against infectious, allergic, and inflammatory diseases.

Laboratory of the Regulation for Intractable Infectious Disease

(Project Leader IMAI Yumiko, M.D., Ph.D.)

In recent years, severe respiratory virus infections, including H5N1 avian influenza, Severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), and more recently, new-type of coronavirus infection (COVID-19) have occurred. When these infections become severe, patients cause the acute respiratory distress syndrome (ARDS) and multiple organ failures, and they require intensive cares including mechanical ventilation in the intensive care units (ICUs). To date, no effective treatments exist that can rescue such patients with lethal infectious diseases. From the aspect of virus-host nuclear interaction, our project aims to elucidate the pathogenesis of severe viral infections and to develop the new therapeutics including vaccines.

Laboratory of Immunobiologics Evaluation

(Project Leader YASUI Teruhito, Ph.D.)

Severe inflammation are associated with infectious diseases and immune disorders such as autoimmune diseases triggered by non-self- and self-antigens, respectively. We are trying to figure out molecular mechanisms underlying how inflammatory diseases are induced, and to develop the therapeutic drugs for the diseases. Our goal is to explore the therapeutic strategies in which human-derived autoantibodies and neutralizing antibodies are available for both clinical diagnosis and the treatment of infectious diseases. In addition, we expect to promote the development of more effective and safe biopharmaceuticals (biologics) such as vaccine based on the immunogenicity to human.

Laboratory of Cell Vaccine

(Project Leader KAWAHARA Masahiro, Ph.D.)

Severe inflammation are associated with infectious diseases and immune disorders such as autoimmune diseases triggered by non-self- and self-antigens, respectively. We are trying to figure out molecular mechanisms underlying how inflammatory diseases are induced, and to develop the therapeutic drugs for the diseases. Our goal is to explore the therapeutic strategies in which human-derived autoantibodies and neutralizing antibodies are available for both clinical diagnosis and the treatment of infectious diseases. In addition, we expect to promote the development of more effective and safe biopharmaceuticals (biologics) such as vaccine based on the immunogenicity to human.

Laboratory of Mockup Vaccine

(Adjunct Project Leader ISHII Ken, M.D., Ph.D.)

Today we face newly-emerging and re-emerging infectious diseases such as pandemic influenza (novel influenza), Ebola hemorrhagic fever, MERS (middle East respiratory syndrome) and SFTS (severe fever with thrombocytopenia syndrome). They break out somewhere in the world, and easily spread over the world due to busy transportation and logistics. While such neglected infectious diseases (NID) are unfamiliar to us and we are relatively unprepared, they cause serious public health problems once emerges. Considering such worldwide health concerns, researchers in Japan and the world conduct research and development of mockup vaccines across academia and the pharmaceutical industry. Mockup vaccines have been developed for influenza virus: the concept is that development of a mockup vaccine for a certain influenza stem would be efficiently applied to another (newly-emerging) stem in a timely manner. We develop a platform of mockup vaccines and evaluate its safety and efficacy.

Center for Drug Design Research

Original Drug Design Platform and Drug Discovery Support for Developing Innovative Drugs

The Center for Drug Design Research (CDDR) focuses on research and development of new technologies relating to drug screening, in-silico design and pharmaceutical optimization in order to contribute to the development of innovative drugs regarding the new modalities such as antibody, nucleic acids. Utilizing every technology and resource established within this center, we also work as a technical support base of the national project "Drug Discovery Support Network" that assists transitioning various drug seeds discovered by academia to the clinical applications.



Director
KONDO Hirosato,
Ph.D.

Research

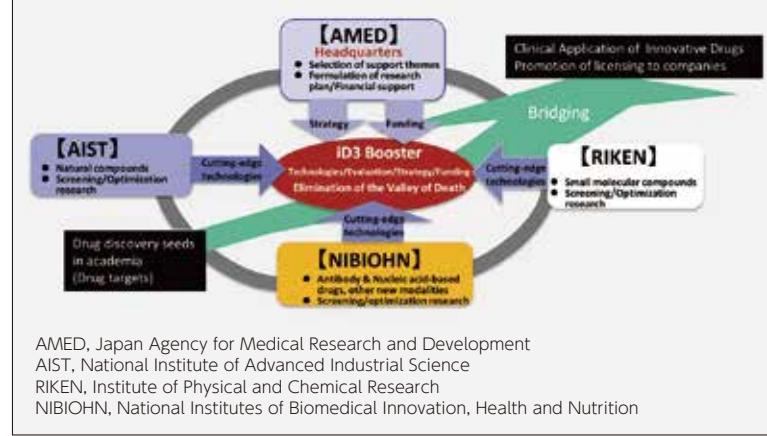
Drug Design Research

In recent medical drug development, not only small chemicals but also middle or high molecular weight drugs, such as biologics and nucleic acid drugs, are expected. There are also many expectations for drug discovery research based on clinical samples. However, drug discovery research that conducts from clinical samples to clinical candidate compounds selection requires many drug discovery basic technologies, especially the methodology for the drug design of the modalities such as antibody and nucleic acids have not been established well, therefore the construction of various technologies are required. In this center, we are focusing on the development of innovative drugs by the research of such drug design technologies.

Drug Discovery and Design Support

"Drug Discovery Support Network" is a national program to assist the successful transitioning of the drug development from the academia seeds. Our center is the technical support base of the above program assisting design and optimization of antibody drugs and nucleic acids using the in-silico drug design, medicinal plant library screening, and also providing various bioresources. We will assist the drug discovery via Drug Discovery Support Network and then contribute to the innovative drug development.

