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# **KINDAI UNIVERSITY**

In Japan, we believe that the discipline involved in academic and sporting endeavors helps to build personal character. When you commit yourself fully to such pursuits, you gain the opportunity to grow in many different ways. Not only do you develop mental, physical, and technical skills, you also strengthen your sense of integrity and propriety. In valuing this spirit of self-improvement at Kindai University, we seek to foster well-rounded individuals with excellent character.



## **Founding Principles**

'Learning for the real world' and 'nurturing intellectual and emotional intelligence'

## **Educational Goal**

To develop caring, trustworthy, and respectable people



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# At a Glance

Kindai University was founded in 1925. Now one of Japan's largest universities, it has six campuses in western Japan and boasts research facilities across the nation-from Hokkaido in the north to Kagoshima in the south. Currently, Kindai University comprises 15 faculties with 49 departments, 11 graduate schools, 1 transdisciplinary graduate school, 18 research facilities, 2 junior colleges, 18 associated primary and secondary schools, and 2 teaching hospitals. The university has over 30,000 students and more than 550,000 alumni.

Kindai University conducts research in a wide range of fields and is making a name for itself as a leader in aquaculture, most notably for its work with bluefin tuna. Dedicated to meeting the needs of today's rapidly changing society, Kindai University will continue expanding its educational programs and facilities.



## **Our Name**

As of April 2016, the official English name of the university was changed from Kinki University to Kindai University. Our new name combines the kin from Kinki and the dai from daigaku ("university"). Kinki is the region in western Japan where the university is located; it covers seven prefectures and encompasses the cities of Kyoto, Kobe, Osaka, Wakayama, and Nara. Along with the name change, we also launched the Faculty of International Studies as part of our effort to broaden our global profile.

## Our Logo

The Kindai University logo represents the flower of the Japanese plum tree, the first flower to blossom after Japan's long, cold winter. The flower's five petals resemble both the shape of a person and the Japanese kanji character  $\pm$  (*dai*), the first character in 大学 (daigaku). There is a small gap in one of the petals indicating that the university's goals are not yet fully realized and that there is still potential for improvement and development.









# Learning & Growing for the Real World

Kindai University offers learning for the real world—a focus that puts our research programs at the international forefront of addressing some of today's most complex issues. With vibrant campuses, compelling curricula, and practical field studies, Kindai University shapes caring global citizens who can inspire trust and respect.



# Kindai University—Aiming Ever Higher for an Even Better Future



\*1: Applied via academic year 2024 general entrance examinations \*2: Source: University Rankings 2025, Asahi Shimbun Publications \*3: According to a 2022 study by MEXT

# 1001-1200

Times Higher Education World University Rankings 2024

1,350,728

Library books

(March 2024)

3,582

Administrative staff members

(May 2024)

(May 2024)

Full-time faculty members 2,263





# Leading the Way in Cutting-Edge Research

Kindai University's research centers are equipped with state-of-the-art equipment and facilities and are blessed with an ideal research environment. Our dedicated research teams strive to make meaningful contributions to society and to lead the world in their respective areas of research.



## Atomic Energy Research Institute (AERI)

AERI operates the UTR-KINKI research reactor, which has a rated thermal power of 1 W. This reactor is one of only three university reactors operating in Japan. Since its first criticality in 1961, it has been used to educate and train personnel for the nuclear industry. This extremely safe reactor has given hands-on experience of an operating reactor to many people—from members of the public to students specializing in nuclear engineering. Along with domestic users, researchers and engineers from overseas have made use of the facility.



## **Bio-Coke Research Institute**

Bio-coke is an environment-friendly biomass fuel that can be made from almost any photosynthetic plant, including what had been considered waste materials such as used tea leaves. An effective form of waste management, Bio-coke is also seen as a way to counter the over-reliance on fossil fuels. Someday, Bio-coke might replace the coal that industries currently use as a solid fuel for smelting iron, leading to a significant reduction in CO<sub>2</sub> emissions. This institute is working to bring Bio-coke to commercial production. It recently began several projects-both in Japan and overseas-to make Bio-coke from various bio-resources.



## **Experimental Farms**

Kindai University has two experimental farms in Wakayama Prefecture-one named Yuasa, the other Oishi. Yuasa Farm focuses mainly on the research and cultivation of fruit crops, including citrus and tropical fruits. Kindai-brand mikan (mandarin oranges) thrive in Wakayama's warm climate. More than 200 other citrus varieties are grown as genetic resources. Yuasa Farm has also researched mango cultivation and breeding for more than 30 years. In 2008, the farm's Aiko mango cultivar was registered as the first new mango cultivar in Japan. Kindai-brand mangos are popular

in department stores in the Kanto and Kansai regions as well as in high-end fruit shops. Since 2020, the farm has collaborated with a local brewing company in cultivating Yamada Nishiki rice and producing a sake named Kindai Sake.

Oishi Farm is in a highland area with a cool climate, making it ideal for raising ducks and cultivating buckwheat. The farm produces Oishi-kamo, Kindai-branded duck meat that is commercially available and popular nationwide. And the farm keeps working to improve the yield and quality of its buckwheat.

## Other Research Centers and Institutes

#### **Folklore Studies Research Institute**

Conducts research on Japanese folklore, with the aim of contributing to the creation and development of new aspects of Japanese culture.

#### World Economy Research Institute

Conducts active international exchanges and joint research with a focus on globalization of the economy and makes constructive government policy proposals on the Japanese economy.

#### Fundamental Technology for **Next Generation Research Institute**

Conducts research on such engineering fields as automotive technology, 3D modeling, architectural environment, biotechnology, and robotics.

