Since the first universities were established in Bologna and Paris in the 12th century, the mission of the university has been the creation and accumulation of knowledge. This mission has traditionally involved maintaining a neutral position in relation to society and an outlook that extends beyond short term trends. At a distance from the unpredictable, changing and market driven world, universities have been able to devote themselves to the development of pure knowledge and research, the results of which have played an important role in societal progress.

Universities should reflect the needs of the era, of the country, of the local community, and increasingly of the global community as well. It is clear that we are now facing complex, unprecedented changes on a global scale, and as pillars of society, universities are now expected to play a greater role in contributing to the real world by providing services to the community. Collaborative partnerships with industry and governments, provision of medical services and health care, and training of tomorrow’s leaders have been added to the university’s more traditional roles of creating and accumulating knowledge.

Imagine the traditional “ivory tower” style university as a circle, a geometric shape with a single, central focus. Keio University believes that universities in the 21st century must broaden their commitments, and can best be represented by an ellipse, a shape with two equal focuses in dynamic balance with one another.

One of these focuses is remaining neutral from economic society in order to promote basic research and the ongoing creation of new knowledge. Economic society is by nature unstable and rapidly changing, so in order for knowledge creation to progress and break ground in new fields, it must take place outside the realm of market driven influences. The other focus is being directly committed to supporting and contributing to society. The university has unique resources which, through innovation and collaboration with community partners, can be put to direct use to improve society.

Keio is taking a variety of steps to realize the University’s “double-focus” vision, including the establishment of the Organization for Research Advancement and Administration (ORAA). The ORAA was established to further develop cross-disciplinary research activities, as well as collaborative partnerships with industry, government, and other universities worldwide.

University research activities have always been an important factor in societal progress. Thus, it is very important for universities to communicate their research activities to the public. Keio’s Annual Report on Research Activities provides the community with information regarding our strategies and direction, as well as our current research activities. It is our hope that this Report will give you a better understanding of what Keio University is doing to accomplish its double-focus vision and contribute to the advancement of society.

Yuichiro Anzai
President
Keio University
In FY2006, the "Keio Policy for Industry Government Academy Collaboration", "Statements for Intellectual Property at Keio University", and "Keio Intellectual Property and Conflict of Interest" were released and reviewed in consideration of the ORAA.

Role and Functions of the ORAA

The ORAA is composed of the Center for Research Promotion, the incubation center, the Intellectual Property Center, the Research Ethics Committee, etc. Each organization has a variety of strategies for cooperating with industry, government, and academia. From the outset of planning, the center involves professors, graduate students, and researchers in all organizations in the ORAA.

The Center for Research Promotion sets up an organization dedicated to planning and promotion of comprehensive research projects. More specifically, it (i) plans and prioritizes comprehensive and strategic projects with its own surveys and mission, (ii) collects the required information on research grants and awards, and provides it to researchers, and (iii) serves as the university's primary contact point for all inquiries and requests for industry-government-academic collaborations. To facilitate this, the center is organized into departments, under the guidance of the Advisory Board, with other organizations in the ORAA, namely, the IPC, the incubation center, and the ORAA. The Office of Research Promotion is an office set up under the professorship of company research, government, and academia, and is responsible for supporting the functions of the ORAA.

The incubation center is an organization with the objective of supporting and advancing incubation activities of transferring research results nurtured at Keio University. It is established to support university venturing by further building activities in the universities. The incubation center, under the guidance of the Advisory Board, walks side by side with the incubation center, the ORAA, with the mission of serving as an agency for the promotion of intellectual property work. The incubation center is primarily responsible for managing the incubation for intellectual property owned by Keio University and the research database.

The Intellectual Property Center (IPC) is a technology-transmitting organization with a broad range of responsibilities, from management and operation of intellectual properties to facilitating cooperation with society. Upon the request of an inventor, the IPC closely examines the potential for licensing considering the market and other practical applications, negotiations, etc., and in the disclaimer of a patent, and manages its maintenance. The IPC is an active medium for licensing, not only intellectual properties but also research ethics, conflicts of interest and taboo, fiscal management, and maintenance of confidentiality at all levels.

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The Mitaka Campus is home to undergraduate faculties in the humanities and social sciences (primarily for junior and senior students), graduate schools and independent research institutions. The Hiyoshi Campus hosts undergraduate faculties in the humanities, social sciences and natural sciences (primarily for freshmen and sophomore students), research institutions, and the Graduate School of Business Administration (Keio Business School). Following is an introduction of research institutions located in these two campuses.

**Research Centers on the Mitaka and Hiyoshi Campuses**

- **Mita Campus/Hyoshi Campus**
- **Institute of Cultural and Linguistic Studies**
- **Institute for Media and Communications Research**
- **Research Center for Arts and Arts Administration**
- **International Center**
- **Kiko Economic Observatory**
- **Fukuzawa Memorial Center for Modern Japanese Studies**

**The Institute of Cultural and Linguistic Studies**

The Institute of Cultural and Linguistic Studies is an academic institution, independent from the University faculties. The Institute investigates the nature of human cognitive capacities and socio-cultural traditions, adopting interdisciplinary approaches across humanities, social sciences, and natural sciences. Currently, seven faculties of the seven schools, specialized in theoretical linguistics, typological linguistics, psycholinguistics, philosophy of language, historical phonetics, historical thought, and Meiji-era history, guide the direction of the research projects at the Institute. Each faculty member with common interest forms a team from all the universities. An outcome of the ongoing projects is reported in the Institute’s annual bulletin. Reports of the two major research projects received a research grant (a special area studies A of Grant-in-Aid for Scientific Research from MEXT) in 2005 academic year for “The research on Japanese and Chinese material culture and language” under the title of the project "Japan-China Cultural Relations: A Study on Material Culture and Language", and a research grant (a special area studies A of Grant-in-Aid for Scientific Research from MEXT) in 2006 academic year for “The research on Japanese and Chinese material culture and language” under the title of the project "Japan-China Cultural Relations: A Study on Material Culture and Language".

**The Institute for Media and Communications Research**

The Institute for Media and Communications Research promotes research projects financed by its own research funds as well as special donations to the Institute. During 2005, the Institute continued to support the following four research projects: "Mediatisation: Power and Journalism", "Internet Development and Cgt Culture in Japan", and "Gender Distribution in the Asia and Pacific Projects". In addition to these research projects, which were launched seven years ago, the Institute has functioned since 2005 as a research unit for a large research project entitled the 21st Century COE Program funded by the Ministry of Education, Culture, Sports, Science and Technology (2005). The results of these research projects were published in the Japan language journal, Nihon Media and Communications Research, Vol. 50, 2009, in the English language journal, Nihon Media and Communications Research, No. 8, 2009, and in the Japanese language journal, Nihon Media and Communications Research, No. 23, 2009, and the English language journal, Nihon Media and Communications Research, No. 23, 2009. These three journals are available as well in the Institute’s library. A series of books entitled "The Dynamics of a Virtual Society: A Multicultural World consisting of a total of 15 volumes were published as a result of the 21st Century COE Program. The 1st and 2nd volumes were published by the research of our team.

**International Center**

The International Center is at the site of Keio University’s International Activities. It has concluded agreements with different universities in the world and is in charge of sending every year numerous students and scholars abroad as well as welcoming those coming to them here. The center provides support to international students in both academic and extra-curricular activities, and also carries on exchange programs with numerous short-term research programs. Forthwith, it holds international workshops in the international academic community. In addition, the International Student and Japan Studies courses, various meetings, and academic activities of international study groups and international organizations exchange programs. In addition, the International Center and Japan Studies courses, various meetings, and academic activities of international study groups and international organizations exchange programs. In addition, the International Center and Japan Studies courses, various meetings, and academic activities of international study groups and international organizations exchange programs. In addition, the International Center and Japan Studies courses, various meetings, and academic activities of international study groups and international organizations exchange programs.
A research institute that focuses on global security and strategic studies, also engaged in various research projects related to national security, international affairs, and technology. They provide education, research, and service in the field of foreign language education and strategic studies.

Institute of Physical Education

The Institute of Physical Education is a research institute that focuses on physical education, research, and service. They provide education, research, and service in the field of physical education, and are involved in various research projects related to physical education.

Health Center

The Health Center is a research center that focuses on health and wellness. They provide education, research, and service in the field of health and wellness, and are involved in various research projects related to health and wellness.

Sports Medicine Research Center

The Sports Medicine Research Center is a research institute that focuses on sports medicine. They provide education, research, and service in the field of sports medicine, and are involved in various research projects related to sports medicine.

Graduate School of Business Administration

The Graduate School of Business Administration is a research institute that focuses on business administration. They provide education, research, and service in the field of business administration, and are involved in various research projects related to business administration.

Books on curricula (in Japanese)

Institute of Cultural and Linguistic Studies

Reports of the Institute of Cultural and Linguistic Studies, No. 11, "Fukusawa’s Vision of Language and Culture" (March 2006)

Institute of Physical Education

Institute of Physical Education, 1911, as the organization for research and education associated with physical education and sports. It provides the extension-research for the mechanism that physical education contributed to mental and physical development and health, the teaching theory related to physical education and sport science, and the analysis of competitive performance from the research results. The research results have been covered with great success to students, faculties, student-athletes, and residents in society currently throughout the extension-curriculum.

