2019 Keio University Annual Report on Research Activities



Research funds at Keio University from national and local public institutions, private businesses, and university funding totaled approximately US\$ 213 million in FY2019.

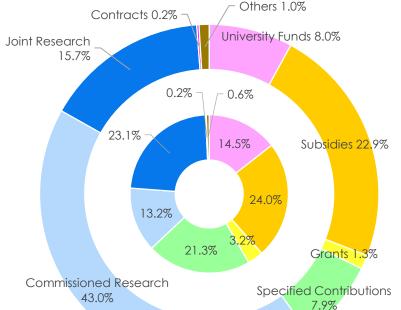
The charts below show research fund totals classified in various ways.

Amount <outer ring> and Number of Projects <inner ring>

Research Funds by Type

(\$=¥110) Thousand US Dollars

		Thousand O3 Dollars
Types of Funds	Number of Projects	Amount
University Funds	796	17,022
Subsidies	1,321	48,873
Grants	177	2,833
Specified Contributions	1,172	16,832
Commissioned Research	727	91,646
Joint Research	1,269	33,386
Contracts	9	456
Others	32	2,051
Total	5,503	213,099



Definition

Subsidies: Research funds provided mainly by government and public offices.

Grants: Research expenses provided mainly by foundations for the purpose of improvement or accomplishment of research.

Specified Contributions: Contributions earmarked for research activities.

Commissioned Research: Research commissioned by government and public offices, as well as private enterprises.

Joint Research: Research involving personnel exchanges and/or sharing technology/facilities under the joint research agreement, with or without payment of research funds.

Contracts: Research under a contract agreement.

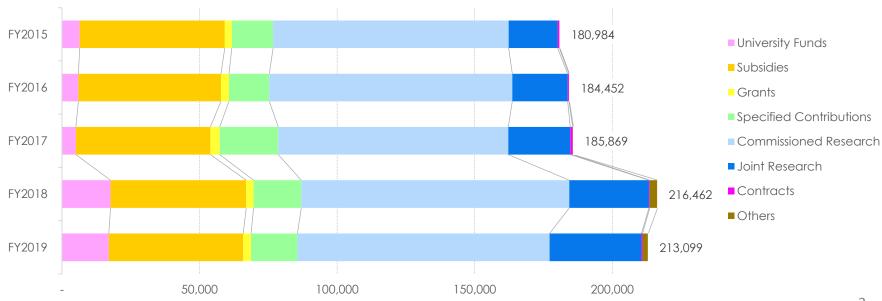
- University Funds
- Subsidies
- Grants
- Specified Contributions
- Commissioned Research
- Joint Research
- Contracts
- Others

^{*}As of March 31, 2020

^{*}Discrepancies may arise in the total amount as totals are rounded to the thousand.

Research Funds by Type FY2015-2019

Research Funds by Type over the Past 5 Years									
Type of Research Funds	FY2015	FY2016	FY2017	FY2018	FY2019				
University Funds	6,434	5,961	5,049	17,656	17,022				
Subsidies	52,738	51,809	48,919	49,315	48,873				
Grants	2,565	2,924	3,365	2,705	2,833				
Specified Contributions	15,022	14,646	21,259	17,305	16,832				
Commissioned Research	85,560	88,338	83,660	97,395	91,646				
Joint Research	17,804	20,110	22,504	28,983	33,386				
Contracts	647	502	879	268	456				
Others	214	164	235	2,835	2,051				
Total	180,984	184,452	185,869	216,462	213,099				



^{*} University funds were revalued in 2018, part of which were not counted as such in the previous years.

(\$=¥110)

Research Funds by Field in FY2019

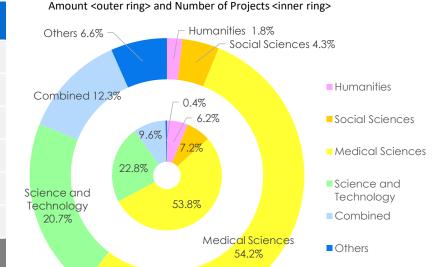
The data in this section are compiled with reference to classification of the field of research in other official reports such as the Survey of Research and Development by the Ministry of Internal Affairs and Communications, and various surveys on research expenses by the Japan Association of Private Universities and Colleges.