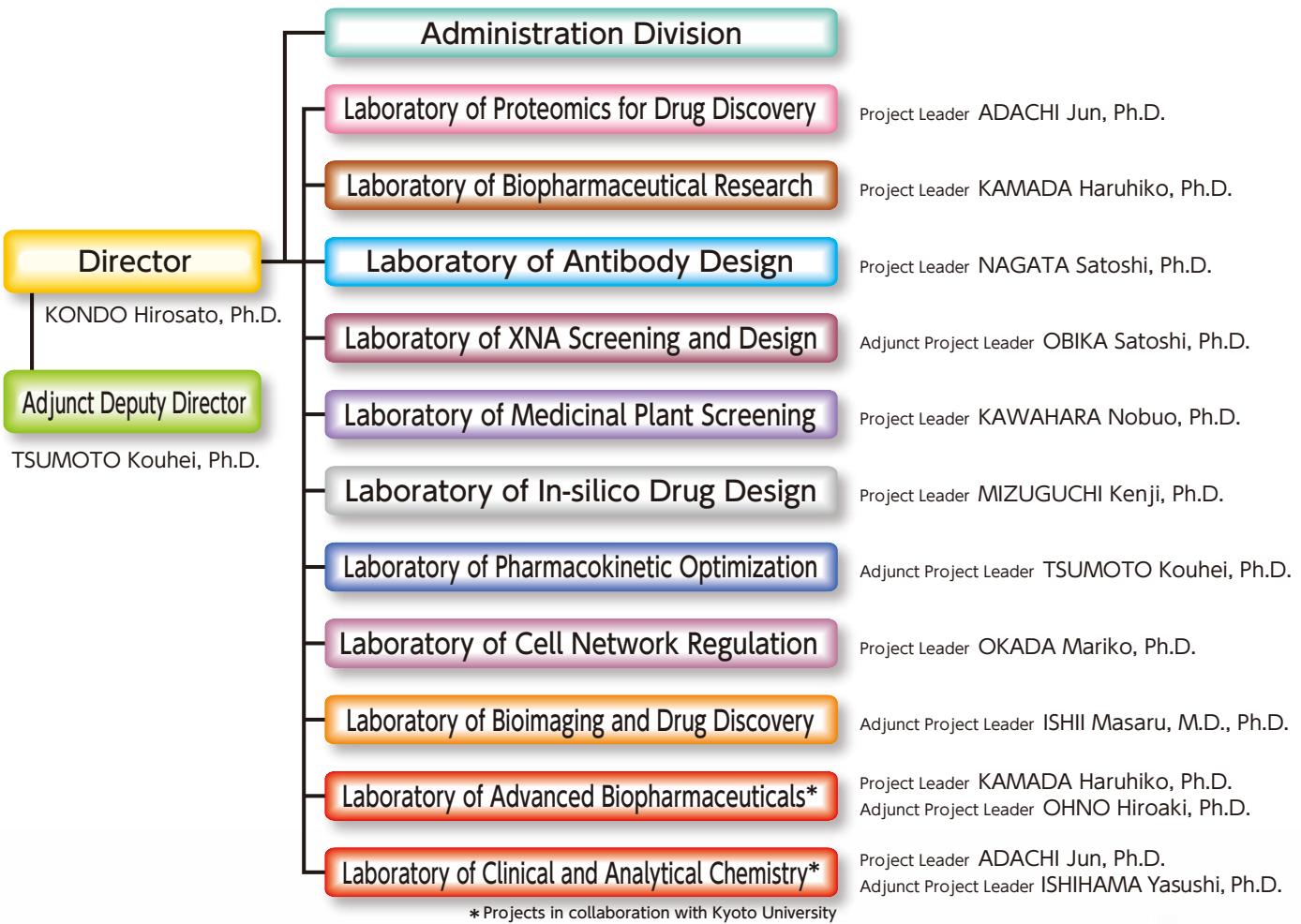
Drug Discovery Support Network



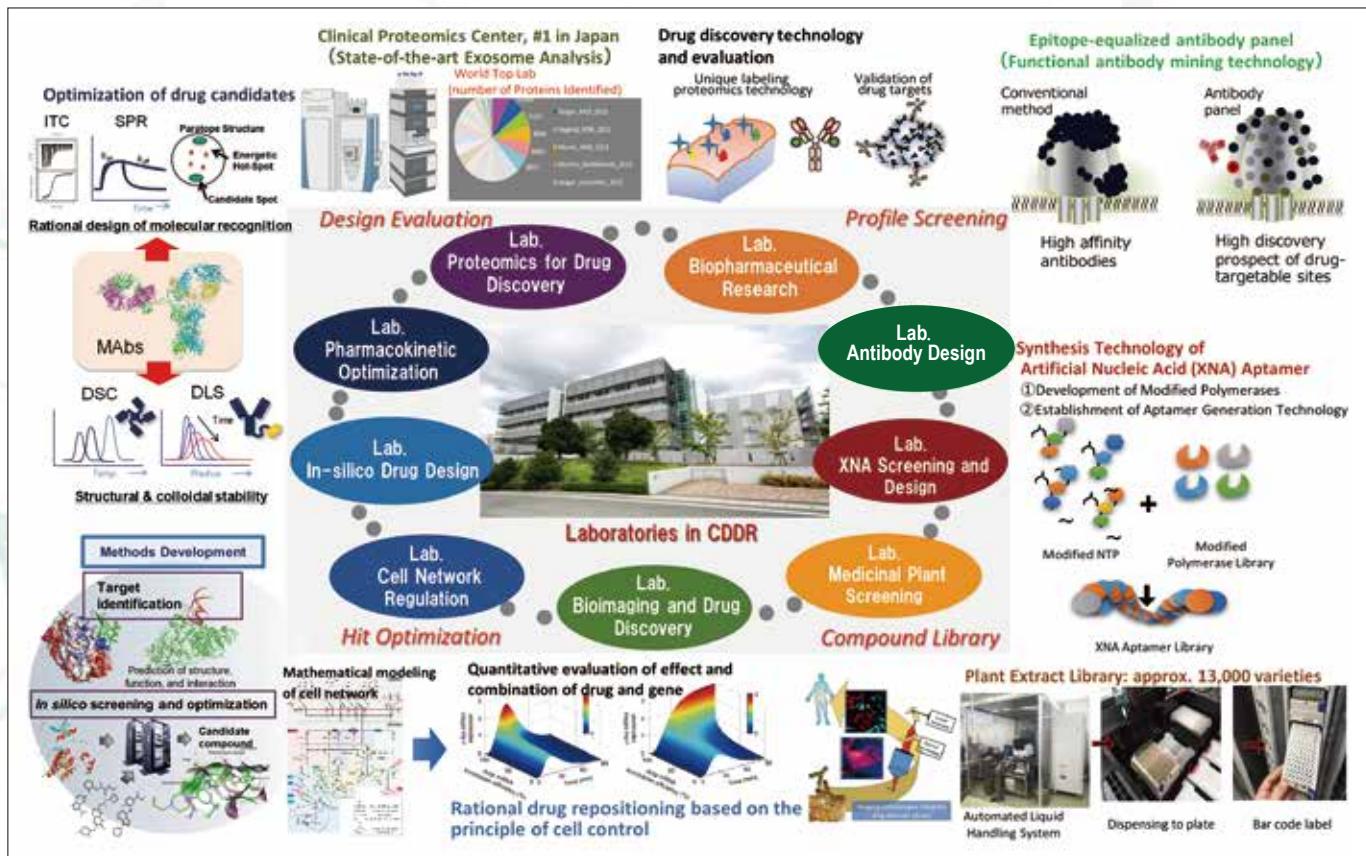
AMED, Japan Agency for Medical Research and Development
AIST, National Institute of Advanced Industrial Science
RIKEN, Institute of Physical and Chemical Research

NIBIOHN, National Institutes of Biomedical Innovation, Health and Nutrition

CDDR Organization Chart



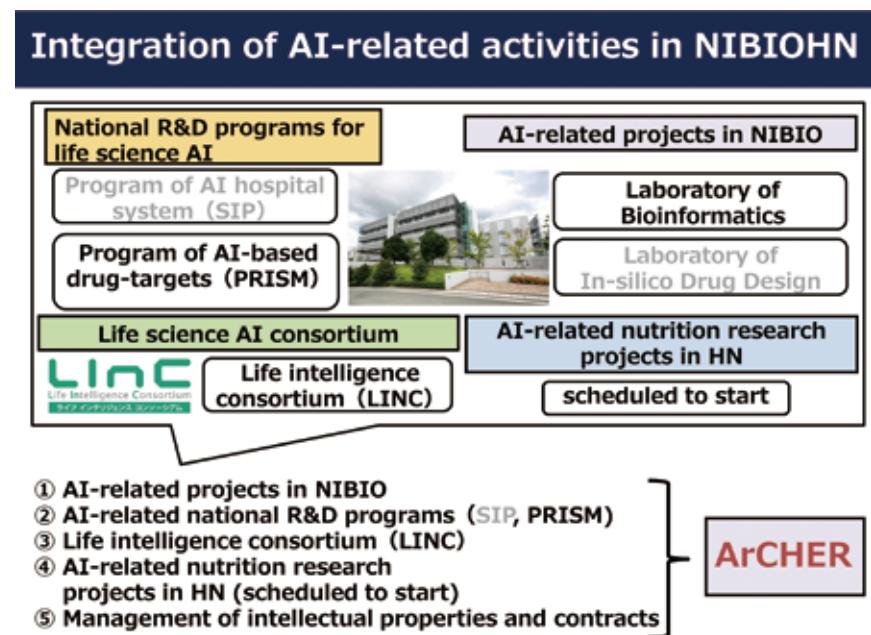
Research Laboratories in CDDR



Artificial Intelligence Center for Health and Biomedical Research

Development and Provision of an Artificial Intelligence Platform for Health, Nutrition, Drug Discovery, and Disease Research

The National Institutes of Biomedical Innovation, Health, and Nutrition (NIBIOHN) established the Artificial Intelligence Center for Health and Biomedical Research (ArCHER) on April 1, 2019, to integrate and expand artificial intelligence (AI)-related activities and other research capabilities. As the name of our organization indicates, the NIBIOHN is best suited to create an AI-based platform for a wide continuum of research covering health, nutrition, drug discovery, and diseases.



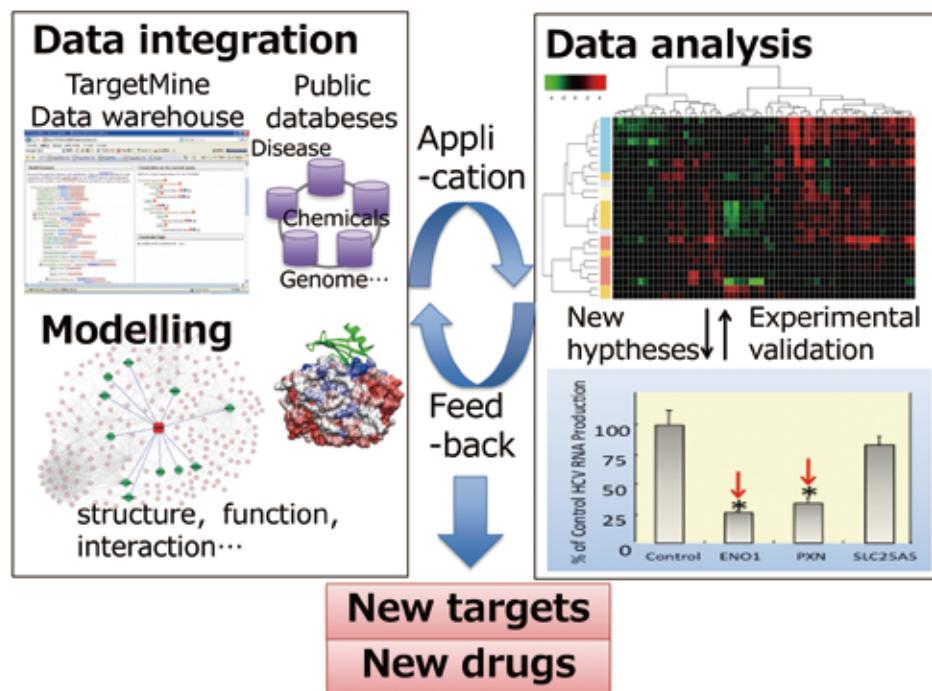
A central challenge in current AI development is to prepare appropriately designed databases, since machine learning algorithms have become increasingly commoditized. Frequently, available databases in health sciences and drug research are not optimized for AI analytics. Therefore, the task of maintaining and integrating available databases to enhance AI-based research is a major pillar of the ArCHER's mission. Another pillar is to develop a systematic framework to facilitate the use and sharing of medical data for purposes other than those for which they were originally collected. Moreover, the ArCHER recognizes the importance of recruiting, developing, and retaining competent staff. The ArCHER has attracted experts with diverse career backgrounds (e.g., academic/private sectors), nationalities, and skill sets. The ArCHER will provide a transdisciplinary "melting pot" that accelerates innovation.

Director
MIZUGUCHI Kenji, Ph.D.