#### Life Science Research Institute

Conducts joint research involving various faculties, such as medicine, agriculture, science and engineering, and pharmacy, with the aim of contributing to the health and welfare of humankind.

#### Science and Technology Research Institute

Conducts research on the fundamentals of science and engineering as well as their applications, with the aim of contributing to the development of state-of-the-art manufacturing technology and interdisciplinary technologies.

#### **Human Rights Research Institute**

Conducts research and investigations into human rights issues overseas and in Japan, such as the international protection of human rights and the social discrimination issue in Japan referred to as dowa.

#### **Pharmaceutical Research** and Technology Institute

Conducts unique, interdisciplinary research that includes searches for outstanding medicinal seeds (potentials) and the development of foods with health-promoting benefits.

#### Japan Cultural Studies Research Institute

Analyzes the current situation of Japanese culture and makes proposals on the direction it should take amid an increasingly globalizing international community

#### **Creative Management and** Innovation Research Institute

Conducts research and investigations into management innovations, with the aim of contributing to the development of business administration.

#### Advanced Technology Research Institute

Comprises four research centers focusing on bioengineering, robotics engineering, plants, and high-pressure protein.

#### **Oriental Medicine Research Institute**

Conducts research on boosting the safety and effectiveness of a new therapeutic approach that merges Oriental and Western medicine

#### Joint Research Center

Facilitates the research and education conducted by faculties in the natural sciences by providing various kinds of state-of-the-art scientific equipment. Branch centers are located at each of the university's campuses.

#### Agricultural Technology and **Innovation Research Institute**

Facilitates research in agriculture forestry and fisheries with the aim of promoting industry-government-academia collaborations and technological advancements in local communities, while also raising the level of fundamental scientific research.

#### **Cyber Informatics Research Institute**

This institute comprises five divisions: intelligent systems. real world computing, cyber security, ICT education, and social implementation

#### Design, Innovation and **Creativity Research Institute**

With a focus on education, research, and industry-academia collaborations, this institute fosters highly skilled designers. The institute brings together instructors from across Kindai University who can advance design research. Researchers here conduct R&D on prototypes for next-generation manufacturing applications in Higashiosaka.

See pages 19–20 for examples of Kindai research.  $\searrow$ 

# A Global Aquaculture Pioneer: Aquaculture Research Institute

Kindai University's aquaculture program and related research began in 1948. The university was the first organization to successfully establish full-cycle aquaculture of marine fish, including Japanese amberjack and red sea bream. The institute followed a process of raising adult fish from eggs rather than from wild-caught juveniles.

Wild stocks of many marine fish species are depleting fast, because of overfishing. Kindai University has sought a solution by focusing its research on full-cycle aquaculture. In 2002, we successfully completed the world's first full-cycle breeding program for Pacific bluefin tuna. Our breeding technologies have been so effective that we are able to produce tuna without relying on wild juveniles. Farming technologies like this will play a key role in conserving wild tuna stocks.

Tuna bred at the Aquaculture Research Institute have been trademarked as Kindai tuna. This brand has garnered widespread prestige, both nationally and internationally. Kindai University will continue to push the boundaries of

aquaculture research. The goal is to reduce pressure on wild fish stocks from fishing and capture-based aquaculture, while promoting the conservation of depleting wild resources.

## World's First Successful Artificial Production of Over 20 Fish Species

In 1965, the Aquaculture Research Institute became the first in the world to produce hatchery-reared Japanese flounder juveniles. Since then, the institute has succeeded in artificially producing more than 20 fish species—many of which are world firsts. These efforts help prevent the depletion of wild fish stocks and enable mass production of fish species that are in short supply. They also make it possible to bring prized fish to market at more reasonable prices. Responding to global food shortages, the Aquaculture Research Institute pursues sustainable food production by promoting a shift from fishing and capture-based aquaculture to hatchery-based aquaculture.



UMS・Kindai Aquaculture Developmen 近畿大学・マレーシアサバ大学春報期

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## In Global Media

The achievements of the Aquaculture Research Institute in full-cycle aquaculture of bluefin tuna have been covered by numerous news media, including the *New York Times*, *Bloomberg News*, and the *Wall Street Journal*. They have also been featured in TV programs on NHK (Japan's public service broadcaster) and the BBC, as well as in TV programs in South Korea and Taiwan.



# **Architects of a Better Future**

Working in fields that span the realms of science, medicine, engineering, and more, Kindai University's diverse



### Professor DOTERA Tomonari

Professor Dotera specializes in condensed matter physics and does research on soft matter quasicrystals. He has created several complex Archimedean tiling patterns in polymers, and—in a paper that was later cited in the explanation of the 2011 Nobel Prize in Chemistry he showed evidence of a 'polymeric quasicrystal' tiling for the first time. In 2014, his paper clarifying the origin of unusual non-periodic ordering that defines soft matte quasicrystals was published in Nature.

#### Professor **NISHIO** Kazuto

Professor Nishio's specialty is pharmacotherapy for cancer—particularly the areas of targeted therapy, translational research, biomarkers, and personalized medicine. Using genome and gene analyses as well as an approach grounded in molecular biology, he works to elucidate pathological conditions and conducts research on biomarker development.

### Professor Emeritus **KUMAI** Hidemi

A fisheries biologist, Professor Kumai has long been involved in aquaculture It was his research team that achieved full-cycle aquaculture of bluefin tuna. In 2003. while serving as the third director of the Aquaculture Research Institute (1991 to 2008), Professor Kumai headed up an aquaculture project that was chosen for the 21st Century COE (Center of Excellence) Program and Global COE Program run by the Japanese government.