Thousand US Dollars

(\$=¥110)

Research Funds by Field

,		Thousand OS Dollars
Research Fields	Number of Projects	Amount
Humanities	340	3,858
Social Sciences	398	9,238
Medical Sciences	2,959	115,554
Science and Technology	1,253	44,141
Combined	529	26,183
Others	24	14,125
Total	5,503	213,099



Humanities

History, Philosophy, Literature, Languages, and other humanities.

Social Sciences

Economics, Sociology, Business and Commerce, Political Science, Law, and other social sciences.

Medical Sciences

Medicine, Nursing, Pharmaceutical Science, and other health and medical sciences.

Science and Technology

Applied Chemistry, Chemistry, Mechanics and Shipbuilding, Engineering, Mathematics, Electrics, Communications, Physics, and other sciences and technology.

Combined

Interdisciplinary fields.

Others

Research Funds by Affiliation in FY2019

Classifying funds by affiliation of researcher (in principle, the representative researcher)

■ Research Funds by Affiliation of Researchers

(\$=¥110) Thousand US Dollars

Affiliation of Researchers	Number of Projects	Amount
Faculty / Graduate School of Letters	184	3,248
Faculty / Graduate School of Economics	126	2,802
Faculty / Graduate School of Law	90	1,192
Faculty / Graduate School of Business and Commerce	107	2,598
Faculty / Graduate School of Medicine	2,664	107,999
Faculty / Graduate School of Science and Technology	1,056	30,148
Faculty of Policy Management	150	3,370
Faculty of Environment and Information Studies	352	25,055
Faculty of Nursing and Medical Care	43	505
Faculty of Pharmacy / Graduate School of Pharmaceutical Sciences	192	4,642
Graduate School of Human Relations	1	6
Graduate School of Media and Governance	179	6,394
Graduate School of Health Management	10	1,139
Graduate School of Business Administration	40	580
Graduate School of System Design and Management	84	3,450
Graduate School of Media Design	39	2,176
Law School	38	253
Others	148	17,542
Total	5,503	213,099

^{*}Discrepancies may arise in the total amount as totals are rounded to the thousand.

Research

Ж

Research Funds by Type 2019

■ Types of External Entities Contributing Research Funds

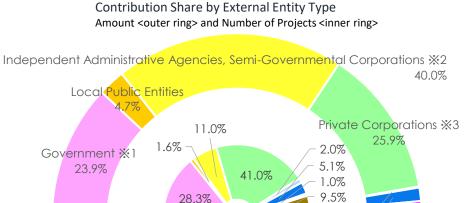
(\$=¥110) Thousand US Dollars

Type of External Entities	Number of Projects	Amount
Government %1	1,332	46,812
Local Public Entities	77	9,206
Independent Administrative Agencies, Semi-Governmental Corporations $\divideontimes 2$	519	78,423
Private Corporations **3	1,929	50,855
Other Universities	96	342
Non-profit Foundations, Charitable Organizations	241	4,612
Foreign Countries	47	2,551
Private Individuals	445	2,902
Others	21	374
Total	4,707	196,077

										- asama	OJ DONAIJ
€1	Government	FY	2015	FY	′2016	FY	2017	F	/2018	FY	2019
	Funding sources	No. of Projects	Amount								
	Ministry of Internal Affairs and Communications	9	629	10	1,506	10	1,988	9	1,254	6	684
	Ministry of Education	1,030	37,259	1,066	36,091	1,064	38,067	1,152	37,941	1,211	36,044
	Ministry of Health, Labor and Welfare	75	3,652	61	2,311	71	1,749	74	2,041	92	4,355
	Ministry of Environment	11	1,920	8	1,334	4	301	3	119	3	647
	Others	41	5,227	12	863	16	4,976	21	4,730	20	5,082
	Total	1,166	48,687	1,157	42,106	1,165	47,080	1,259	46,086	1,332	46,812