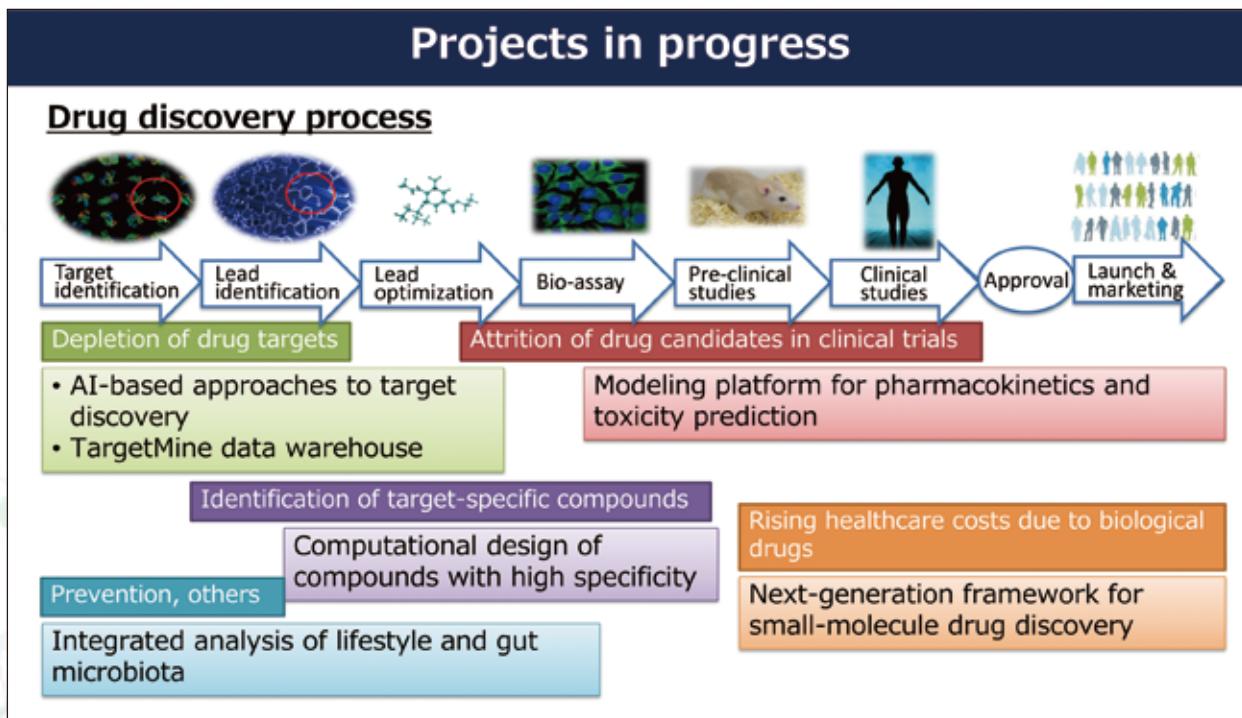
Laboratory of Bioinformatics

(Project Leader MIZUGUCHI Kenji, Ph.D.)

This laboratory carries out bioinformatics and computational biology research into drug discovery and development. We aim to establish systems approaches to drug discovery by developing novel computational techniques and analyzing an array of disease-related data in collaboration with wet-lab groups. We are developing a new AI platform to utilize clinical information and accelerate drug discovery.



We apply AI and informatics to identify drug targets and their corresponding candidate molecules, predict human pharmacokinetic and toxicity profiles in pre-clinical studies, and discover measures for disease prevention.



Section of AI Research Planning and Promotion

(Manager SHINDO Masanori)

This section provides management and administrative support to facilitate the research projects of the ArCHER. Specifically, the responsibilities of this section relate to the management of intellectual properties, contract agreements, public relations, planning, IT infrastructure-related support, and coordination with external organizations.

Research Center for Medicinal Plant Resources

As best represented by Chinese herbal medicine, medical plants have been used as ingredients for pharmaceutical products from ancient times. The Research Center for Medical Plant Resources, the only comprehensive research center in Japan for medical plants, performs research and development on technology related to the cultivation and breeding of medicinal plants, chemical and biological evaluations. And we cultivate and preserve more than 4,000 species and groups of medicinal plants suitable to the vegetation of each area at three divisions in Japan, to supply seeds and seedlings and offer guidance on cultivation technology to various research institutes. Moreover, we open it to public "The database for the medicinal plants" that includes growth characteristic, cultivation method, related crude drugs and Kampo formulae of the major medicinal plants we possess.

General description of each division

Tsukuba Division (Tsukuba City, Ibaraki Prefecture)



Director
KAWAHARA Nobuo,
Ph.D.



Poppy



Ephedra

Hokkaido Division

(Nayoro City, Hokkaido)

[Features] Performs research on the cultivation and rearing of top quality plants from medicinal plants in northern Japan. Plants used by Aynu are also collected.

[Representative plants] Rhubarb, gentian, glycyrrhiza, astragali radix and saussureae radix, etc.



Rhubarb



Gentian

Tanegashima Division

(Nakatane-cho, Kumage-Gun,Kagoshima Prefecture)

[Features] Performs research on cultivation, collection and preservation of medicinal plants in southern Japan.

[Representative plants] Cinnamomum sieboldii meissen, curcuma, rauwolfia serpentina, cassia angustifolia, etc.



Curcuma



Rauwolfia serpentina

Comprehensive Medicinal Plant Database

"Comprehensive Medicinal Plant Database" provides useful information for standardization of crude drugs using for Kampo medicines and for cultivation promotion of medicinal plants on our website (<http://mpdb.nibiohn.go.jp>) from April 2013.

National Institute of Biomedical Innovation

Comprehensive Medicinal Plant Database

Detail of database
If you click this link, the screen goes to detail information.

Search

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Tsukuba Primate Research Center

Tsukuba Primate Research Center (TPRC) is the only facility in Japan that can perform research in all areas including breeding and utilization of cynomolgus monkeys (*Macaca fascicularis*). TPRC was established in 1978 as the Tsukuba branch of the National Institute of Health (current the National Institute of Infectious Diseases, NIID). The primary duty of the TPRC was breeding, maintenance, and supply of high-quality cynomolgus monkeys for the national control tests of attenuated live vaccines and research on infectious diseases. In 2005, the TPRC was separated from the NIID and transferred to the National Institute of Biomedical Innovation (NIBIO). The NIBIO was then integrated with the National Institute of Health and Nutrition in 2015 and reorganized as the National Institutes of Biomedical Innovation, Health and Nutrition (NIBIOHN).



Consideration of animal welfare

Basic resource

- Supply of multipurpose, high-quality monkeys**
 - Supply SPF monkeys with detailed individual recognition data
 - Supply of special monkeys such as pregnant monkeys, embryos and aged monkeys
- Provision of technologies and information**
 - Breeding and rearing technology
 - Quality control technology
 - Individual recognition data base

Strategic resource

- Spontaneous diseases model development**
 - Familial disease models
- Experimental induction diseases models**
 - infectious diseases, nervous diseases, cardiovascular diseases etc.
- Provision of technologies and information**
 - Inspection technique, analysis technique
 - iPS and ES technique

The activities of the TPRC involve promotion of research and development of innovative drugs and therapeutics using cynomolgus monkeys, as well as development, management, and supply of the monkeys as research resources. The high-quality cynomolgus monkeys maintained and controlled in the TPRC can greatly contribute to the evaluation of the effectiveness and toxicity of new drugs and medical technology and for pre-clinical trials. The non-human primate shared facilities of the TPRC respond to collaborative researches in various fields of biomedical sciences or on infectious diseases between researchers in the TPRC and third parties including private companies.

Research and promotion of drug

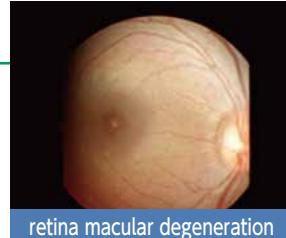
- ★ Development and supply of high quality NHP
- ★ R & D of drug and medical equipment
- ★ Evaluation of drug
- ★ R & D of drug, vaccine and diagnostic tools
- ★ Development of NHP model of human disease
- ★ Operation and management of shared facilities

Research

Cynomolgus monkeys show human-like characteristics. The TPRC is continuously monitoring for such specific pathogens and aims to maintain Specific-pathogen free (SPF) conditions in the colonies. The cynomolgus monkeys at the TPRC originally come from the Philippines, Malaysia, and Indonesia and are maintained and managed such that monkeys from different habitat areas are not mated. Breeding is conducted to maintain hereditary differences for many generations within a certain constant deviation, with an aim to avoid inbreeding. These monkeys are utilized by medical research, since monkeys are breeding and keeping as a medical research specialization.

Studies on Spontaneous Diseases

Some spontaneous diseases have been found, and the familial progress of diseases such as macular degeneration, dilated cardiomyopathy, and diabetes has been confirmed. Data on the familial progress of these diseases is a useful tool for studying pathological mechanisms and therapeutics. Since cynomolgus can be used for longevity studies such as those focused on Alzheimer disease using aged animals that are more than 20 years old, which correspond to ≥ 60 years of age in humans. Some obese animals develop hyperlipidemia or diabetes and can be used as a model for life style-related diseases. Thus, the extraction and analysis of spontaneous diseases makes a substantial contribution to the study of human diseases.



retina macular degeneration



hyperlipidemia



Aging



Endometriosis

Research on Disease Models

The TPRC is also proactively trying to develop model animals for these diseases by artificial manipulation. Research on infectious diseases such as tuberculosis, prion disease, influenza, and AIDS, and other medical science research in areas such as regenerative medicine, gene therapy, and cranial nerve diseases are conducted at the TPRC.