### Professor SUGIURA Reiko

Professor Sugiura is a pioneer researcher on the identification of regulatory factors of MAPK (mitogen-activated protein kinase) and the elucidation of its control mechanisms. Along with her distinguished work as a scientist and a medical doctor, she is developing a groundbreaking strategy to combat cancer on a molecular-targeted basis. She currently serves as a research project leader for the Strategic Research Foundation which is supported by the Japanese government

#### Associate Professor **MORIYAMA** Hiroyuki

Associate Professor Moriyama's scientific interest is focused on the basic biology of stem cells. His group investigates the potential value of mesenchymal stem cells in tissue engineering and the utilization of environmental signals, such as oxygen, in modulating stem cells. By combining his extensive technical expertise in stem cell science and dermatological research. his ultimate goal is to reconstitute the perfect skin tissue and to develop personalized regenerative therapy.

#### Specially Invited Professor MITSUDOMI Tetsuya

Professor Mitsudomi's current research interests include surgical treatment, targeted therapy, and biomarker development for lung cancer. He won the Mary J. Matthews Award at the 2013 World Conference on Lung Cancer. He also received the 2014 Kivoko and Paul Bourdarie-Goto Scientific Prize for his paper on the treatment of lung cancer harboring EGFR (epidermal growth factor receptor) mutations.

### Professor IDA Tamio

Professor Ida does research on Bio-coke, a biomass fuel that can be used as a coal coke substitute in large-scale industrial processes. Bio-coke technology can help reduce CO<sub>2</sub> emissions for the prevention of global warming and can also help control rising coal coke prices. Professor Ida's main research project is on Bio-coke manufacturing methods and devices that would enable fast and efficient production of Bio-coke. He also aims to develop innovative biomass energy technology for building a greener world.

### Professor **KUDO** Masatoshi

Professor Kudo has been a member of the ILCA (International Liver Cancer Association) Governing Board since 2009 and is a past president of APPLE (Asia-Pacific Primary Liver Cancer Expert Association). He has published over 1,100 international scientific peer-reviewed papers in well-regarded journals. He received a Highly Cited Researchers award in the Clinical Medicine category from Clarivate Analytics in 2019, 2020, and 2021.



# Where Opportunities for Learning Abound

Kindai University is one of the largest universities in Japan, boasting 15 faculties with 49 departments, 11 graduate schools, and 1 transdisciplinary graduate school. As a comprehensive educational institution, we provide opportunities for learning and research in a wide range of disciplines in the arts and sciences alike.













### **Graduate Schools**

Graduate School of Law	Graduate School of Inte		
Graduate School of Commerce	Human Studies		
Graduate School of Economics	Graduate School of Agi Graduate School of Me		
Graduate School of Science and			
Engineering	Graduate School of Bio		
Graduate School of Pharmacy	Science and Technolog		

## **Undergraduate Programs**

Faculty of Law	Department of Law	Faculty of Agriculture	Department of Agricultural Science
			Department of Fisheries
Faculty of Economics	Department of Economics		Department of Applied Biological Chemistry
	Department of International Economics		Department of Food Science and Nutrition
	Department of Public Management		Department of Environmental Management
Faculty of Business Administration	Department of Business Administration		Department of Advanced Bioscience
	Department of Business and Marketing Strategy	Faculty of Medicine	Department of Medicine
	Department of Accounting	-	•
	Department of Career Management	Faculty of Biology-Oriented	Department of Biotechnological Science
Faculty of Science and Engineering	Department of Science	Science and Technology	Department of Genetic Engineering
	Department of Life Science		Department of Science and Technology on Food Safety
	Department of Applied Chemistry		Department of Computational Systems
	Department of Mechanical Engineering		Biology
	Department of Electrical, Electronic and Communication Engineering		Department of Human Factors Engineering and Environmental Design
	Department of Civil and Environmental Engineering		Department of Biomedical Engineering
	Department of Energy and Materials	Faculty of Engineering	Department of Biotechnology and Chemistry
Faculty of Architecture	Department of Architecture		Department of Mechanical Engineering
			Department of Robotics
Faculty of Pharmacy	Department of Pharmacy (6 years)		Department of Electronic Engineering and Computer Science
	Department of Pharmaceutical Sciences (4 vears)		Department of Informatics
			Department of Architecture
Faculty of Literature,	Department of Literature		
Arts and Cultural Studies	Department of Arts	Faculty of	Department of Biological and
	Department of Cultural and Historical Studies	Humanity-Oriented Science and	Environmental Chemistry Department of Electrical and
	Department of Cultural Design	Engineering	Electronic Engineering
			Department of Architecture and Design
Faculty of Applied Sociology	Department of Applied Sociology		Department of Information and Computer Science
Faculty of International Studies	Department of International Studies		Department of Management and Business
Faculty of Informatics	Department of Informatics	Junior College Division	Department of Business and Economics

erdisciplinary	Graduate School of Systems Engineering
riculture	Graduate School of Humanity-Oriented Science and Engineering
dical Sciences	Transdisciplinary Graduate School of
ology-Oriented Jy	Social Innovation and Entrepreneurship

Note: As of academic year 2024

# **Linked for Learning**

Kindai University currently has partnerships with 282\* worldwide universities, where over 500 of its students study. In addition to exchanges of faculty members and students, Kindai and these universities cooperate in conducting and publishing research in a range of fields. \* As of July 2024

### Partner Universities Overseas

#### Europe

- Belgium Haute Ecole EPHEC • The Higher Education Institution of the Province of Liège • Thomas More University of Applied
- UC Leuven-Limburg
- Bulgaria Technical University of Sofia