Keio Research Center for Foreign Language Education

The Keio Research Center for Foreign Language Education serves the needs of students, faculty members, and affiliated schools. The center provides foreign language education, research, and consultation in terms of education, language and culture. We provide specialized courses such as English for professionals. For standardized tests, advanced classes, classes that focus on particular skills, and other classes that formal facilities are unable to provide. Our goal is to supplement the language classes provided by the various faculties. In terms of research, we currently have four projects aimed at improving foreign language education: 1) Policy Discourse Research 2) 20th Century Study Development 3) Ethnography of Development 4) and 5) Research on the role of the Shido Bunko. In summary, we provide a variety of lectures, workshops, and study abroad programs.

Keio Research Center for the Liberal Arts

The Keio Research Center for the Liberal Arts was founded in 2003 in order to seek the domain of humanities, arts, and social sciences. The "liberal arts" pass down to follow generations. Thus far to pursue various various full-fledged research and analysis, suggested new systems or curricula based on the results, brought about by the research, and examined the educational efficiency of these proposals through expert mental classes, and institution courses.

There are three research projects conducted by the center. "Keio Research Project: Rarely "Sakurai Study Project" and "Individual Research Project". "The Keio Research Project" which has been focusing in the culture of Keio University, has investigated the actual situation of the cross-disciplinary general education courses at Keio University, and in 2003, published the results. The project aims to examine the Keio Research Center for the Liberal Arts, the Shido Bunko, and the Institute of Cultural and Linguistic Studies.

http://www.kbs.keio.ac.jp/index-e.html

http://www.hc.keio.ac.jp/lib-arts/

http://www.gsec.keio.ac.jp/

http://www.hc.keio.ac.jp/lib-arts/

http://www.hcc.keio.ac.jp/
Keio Leading-edge Laboratory of Science and Technology (KLL)

The Keio Leading-edge Laboratory of Science and Technology (KLL), a stage for industry-government-academia collaboration, was established at the Graduate School of Science and Technology in 2000 as a center for leading academic research and new business creation in science and technology. Its goal is to return research achievements to society and to conduct research activities that transcend areas of specialization. The KLL has promoted and advanced research projects which are based on the originality of Keio University and take advantage of its strength as a comprehensive university.

http://www.kll.keio.ac.jp/

Here is an introduction to activities of the KLL.

Activities of the KLL

Coordination for Research Work

The KLL acts as a point of contact between Keio University and groups outside of Keio University such as industrial circles, promoting cooperation for research work in the pre-patent period or exporting it. It promotes the research activities of the Yagami Campus from various perspectives (see http://www.kll.keio.ac.jp/), readily responding to individual consultations, and establishes an interactive flow between enterprises and university research activities. By utilizing these dynamics, the KLL coordinates optimal joint and commissioned research projects.

Promotion of Research Activities

With the objective of focusing on the development of “growing” research areas that are expected to be important to society in the future, the KLL calls for research projects (“KLL Specified Research Projects”), and advances research aggressively and systematically in terms of both finances and research topics. In order to more vigorously advance general research projects that have been established, “KLL Research Grants” for research projects (total 250 million yen, available see page 34), as well as the 524 Keio-kaiwan Town Campus. Furthermore, researchers from corparations and researches outside of the university who participate in research are granted the status of “Researcher of the KLL”. They are able to perform research activities smoothly at Keio, by for example, utilizing the Information and Media Center for Science and Technology (library).

Returning of Research Achievements to Society

Annually in December, the KLL holds the Keio Techno-Mall, an exhibition aimed at corporate managers. The exhibition introduces research achievements and explores ways to generate new businesses. In 2006, there were 67 booths introducing research achievements and over 1,500 attendees. (The Keio Techno-Mall 2005 is scheduled for 2 December 2005 at the Tokyo International Forum). In cooperation with the Intellectual Property Center, the event supports the patenting and commercialization of research achievements and fulfills the role of intellectual creation by returning the achievements to society.

Number of Concluded Research and Other Cases (Received FY2000–FY2008)

Concluded Research Projects (excerpt)

- “Target Gene Exploration for Drug Discovery”
  Professor Akiko Matsuo (Fundamental Science and Technology)
- “High-Speed RF Chip with Spread Spectrum Modulation”
  Associate Professor Yukitoshi Sanada (Integrated Design Engineering)
- “Development of New Technologies for In vivo Analysis of Protein-Protein Interactions Constructing Networks in vivo”
  Ministry of Education, Culture, Sports, Science and Technology (MEXT)
  Professor Hiroshi Yanagawa (Fundamental Science and Technology)
- “A Study on Fundamental Technology of Distributed Real-time Network for Human Activity”
  Ministry of Education, Culture, Sports, Science and Technology (MEXT)
  Professor Toshiharu Saiki (Integrated Design Engineering)
- “Highly Dependable Software for Capturing Environmental Information”
  Ministry of Education, Culture, Sports, Science and Technology (MEXT)
  Professor Hiroshi Yanagawa (Integrated Design Engineering)
- “Development of New Technologies for In vivo Analysis of Protein-Protein Interactions Constructing Networks in vivo”
  Ministry of Education, Culture, Sports, Science and Technology (MEXT)
  Professor Hiroshi Yanagawa (Integrated Design Engineering)
- “Optical Detection of a Single Pair of Charge-transfer Molecules for Angiogenesis Regulation”
  Professor Toshiharu Saiki (Integrated Design Engineering)
- “New e-Learning Paradigm based on Natural Language Processing”
  Associate Professor Ken-ichi Ito (Science for Open and Environmental Systems)
- “Development of a Bacteria-based Computer and its Application to Gene Analysis”
  Professor Yasubumi Sakakibara (Fundamental Science and Technology)
- “Construction of an Artificial Engine”
  Professor Minoru Kobayashi (Fundamental Science and Technology)
- “Molecular Evolution of Peptides to Inhibit the HIV-1 Infection”
  Professor Hiroshi Yanagawa (Integrated Design Engineering)
- “A New e-Learning Paradigm based on Natural Language Processing”
  Associate Professor Kazuaki Ito (Science for Open and Environmental Systems)
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Shinanomachi Research Park
Center for Translational Research: From Bench to Bed

Schematic Diagram

Faculty of Science and Technology

Graduate School of Medicine

Keio University Hospital

Shinanomachi Research Park

Faculty of Environmental Information, etc.

Research Support Department

Central Research Laboratory

Laboratory Animals Center

IC Center

Strategic Research Department

High-tech Research Center

Shinanomachi Campus

Graduate School of Medicine

Center for Integrated Medical Research

School of Medicine

Organizational Chart

Board of CHIR

Evaluation Committee of CHIR

Major Research Projects:

Publicly Funded Projects

Ministry of Education, Culture, Sports, Science and Technology (MEXT)

• 21st Century Innovative Long-life Science Technology Development Project

Academic Frontier Promotion Project

Application of High Throughput Metabolite Network Technology to Repeatability Sciences

High Technology Research Center Project

Project of the Research and Development Center for Regenerative Medicine and Therapeutics, Keio University School of Medicine

Leading Project

Social Academic Partnership Research Promotion Project

Development of Diagnostic and Therapeutic Techniques for the Central Nervous System Diseases

Graduate School of Medicine

Graduate School of Pharmaceutical Sciences

Center for Integrated Medical Research

• Special Assistance for Providing the Advancement of the Education and Research of the Private University

• 21st Century Revolutionary Long-life Science Technology Development Project

School of Medical Systems Science

Graduate School of Medical Sciences

School of Medicine

Research Centers

Faculty of Science and Technology

Graduate School of Medicine

School of Medicine

Keio University Hospital

Shinanomachi Campus

Central Research Laboratory

Laboratory Animals Center

IC Center

Strategic Research Department

High-tech Research Center

Shinanomachi Research Park

Graduate School of Medicine

Center for Integrated Medical Research

School of Medicine

Keio University Hospital
Keio University's SFC campus, SFC, was built in 1999 as a site for research and education based on completely new concepts adapted to the changing times. It includes the three faculties of Policy Management, Environmental Information, and Nursing and Medical Care as well as the Graduate School of Media and Governance which opened in 1996. SFC's mission is to establish "high-quality professionals" who will be able to respond to the social and economic needs of the changing world, in the field of research and education. The SFC Research Institute is committed to presenting its research achievements widely to the public so that the results of its efforts flow back to society.


Venture Incubation

Keio University is expanding incubation facilities with the establishment of new university management incubation facilities on the three faculties and Graduate School of Media and Governance which promotes research activities at SFC. Keio University hopes that a variety of new business will emerge from these facilities, including new companies active at the global level and community-based social enterprises.

Keio KPC-ENP Seminar

The Keio KPC-ENP Seminar is a collaborative project between the Keio University and Nippon Printing Co., Ltd. ENP that was established through a Research Conference offered at the SFC Forum from the view points of social communications and technology. The seminar seeks the future vision toward realization of "flexible society" by changing social information communications.

http://www.sfc.keio.ac.jp/english/seminar.html

World-Leading Fusion Research Technology

SFC Research Consortium

SFC Research Consortium conducts joint research projects which take major roles under the premise of mutual benefit. The university, takes the initiative in deciding a research topic, and invites participation from multiple external organizations including businesses and government, to extend efforts beyond a single field of study.