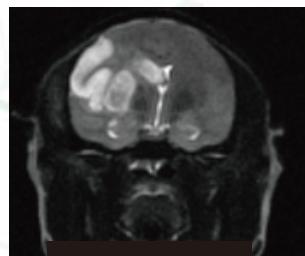
AIDS virus



Infectious Disease Experimental Facility



CT imaging of tuberculosis



Brain infarct model



Operation room



Drug solution shower room in ABSL3



Animal cage in ABSL3

Shared Facilities

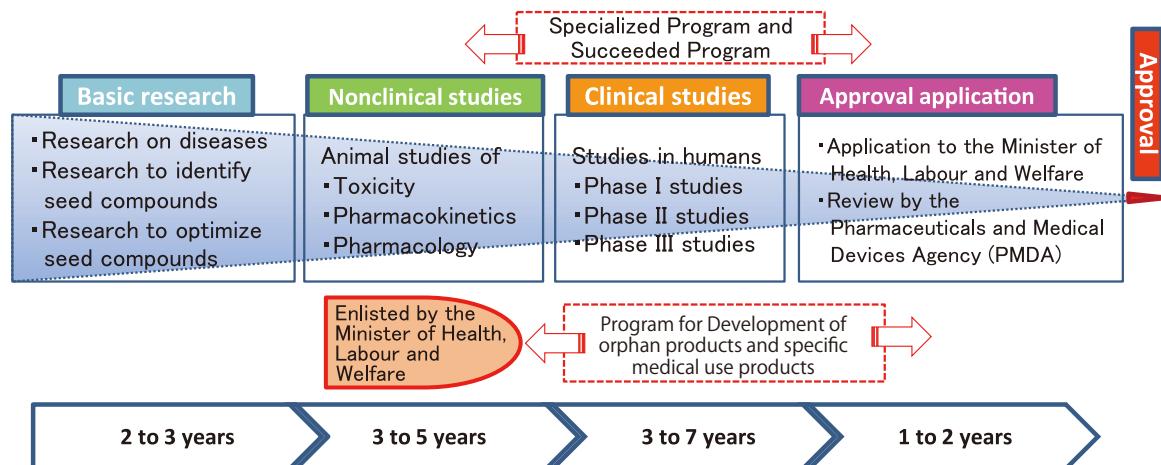
Cynomolgus monkeys at the TPRC are made widely available for use as bioresources for domestic research institutions to promote health science studies in these shared facilities. Researchers from third parties such as universities can utilize the shared facilities after submission of a shared facilities utilization plan and after review and approval by the Shared Facilities Steering Committee. Researchers from private companies can also use the shared facilities after conclusion of a collaborative research contract with the NIBIOHN.

Department of Research and Development

Promotion of development of drugs and other products

In order to effectively promote the development of drugs, medical devices, and products for regenerative medicine and other purposes, it is necessary to facilitate mutual collaboration (including national testing and research institutes) among universities, industries, and public organizations, according to the stage of development.

Therefore, the Department of Research and Development provides instruction, advice, and other types of supports by the program director (PD) and program officers (POs) accelerate the practical application of drugs and other products, taking advantage of its expertise and experience of development of drugs and other products.



Program for the promotion of development of Orphan Products and Specific Medical Use Products

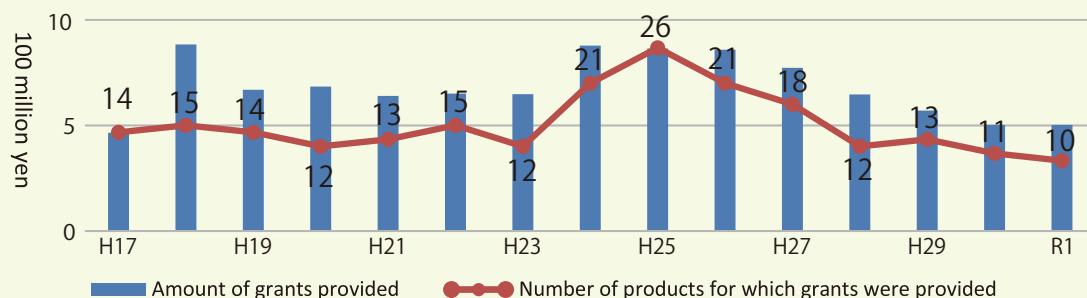
Drugs, medical devices, and products for regenerative medicine for the treatment of intractable diseases, and drugs unspecified pediatric usage and dosage, are urgently needed in healthcare. However, research and development by companies that started development of these products, or by other companies, tends to be slow due to the small number of patients, lack of methods for evaluating efficacy, difficulty in recouping the investment required for development, and other problems.

In our program for the promotion of development of orphan products and specific medical use products, we provide support in the form of grants, instructions, and advice with the goal of promoting the development of products designated by the Minister of Health, Labour and Welfare.
(Program for the promotion of development of specific medical use products will start in the autumn of 2020.)

Main achievement

We provided grants for 186 orphan drugs, 13 orphan medical devices, and 5 orphan products for regenerative medicine . Among them, 131 orphan drugs, 10 orphan medical devices and 2 orphan product for regenerative medicine have become available in clinical practice. (As of Feb, 2020)

<Changes in grants provided by the National Institutes of Biomedical Innovation, Health and Nutrition >



For further information (websites in Japanese)

[Guide for orphan drugs, etc.]<https://www.nibiohn.go.jp/nibio/part/promote/index.html>

Specialized Program and Succeeded Program

Specialized Program

In order to support venture and other businesses engaging in development on drugs and medical devices at the stage of practical application, we provide supports in various forms. For example, we provide instruction and advice so that application could be facilitated for "Projects suited for practical application", for which a grant was provided from fiscal year (FY) 2004 to FY 2010. So far, two products have been approved.

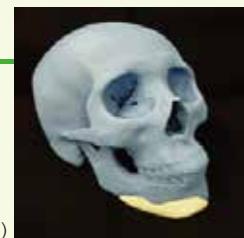
Main achievements ■ CT-bone®

Company that developed the product: Next 21 K. K.

Purpose of use: An artificial bone molded with 3D printer designed based on the CT data of the affected part is implanted for repair the bone defect department.

It can be shaped to fit onto the bone of the patient.

Grant period: From FY 2006 to FY 2008, Approval granted in: April 2018



(Image provided by: Next 21 K. K.)

Succeeded Program

To promote research and development of drugs, medical devices, and other products based on cutting-edge technologies in the private sector, we assist corporate bodies that are conducting research and development funded by multiple companies. To this end, we provide support, including instruction and advice, to relevant companies that received funding from the Organization for Pharmaceutical Safety and Research (current Pharmaceuticals and Medical Devices Agency) from FY 1987 to FY 2003. Some of the products developed with our support have been launched and continue to be developed by the licensees.

Main achievements ■ A kit for preparing iPS cells

Company that developed the product: DN AVEC Research Inc

Intended use: Development of this product is continued by the ID Pharma Co.,Ltd/I'rom Group Co.,Ltd, which were licensed to use a patent held by the company that initiated development, and the product was launched in May 2011. By promoting the efficient expression of Yamanaka's four factors in cells using the Sendai virus vectors, the kit allows iPS cells to be reliably prepared using a small amount of biological material (if blood is used, one drop).

Grant period: From FY 1995 to FY 2003.



(Image provided by: ID Pharma Co.,Ltd)

Administrative Agency for Innovative AI Hospital System



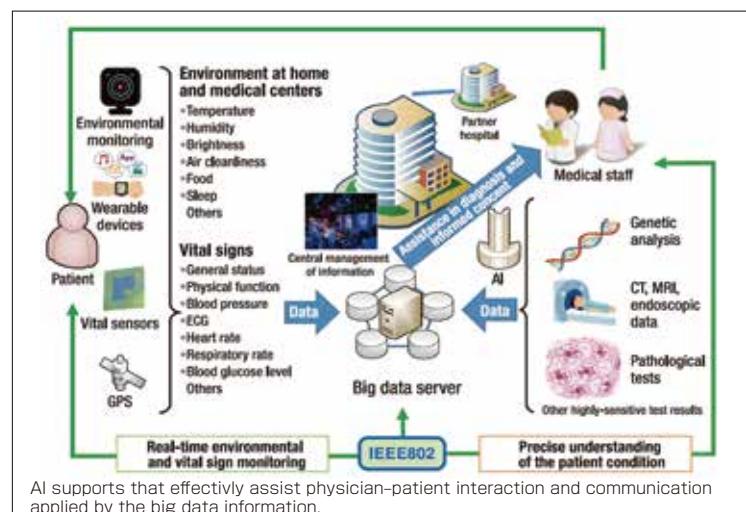
Cross-ministerial Strategic Innovation Promotion Program (SIP), Innovative Artificial Intelligence (AI) Hospital System, is promoted by the Cabinet Office. Department of Research and Development is responsible for administrative tasks involved in the open call for the main research organization, contract and expenses.

Artificial intelligence (AI) technologies promote patient-friendly, high-quality medical care!