2	Independent Administrative Agencies, Semi-Governmental Corporations	F	/2015	F	/2016	F	/2017	F١	/2018	F	/2019
	Funding sources	No. of Projects	Amount								
	NICT *a	19	1,114	20	1,784	10	1,352	12	735	14	559
	JST *b	81	19,611	81	24,814	88	20,778	99	21,956	89	17,817
	AMED *c	201	50,825	216	48,634	220	43,108	289	52,110	248	49,282
	NEDO *d	12	1,096	18	1,866	16	2,173	22	3,695	20	3,860
	Others	91	1,689	111	2,158	110	3,010	132	3,943	148	6,905
	Total	404	74,336	446	79,256	444	70,422	554	82,440	519	78,423





Other Universities 0.2% Non-profit Foundations, Charitable Organizations 2.4% (\$=\mathbf{y}110)

Foreign Countries 1.3% Private Individuals 1.5% Others 0.2%

0.4%

■ Government ※1

Thousand US Dollars

- Local Public Entities
- Independent Administrative Agencies, Semi-Governmental Corporations ※2
- Private Corporations ※3
- Other Universities
- Non-profit Foundations, Charitable Organizations
- Foreign Countries
- Private Individuals
- *a National Institute of Information and Communications Technology
- *b Japan Science and Technology Agency
- *c Japan Agency for Medical Research and Development
- *d New Energy and Industrial Technology Development Organization

Research Funds by Campus in FY2019

■ Types of External Entities Contributing Research Funds to Each Campus

(\$=¥110) Thousand US Dollars

/ 1	<u> </u>		•			Tilousallu O3 Dollais
Campuses		Government Organizations	Non- Government Public Organizations	Private Corporations	Others	Total
Mita Campus	No. of Projects	208	9	18	1	236
	Amount	8,910	120	405	105	9,540
Hiyoshi Campus	No. of Projects	132	19	99	7	257
	Amount	3,907	423	4,518	87	8,935
Shinanomachi Campus	No. of Projects	890	164	1,002	454	2,510
	Amount	65,848	3,258	27,989	3,886	100,981
Yagami Campus	No. of Projects	368	86	389	46	889
	Amount	18,867	1,306	7,379	540	28,092
Shonan Fujisawa Campus	No. of Projects	151	68	293	33	545
	Amount	17,394	1,828	7,250	1,259	27,731
Shiba-Kyoritsu Campus	No. of Projects	66	17	57	2	142
	Amount	3,131	367	852	9	4,359
Shin-Kawasaki Town Campus	No. of Projects	5	3	34	0	42
	Amount	788	45	1,490	0	2,323
Tsuruoka Town Campus	No. of Projects	25	14	30	3	72
	Amount	1,786	6,661	525	2	8,974
Tonomachi Town Campus	No. of Projects	6	1	7	0	14
	Amount	4,604	91	447	0	5,142
Total	No. of Projects	1,851	381	1,929	546	4,707
	Amount	125,235	14,099	50,855	5,888	196,077

^{*} Totals are compiled based on the home campuses (in principle, the affiliation of the research project leaders). The actual research, however, may take place at different campuses.

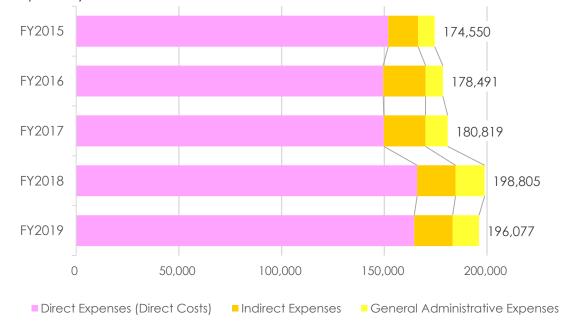
Direct and Indirect Research Expenses FY2015-2019