Croatia Algebra University College

Czech

• Czech University of Life Sciences Prague

Finland JAMK University of Applied Sciences

#### France

• EM Normandie • Ecole Nationale Supérieure d'Architecture de Paris La Villette EDC Paris Business School

 ESPOL (European School of Political and Social Sciences)–Institut Catholique de Lille • Universite Le Havre Normandie

#### Germany

- Baden-Wuerttemberg Cooperative State University, Ravensburg (DHBW)
- Clausthal University of Technology
- Cologne University of Applied Sciences
- FH Münster University of Applied
- Frankfurt University of Applied Sciences
- Free University of Berlin Harz University of Applied Sciences
- Hochschule f
  ür bildende K
  ünste
- Hamburg Hochschule Worms (University of Applied
- Sciences, Worms) Ludwig-Maximilians-Universität München (LMU)
- Technische Hochschule Ingolstadt
- Trier University of Applied Sciences

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• University of Pécs • Dublin City University University College Cork University College Dublin University of Limerick

Budapest Metropolitan University

 Sapienza University of Rome Sculoa Internazionale Superiore di Studi Avanzati (SISSA) University of Siena University of Turi

Kosovo • University of Prishtina

Latvia • Riga Technical University

Lithuania Vilnius University

#### Netherlands

- Avans University of Applied Sciences Fontys University of Applied Sciences Hanze University of Applied Sciences
- Groningen HZ University of Applied Sciences
- Rotterdam University of Applied Sciences The Hague University of Applied Sciences
- Windesheim University of Applied Sciences

### North Macedonia

Poland

International University of Struga

### Adam Mickiewicz University Warsaw School of Economics

Portugal University of Algarve Romania Romanian-American University • Transylvania University of Brașov

 Don State Technical University Dubna University • Financial University ITMO University Kazan Federal University • Lomonosov Moscow State University Moscow City University Moscow Institute of Architecture–State Academy MARKHI National Research Nuclear University (MEPh)

 National Research University Higher School of Economics-Saint Petersburg Novosibirsk State University • University of Tyumen

• Autonomous University of Barcelona

• La Salle Universitat Ramon Llull The Catholic University of Saint Anthony de Murcia University of Almeria

 University of Malaga • University of Valencia

#### Sweden Karlstad University • Luleå University of Technology

Switzerland Lucerne University of Applied Sciences and Arts, School of Computer Science and Information Technology (HSLU-I)

U.K. • London Metropolitan University University of Essex University of Nottingham • University of Sussex • University of Winchester

### Asia

Bangladesh Jahangirnagar University

Brune Universiti Brunei Darussalam

#### Cambodia International University Royal University of Agriculture

 Changzhou University China Pharmaceutical University Dalian University of Technology Hangzhou Normal University Hong Kong Baptist University Hong Kong Shue Yan University Jilin University Liaoning University Lingnan University Macau University of Science and Technology Nanjing Forestry University Northeastern University Northeast Forestry University Peking University Shanghai Maritime University • Shanghai Normal University Shanghai University Shenyang Pharmaceutical University Sias University Xiamen Universit Xi'an University of Technology

Georgia Georgian American University

 Amity University Chandigarh University

 Chitkara University Jawaharlal Nehru University

#### Middle East and Africa

The American University in Cairo

College of Management Academic Studies (COMAS)

The University of Jordan

Turkey Bezmialem Vakif University Halic University Istanbul University Karabuk University Marmara University

## The Village E<sup>3</sup> [e-cube]

The Village E<sup>3</sup> [e-cube] opened on the Higashiosaka Campus in November 2006 as a unique place to learn and brush up English skills. The three Es-English, Enjoyment, and Educationrepresent the facility's concept of learning practical English while having fun.

Only English is allowed at this first-of-its-kind facility for universities in Japan. English-speaking staff members are on hand for practical conversation, and a variety of activities, mini lectures, and events are held in English. It's a great place to go to make friends who want to practice English and learn about the world

As of July 2024, over 1.6 million people had visited the Village

### University of Seoul Yonsei University

• Asia University

Taiwan

 Binus University Bogor Agricultural University Syiah Kuala University University of HKBP Nommenser

#### Kazakhstar Eurasian National University

Andalas University

Indonesia

Malaysia Asia Pacific University of Technology & Innovation (APU) Taylor's University Universiti Malaya • Universiti Malaysia Sabah Universiti Putra Malavsia Universiti Teknologi MARA • Universiti Tenaga Nasional

#### Philippines

• Enderun Colleges • Silliman University University of Perpetual Help • University of the Philippines

#### South Korea

 Busan University Of Foreign Studies Chonnam National University Chuna-Ana University Dongseo University • Hankuk University of Foreign Studies Hansung University Hanyang University Honam University Inha University Kookmin University Korea University Kyung Hee University Kyunsung University National Institute of Fisheries Science (NIFS) Seokyeong University Seoul Theological University Sogang University • The Cyber University of Korea

### Oceania

Australia Bond University Deakin University Griffith University Macquarie University Queensland University of Technology Southern Cross University University of Canberra University of Southern Queensland University of Tasmania

 Chang Jung Christian University Chung Yuan Christian University • CTBC Business School Feng Chia University • Fu Jen Catholic University U.S.A Kainan University Kaohsiung Medical University Ming Chuan University Nanhua University National Central University National Cheng Kung University National Chung Hsing University Boston University • National Formosa University National Ilan University National Taipei University • National Taipei University of Business Pomona National Taipei University of Technology National Taiwan University National University of Kaohsiung

 National Yang Ming Chiao Tung University Soochow University

Tamkang University

#### Thailand

- Chiang Mai University Chulalongkorn University
- King Mongkut's Institute of Technology
- Ladkrabang
- Rajamangala University of Technology Sriviiava
- Ramkhamhaeng University
- Thai-Nichi Institute of Technology Thammasat University
- Vietnam

• University of Wollongong

Western Sydney University

The University of Fiji

University of Otago

#### • FPT University

- Ho Chi Minh City University of Foreign Languages-Information
- Thai Nguyen University Ton Duc Thang University
- Vietnam National University, Hanoi
- Viet Nam National University Ho Chi Minh

Brazil

Colombia

University of Waikato

New Zealand

## **International Students** at Kindai University

global atmosphere of the campus.