Currently, the following 5 joint consortium projects have been organized:
- Building Conceptual Media and Application Systems
- Urban
- Korean-English Translation and Information System
- E-CELL (Digital Video Transport System Consortium)
- EPC (Age, Physical Fitness, Health System Consortium)
- IAM (Digital Media Learning Laboratory Consortium)
- M-CELL (Digital Media Learning Laboratory Consortium)
- SFC (Digital Media Learning Laboratory Consortium)

For Inquiries and Document Requests:
- Keio Laboratory
http://www.sfc.keio.ac.jp/sfc-forum/

http://www.sfc.keio.ac.jp/sfc-forum/
Shin-Kawasaki Town Campus

Open and Cutting-edge Research Facility Pursuing Industry-Government-Academia Collaboration

The Shin-Kawasaki Town Campus, popularly known as the K Town Campus, was established in the spring of 2000 as a facility responsible for cutting-edge joint research among industry, government, and academe through collaboration and cooperation with the Kawasaki City. K (“K” Square) represents the double meaning of (1) Kato (one “K”) and Kawasaki (another “K”) leaning up and thereby producing a squared effect by joining forces, and (2) the campus square ( plaza). This is where the Shin-Kawasaki Frontier Research and Education Collaborative Square was established as a frontier research organization within Keio University.

This roughly two-hectare site surrounded by greenery houses four two-story research buildings and one welfare building where a total of approximately 370 researchers including graduate students, joint researchers, and others work day and night to advance research.

All present, 14 representative Keio University frontier research projects that are rooted in industry-government-academia collaboration are being conducted here. In addition to using frontier research to enhance the technology of local businesses and cultivate local industry through the generation of new industries, the K Town Campus also holds open seminars (eight seminars were held in FY2004), open campus days, and other events that serve to make city residents and young people aware of numerous types of learning centered on science and technology.

Toward Industry-Government-Academia Collaboration

The Shin-Kawasaki Frontier Research and Education Collaborative Square (K Square) is a center which aims to foster not only industry-government-academia collaboration, but also collaboration with the community, thereby to stimulate the local community by transmitting research achievements, both practical and academic, as well as cultivating future members of society. The campus is also the place for the establishment of frontiers in innovation concerned for the promotion of Brandon results for industry-government-academia collaboration, advancing integration within the community, and supporting the founding of new businesses and fostering of entrepreneurs.

Then, the Town Campus will continue to work as a center for collaboration that is meaningful to both Keio and the Kawasaki City.

Research Projects

- Completed in FY2004
- New Project starting in FY2005

K-Building

Research Projects

1. Project for Smart Network Project
2. Project for Distributed Real-time Information Processing for Human-made Facilities
3. Project for Flexible Network for Real-time Control
4. Project for High-speed Data Transmission and High-quality Displays
5. Project for Flexible Communication Systems
6. Project for Communication and Database Systems
7. Project for Information Processing for Humanoids

K-Building

Research Projects

1. Project for Next Generation Robot Motion Control
2. Project for Next Generation Robot Manipulation
3. Project for Next Generation Network Technology
4. Project for Next Generation Network Technology
5. Project for Next Generation Network Technology
6. Project for Next Generation Network Technology
7. Project for Next Generation Network Technology

K-Building

Research Projects

1. Project for Next Generation Network Technology
2. Project for Next Generation Network Technology
3. Project for Next Generation Network Technology
4. Project for Next Generation Network Technology
5. Project for Next Generation Network Technology
6. Project for Next Generation Network Technology

K-Building

Research Projects

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2. Project for Next Generation Network Technology
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K-Building

Research Projects

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3. Project for Next Generation Network Technology
4. Project for Next Generation Network Technology
5. Project for Next Generation Network Technology
6. Project for Next Generation Network Technology
The Institute for Advanced Biosciences (IAB) is a full-fledged laboratory for bioresearch set up at the TTCK in April 2003. The IAB, using the leading-edge biotechnology, systematically monitors and analyzes the cellular activities of organisms and microbes, simulates various cell functions and activities by computer, and applies its findings to areas such as medical care and food fermentation.

The IAB attracts attention of the world as a pioneer of "integrated systems biology," a new IT-driven bioscience.

In April 2003, Keio University established the Tsuruoka Town Campus of Keio (TTCK) in Tsuruoka City, Yamagata Prefecture, with the cooperation of Yamagata Prefecture and the municipalities of the Shonai region. The cornerstone of the campus is the Institute for Advanced Biosciences (IAB). Research at IAB is performed at two facilities; the Center Building and the Bio-lab.

TTCK conducts, closely and jointly working with the other campuses of Keio, research and development in advanced areas and enhances research and educational activities. It proactively transforms newly-created technologies to local governments and businesses to encourage industry-government-academia collaboration, contributing to regional development as well as to the advancement of science and technology in Japan.

The IAB attracts attention of the world as a pioneer of "integrated systems biology," a new IT-driven bioscience.
The Humanities Media Interface (HUMI) Project of the Humanities Media Research Center at Keio University conducts research on digital archiving of rare and valuable books and manuscripts. The digital photography and related imaging technologies developed through the project have been contributing to the preservation and disclosure of rare and valuable books both in Japan and overseas. Since the spring of 2004, the HUMI Project, based at Newton Court, has implemented digitalization of valuable books of global importance in Europe, including the Bury St. Edmunds (Cambridge University), the Cadiz Press edition of The Canterbury Tales (The British Library), the Nara Shon (The British Library, Chester Beatty Library), Gutenberg Bible (Pepys Library, National Library of Scotland) and the Winchester Manuscript Le Morte D’Arthur (The British Library). HUMI Project also hosted the “Newton Court Colloquium on the History of the Book and Digitization” in 2005 and 2006, where experts in the fields of historical bibliography, English literature of the Middle Ages, the History of books, art history, and digital archiving met together to discuss the digitalization of rare and valuable books from varied points of view.

On 10 March 2008, the “Keio Workshop on International Collaboration in Digital Media and Content” was held as a workshop of the Research Institute for Digital Media and Content (DMC) (see below) launched in July 2004. The workshop started with the attendees expressing their evaluations of the DMC’s activities to date and expectations for the future. Then, a keynote address titled “Digital Libraries and Digital Editions” and four sessions (“Capturing, Modelling, and Archiving of Human Activities,” “Context Creation and Management for Multimedia Data,” “Digitization of Rare Books and Manuscripts,” and “Digital Media and Networking Technology”) were held in the course of the following two days of the workshop. The two-day event welcomed many Japanese and overseas researchers, as well as British media representatives.

Keio University was selected as one of the “Encouraging Development of Strategic Research Centers,” a program of the Special Coordination Funds for Promoting Science and Technology of the Ministry of Education, Culture, Sports, Science and Technology (MEXT), in FY2004. The goal of this program is to foster excellent researchers and personnel of internationally competitive standards, and to establish an efficient research center through structural reform of existing R&D organizations based on outstanding vision and leadership on the part of top management. The Research Institute for Digital Media and Content (DMC) promotes digitization of any contents residing not only at Keio but also throughout society, aggressively transmitting them from Japan to the international community, and leads the way in generating and disseminating new knowledge to the knowledge-based society of the 21st century. The DMC also advances the activities of the Digital Media and Content Consortium in order to engage in cooperation with businesses.

Advanced Research Section

This section undertakes leading-edge research on new generation contents through research and development of, for example, technologies that capture three-dimensional contents, generate user interfaces, and reconstruct scenes using actual reality technology.

Networks and Security System Unit

This unit experiments with palatable ubiquitous networking using highly realistic course instruction systems. The unit also expounds relevant and basic science on network and international collaboration, the systems unhindered by the existing and direct differences that are obstacles in the case of traditional schooling.

International Intellectual Property and Standardization Strategy Unit

This unit considers rules and regulations concerning digital intellectual property centered on copyrights, and conducts research on digital copyright management systems. It also works with the university in creating new technologies for educational material which chance professionals in the area of technology standardization.

Digital Media and Content (DMC)

The DMC also advances the activities of the Digital Media and Content Consortium in order to engage in cooperation with businesses.

International Collaboration Section

This section has overseas centers in the UK, China, and the Republic of Korea. It advances international collaboration with research organizations and educational institutions, and has also introduced an internship program to foster young researchers and professionals.

[Events in FY2004]

The DMC’s symposium-and workshop series was held on the basis of the results of research activities. The results of research activities may be described as society.