■ Direct and Indirect Research Expenses, and General Administrative Expenses over the Past 5 Years

(\$=¥110) Thousand US Dollars

Type of Research Funds	FY2015	FY2016	FY2017	FY2018	FY2019
Direct Expenses (Direct Costs)	151,884	149,453	149,758	165,932	164,543
Indirect Expenses	14,581	20,654	20,234	18,746	18,709
General Administrative Expenses	8,085	8,385	10,827	14,127	12,825
Total	174,550	178,491	180,819	198,805	196,077

*Discrepancies may arise in the total amount as totals are rounded to the thousand.



Definition

Indirect Expenses: Expenses allocated equivalent to a certain percentage of the Competitive Research Funds in addition to the direct expenses for the research to supplement administrative and operational costs of the institution to which project leaders are affiliated.

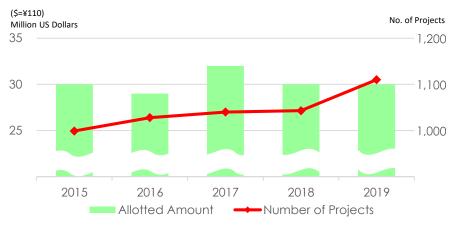
General Administrative Expenses (Overhead Costs): Expenses allocated to supplement administrative costs for research other than direct expenses for the research, other than Indirect Expenses.

The Grants-in-Aid for Scientific Research (KAKENHI) Program

■Institu	(\$=¥110) Million US Dollars		
Rank	Name of Organization	No. of Projects	Amount
1	The University of Tokyo	3,995	200
2	Kyoto University	2,898	117
3	Osaka University	2,591	99
4	Tohoku University	2,480	88
5	Kyushu University	1,865	62
6	Nagoya University	1,796	75
7	Hokkaido University	1,694	58
8	University of Tsukuba	1,273	38
9	Kobe University	1,144	29
10	Hiroshima University	1,135	24
11	Keio University	1,110	30
12	Waseda University	1,040	27
13	Okayama University	912	21
14	Kanazawa University	905	19
15	Tokyo Institute of Technology	876	40
16	RIKEN	847	45
17	Chiba University	830	21
18	Niigata University	781	16
19	Kumamoto University	696	16
20	Tokyo Medical and Dental University	676	15
	:	:	:
	Amount Awarded to all organization	ıs	1,958

■ Number of Projects and Total Funding at Keio University (over the Past 5 years)

Fiscal Year	Rank	No. of Projects	Allotted Amount	Total funds awarded to all organizations
2015	11	999	30	1,882
2016	11	1,028	29	1,906
2017	11	1,040	32	1,924
2018	11	1,043	30	1,926
2019	11	1,110	30	1,958



^{*}Source: MEXT website

https://www.mext.go.jp/a_menu/shinkou/hojyo/1422129.htm

^{*}Allotted amount includes direct and indirect expenses.

^{*}Discrepancies may arise in the total amount as totals are rounded to the million.

^{*}This classification by the affiliation of only the project leaders, and thereby does not necessarily show the actual status of all the project members in their own affiliations.

Number of Researchers at Keio University in FY2019

As of March 31, 2020

■ Number of Researchers

Campuses	Tenured/ Semi-tenured Researchers	Project Researchers (Non-tenured)	Researchers (Non-tenured)
Mita Campus	397	36	6
Hiyoshi Campus	331	15	21
Shinanomachi Campus	553	180	158
Yagami Campus	261	22	22
Shonan Fujisawa Campus	176	58	5
Shiba-Kyoritsu Campus	68	7	0
Total	1,786	318	212