A database consisting of a large amount of data (big data) from the medical care-based Internet of Things (IoT) will be established. Its objectives include ensuring high-quality medical care in the "super-aging" society, suppressing national medical spending, enhancing the international competitiveness of the medical care industry of Japan, and reducing the workloads of medical care professionals. Furthermore, AI technologies will be used to create new platforms that will assist in the diagnosis, training, and communication of inter-medical care professionals as well as in improving their interactions with patients and their family members.

Expected Outcomes

This program will develop a comprehensive package of advanced medical care services that are optimized by AI technologies and big data analytics. This program will help spread high-quality medicine that offers minimally invasive and personalized treatment options based on the genetic, physical, and lifestyle characteristics of individual patients. The advantages of this high-quality medicine include prolonging healthy lifespans, suppressing the increasing health care expenditures by identifying ineffective therapies and therapeutics, and strengthening the workforce. Simultaneously, the new technologies that will become available through this program will help reduce the workloads of physicians, nurses, and other medical care personnel, thereby maintaining the availability of high-quality medical care services in the very high-aged society. Moreover, the new technologies that will support the AI hospital system will increase the international competitiveness of the medical, pharmaceutical, and health care industries of Japan.



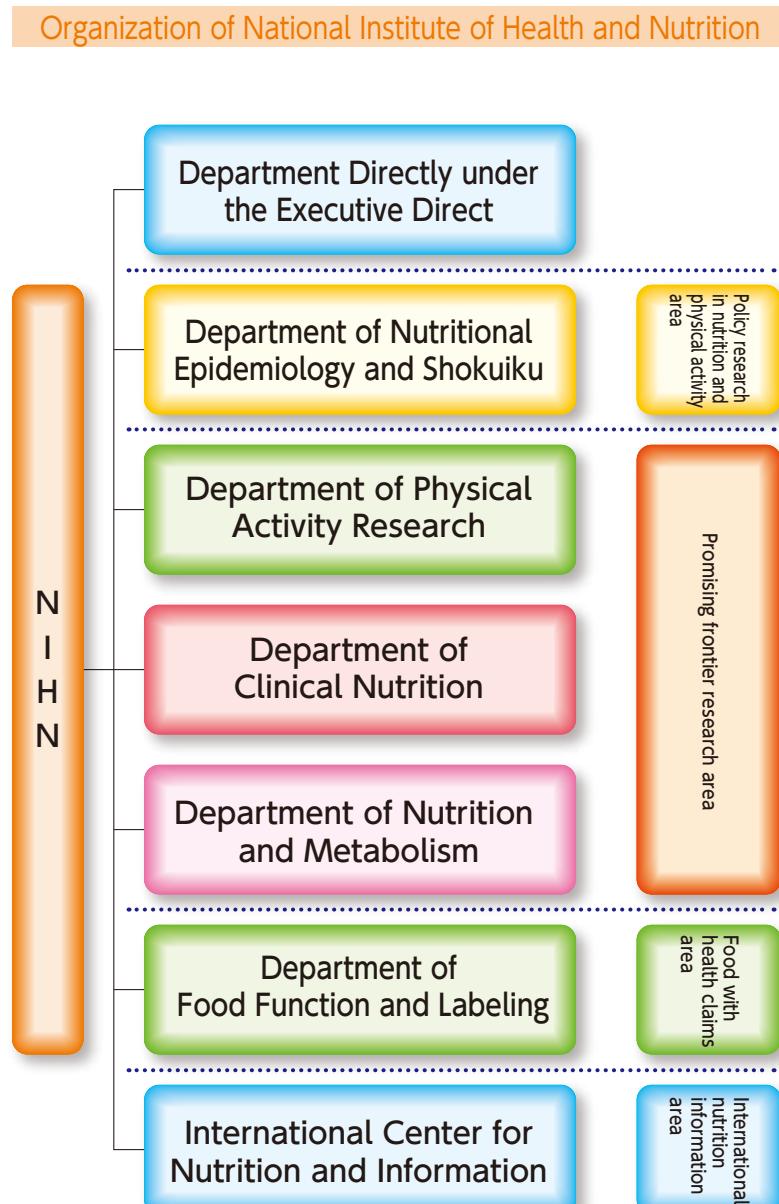
AI supports that effectively assist physician-patient interaction and communication applied by the big data information.

National Institute of Health and Nutrition (NIHN)

NIHN conducts research on nutrition and physical activity to achieve extension the healthy life expectancy of the people. Regarding nutrition research, we are conducting a wide range of research from basic research to energy metabolism and epidemiological research, as well as analytical research on National Health and Nutrition Survey. In addition, we are conducting researches to establish evidence of the health benefits of physical activity, establish a "Metabolic syndrome - Frailty checkup", and conduct a regional cohort study focusing on the intestinal environment. We are promoting awareness program such as sharing such knowledge internationally and providing correct information on health. As a new initiative for the next 100 years, research and innovation on new health and nutrition, such as Global Disaster Nutrition, Chrononutrition and AI Nutrition, has also begun.



Executive Director
& Director
ABE Keiichi



Department Directly under the Executive Director

Aims of the Department

The Department Directly under the Executive Director was launched in 2018 in order to conduct studies with both strengthening external collaboration and research innovation. As for external collaboration, we regularly hold forum or discussion with press or industries, and promote collaboration with overseas research institutions, with startup companies and with domestic cohort researches. As for promotion of innovation, we are accelerating social implementation research with local governments on frail measures. Furthermore, since last year, we have been preparing to launch a team of AI nutrition research as a new research innovation. We are aiming to accelerate AI nutrition research in the future, as a division in the Artificial Intelligence Center for Health and Biomedical Research (ArCHER) which was established in our institute last year.

Section of Research Collaboration and Partnership

In order to promote research activities and data utilization, we are improving the infrastructure of intra-network systems and enhancing information functions for research collaboration. Our section communicates the latest research results of the institute and the latest knowledge related to health, exercise, and nutrition around the world to nutrition professionals and the general public through our website and SNS. We are promoting cooperation with local governments and companies to achieve social implementation, and actively support internal and external cooperation by inviting external researchers and holding seminars and discussion meetings.



AI Nutrition Research team

The AI Nutrition Research team has started full-scale this year with a new leader. AI analysis of high-quality big data from cohort research, raw data using various devices, and image data such as motion capture, etc. is expected to lead to new insights and to be able to predict diseases or healthy longevity by future simulation. AI nutrition research aims to launch precision health care, under the growing attention to complicated major health issues, with coexistence of metabolic syndrome and frailty.



Division of Nutritional Epidemiology and Shokuiku

Aims of the Department

We conduct epidemiologic studies to examine the effect of diet and nutrition to people's health conditions. The results are used as scientific basis to set dietary guidelines, as they provide information on dietary intakes to promote health among the Japanese population.

We also conduct studies on Shokuiku (Food and nutrition education, in Japanese), to promote health throughout the life-course. We aim to clarify the approaches needed to promote adequate growth in infants and children, prevent metabolic syndrome in adults, and to maintain health among the elderly. We also strive to collaborate with health professionals to disseminate these scientific evidence.



Chief
TAKIMOTO Hidemi,
M.D.



Department of National Health and Nutrition Survey

We are in charge of tabulating and reporting the results of the annual National Health and Nutrition Survey, conducted by the Ministry of Health, Labour, and Welfare.

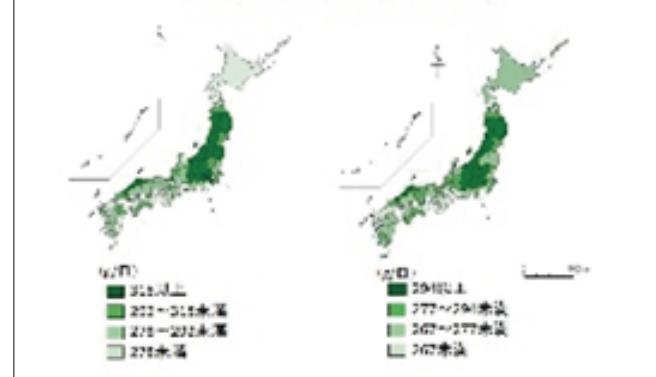
We also conduct studies which support the scientific basis to promote national health policies such as the Health Japan 21 (the second term). The information is updated in the below website.

Health Japan 21 (the second term) :

<https://www.nibiohn.go.jp/eiken/kenkounippon21/en/>



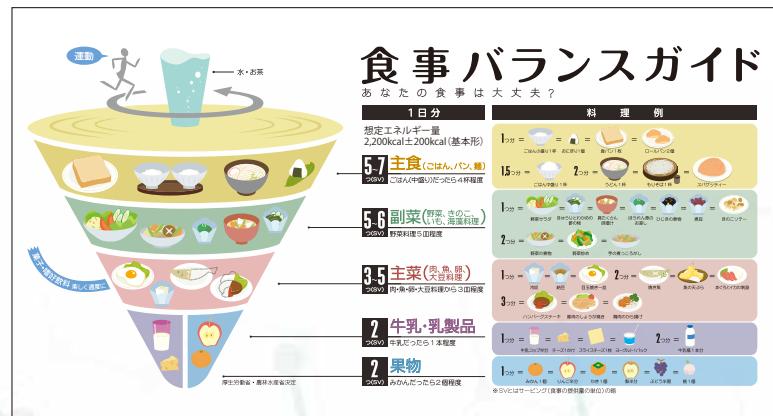
20歳以上の野菜摂取量平均値 男性(左)・女性(右)



Department of Shokuiku

We conduct research on scientific evidence to promote and disseminate Shokuiku. Applying the National Health and Nutrition Survey data and those of other cohort studies, we aim to provide concrete evidence regarding the relationship between healthy diet practices and health outcomes.