11 December 2004 Digital Libraries and Digital Editions (DMC Opening Symposium)

13 January 2005 DMC Symposium “The Digital and the Real of Prosperity”


20 March 2005 International Workshop on International Collaboration in Digital Media and Content

27–29 March 2005 DMC Workshop on Promoting the Digitization Project of Chinoi Gousha

Production Section

Digital content studios have been established and put into operation at each of the four campuses, Mirr, Hiyori, Inagawa, and Mita. Production/studios are also attached to the studios of Hito and Inagawa Campuses, each studios personnel and universities are thus based at the university and produces content to promote contents. The DMC

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### 1 Promotion of Exchanges between Keio Researchers

**Breakfast Meeting for Interdisciplinary Exchanges**

Keio’s campuses are dispersed throughout the Tokyo and Kanagawa areas, and young, front-line researchers are often heavily caught up in routine duties, leaving limited time for researchers from the different campuses to actually meet. To increase the chances of contact, and encourage interest in other fields of study, the Center for Research Promotion, at the suggestion of the advisory board, started monthly breakfast meetings with coffee and sandwiches.

At the breakfast meeting, the lecture for the day gives a talk on his/her own recent research topics and then participants conduct free discussion with the advisory board members. The discussions are always lively and high-spirited; in some cases, a political scientist may throw questions from an alien perspective to an engineer, and in others, researchers from the humanities and the sciences surprisingly share a common awareness of the issues.

The breakfast meeting is just a first and small step toward offering a meeting place for researchers from different fields. The second step to be taken for all of Keio University is the provision of effective support and necessary services to leading researchers of the next generation.

### 2 Transmission of Research from the University to Society

**Symposium**

University-hosted seminars and symposiums have generally centered on individual research institutes and groups in related fields of study. Typical examples are the SRC Open Research Forum (SDF) staged each year in November at Roppongi Hills by Keio Research Institute at SFC (see page 12L) and the Keio Techno-Mall hosted every December at the Tokyo International Forum by Keio Leading-edge Laboratory of Science and Technology (KLL) (see page 8).

### 3 Organization to Organization: Research Collaboration

**Cross-disciplinary Industry-Academia Collaboration Project**

On June 4, 2005, Fast Retailing Co. Ltd., (UNIQLO) announced a scientifically-designed sportswear named “UNIQLO TECH.” This was the result of a joint research contract signed in FY2004 between the company and Keio University through its Center for Research Promotion. The joint research project is an example of co-creation of the Faculty of Science and Technology on Yuigahama Campus, the School of Medicine in Chiran Campus, and the Sports Medicine Research Center on Yuigahama Campus.

The sportswear has been commercialized with technologies developed by Professor Konishi Osamu, Vice-Director of the Sports Medicine Research Center. The special cut of the stretch fabric is designed to reduce muscular fatigue, offer breathing support, and limit elevation of body temperature. UNIQLO TECH has sold well and an additional line produced through the joint research will also enter the market.

This particular project was led by a coordinator from the Center for Research Promotion. The coordinator and UNIQLO discussed and negotiated the concept of the research, specific goals for product development, marketing analysis, and the roles and responsibilities of both sides. In the meantime, the coordinator approached researchers at the university in relevant fields and succeeded in launching the business-academia project consisting of a joint force of three university organizations and a company.

It is certain that joint and/or commissioned research projects between universities and companies would soon follow as Keio University is determined to deepen exchange and cooperation with society and to transmit research results to society in the form of symposiums and other media.
**The 21st Century COE Program**

Since its foundation in 1858, Keio University has been at the forefront of education and research in Japan. For 147 years, Keio has consistently fulfilled its mission to contribute back to society through its academic and research achievements in fields such as industry and medicine. Keio has also made substantial contributions through fostering the leaders of society and creating new areas of knowledge.

Keio University continues to be a driving force in creating the future of Japan and the global community. The University’s application to participate in the 21st Century COE Programme for FY2002 and FY2003 is an opportunity to advance its fundamental mission through two main focuses: neutrality and a firm commitment to society. The 21st Century COE Programme opens up new possibilities to focus upon the creation of significant intellectual values and human resource development, while remaining impartial and unaffected by the short-term trends of society. Keio University will reinforce its commitment to society by actively contributing to discussions of current social issues.

Keio University aims to become a leader in the global society of the 21st century through the creation of dynamic development and integration of these two focus points at an international level, based upon a unique elliptical model.
FY2002

Designing toward the Ordering of Political Society
In a Multi-cultural and Multi-generational World

Program Leader: Professor Toshiyuki Yoshioka, Graduate School of Law

With the globalization that has been progressing in recent years, claims in the area of multiculturalism have made them appear in many cities and societies. The consideration that these problems cannot be resolved at the level of political leadership alone, the program proposed will establish mechanisms to clarify the roots of citizens’ attitudes, to be gained through analysis and change, and to consider the direction in which multicultural communities are moving.

The eventual goal is to establish a “multicultural citizens’ attitudes research center” and to establish an “enlarged citizens’ attitudes data archive.” Targeted at a variety of countries, together we will constitute Japan’s first international-oriented human research network. Research plans to increase data and related analyses regarding citizens’ attitudes in a multicultural society, and carrying on investigation into conditions that will make it easier for such conflicts to arise. Research will be undertaken in the future for political society in the 21st century, the difference in attitudes of political society, variations in multiculturalism in particular, and the differences in perspectives of multicultural communities in Japan.

FY2003

Integrative Mathematical Sciences:
Projects in Mathematics Motivated by
Natural and Social Phenomena

Program Leader: Professor Kiyoshi Hikami, Graduate School of Science and Technology

The Integrative Mathematical Sciences project is designed to open new horizons in mathematics, by linking the gap between pure mathematics and application-oriented mathematics, and to investigate new concepts and leading methods for mathematical sciences. The core of the research and educational program is built on pure mathematics, as supported by data science and experimental mathematics. Data science serves as the interface to understand the mathematical structures, and experimental mathematics supports the experimental aspect of mathematical sciences.

The main objective of this program is to provide the construction of international educational and research centers through integrating these aspects of mathematical sciences. To facilitate our efforts further, the Center for Integrative Mathematical Sciences at Keio will be established under the auspices of the University at the earliest possible opportunity.

As well as our research projects, we have a strong mandate to encourage Ph.D. students and young researchers internationally. For this purpose, we have already started regular interdisciplinary seminars and colloquia to enhance interdisciplinary exchanges.

Another important aspect of our CLEP program is domestic and international collaborations in mathematical sciences with educational and research institutions overseas. We also invite researchers to give lecture series, for graduate students, both to inform the students of progress in recent mathematical studies in mathematics, and to encourage research collaborations with the CLEP program. The plan is also to organize an international workshop every year.

Basic Study and Clinical Application of Human Stem Cell Biology and Immunology
Approaches Based on the Development of Experimental Animal Models

Program Leader: Professor Hisayuki Obatake, Graduate School of Medicine

The Keio University Graduate School of Medicine leads as excellent staff in two academic fields. (1) Stem cell biology and regenerative medicine, and (2) medical and pharmaceutical research. This project will develop new models of human diseases. The CLEP can make use of the traditional research-based approach on the development of experimental models in the study of cancer and in vitro experiments and failure in the future. This program will take the initiative to establish links with many researchers, with the medical field.

If we continue to develop the experimental models for human diseases and animal models of human diseases, we can also establish a transplant system to study the mechanisms of stem cells and the various diseases. This research will be highly significant for understanding the mechanisms of stem cells and their applications.

Establishment of Individualized Cancer Therapy Based on Comprehensive Development of Minimally Invasive and Innovative Therapeutic Methods

Program Leader: Professor Yoshiaki Maeda, Graduate School of Medicine

In this COE program, we will attempt to establish an individualized cancer therapy based on the comprehensive development of minimally invasive and innovative therapeutic methods. The goal of this research is to establish new methods for the diagnosis and treatment of cancer. The CLEP will develop new models of cancer that are highly significant for understanding the mechanisms of cancer and developing new methods for its treatment.

The COE will aim to improve the current treatment methods for cancer, and to develop new methods for the diagnosis and treatment of cancer. The CLEP will also focus on the development of new models of cancer, and to establish new methods for the diagnosis and treatment of cancer.
Toward an Integrated Methodology for the Study of the Mind—CRIM: Center for Integrated Research on the Mind—

Program Leader: Professor Tetsu Kohsaka, Graduate School of Letters

In the year 2004-05, “Center for the Integrated Research on the Mind” has launched, in cooperation with various academic institutions outside Keio University, a series of symposia, workshops, and conferences. One of them is the symposium on “The Nine Pillars of the Media: Cognitive Science and Virtual Image” of one international symposium “Digital Art: New Technology, Creativity, and Society” to which a number of scholars from France participated (October 2005).

Given our overall understanding, research works between faculty members and graduate students. Macro policies in light of micro observations of their effects, is commonly recognized as critical by all eight research projects. Moreover, our positioning toward the field of policy research, which is jointly published with Economic Research Institute at Kyoto University. In the International Journal of Economic Theory, which was not fully analyzed in economics in the past. In order to analyze the quality of the market, the analysis of the panel data of households is required not only for Japanese households but also for Asian households. Furthermore, firm level data including small business data, public expenditure data etc. will be collected to analyze qualitative changes in various market. Based on these analysis, the new economic policy recommendations of which improve the market function will be addressed. Importantly the legal and institutional factors will also be analyzed in order to improve the quality of the market.