■ Development of Future Researchers

		No. of Doctorates Conferred	No. of Studen	ts Enrolled in Doctoral Courses
Graduate Schools	Course Doctorates	Dissertation Doctorates	Maximum Occupancy	No.of Students Enrolled
Graduate School of Letters	9	4	135	93
Graduate School of Economics	9	2	45	39
Graduate School of Law	4	7	90	63
Graduate School of Human Relations	6	4	33	44
Graduate School of Business and Commerce	3	1	60	18
Graduate School of Medicine	73	51	320	398
Graduate School of Science and Technology	71	1	450	297
Graduate School of Business Administration	0	0	24	1
Graduate School of Media and Governance	16	1	150	176
Graduate School of Health Management	3	0	30	39
Graduate School of System Design and Management	5	1	33	62
Graduate School of Media Design	8	0	30	65
Graduate School of Pharmaceutical Sciences	8	4	29	58
Subtotal	215	76	1,429	1,353
Total		291		

Research Fellows in FY2015-2019

Number of JSPS Research Fellows at Keio University

■ Research Fellows by Affiliation

Faculties, Graduate Schools, Research Institutions	FY2015	FY2016	FY2017	FY2018	FY2019
Faculty/Graduate School of Letters, Graduate School of Human Relations	23	19	18	18	20
Faculty/Graduate School of Economics	4	10	13	8	4
Faculty/Graduate School of Law	8	5	8	11	11
Faculty/Graduate School of Business and Commerce	3	4	4	4	3
Faculty/Graduate School of Medicine	30	33	32	30	30
Faculty/Graduate School of Science and Technology	48	61	65	56	63
Faculty of Policy Management, Faculty of Environment and Information Studies, Graduate School of Media and Governance	15	15	19	17	13
Faculty of Nursing and Medical Care, Graduate School of Health Management	0	0	0	0	0
Faculty of Pharmacy, Graduate School of Pharmaceutical Sciences	4	7	4	3	3
Graduate School of Business Administration	0	0	0	1	1
Graduate School of System Design and Management	0	0	0	0	1
Graduate School of Media Design	1	1	1	0	0
Law School	0	1	1	0	0
Affiliated Research Institutes	2	2	8	2	3
Total	138	158	173	150	152

■ Number of JSPS Research Fellow by Category

Category	FY2015	FY2016	FY2017	FY2018	FY2019	
DC1	59	60	56	50	49	
DC2	31	42	44	40	48	
PD	31	35	48	41	36	
SPD	0	0	1	1	1	
RPD	6	9	9	3	3	
CPD	-	-	-	-	1	
Foreign Researchers	11	12	15	15	14	
Total	138	158	173	150	152	

*The "Research Fellowship for Young Researchers" program is divided into 5 categories, DC, PD, RPD, SPD, and CPD. Graduate and doctoral students are mainly accepted, with periods of acceptance differing according to category.

http://www.jsps.go.jp/english/e-pd/index.html

*The "Postdoctoral Fellowship for Foreign Researchers" program is also available for overseas young researchers for providing them an opportunity to work together under the guidance of Japanese researchers in Japanese universities, etc.

http://www.jsps.go.jp/english/e-fellow/index.html

Researchers from Outside Keio

■ Number of Researchers Accepted — Breakdown by Job Title and Status

Job Titels, Status	Number of Researchers	Qualification
School of Medicine Researchers	509	Researchers employed by research, educational, or medical institutions other than the School of Medicine.
Research Associates of Faculty of Science and Technology	22	Researchers participating in research without a contract for commissioned research.
Researchers of KLL, Keio Leadingedge Laboratory of Science and Technology	65	Researchers participating in research under a commissioned research contract.
Distinguished Researchers, Keio Research Institute at SFC	2	A Distinguished Researcher is one who is recognized to be beneficial to the progress of research activities of the Institute and whose Faculty Sponsor is the Executive Director of the Institute. A Distinguished Researcher must have outstanding research achievements and research management results both in the home country and abroad, and be internationally and widely active.
Senior Researchers, Keio Research Institute at SFC	360	Senior Researchers are regarded as researchers who are accepted by Keio Research Institute at SFC upon recommendation by a Faculty Sponsor and then participate in research activities. A 'Senior Researcher' must possess a Master's degree or equivalent/higher degree, and also be recognized as an experienced, distinguished, and self-sustained researcher.
Researchers, Keio Research Institute at SFC	139	Researchers are regarded as researchers who are accepted by Keio Research Institute at SFC upon recommendation by a Faculty Sponsor and then participate in research activities. A Researcher must possess a Bachelor's degree or equivalent/higher degree, and be recognized as an experienced and distinguished researcher.
Research Associates, Faculty of Pharmacy	54	Researchers participating in research without a contract for commissioned research.
Research Associates, Keio Advanced Research Centers	94	External researchers assigned for Keio Advanced Research Centers projects
Visiting Professors and Researchers (See Table A)	606	
Others (See Table B)	614	
Total	2,465	4.2