This center is in charge of all services related to

**Global Education Center** 

Approximately 500 students from around the world study at Kindai University, supported in their studies, everyday life, finding employment, and other areas by the Global Education Center. The university also has a system for partnering international students with Japanese students, who provide support with academia and adapting to life in Japan.

Each year is seeing an increasing number of exchange

students coming to Kindai University. Hailing from Asia, Europe,

the US, and other world regions, these students contribute to the

Japanese-language education and international exchange. Please

contact us if you have any questions. We welcome all inquiries.

#### Exchange

#### **North America**

- Canada McGill University
- Saint Mary's University
- St. Thomas University
- University of Calgary
- University of Prince Edward Island
- University of Regina
- University of the Fraser Valley
- Aquinas College • Augsburg University
- Augustana University
- Barry University
- Bluffton University
- Boise State University
- Brooklyn College, City University of New
- California Lutheran University California State Polytechnic University
- California State University, Channel Islands
- California State University, Dominguez Hills
- California State University, East Bay
- California State University, Long Beach
- California State University, Los Angeles California State University, Monterey Bay
- California State University, San Bernardino
- Chatham University
- Coastal Carolina University
- College of Saint Benedict & Saint John's
- Dakota State University
- Davenport University
- Dominican University
- Dominican University of California
- Eckerd College
- Fairleigh Dickinson University
- Fisher College

#### Central and South America

#### Argentina

- University of Mendoza
- School of Economics, Business Administration and Accounting at Ribeirão Preto, University of São Paulo Universidade de São Paulo

Universidad del Rosario

- Florida Institute of Technology • Grand Valley State University
- Hawaii Pacific University
- Indiana University–Purdue University
- Indianapolis Johnson & Wales University-Charlotte Campu
- Kent State University
- Lewis University Marguette University
- Miami University (Oxford)
- Middle Tennessee State University
- Northern Illinois University
- Oklahoma City University
- Pacific University
- Queens College, City University of New York
- San Francisco State University • Santa Rosa Junior College
- St. Joseph's University
  Stockton University
- Temple University
- Trinity University
- University of Bridgeport
- University of California, Berkeley
- University of California, Davis University of California, Riverside
- University of Central Florida
- University of Cincinnati
- University of Hartford
- University of Hawai'i at Hilo
- University of Hawai'i at Manoa
- University of La Verne
- University of Missouri-St. Louis
- University of North Carolina Wilmington
- University of St. Thomas
- University of Tampa
- West Chester University
- West Virginia University
- Western Michigan University
- Universidad La Salle Laguna
- Universidad Popular Autónoma del Estado de Puebla

Universidad Tecnológica de Panamá

Universidad San Ignacio de Lovola

#### Uruguay

Catholic University of Uruguay



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- Mexico

# World-Leading Research

Kindai University has long been a hub of research. Our broad-based coverage of both the sciences and the humanities means we can take an interdisciplinary approach to collaborative research projects. We have a track record of success in joint research, contracted research, technical guidance, and technology transfer. Here are some recent examples of the university's high-profile research.

## **Bio-Coke—A Next-Generation Recycling-Based Biofuel**



A peaceful society is built on protecting the environment and avoiding inter-state conflicts over energy. Future solutions must involve sustainable and renewable energy sources—and solid biofuels are

one such source that's drawing particular attention

Bio-coke is a new type of solid biofuel that can be made from any photosynthetic plant. Bio-coke has the

potential to replace the coal and coal coke consumed in the steel and electric power industries as well as in glass production. There are high hopes that it will be used widely. Bio-coke can boost development and add value in manufacturing industries in the form of zero-emission waste disposal and zero-carbon manufacturing processes. The Bio-Coke Research Institute at Kinki University is actively

engaged in R&D to lead Japan and the world toward achieving carbon-neutral societies

## **Kindai University Changed How the World Treats Primary Liver Cancer**



Kudo speaks at an international symposit

Kindai University's Liver Cancer Treatment Group, led by Professor Masatoshi Kudo, conducted clinical trials of liver cancer therapies, including TACTICS, TACTICS-L, a proof-of-concept study of lenvatinib, and ABC conversion. Results clearly showed that upfront systemic therapy followed by curative conversion improved overall survival

rates in patients with intermediate-stage hepatocellular carcinoma (HCC). Following these results, the Japan Society of Hepatology and the Asia-Pacific Primary Liver Cancer Expert

Association adopted this treatment strategy into their respective clinical

practice guidelines. The Kindai treatment strategy was also included in the clinical practice guidelines of the American Association for the Study of Liver Diseases, the European Society for Medical Oncology, and the

Barcelona Clinic Liver Cancer.

Kindai University effectively changed global clinical practice guidelines for the treatment of HCC. This achievement led to Professor Kudo being recognized as one of the world's leading experts in the treatment of HCC.