International Network of Research

Two international journals are published from this research project. In the field of economic theory, International Journal of Economic Theory (Blackwell) which is jointly published with Economic Research Institute at Keio University. In the field of policy research, Asian Economic Papers (MIT Press), is jointly published with Columbia University and Korea Institute of International Economic Policy (KIEP). Research Network has been established, such institutes as CSSS (Chinese Academy of Social Sciences), Renmin University, National Development Bank (China), Seoul National University, KEIP (Korea), Bank Indonesia, KOF (Indonesia), University of Hong Kong, ISIS Malaysia, The School of Business, University of Malaysia, University of London, (U.K.) and Tsinghua University (China).

Developing a Theory of Market Quality and an Empirical Analysis Using Panel Data

Program Leader: Professor Naoji Yoshida, Graduate School of Economics
http://www.econ.c u-keio.ac.jp/}

The purpose of this research is to enhance quality of the market function which were not fully analyzed in economics in the past. In order to analyze the quality of the market, the analysis of the panel data of households is required not only for Japanese households but also for Asian households. Furthermore, firm level data including small business data, public expenditure data etc. will be collected to analyze qualitative changes in various market. Based on these analysis, the new economic policy recommendations of which improve the market function will be addressed. Importantly the legal and institutional factors will also be analyzed in order to improve the quality of the market.

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Policy Innovation Initiative: Human Security Research in Japan and Asia

Program Leader: Professor Motyuki Oe, Graduate School of Media and Governance
http://www.coe.cirm. keio.ac.jp/}

The 21st Century COE Program

Program Leader: Professor Naoyuki Yoshino, Graduate School of Economics
http://www.coe.cirm. keio.ac.jp/}

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**Understanding and Control of Life's Functions via Systems Biology**

Program Leader: Professor Hiroki Yamaie, Graduate School of Science and Technology

Program Website: [http://www.coekeio.ac.jp](http://www.coekeio.ac.jp)

Our program is an internationally integrated center for enabling innovation and research in the field of systems biology by providing interdisciplinary research and training to graduate students in engineering, biology, and medicine, with the ultimate goal of understanding and regulating biological functions through the application of mathematical sciences, genetics, proteomics, and metabolomics.

The center aims to obtain biological information to guide the development and application of novel biologically active molecules to regulate cell and organ functions, as well as to reconstitute biological systems in vitro and in vivo and function there in vivo. To facilitate interdisciplinary research training of postgraduate students, the “Keio-Bioscience Interactive Research Program” (KBIRP) supports those who are interested in themes in integrative biology, from the molecular level to the organism level, as well as those aiming at integrating the engineering and biomedical sciences.

The center has focused on three major research areas: (1) discovery and development of novel biologically active molecules, (2) reconstitution of integral systems in vitro and in vivo, and (3) function control of biological systems. Integration of knowledge from various fields, such as engineering, biology, and medical sciences, is important to the center, and we have received guests from various fields.

**Function Creation Oriented Life-Conjugated Chemistry**

Program Leader: Professor Haruna Kawai, Graduate School of Science and Technology

Program Website: [http://www.coekeio.ac.jp](http://www.coekeio.ac.jp)

Research Activity and Collaboration

The midterm assessment reported that “Life-conjugated chemistry is a unique and appropriate subject toward the future chemistry and materials science.” It also reported that several highly qualifies achievements have been resulted from this project. The assessment gave some other comments, which included that the project should be made more distinct and project-wise the value of proposed approach.

In order to realize the target in a distinct, we have constructed a project network among the research groups. This group is unique, and we have achieved the project network among the project members in each group. Therefore, we set our goal to pursue the value of life-conjugated chemistry. We will realize it through the future and international collaboration, for example, we signed a treaty with the industry sectors. Research groups in Tokyo University. We will have three international symposiums organized by each group in 2005.

**Optical and Electronic Device Technology for Access Network**

Program Leader: Professor Toshioaki Matsumoto, Graduate School of Science and Technology

Program Website: [http://www.coekeio.ac.jp](http://www.coekeio.ac.jp)

In this global era, international collaborative networks engaged in academic fusion are essential for the achievement of scientific breakthroughs. Our CoE has held its first international workshop and symposia, collaborations with international research institutions, hosting scholars from overseas and overseas in Japan at Keio and through research laboratories and international internships.

For the past two years, under the auspices of our CoE, speakers have been invited from across the globe to International workshops. That seminars were held in Japan in 2004 in July and in 2005 in June. Among the research groups, our WAIP group organized an original paper in a very short time. In 2004, three workshops for the education of young RAs were held at Tsukuba, Yokohama, and Tokyo.

This year, an international workshop was held at Shonan International Village at the end of September. The center has been strongly promoting research cooperation with domestic and foreign institutions, universities, including RIKEN, University of Tokyo, Gunma University, Tohoku University, Oita University, Kyushu University, Doshisha University, University of California, Los Angeles, University of Illinois, University of Strasbourg, University College London, University of Montana, University of Orleans, Shionogi Pharmaceutical University, and others. Research cooperation with RIKEN has focused on plant metabolism and genome and network analysis. In cooperation with RIKEN, one of our RAs obtained remarkable results on prediction of the number of novel coding RAs from the mouse DNA database (350).

The center has been implemented a project network among the research groups in Tokyo University. In 2005, the First International Conference on Metabolome was held at Tsukuba and in June, and an International Symposium on Biosimulation was held in Tokyo in July.

The first international conference was held in Tokyo in May, and an international symposium on Biosimulation was held in Tokyo in July.
Basic Study and Clinical Application of the Human Stem Cell Biology and Immunology: Approaches Based on the Development of Experimental Animal Models

Program Leader: Prof. Masaki Kitajima, Graduate School of Medicine

http://www.coe-stemcell.keio.ac.jp/

Role of OS in the Program

In Japan, there are high hurdles to be overcome in applying the results of basic research to clinical research. It is indispensable to foster practical research using animal models of human diseases. The Central Institute for Experimental Animals (CIEA) is deeply involved in the establishment of an animal experimentation system for animal models of human diseases to be useful in medicine based on the strong belief that laboratory animals should support medicine, and also in the establishment of in vivo transplantation models to connect basic and clinical research.

Visiting Professors: Tetsuo Hamada, director of CIEA, and Naotake Terakawa, deputy director of CIEA, play important roles as leaders of the CIEA programs.

Education Program

- Monthly updated data presentations in English: "CIEA MISETING" will be held for the purpose of information exchange among young investigators and promotion of joint research and an advanced graduate student and postdoctoral (OS) education will be supported.
- A Bioinformatics course for graduate students, Course of Molecular Developmental Biology is being offered.
- Improvement of the teaching assistant (TA) system and research assistant (RA) system.
- "Bioassay Course" is being offered.
- Development of interdisciplinary research environment by visiting prominent scientists from all over the world and researchers in the field and research exchanges and symposiums.
- CIEA advanced short laboratory course, ABC-HIV Research Seminar course and CIEA Flow Cytometry course were offered.
- A Flow cytometry core facility, CIEA Stem Cell Biology/Immunology Research and Education Center was established.

Establishment of CIEA Stem Cell Biology/Immunology Research and Education Center

Program Leader: Masaki Kitajima, Graduate School of Medicine

http://www.coe-stemcell.keio.ac.jp/

The Integrative Mathematical Sciences Program has been established as an international research and education center by promoting the following projects.

1. Translational Research Projects and International Collaborations

We started the Integrative Mathematical Sciences program with the following two research and educational themes: "Non-commutative manifold and discrete geometric structures in the framework of non-commutative geometry" and "Analysis of nonlinear phenomena in the framework of data science." In accordance with these themes, we organized nine ongoing seminars in which many related researchers from outside of Keio University have taken part. Further, we hosted in total seven international conferences and workshops in 2004. Workshops on the Hauser-Stokes Equations (May 4th to 8th in Keio University, U.K. Open Winter School 2005, January 4th to 8th in London, England), Chern-Bakalowitsch (May 23rd to 26th in Keio University), Non-commutative Geometry and Physics (May 4th to 7th in Shonan Village), etc. Not only from within academia, but also many researchers from outside the university took part in these conferences and workshops. As a result, we were able to collaborate in international research with many universities in the UK, and we also received support from the London Mathematical Society in 2005, so we have concluded the Swiss Geometric Research Education Project with the Ecole Polytechnique Federale de Lausanne in Switzerland. We also held international conferences and workshops in cooperation with the European Mathematical Society, the American Mathematical Society, and the Mathematical Society of Japan, and we are currently in progress. We also cooperated with Keio University, one of our affiliate institutions, and are planning to hold an international conference together. In addition, the research collaboration regarding quantitative risk management with Zurich ETHZ and the international research collaboration within Keio University have both progressed greatly.

2. The nurturing of Talented People

In our role as a research support program for PhD students and young researchers, we have competitively selected and employed five postdoctoral fellows (two from overseas) and 30 research assistants, and we supported their research. Moreover, we carried out the following projects for the sake of training the students and young researchers.