We also contributed to a Shokuiku leaflet released by the Ministry of Agriculture, Forestry and Fisheries. We provided the evidence of well-balanced meals, such as meals including grain, fish and meat, and vegetable dishes.



Department of Nutritional Guidelines

We conduct research on nutritional adequacy among populations with special needs, such as the elderly. Studies on nutritional physiology are conducted in setting such as the local population, facilities for the elderly, and hospitals. Through these studies we make efforts to develop methods for nutritional assessment, develop standards for energy and nutrient requirements, and setting frameworks for providing adequate diet.



Department of Physical Activity Research

Toward extension of healthy life expectancy through physical activity and exercise

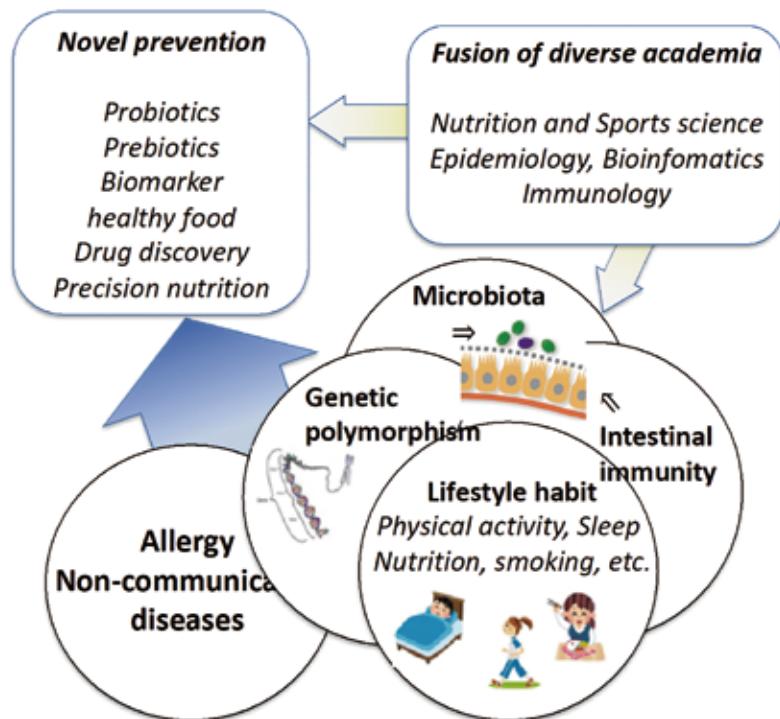


Chief
MIYACHI Motohiko,
Ph.D.

Aims of the Department

The increasing population with lifestyle-related diseases, metabolic syndrome (metabo), locomotive syndrome (locomo), or cognitive dysfunction which affects healthy life expectancy and quality of life, is a serious social problem. The Department of Physical Activity Research conducts research to clarify the scientific basis for prevention of these problems through the increase of physical activity, exercise, and fitness.

The research on physical activity is being conducted at many universities, including the Faculties of Physical Education and Sports Science. The feature of our research department is to work with researchers in nutrition and pharmaceutics to clarify the interaction between physical activity and exercise with diet and medicine. As part of this, we are working to build a microbiome information platform of healthy individuals as a synergy study with the Institute of Biomedical Innovation. In order to contribute to extending the healthy life expectancy of the people, we will promote unprecedented multifaceted physical activity research.



Section of Behavioral physiology

The Section of Behavioral physiology aims to explore factors related to the amount of physical activity and the establishment of exercise habits. Since various factors, such as genetic, physical, mental, and social factors, are involved in human behavior in a complex manner, and this laboratory uses a wide range of research methods such as genetics, physiology, and epidemiology to clarify the mechanisms. In recent years, as a synergy research with the Institute of Biomedical Innovation, we are investigating how the intestinal flora will affect the behavior, health status, disease, and lifestyle of the host. Through this kind of research, we would like to propose new ways to prevent lifestyle-related diseases and to extend healthy life expectancy.

Measurement of physical fitness (aerobic capacity) using treadmill



Section of Exercise Guideline

The Section of Exercise Guideline aims to provide scientific evidences for future revision of the "Exercise and Physical activity Reference for Health Promotion (EPAR)2013" and "Active Guide (Physical activity guidelines)" . The section examines the associations of physical activity, exercise and physical fitness with various health outcomes using cohort studies in Japan, and conduct review and meta-analysis of worldwide evidence published papers. We also focus on cardiovascular exercise epidemiology & physiology, in particular the associations of physical activity and fitness with cardiovascular aging.

Contribution to the establish, dissemination and enlightenment of exercise guidelines



Section of Healthy Longevity

Japan is facing a super-aging society, and it is expected that the number of elderly people aged 65 and over will reach about 40% by 2055, and extending healthy life expectancy is a major social target. Although the period in which elderly people can enjoy a healthy and independent life will be extended by extending healthy life expectancy, shortening the "care period" that requires nursing care and medical treatment, in other words, preventing frail, should be needed. In this laboratory, in cooperation with local governments, local residents, universities, national research institutes, companies, and etc., we establish scientific evidence to clarify the cause of the frail and the mechanism of its improvement, and aim it's social implementation.



The brochure for frail prevention co-edited with Osaka Prefecture

Department of Clinical Nutrition

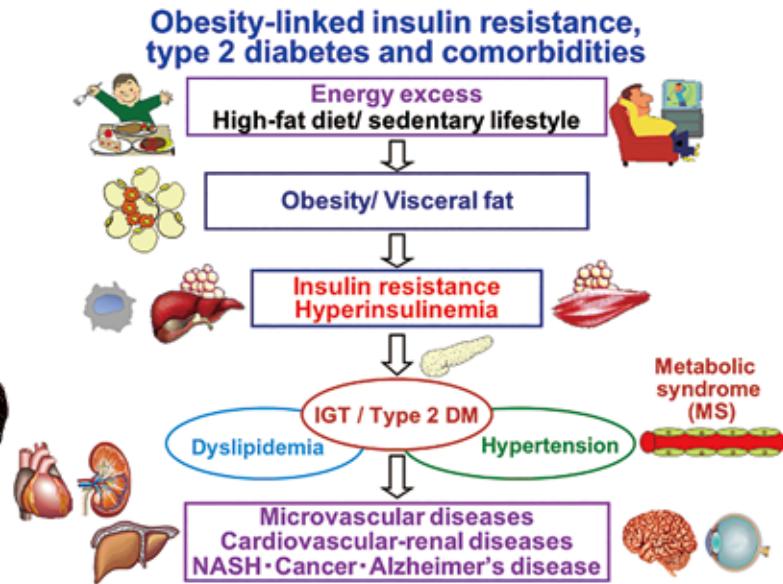
Elucidation of the causes of lifestyle-related diseases and development of nutritional therapy



Chief
KUBOTA Tetsuya,
M.D., Ph.D.

Aims of the Department

One of the reasons of a rapid increase in the number of Japanese people with lifestyle-related diseases is collapsed nutritional balance, which could lead to development of diseases by interacting with genetic factors or by deteriorating normal physiological functions. This department therefore undertakes research to elucidate the detail mechanisms to develop lifestyle-related diseases, focusing on diet and nutrition. Based on which, we aim to establish therapeutic and preventive methods for these diseases.

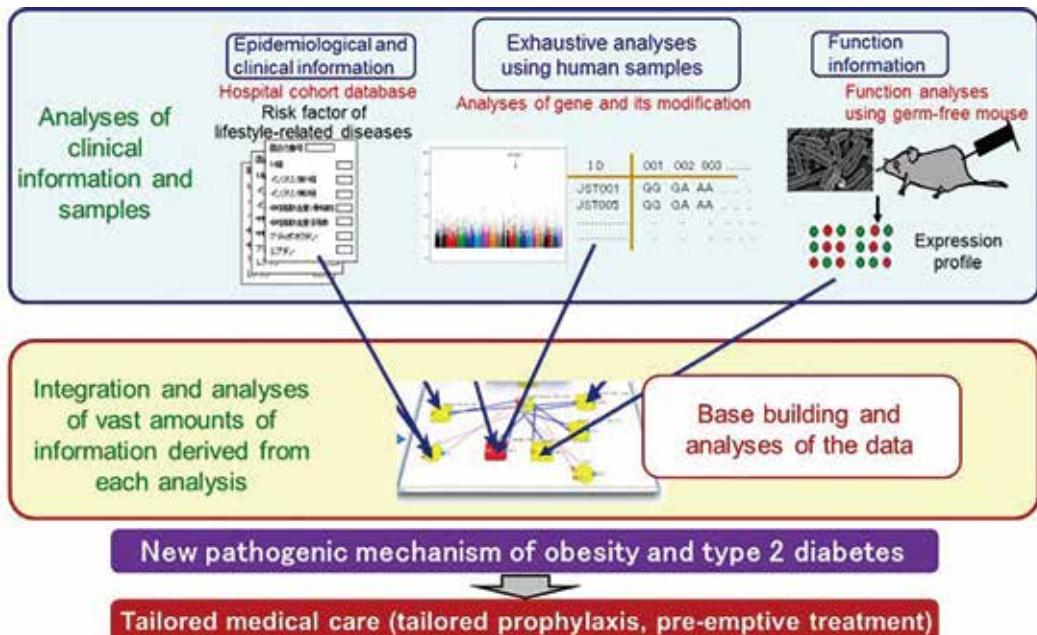


Based on the characteristics of lifestyle-related diseases, we are focusing on mainly the following key words