Research outline

## Using Cloning Technology to Reactivate Cell Nuclei of 28,000-Year-Old Mammoth



Kindai University has succeeded in observing biological activity in cell nuclei collected from a 28,000-year-old fossil. The fossil came from a Siberian mammoth dubbed "Yuka" that was discovered in permafrost. Cell nuclei from the fossil were transplanted into mouse oocytes—a method of nuclear transfer that is used to produce cloned animals. After nuclear transfer, mouse proteins were loaded onto the mammoth cell nucleus. Part of the mammoth cell

Remains of the woolly mammoth named Yuka

## Kindai and Toyota Tsusho Ramp Up **Tuna Farming**



Kindai University is collaborating with

Toyota Tsusho Corporation, a Toyota

Group trading firm, in developing a

business uses full-cycle aquaculture

university's Aquaculture Research

are hatched and grown into fry in

technologies developed by the

and Production Center.

tuna-growing aquaculture business. The

Institute and the Aquaculture Technology

Fertilized tuna eggs supplied by Kindai

land-tanks at a Toyota Tsusho subsidiary in Nagasaki Prefecture. The fry are then transferred to offshore nets, where they grow into larger juveniles that are shipped to tuna farmers around Japan. Kindai provides technical guidance to these fish farmers.

This joint venture has expanded in recent years to include the production of red sea bream. Kindai madai is a new strain of red sea bream with a significantly faster growth cycle. It was



A collaborative research group led by

nucleus then started to form a new nucleus-like structure. Such events are often observed when animals are cloned using this method. This study shows that the 28,000-year-old fossil still contained at least partially active nuclei. The results of this research were published in the online international scientific journal Scientific Reports.



Time-lapse images of oocyte injected with mammoth cell nucleus

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cultivated at the university using selective breeding technology. Kindai and Toyota Tsusho cooperate in other areas, too. Examples include the development of fish feed and a new juvenile sorting technique using AI technologies.



	Tuna Dream Goto Fish Nurse	ry Ceni	ter
•	Fertilized eggs ○○○○○○ ○○○○○○ ○○○○○○ ○○○○○○ ○○○○○○	latcheo nto fry approx	l and grown . 5 cm)
J			
	Tuna Dream Goto Corpor	ation	
	Intermediate breeding		
)	Fry relocated offshore Juveniles (approx. 5 cm) (approx. 30 cm)	••	Shipment (fish farms)



Kindai University Hospital on the Faculty of Medicine Campus in Osaka-Sayama

# **Providing Advanced Medical Education** and Treatment

The Kindai University Faculty of Medicine has two affiliated teaching hospitals that provide clinical education and training to current and future health professionals, while also delivering advanced medical care to patients. One of them, Kindai University Hospital, plays a vital role as the core medical institution in southern Osaka. It is renowned for its use of cutting-edge treatments and diagnostic tools, such as PET-CT scans. The other is Nara Hospital, which also contributes to the local community by offering prompt and precise diagnosis and treatment in a wide range of specialties.

The Faculty of Medicine campus and Kindai University Hospital (both located in Osaka-Sayama city) are being transferred to Izumigaoka in Sakai city. The transfer, which is scheduled for completion in 2025, will enhance the provision of education and advanced medical care in southern Osaka.

The Faculty of Medicine also has two research centers that actively pursue research projects of real-world significance.





Kindai University Nara Hospital

## **Kindai University Hospital Emergency and Disaster Center**

In December 2013, Kindai University Hospital bolstered its position as southern Osaka's core medical institution by opening its Emergency and Disaster Center. The new center consolidates the hospital's emergency departments-including the ER, Cardiovascular Center, and Stroke Center-in a new five-floor, earthquake-proof building equipped with state-of-the-art medical facilities and equipment. With this center, the hospital can provide efficient and appropriate treatment as well as the best in emergency medical care.

Designated by the Japanese government as a key disaster-response base hospital, Kindai University Hospital will make its Emergency and Disaster Center available as a base for treating severely ill or injured patients during disasters, such as large-scale earthquakes.





## **Da Vinci Surgical System**



In keeping with its reputation of being one of Japan's best hospitals for cancer treatment, Kindai University Hospital has introduced the da Vinci Surgical System. This robotically assisted surgical platform facilitates complex surgery and uses a minimally invasive



## **Making Advances in Cancer Research**

The Department of Medical Oncology is the first university department in Japan dedicated to medical oncology. Part of the Faculty of Medicine, this department played a central role in the development and clinical trial of gefitinib (trade name Iressa), a drug used in targeted therapy for lung cancer

First approved in Japan, gefitinib inhibits tyrosine kinase, an enzyme that causes cancer cells to grow. Though gefitinib does produce side effects, it is

highly effective in certain types of patients when properly administered. In March 2006, a clinical trial for gefitinib got underway, with Kindai University and medical institutions in nine Asian countries taking part. Called IPASS (Iressa Pan-Asia Study), this joint study lasted a year and seven months. The results, announced at international academic conferences, have made an impact on the medical world. The wealth of detailed data collected through IPASS was instrumental in

approach, giving patients a safe and less burdensome surgical option. Kindai University Hospital uses da Vinci mainly for prostatectomies but is increasing its use in the treatment of gynecologic and stomach cancers.

paving the way for the appropriate and effective usage of gefitinib as a new treatment for lung cancer.

Kindai University is a key player in the research and treatment of cancer in Japan and Asia. It is also one of the few universities in Japan focusing on fostering oncologists who are also pharmacotherapy specialists.