Researchers from Outside Keio in FY2019 (2)

■ Table A: Number of Visiting Professors and Researchers

Job Titles, Status	Mita/Hiyoshi	Shinanomachi	Yagami	Shonan Fujisawa	Shiba-Kyoritsu	Total
Visiting Professors	45	20	29	6	0	100
Visiting Associate Professors	22	20	9	6	0	57
Visiting Assistant Professors	15	11	7	10	0	43
Visiting Instructors	1	8	18	0	0	27
Visiting Research Fellows	105	161	62	13	1	342
Visiting Junior Research Fellows	22	6	8	1	0	37
Total	210	226	133	36	1	606

Table B: Others

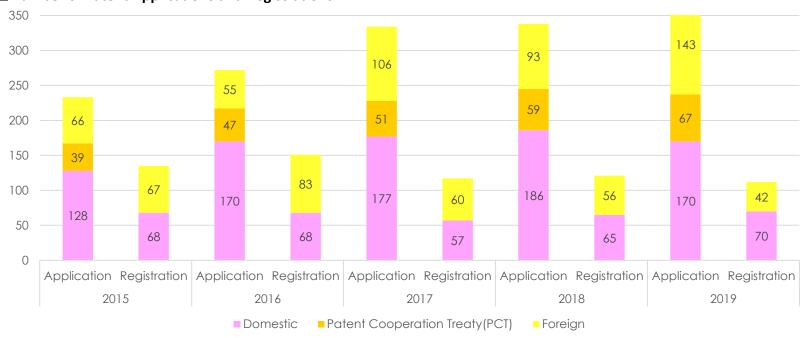
		* No. of	No. of	
Campuses	Research Institute		Researchers from	Total
N4"1 -		Keio University	Outside Keio	40
Mita	Art Center	25	23	48
	Teacher Training Center	37	46	83
	Global Research Institut	67	43	110
	Institute for Economic Studies	80	52	132
	The Keio Institute of Cultural and Linguistic Studies	28	96	124
	International Center	14	17	31
	Keio Economic Observatory	35	94	129
	Institute of Oriental Classics (Shido Bunko)	9	4	13
	Center for Japanese Studies	10	51	61
	Keio Institute of East Asian Studies	18	25	43
	Fukuzawa Memorial Center for Modern Japanese Studies	26	46	72
	Institute for Journalism, Media and Communications Studies	12	22	34
Hiyoshi	Research Institute for Digital Media and Content (DMC)	10	0	10
	Institute of Physical Education	18	0	18
	Health Center	16	0	16
	Keio Research Center for Foreign Language Education	40	2	42
	Sports Medicine Research Center	8	29	37
	Keio Research Center for the Liberal Arts	193	0	193
	Research and Education Center for Natural Sciences	76	64	140
Total		722	614	1,336

Researchers at Keio University: the figure indicates the total number of researchers including teachers in the affiliated elementary and secondary schools of Keio, in addition to tenured and non-tenured researchers of undergraduate faculties/graduate schools or research institutes.

A researcher affiliated to more than two institutions is counted as one researcher of each.

Intellectual Property Rights and Technology Transfer FY2014-2018

■ Number of Patent Applications and Registrations



Number of Income-generating Licenses and Income Amounts, Number of New Licensing Agreements