- We invited productive world class researchers and delivered lecture series to help students and young researchers further their studies. The "Integrative Translational Research" group invited a quad professor from many research fields of the "Mathematics Lecture Series" which continued for three sessions per academic period. The lecture series were delivered by prominent mathematicians from various professional backgrounds in the US, the UK, and Europe, and were given in English.
- We invited the "Keio Science Forum" group, which included Nobel Laureates and Fields Medalists, to deliver lectures. Further, the "Mathematics and Physics" group also gave talks in the lecture series. In a manner, the "Keio Science Forum" group interested scholars from overseas and organized the "CIEA lecture series".
- We invited the "Keio Science Forum" group, which included Nobel Laureates and Fields Medalists, to deliver lectures. Further, the "Mathematics and Physics" group also gave talks in the lecture series. In a manner, the "Keio Science Forum" group interested scholars from overseas and organized the "CIEA lecture series".

Through these various activities, PhD students graduated in large numbers and were able to enter society. This year we had more than 25 applicants for the PhD programs in the field of mathematics, the number of applicants accounted for 50% of all applicants in the areas of Fundamental Science and Technology. Now we have more than 30 PhD candidates in mathematics. This fact demonstrates that our CIEA program has already won wide recognition.

System Design Paradigm in Human-Aware Intelligence and Life

Program Leader: Prof. Kaoru Yoshida, Graduate School of Science and Technology

http://www.ceso.yokohama-keio.ac.jp/

This COE project has the following three themes: Systems Design Paradigm, Human-Aware Intelligence and Life.

1. Systems Design Paradigm

We started the Integrative Mathematical Sciences Program with the following two research and educational themes: "Non-commutative manifold and discrete geometric structures in the framework of non-commutative geometry" and "Analysis of nonlinear phenomena in the framework of data science." In accordance with these themes, we organized nine ongoing seminars in which many related researchers from outside of Keio University have taken part. Further, we hosted in total seven international conferences and workshops in 2004. Workshops on the Hauser-Stokes Equations (May 4th to 8th in Keio University, U.K. Open Winter School 2005, January 4th to 8th in London, England), Chern-Bakalowitsch (May 23rd to 26th in Keio University), Non-commutative Geometry and Physics (May 4th to 7th in Shonan Village), etc. Not only from within academia, but also many researchers from outside the university took part in these conferences and workshops. As a result, we were able to collaborate in international research with many universities in the UK, and we also received support from the London Mathematical Society in 2005, so we have concluded the Swiss Geometric Research Education Project with the Ecole Polytechnique Federale de Lausanne in Switzerland. We also held international conferences and workshops in cooperation with the European Mathematical Society, the American Mathematical Society, and the Mathematical Society of Japan, and we are currently in progress. We also cooperated with Keio University, one of our affiliate institutions, and are planning to hold an international conference together. In addition, the research collaboration regarding quantitative risk management with Zurich ETHZ and the international research collaboration within Keio University have both progressed greatly.

2. Human-Aware Intelligence and Life

In Japan where there are high hurdles to be overcome in applying the results of basic research to clinical research, it is indispensable to foster practical research using animal models of human diseases. The Central Institute for Experimental Animals (CIEA) is deeply involved in the establishment of an animal experimentation system for animal models of human diseases to be useful in medicine based on the strong belief that laboratory animals should support medicine, and also in the establishment of in vivo transplantation models to connect basic and clinical research.

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Establishment of CIEA Stem Cell Biology/Immunology Research and Education Center

Program Leader: Masaki Kitajima, Graduate School of Medicine

http://www.coe-stemcell.keio.ac.jp/
### Research-related Facilities and Libraries

Keio University provides research space and incubation facilities for rent as indicated below. Please inquire in advance for vacancies, rental qualifications, application procedures, application deadlines, etc.

#### Research Space for Rent

Keio University has Run campuses: Hiyoshi, Shinonome, Yagami, and Shonan Fujisawa, each one of them developing leading-edge research and education in various disciplines, and also high-level medical practice. The Media Centers, centering the library service, branch on each campus to provide intensive support for all these specific activities.

#### Library Collections

Keio University has six campuses: Mita, Hiyoshi, Shinonome, Yagami, and Shonan Fujisawa, each one of them developing leading-edge research and education in various disciplines, and also high-level medical practice. The Media Centers, centering the library service, branch on each campus to provide intensive support for all these specific activities.

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### FY2004 Financial Position

**Ended on March 31, 2005**

#### 1 Balance Sheet

<table>
<thead>
<tr>
<th>Accounts</th>
<th>Amount (in Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>309,209</td>
</tr>
<tr>
<td>Marketable securities</td>
<td>3,080</td>
</tr>
<tr>
<td>Loans receivable</td>
<td>11,854</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>12,854</td>
</tr>
<tr>
<td>Inventories</td>
<td>1,381</td>
</tr>
<tr>
<td>Other current assets</td>
<td>1,861</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>327,606</td>
</tr>
<tr>
<td>Long-term investments</td>
<td>1,131</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>1,180</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>380,919</td>
</tr>
</tbody>
</table>

#### 2 Income and Expenditure Statement

<table>
<thead>
<tr>
<th>Income and Expenditure Statement</th>
<th>Amount (in Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Funds</strong></td>
<td></td>
</tr>
<tr>
<td>Income from operations (1)</td>
<td>343,298</td>
</tr>
<tr>
<td>Income from capital and financial management activities (2)</td>
<td>8,475</td>
</tr>
<tr>
<td>Income from asset administration (3)</td>
<td>3,876</td>
</tr>
<tr>
<td><strong>Total income</strong></td>
<td>355,649</td>
</tr>
<tr>
<td><strong>Expenditures</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Funds</strong></td>
<td></td>
</tr>
<tr>
<td>Current excess over expenditure</td>
<td>8,172</td>
</tr>
<tr>
<td><strong>Total expenditure</strong></td>
<td>772</td>
</tr>
<tr>
<td><strong>Net income</strong></td>
<td>8,172</td>
</tr>
</tbody>
</table>

---

### Research-related Facilities and Libraries

#### Research Space for Rent

- **Overview**
  - Total of 32 rooms in Research Building or Yagami Campus
  - **Total floor area:** 2,493.6m²

- **Details**
  - **Building:** Keio University
  - **Floor area:** approximately 2,500m²
  - **Floor number:** 1st to 5th
  - **Floors:** 5 floors, 29 units

- **Features**
  - **Size:** 7m × 10m × 10m
  - **Number of units:** 29 units
  - **Floor area:** 24,400m²
  - **Type:** Steel frame with a reinforced concrete structure; 2 under ground floors, 3 under ground floors, and one penthouse floor
  - **Opened for business:** May 2006

#### Library Collections

- **Overview**
  - Keio University has six campuses: Mita, Hiyoshi, Shinonome, Yagami, and Shonan Fujisawa, each one of them developing leading-edge research and education in various disciplines, and also high-level medical practice.

- **Features**
  - **Size:** Total floor area: approximately 3,800m²
  - **Opened for business:** May 2006

---

### Research-related Facilities and Libraries

- **Overview**
  - Keio University has six campuses: Mita, Hiyoshi, Shinonome, Yagami, and Shonan Fujisawa, each one of them developing leading-edge research and education in various disciplines, and also high-level medical practice.

- **Features**
  - **Size:** Total floor area: approximately 3,800m²
  - **Opened for business:** May 2006
Research Funds at Keio University in FY2004

Research Funds at Keio University from national and local public institutions, private businesses, and university funding, etc., totaled approximately ¥35 billion in FY2004. These funds include the Special Coordination Fund for the Promotion of Science and Technology “Program to Encourage the Development of Strategic Research Centers,” of the Ministry of Education, Culture, Sports, Science and Technology (MEXT). This research grant project provides intensive support to organizational reform efforts for the purpose of developing an excellent research infrastructure. Others include funds for the 21st Century COE Program which which Keio University won 12 projects, the largest number for a private university.

In the following, data on research funds is categorized by campus, affiliation of researcher, type of funds, and field of research.

3. Research Funds by Type

The number of projects funded by specified contributions results in the target of all of them compared to the other types of funding. Funds from foundations come first in terms of amount, funds from commissions, commissioned research, and specified contributions account for approximately 60% of the total research funds.

<table>
<thead>
<tr>
<th>Type of Funds</th>
<th>Number of Projects</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Funds</td>
<td>436</td>
<td>¥6,000,000</td>
</tr>
<tr>
<td>Subsidies</td>
<td>153,530</td>
<td></td>
</tr>
<tr>
<td>Grants</td>
<td>¥351,028</td>
<td></td>
</tr>
<tr>
<td>Contributions</td>
<td>¥153,530</td>
<td></td>
</tr>
<tr>
<td>Contract Research</td>
<td>¥4,926,284</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2,999</td>
<td>¥13,885,447</td>
</tr>
</tbody>
</table>

4. Subsidies not included in imputed income

Some of the subsidies for the university appear as imputed income of school accounts in the financial statement (¥5,000 million of FY2004). New income and expenditure statement, page 36, but others do not. These amount to approx. ¥16.6 billion in FY2004. For example, subsidies from the university are not included in the financial statement. Accordingly, a comparison to government in FY2004 is not included in the financial statement. The table below shows the subsidies included in imputed income in the financial statement.