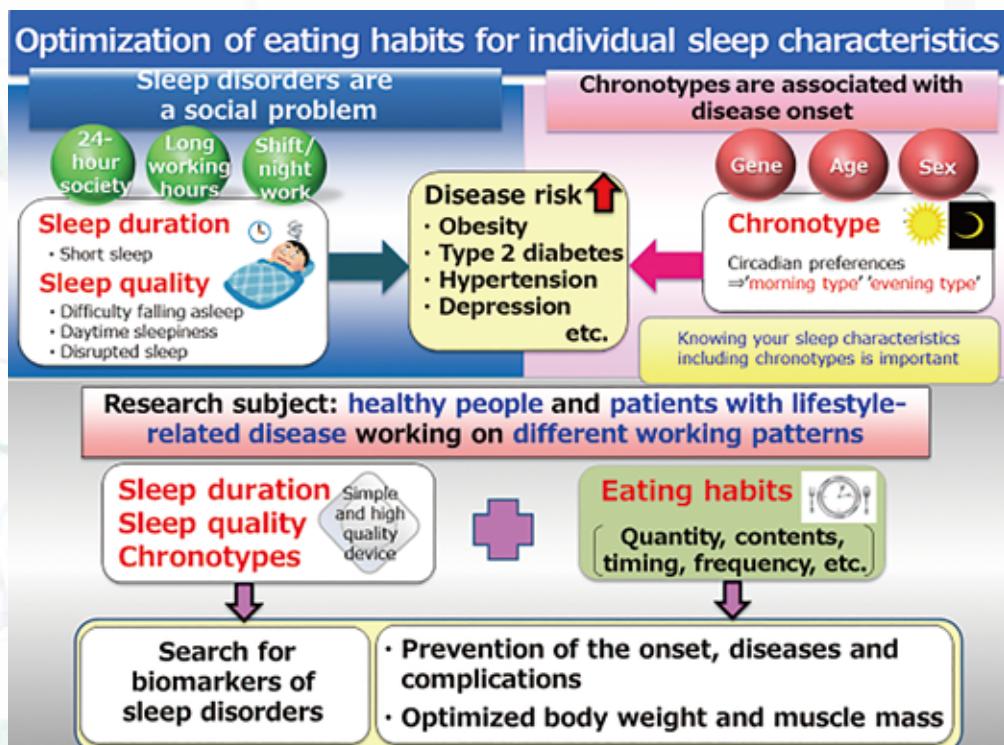
Dietary pattern, Sleep, Obesity, Type 2 diabetes

Section of Nutritional Therapy

It is recognized that lifestyle-related diseases like type 2 diabetes are largely caused not only by genetic predisposition but also by the change of environmental factors associated with diversifying diets. In order to explore the interaction between genetic predisposition and environmental factors, we undertake exhaustive analyses using clinical information and human samples and systematic analyses integrating the function analysis using mice. By which, we aim to explore pathogenic mechanism of type 2 diabetes and establish tailored prophylaxis of lifestyle-related diseases.



Sleep disorders have been reported to increase the risk of metabolic diseases such as obesity and type 2 diabetes. In addition to sleep duration and sleep quality, chronotypes play a crucial role in having physical health. Chronotypes, known as the 'morning type' (early riser) and 'evening type' (late sleeper), give an indication of individual preference for timing of different activities and the ease of waking up in the morning. Moreover, eating habits are known to be closely associated with sleep characteristics. We aim to identify the eating habits suited to sleep characteristics of individuals by evaluating chronotypes as well as sleep duration and quality, leading to the prevention of the lifestyle-related diseases.



Department of Nutrition and Metabolism

Appropriate intake of energy and major nutrients and chrononutrition



Chief
MIYACHI Motohiko,
Ph.D.

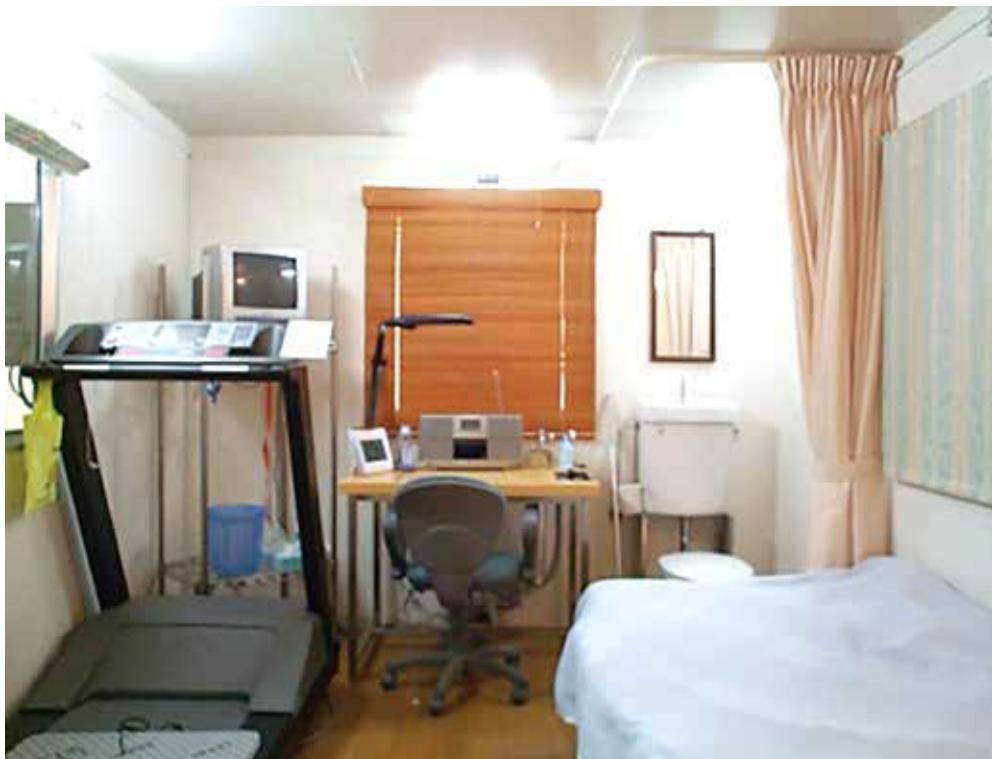
Aims of the Department

Our department undertakes research on energy metabolism and appropriate intake of major nutrients such as protein, lipid and carbohydrate with the aim to provide the data for establishment of nutritional guidelines such as the “Dietary Reference Intakes (DRIs) for Japanese” of energy and major nutrients. Moreover, we conduct chrononutrition research aimed at restoring disturbance of circadian rhythm by dietary content and ingestion methods to extend healthy life expectancy.



Section of Energy Metabolism

This section examines estimation methods of energy expenditure in one's daily life using doubly labeled water method and human calorimeter. Moreover, we undertake research to provide the data for establishment of estimated energy requirement (EER) in the "Dietary Reference Intakes (DRIs) for Japanese" which is revised every five years by the Ministry of Health, Labour and Welfare. Additionally, this section undertakes research on energy metabolism during resting and activity (energy expenditure and substrate utilization) and on regulatory mechanism and potential variables of energy balance including diet.



Human calorimeter

Section of Chrononutrition

The circadian rhythm maintains the 24-hour rhythmicity in our body. The suprachiasmatic nucleus in the hypothalamus of the brain is affected by the central clock, and peripheral tissues such as the liver and adipose tissue are affected by the peripheral clock. The central clock is affected by light, and the peripheral clock is affected by meals. It has been reported that irregular lifestyles can disrupt the circadian rhythm, which in turn can lead to the development of diseases such as obesity and cancer.

Therefore, this section conducts research aimed at restoring disturbance of circadian rhythm by dietary content and ingestion methods, and contributes to extension of healthy life expectancy.



Department of Food Function and Labeling

Aims of the Department

A variety of foods claiming beneficial effects are distributed worldwide. These foods are so-called health foods or functional foods, which contain high levels of functional components. Food labeling is key information on consumers' food choice. Foods in Japan cannot label a function claim in general, but with several exceptions. Foods with Health Claims, such as Foods for Specified Health Uses (FOSHU) and Foods with Nutrient Function Claims (FNFC), can label a functional claim under the Japanese Health Promotion Law and the Food Labeling Law.



Chief
CHIBA Tsuyoshi,
Ph.D.

Our department works to ensure safety and appropriate use of health foods through following approaches: (1) analyzing nutrients and/or functional components in foods, such as the FOSHU and the FNFC; (2) research for evaluating safety and effectiveness of functional ingredients; (3) research for conducting a survey of actual use of health foods and the appropriate labeling; (4) constructing an online database that compiles reports on the safety and effectiveness of health foods and their ingredients in order to share information with consumers and health professionals.