# **Our Athletes Aim for the Highest**

Kindai University is home to varsity athletic teams ranked among the highest in Japan, including the swimming, baseball, and archery teams. These teams have produced top-caliber athletes who have made their mark in both the national and international arenas. Here we introduce Kindai University's lineup of Olympic medalists and its history of participation in the Olympic Games.

## **Kindai University Olympic Medalists**

### Mexico 1968: Bronze

### **MORIOKA Eiji**

- Boxing (bantamweight)
- Graduated 1969;

Sydney 2000: Bronze

**NAKAO Miki** 

• Graduated 2001;

• Swimming (200-meter backstroke)

Faculty of Commerce-Economics

Nakao was a student at Kindai

University High School when she

competed in her first Olympics in

hard training paid off when she

became the first Kindai University

medalist since Eiji Morioka in 1968.

Athens 2004: Silver and Bronze

YAMAMOTO Takashi

· Swimming (200-meter butterfly,

• Graduated 2001;

4x100-meter men's medley relay)

Faculty of Commerce-Economics

Yamamoto was captain of Japan's

national swimming team when he

earned two medals. One of those

medals was in the 4x100-meter

medal in that event in 44 years.

men's medley relay—Japan's first

competed in his third Olympics and

1996 in Atlanta. In 2000, her years of

Faculty of Commerce-Economics

Morioka fought Valerian Sokolov of the USSR in the semifinals but was defeated by Sokolov, who went on to win the gold medal. Morioka later said that he had been happy to hear booing from the audience in response to the questionable call that determined his defeat.



#### Athens 2004: Bronze

### **NAKANISHI Yuko**

 Swimming (200-meter butterfly) Graduated 2004; Faculty of Commerce-Economics

Nakanishi competed in her first Olympics in Sydney in 2000. She earned a medal during her second by beating out her opponent for third place by just a hair in an intense race that came down to the last 50 meters.



#### Athens 2004: Bronze

#### **OKUMURA** Yoshihiro

Swimming (4x100-meter men's medley relay) Graduated 2006;

Faculty of Commerce-Economics

200-meter freestyle events and made it to the semifinals in the latter. He served as anchor in the 4x100-meter men's medley relay, helping his team win a bronze medal.

#### London 2012: Bronze

### **TERAKAWA Aya**

 Swimming (100-meter backstroke, 4x100-meter women's medley relay) Graduated 2007; Faculty of Law

In her second Olympics (after Athens 2004), Terakawa won her first medal when she broke her own Japanese record in the 100-meter backstroke. She also medaled as a member of Japan's 4x100-meter women's medlev relav team.



#### London 2012: Silver and Bronze

### **IRIE Ryosuke**

- Swimming (100-meter backstroke, 200-meter backstroke, 4x100-meter men's medley relay)
- Graduated 2012; Faculty of Law

Irie missed out on a medal at the 2008 Beijing Olympics but made up for it in London with a total of three medals: a bronze in the 100-meter backstroke and a silver in both the 200-meter backstroke and the 4x100-meter men's medley relay.

and then-student Kawanaka joined forces as two thirds of the Japanese women's team to earn their country its first medal in the men's and women's team event.



#### London 2012: Silver Tokyo 2020: Bronze (2)

#### **FURUKAWA Takaharu**

- Archery (men's individual), London Archery (men's individual, men's team), Tokyo Graduated 2007;
- Faculty of Business Administration

At the Tokyo Olympics—his fifth Olympics in a row since Athens in 2004—Furukawa won a bronze medal in the men's individual archery event and another one in the men's team event. Along with his silver medal in the London Olympics, Furukawa has three medals—he still dreams of winning gold.







Okumura competed in the 100- and

1964	Tokyo Olympics Kichijiro Hamada competes in boxing, making him Kindai University's first Olympic athlete.
1968	Mexico Olympics Eiji Morioka wins a bronze medal in boxing.
1972	Munich Olympics Shiro Maruyama competes as a member of the men's fencing team.
1984	Los Angeles Olympics Takemi Ise competes in swimming.
1988	Seoul Olympics Yukinori Tanaka and Shigemori Maruyama compete in swimming.
	Calgary Winter Olympics Atsushi Egawa competes in cross-country skiing.
1992	Barcelona Olympics Five Kindai University students compete in swimming, archery, and sailing.
	Albertville Winter Olympics Kiminobu Kimura competes in alpine skiing.
1994	Lillehammer Winter Olympics Kiminobu Kimura competes in alpine skiing.
1996	Atlanta Olympics Hisato Yasui and Ryuji Horii compete in swimming.
1998	Nagano Winter Olympics Kiminobu Kimura competes in alpine skiing.
2000	Sydney Olympics In swimming, Takashi Yamamoto and Yuko Nakanishi finish as finalists, and Miki Nakao wins a bronze medal. In archery, Masafumi Makiyama and Yuji Hamano compete.
2004	Athens Olympics In swimming, Takashi Yamamoto and Yuko Nakanishi win a silver and a bronze medal, respectively; Yoshihiro Okumura and Aya Terakawa also compete.
2006	Turin Winter Olympics Five Kindai University graduates compete in skiing events.
2008	Beijing Olympics In swimming, Ryosuke Irie, Misaki Yamaguchi, Yoshihiro Okumura, and Yuko Nakanishi finish as finalists.
2010	Vancouver Winter Olympics Hiroomi Takizawa and Yuichi Onda compete in skiing events.
2012	London Olympics Medals go to Ryosuke Irie and Aya Terakawa for swimming and to Miki Kanie, Kaori Kawanaka, and Takaharu Furukawa for archery. Sho Sotodate competes in swimming and Hideki Kikuchi in archery.
2014	Sochi Winter Olympics Yuichi Onda competes in cross-country skiing.
2016	<b>Rio Olympics and Paralympics</b> Four Kindai University graduates compete in swimming and archery. Mei Ichinose finishes as a finalist in swimming at the Paralympics.
2020	Tokyo Olympics and Paralympics Two graduates compete in archery and two in swimming. Five students compete in swimming, diving, and Paralympics swimming. One graduate finishes in fifth place in karate, and a graduate/student team places fourth in artistic swimming.
2024	Paris Olympics and Paralympics Three graduates compete in archery, with two finishing in fifth place. Fifth place was also achieved by two graduates competing in artistic swimming and another competing in athletics. Five other students compete in swimming, trampoline, judo, rugby sevens, and Paralympics swimming.