<table>
<thead>
<tr>
<th>Type of Fund</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants-in-Aid for Scientific Research</td>
<td>¥1,674,846</td>
</tr>
<tr>
<td>Support Program for National University Education</td>
<td>¥1,674,846</td>
</tr>
<tr>
<td>Special Coordination Fund for the Promotion of Science and Technology</td>
<td>¥1,674,846</td>
</tr>
<tr>
<td>Support Program for Undergraduate Education In Ecosystem</td>
<td>¥1,674,846</td>
</tr>
<tr>
<td>Special Research</td>
<td>¥1,674,846</td>
</tr>
<tr>
<td>Total</td>
<td>¥13,885,447</td>
</tr>
</tbody>
</table>

Source: Keio University Research Activities FY2004
5. Research Funds by Field

The data in this section is compiled with reference to classification of the field of research in other official reports, such as the Survey of Research and Development by the Ministry of Education, Culture, Sports, Science and Technology of Japan, and various reports on research expenses by the Japan Association of Private Colleges and Universities. The field of medical science comes first in the number of projects, but science and technology are in the lead in terms of amount. Research in the field of science and technology includes research on both faculties of science and technology and instrumental information.

Indirect Expenses and General Administrative Expenses

<table>
<thead>
<tr>
<th>Field</th>
<th>Number of Projects</th>
<th>Amount (in yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science and Technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Indirect Expenses</th>
<th>General Administrative Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Ratio of Direct Research Expenses to Research Funds

The ratio of direct research expenses to research expenses, including indirect expenses and general administrative expenses, is slightly less than 47%. The field of medical science comes first and social sciences come second in terms of the amount of direct research expenses. In terms of the number of projects, science and technology are first and social sciences are second. The difference is due to the field of social sciences, particularly human and social sciences, having a higher percentage of direct research expenses. However, the actual percentage is still lower than that of North American and European counterparts.

7. Direct Research, Indirect, and General Administrative Expenses by Campus

The data in this section is compiled with reference to classification of the field of research in other official reports, such as the Survey of Research and Development by the Ministry of Education, Culture, Sports, Science and Technology of Japan, and various reports on research expenses by the Japan Association of Private Colleges and Universities. The field of medical science comes first and social sciences come second in terms of amount. Research in the field of science and technology includes research on both faculties of science and technology and instrumental information.
The competitive research fund has been defined as a “funds for research and development to be distributed to researchers and institutions making proposals on a subject publicly announced and passing the examination based primarily on scientific and technological perspectives, by a committee composed of more than two members including experts in the subject field.” (Reform of the Competitive Research Funding System Council for Science and Technology Policy, April 2000). In the “Science and Technology Basic Plan FY2004-FY2005,” the Japanese government set a target for doubling the budget appropriation for competitive research funds under the model of the United States, which holds an established position in world-leading research supported by such funds.

Amount of competitive funds and adopted rate can be indicators for the research potential of universities. National universities have been long ahead of private universities in part due to different research environments. The national universities have been better funded with government subsidies for administration and maintenance of facilities, so in comparison they have better research facilities than their private counterparts. Well-equipped research facilities are a great advantage in generating high-quality research and then attaining competitive funds.

However, this situation is expected to change as the national universities have been converted into independent corporations since FY2004. Competition for funding between universities will certainly grow more intense, though there are no perceptible changes yet.

The government budgeted ¥46.3 billion for competitive research funds in FY2004, approximately one-tenth of total allocations for science and technology. Grants-in-Aid Scientific Research (Kakenhi) funded by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Japan Science and Technology Agency (JST) are the primary sources for the promotion of research activities tackling the key issues. Development of the Analyzing and Sharing System of Information Security (C079,961,080,814,095,596) was the main target for doubling the budget appropriation for competitive research funds of FY2004. This becomes the largest budget in a single project and was distributed to the first 15 institutions, which are listed below in order of competitiveness.

The selected researchers perform their research at their own facilities. This type includes both large-scale researches conducted at national graduate schools and small individual researches carried out by Research Project Representatives and Subjects of Keio University in CREST funded by the MEXT. The selected universities can be identified on the basis of the Research and Development System Document System (Kakenhi).

The special coordination fund for promoting science and technology is a budget for research projects that are expected to be of great significance both for science and technology and for the economy, and that are essential for science and technology cooperation with other countries. FY2004 Special Coordination Fund for Promotion of Science and Technology (KAKENHI) was introduced by MEXT and JST in FY2004. The special coordination fund is a unique and large-scale research project with high scientific significance.

The selected researches perform their research at their own facilities. This type includes both large-scale researches conducted at national graduate schools and small individual researches carried out by Research Project Representatives and Subjects of Keio University in CREST funded by the MEXT.

The following is an overview of representative competitive research funds of MEXT: 1) Kakenhi, 2) Basic Research Programs, and 3) Special Coordination Funds for Promoting Science and Technology. A portion of the achievements by Keio University will also be introduced here.

2 Basic Research Programs:

The Basic Research Programs of MEXT provide purpose-oriented basic research for the strategic objectives of the national government, with the division of national and city social and economic demands and also picked areas for science and technology fields. The specific areas of research are pre-selected by the strategic research committees - the MEXT calls for proposals (MEXT CSRP) according to the announcement made by the MEXT and the JST. These call for proposals are broad in concept, and major research areas are selected in each field, such as those that are necessary or important to determine whether the MEXT calls for proposals are conducted. They target universities, national research institutes, and public research institutions. The general research areas are expected to be promising fields ranging from humanities and social sciences to the natural sciences, biomedical fields, Urgent researches, Leadership for international scientific cooperation, etc.

The research areas and subjects selected in the latest call for proposals are as follows:
- Advanced Research on Next Generation Information Technology
- Advancements in Information and Communication Technologies for Competitive Research Funding System
- Strategic Measures Focusing on Priority Areas
- Strategic Measures Focusing on Priority Areas

3 Special Coordination Funds for Promoting Science and Technology:

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Researchers at Keio University in FY2004

As of 31 March 2005

The section presents data on researchers involved in research or education at Keio University (Professors, Associate Professors, Assistant Professors and Instructors), doctoral students and awardees of doctor's degrees, and researchers participating in research projects at Keio but not affiliated under the any of above conditions.

Number of Researchers

- Researchers at Keio University: the figure indicates total number of researchers including teachers in the affiliated elementary and secondary schools of Keio University.
- Researchers employed by Keio University: this includes researchers employed by research institutes, educational, or medical institutions other than the School of Medical Education.
- Researchers accepted by Keio Research Institute at SFC upon application from an institution: these researchers are those employed under full-time contracts without fixed period contract.

Subtotal 149

Figures in parentheses indicate the maximum number of students for the graduate school. *1 The figures for the Graduate School of Medicine include 41 researchers with fixed period contracts.

Table A: Visiting Professors and Researchers

<table>
<thead>
<tr>
<th>Job Title/Status of Researchers</th>
<th>Number of Researchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visiting Professor</td>
<td>129</td>
</tr>
<tr>
<td>Visiting Researcher</td>
<td>20</td>
</tr>
<tr>
<td>Visiting Lecturer</td>
<td>4</td>
</tr>
<tr>
<td>Visiting Researcher</td>
<td>19</td>
</tr>
<tr>
<td>Visiting Research Assistant</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>168</td>
</tr>
</tbody>
</table>

Table B: Others

<table>
<thead>
<tr>
<th>Research Area</th>
<th>No. of Researchers at Keio University</th>
<th>No. of Researchers not Employed by Keio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institute of Cultural and Linguistic Studies (Institute of English)</td>
<td>41</td>
<td>30</td>
</tr>
<tr>
<td>Institute for Media and Communications, Research (Institute of Humanities)</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Institute for Media and Communications, Research (Institute of Social Sciences)</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Institute for Medical Education (Institute of Medical Education)</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>Institute for Social Science Research (Institute of Social Science)</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>Institute of Social Studies (Institute of Social Studies)</td>
<td>27</td>
<td>15</td>
</tr>
<tr>
<td>Institute of Information Science and Technology (Institute of Information Science and Technology)</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Institute of Liberal Arts (Institute of Liberal Arts)</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Institute of Physical Education (Institute of Physical Education)</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td>Institute for Foreign Language Education (Institute of Foreign Language Education)</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Institute for Foreign Language Education (Institute of Foreign Language Education)</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
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<td>5</td>
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<td>Institute for International Education (Institute of International Education)</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>469</td>
<td>346</td>
</tr>
</tbody>
</table>

Not only undergraduate faculty or graduate students but research institutes of Keio University accepts researchers from other research institutions and universities outside Keio.

Support for Future Researchers

There are two types of doctor's degree: course and dissertation doctorates. Course doctorates are conferred to those who have completed a course of study with all other requirements. Dissertation doctorates are conferred to those who have submitted a dissertation with consent of a committee of supervisors and passed the examination by a board of review. The board will decide on completion of a student's course in three years, except for the Graduate School of Medicine, which maintains a four year standard.

Number of Doctorates Awarded

- Course Doctorate: 9
- Dissertation Doctorate: 2

Total 11

Number of Students Registered in Doctoral Courses

- Graduate School of Letters: 125
- Graduate School of Economics: 75
- Graduate School of Science and Technology: 173
- Graduate School of Medicine: 173
- Graduate School of Business Administration: 168
- Graduate School of Business and Commerce: 168
- Graduate School of Human Relations: 145
- Graduate School of Science and Technology: 153
- Graduate School of Letters: 145
- Graduate School of Human Relations: 145

Total 1,123

As of 31 March 2005

Research from outside Keio

Keio University has long emphasized the creation of a good environment for intellectual exchange and synergistic cooperation with researchers both within and outside the institution, with the goal of sharing common or related research subjects.