Section of Information Network of Health Food

Compiles reports on the safety and effectiveness of health foods and their ingredients, and informs consumers about risks and benefits of health foods



Information system on safety and effectiveness for health foods
<https://hfne.nibiohn.go.jp/>
(Japanese only)

- ✓ Component analysis for appropriate labeling
- ✓ Evidence for safety and effectiveness of health foods
- ✓ Actual situation of the use of health foods

Section of Food Component Analysis

Analyzes Food for Special Dietary Uses and Food for Specified Health Uses approved by the government



Section of Food Safety and Function

Evaluates the effectiveness and safety of functional foods and their ingredients



Human researches

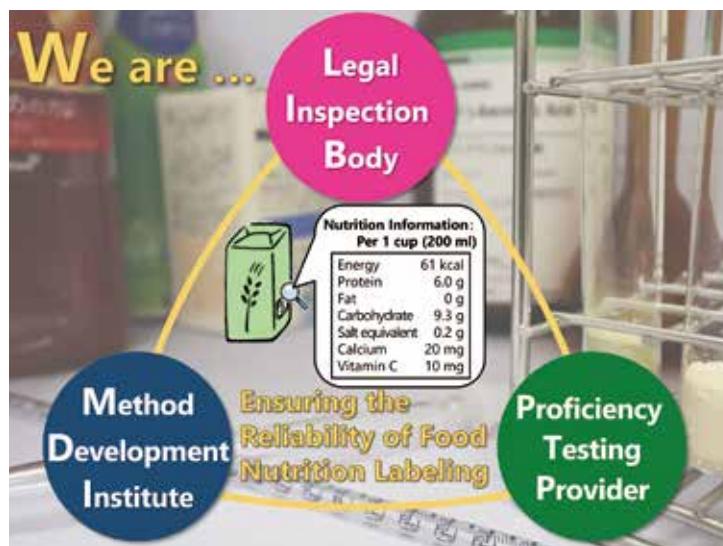


Laboratory experiments



Section of Food Component Analysis

This section undertakes laboratory analyses of foods with nutrient declarations to ascertain compliance with the Food Labeling Act. This section also conducts laboratory analyses of "Food for Special Dietary Uses" including "Foods for Specified Health Uses" to assure their compliance with the Health Promotion Act. Amounts of nutritional or functional components are confirmed whether to be in accordance with the information provided by food labels. We also provide proficiency testing schemes for analytical organizations performing food nutrition analysis. Furthermore, we work on the development and improvement of analytical methods for nutrients and function components in foods. Therefore, we contribute to ensuring the reliability of food nutrition labeling in Japan.



Section of Food Safety and Function

This section assesses the safety and efficacy of health foods and their ingredients, as well as their nutritional and physiological effects. There is a high proportion of people who use multiple health foods and drugs in combination. Thus, we assess the health effects of health foods and their ingredients, in addition to drug interactions, and study the safety and effectiveness of the combined effects of functional foods and/or nutritional components. We examine the effects of health foods on health condition and drug efficacy in elderly people and patients, using animal models. We also conduct research on the nutritional and physiological impact of foods, their ingredients, and nutrients that are expected to maintain and promote health and reduce the risk of lifestyle-related diseases, while also assessing their safety and efficacy.



Section of Information Network of Health Food

Abundant information on so-called health foods and food components adversely affects consumers' decision making and interferes with dissemination of the Foods with Health Claims and promotion of appropriate lifestyle habits. In this context, this section constructs an online database that compiles information on safety and effectiveness of foods and food components that has been recognized as health foods based on scientific evidence and shares such information with consumers and health professionals through the website "Information system on safety and effectiveness for health foods (<https://hfnet.nibiohn.go.jp>; Japanese only)". In order to pursue risk communication, this section also promotes to establish a system where we can obtain cooperation from the health and nutrition specialists and collaboration with other institutes and organizations.



International Center for Nutrition and Information

Establishing international networks and providing correct information

Aims of the Department

This center works on planning and coordination of various external programs at the NIHIN; establishment of international research networks in particular with Asian countries, fellowship/training programs for young foreign researchers, organization of international symposiums and provision of research findings through international journals and the website. In March 2014, "Unit for International Collaboration on Nutrition and Physical Activity" of the institute was designated as WHO Collaborating Centre for Nutrition and Physical Activity. Furthermore, as a GEMS/Food Collaborating Institution, we provide dietary intake data from the National Health and Nutrition Survey to the WHO.

Chief
NISHI Nobuo,
M.D., Ph.D.



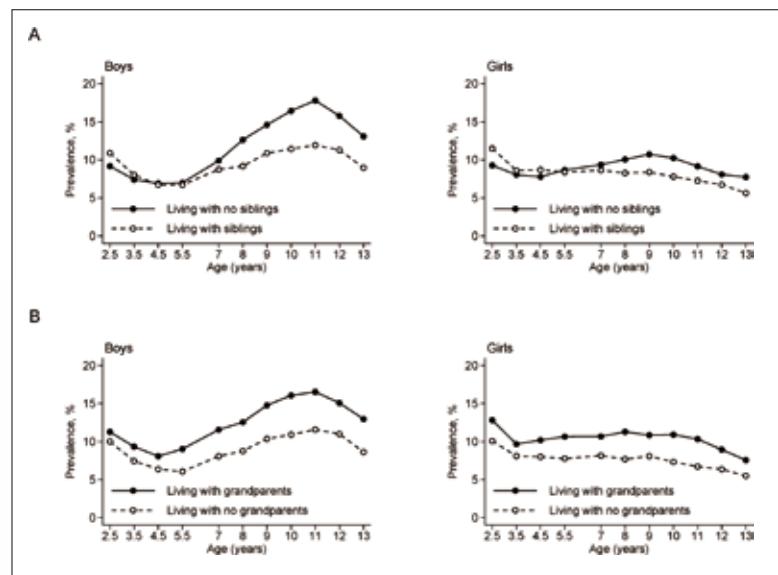
Section of International Nutrition Strategy

1. Promotion of collaborative research with institutes in the field of health and nutrition in Asian countries.
2. Promotion of cooperation and collaboration with international organizations.
3. We accept one or two researchers every year in NIHN Fellowship Program for Asian Researchers.
4. We host the international symposium called Asian Network Symposium on Nutrition every two years.



Section of Population Health Metrics

Our goal is to provide data and information for improving global health through statistical analysis of big data on health and nutrition. Especially, we analyze data from official health statistics such as the National Health and Nutrition Survey in Japan to establish methodologies for monitoring the status of health and nutrition at the national level. We also collaborate with researchers in global networks for population health metrics and evaluation.



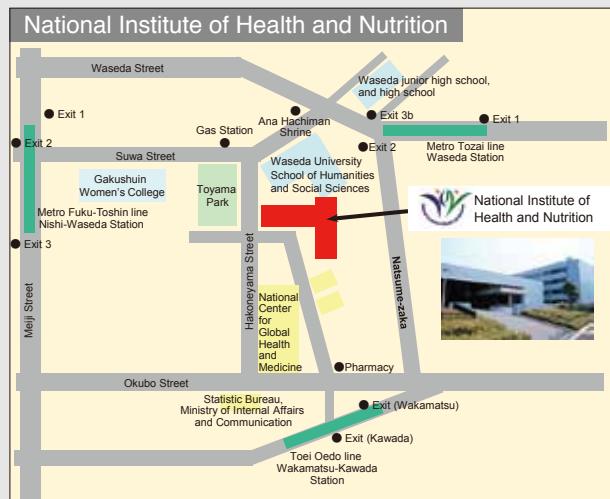
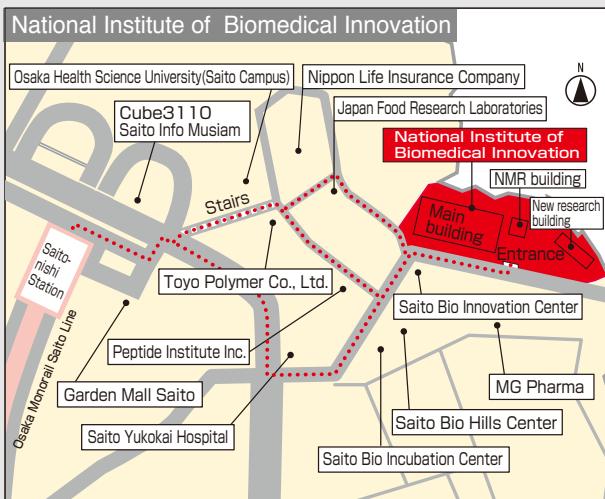
Section of Global Disaster Nutrition

Our mission is to reduce nutrition and health problems according to natural disasters with a slogan of "Evidence to Action".

1. Research for reducing nutritional disparity according to natural disaster
2. Develop nutritional support system during disaster
3. Provide information and logistic support



National Institutes of Biomedical Innovation, Health and Nutrition - Guide map



Access

[Train] Take the Osaka Monorail to "Saito-nishi". and walk 10 minutes.

[Taxi] about 20 min. from "Senri-chuo", about 15 min. from "Kita-senri" station

[Driving] About 15 min. from Ibaraki Interchange, Meishin Expressway
About 15 min. from Suita Interchange

Access

[Train] • 10 min. walk from Waseda station (Exit 2 or 3b),
Metro Tozai line
• 10 min. walk from Wakamatsu-Kawada station (Exit Kawada),
Toei Oedo line
• 14 min. walk from Nishi-Waseda station (Exit 1 or 2),
Metro Fuku-Toshin line

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