## **Greetings from the President of Kindai University**



Founded on the principles of "learning for the real world" and "nurturing intellectual and emotional intelligence," Kindai University aims to develop graduates who are "caring, trustworthy, and respectable." The university, established in 1949, has its roots in the Osaka Technical College founded in 1925 and the Osaka Science and Engineering University established in 1943. Embracing the philosophy of our founder, Koichi Seko—instilling teachings in those that yearn to learn—Kindai University has evolved into a comprehensive institution offering a wide range of fields, from medicine to arts. In recent years, the university has continued to adapt to

societal changes, opening the Faculty of International Studies in 2016 and the Faculty of Informatics in 2022. Ourmission is to foster individuals with intellectual and emotional intelligence and high aspirations who will support society through the cultivation of a spirited challenge, creativity, social engagement, and lifelong self-directed learning. Additionally, we are committed to conducting high-quality research grounded in practical education and returning its benefits to society.

Since the outbreak of COVID-19, university education has significantly been transformed. Alongside traditional in-person classes, online and on-demand courses have been widely adopted. In 2021, the university opened the Kindai Creative Studio (KICS) on the Higashiosaka Campus, a studio equipped with sound and video processing facilities, enabling the production of high-quality on-demand course materials. We aim to actively pursue innovative education, incorporating the latest ICT technologies to offer novel forms of learning for the next generation.

As part of our commitment to practical education and talent development, Kindai University has set a goal to create 100 university-launched ventures by 2025. To support this initiative, we introduced the Kindai University Venture

Entrepreneurship Support Program, KINCUBA. As a base for promoting this program, October 2022 saw the establishment of the KINCUBA Basecamp, an incubation facility on our Higashiosaka Campus. This facility serves as a hub where students and faculty with entrepreneurial mindsets can freely interact and discuss, providing support for entrepreneurship at stages ranging from fostering an entrepreneurial mindset to the establishment of a corporation. In 2023, we launched the Transdisciplinary Graduate School of Social Innovation and Entrepreneurship for aspiring and existing entrepreneurs, providing education on entrepreneurship that transcends traditional academic disciplines

As we approach our centennial in 2025, Kindai University remains dedicated to providing distinctive education and research activities based on our founding principles and educational objectives. Our action guidelines are to be "always innovative," "useful to society," and "supported and encouraged by the community." We aspire to continue being a chosen educational institution responsive to the changing times, as outlined in our Kindai University Long-Term Vision 2030. Despite the challenging environment for educational institutions, including universities, due to the declining population of 18-year-olds, our staff is united in our commitment to progress as a comprehensive university that continues to be future-oriented and essential to society.

> Itaru Matsumura esident of Kindai University

News Focus

facility's address.

in-demand areas

district. farmers who are supplied juveniles aquaculture process.

### **KINCUBA Basecamp**

Launched in October 2022, KINCUBA Basecamp is an incubation facility that's open to students 24 hours a day. The Basecamp promotes the KINCUBA program—a venture startup support program

launched by the university in April 2022. The Basecamp facility is located in front of the iconic West Gate of Kindai University's Higashiosaka Campus, It serves as an informal hub where entrepreneurial students and faculty members can gather and discuss ideas for new business ventures. The Basecamp facilitates new startup

ventures by allowing students to register their own company using the



KINCUBA Basecam

## Informatics Faculty Opens—Kindai's 15th Faculty

Kindai University opened its 15th faculty-the Faculty of Informatics-in April 2022 at the Higashiosaka campus. The world is undergoing what some call a fourth industrial

revolution, involving technological innovations such as IoT, big data, and AI These innovations will underpin a super-smart society that Japan has called "Society 5.0." Against this backdrop, the new faculty aims to develop highly skilled IT experts who can handle technology in AI applications data analysis, cyber security, and other



## Kindai Restaurants Cultivate an Appetite for Lab-Bred Fish

Kindai University Aquaculture Research Institute in Wakayama Prefecture is putting the fruits of research to tasty use at the university's own seafood restaurants in Osaka and Tokyo. The restaurants serve tuna, red sea bream, and other kinds of fish cultivated at the fisheries lab as well as vegetables and other produce from Wakayama.

Following the April 2013 launch in a bustling business and commercial complex known as Grand Front Osaka, the first Tokyo outlet opened in December 2013 in the upscale Ginza shopping

A second Tokyo location opened in 2020 in the prestigious business district of Marunouchi. While the Osaka and Ginza restaurants serve fish that is cultivated and shipped by Kindai under the concept "Kindai-graduate fish," the Marunouchi location serves fish grown and shipped by fish

cultivated through full-cycle aguaculture by the university Kindai has dubbed these fish "Kindai-born fish" with the aim of expanding the full-cycle

With the Marunouchi location continuing to fuel the public's appetite for Kindai fish, the three restaurants combined to reach a customer mil of 1,480,000 in August 2022.