Not only undergraduate faculty or graduate students but research institutes of Keio University accepts researchers from other research institutions and universities outside Keio.

Number of Researchers Accepted — Breakdown by Job Title and Status

<table>
<thead>
<tr>
<th>Job Title/Status of Researchers</th>
<th>Number of Researchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Associate Professor</td>
<td>99</td>
</tr>
<tr>
<td>Research Associate Professor</td>
<td>76</td>
</tr>
<tr>
<td>Researcher (Shonan Fujisawa)</td>
<td>125</td>
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<td>Total</td>
<td>1,123</td>
</tr>
</tbody>
</table>

Table A: Visiting Professors and Researchers

<table>
<thead>
<tr>
<th>Job Title/Status of Researchers</th>
<th>Number of Researchers</th>
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</thead>
<tbody>
<tr>
<td>Visiting Professor</td>
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</tr>
<tr>
<td>Visiting Researcher</td>
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<tr>
<td>Visiting Lecturer</td>
<td>4</td>
</tr>
<tr>
<td>Visiting Researcher</td>
<td>19</td>
</tr>
<tr>
<td>Visiting Research Assistant</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>168</td>
</tr>
</tbody>
</table>

Table B: Others

<table>
<thead>
<tr>
<th>Research Area</th>
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</tr>
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<td>Total</td>
<td>469</td>
<td>346</td>
</tr>
</tbody>
</table>

As of 31 March 2005

Not only undergraduate faculty or graduate students but research institutes of Keio University accepts researchers from other research institutions and universities outside Keio.
The Intellectual Property Center (IPC) was established in November 2000. As depicted in the diagram on the left, the role of the IPC is to act as a linking hub between Keio and society at large. This role involves protecting research achievements at Keio as intellectual properties, transferring the patents to society, giving feedback of the market evaluations to the researchers, and ultimately stimulating research activities at the university. The IPC believes that, through such activities, it has been contributing to the realization of “creating intellectual values,” “exploring entrepreneurial potential,” and “inspiring education.”

1. Rules and Regulations for Intellectual Property and Technology Transfer

In FY2004, the Guidelines for Intellectual Property was enacted. It formed the basis for activities dealing with intellectual property and technology transfer at Keio and clarified the organizational support of the university as a whole for these activities, with new or revision of the existing rules concerning inventions as follows:

- Rules and Regulations for "Inventions" (revised)
- Rules and Regulations for "Tangible Achievements of Research" (new)
- Rules and Regulations for Intellectual Property Mediation Committee" (new)

2. Intellectual Property

Filing activities of the IPC remained active throughout FY2004 as in the previous year. The IPC filed 127 domestic patent applications, 48 PCT applications, and 30 international patent applications. Noteworthy is the fact that the number of international patents increased.

The following charts and a graph show patent applications by field of technology, campus, and inventor.

3. Technology Transfer

Technology transfer of the intellectual properties representing technologies of the university is engaged through:

1. Licensing to a company.
2. Starting a company based on intellectual property (IP) rights.
3. Joint research with a company towards commercialization

The following graphs indicate technology transfer by the above categories.

4. Platform for Information Exchange between Industry and Academia

The IPC strongly believes, from six years of experience in implementing IP and technology transfer activities, the importance to further activate industry-academia collaboration through information exchange and integration of knowledge between the two. Thus, the IPC has started Keio Innovation Network. It is a monthly meeting on specific topics to convey technological information at Keio. The first meeting was held in February 2005, with an overview as shown below.

5. Others

The Keio Innovation Network (East Building, Mita Campus)
"Visible Light Communications"
Prof. Hirofumi Nakanishi, Faculty of Science and Technology
"Synchronization and Application of Transparent Nano-photonics"
Asst. Prof. Tatsuya Ito, Faculty of Science and Technology
"Optical Microwave for Photonic Networks"
Asst. Prof. Hiroaki Takahashi, Faculty of Science and Technology
"Magnetic Memories Based on Domain Wall Motion"
Instructor Eiji Saitoh, Faculty of Science and Technology

This was the second consecutive win for the IPC, which received the Award of the Minister of Education, Culture, Sport, Science and Technology in June 2003.
## Awards for Research Activities, FY2004

<table>
<thead>
<tr>
<th>Date Awarded</th>
<th>Winner</th>
<th>Award</th>
<th>Research for Award</th>
<th>Reason for Award</th>
<th>Awarding Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>25/09/04</td>
<td>Nobuyuki Shigemori (Prof., Sch. of Medicine)</td>
<td>Gold Medal Award</td>
<td>For the development of new drugs for the treatment of cancer</td>
<td>For contributing to the field of cancer research</td>
<td>The Japan Academy</td>
</tr>
<tr>
<td>25/09/04</td>
<td>Yukihiro Ohno (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Achievement Award</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>For his pioneering work in the field of materials science</td>
<td>The Japan Academy of Sciences and Technology</td>
</tr>
<tr>
<td>30/09/04</td>
<td>Hiroshi Kato (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>The Japan Academy of Sciences and Technology</td>
</tr>
<tr>
<td>01/10/04</td>
<td>Koichi Ono (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>The Japan Academy of Sciences and Technology</td>
</tr>
<tr>
<td>06/10/04</td>
<td>Takashi Hasegawa (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>The Japan Academy of Sciences and Technology</td>
</tr>
<tr>
<td>13/10/04</td>
<td>Naoko Aikawa (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
<td>For his outstanding contributions to the field of materials science</td>
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</tr>
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<tr>
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<td>Hiroshi Itoh (Prof., Sch. of Science and Technology)</td>
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<td>For his outstanding contributions to the field of materials science</td>
<td>The Japan Academy of Sciences and Technology</td>
</tr>
<tr>
<td>03/11/04</td>
<td>Shigenori Tanaka (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
<td>For his outstanding contributions to the field of materials science</td>
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<td>The Japan Academy of Sciences and Technology</td>
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<td>The Japan Academy of Sciences and Technology</td>
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<tr>
<td>17/11/04</td>
<td>Shinji Ikeda (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
<td>For his outstanding contributions to the field of materials science</td>
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<td>The Japan Academy of Sciences and Technology</td>
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<tr>
<td>24/11/04</td>
<td>Koichi Ono (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
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<tr>
<td>01/12/04</td>
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<tr>
<td>08/12/04</td>
<td>Naoko Aikawa (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>The Japan Academy of Sciences and Technology</td>
</tr>
<tr>
<td>15/12/04</td>
<td>Yoshio Ohno (Prof., Sch. of Science and Technology)</td>
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<td>For his outstanding contributions to the field of materials science</td>
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<td>The Japan Academy of Sciences and Technology</td>
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<tr>
<td>22/12/04</td>
<td>Hiroshi Itoh (Prof., Sch. of Science and Technology)</td>
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<td>The Japan Academy of Sciences and Technology</td>
</tr>
<tr>
<td>05/01/05</td>
<td>Naoki Aikawa (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
<td>For his outstanding contributions to the field of materials science</td>
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<td>The Japan Academy of Sciences and Technology</td>
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<tr>
<td>12/01/05</td>
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<td>Hiroshi Itoh (Prof., Sch. of Science and Technology)</td>
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<td>For his outstanding contributions to the field of materials science</td>
<td>The Japan Academy of Sciences and Technology</td>
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<tr>
<td>26/01/05</td>
<td>Shigenori Tanaka (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>The Japan Academy of Sciences and Technology</td>
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<tr>
<td>02/02/05</td>
<td>Naoki Aikawa (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>The Japan Academy of Sciences and Technology</td>
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<tr>
<td>09/02/05</td>
<td>Yoshio Ohno (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>For his outstanding contributions to the field of materials science</td>
<td>The Japan Academy of Sciences and Technology</td>
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<tr>
<td>16/02/05</td>
<td>Hiroshi Itoh (Prof., Sch. of Science and Technology)</td>
<td>Distinguished Service Award</td>
<td>For his outstanding contributions to the field of materials science</td>
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### Additional Information

- **Source:** Keio University Annual Report on Research Activities, FY2004
- **Date:** March 2005
- **Volume:** Vol. 4, No. 4
- **Publisher:** Keio University Press
- **ISBN:** 4-19-100009-0

### Acknowledgments

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<td>Keio Award</td>
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<td>Kazuhiro Fukaya (Prof., Sch. of Business and Commerce)</td>
<td>Keio Award</td>
<td>For the publication, Keio University, 5th Keio University Doctoral Fellow (PD) 3, 8, 9, 12, 19, 22, 25, 27, 31, 32, 34, 36, 40, 43</td>
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<td>Yoriko Shibuya (Prof., Fac. of Environmental Information)</td>
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<td>Yusuke Nakao (Prof., Sch. of Medicine)</td>
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<td>For publication of Atsushi Nakao – Boshin no Keizaigaku: Trajectory of the Revolutionaries and The Political Science of Culture, Keio University Press (May 2004)</td>
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