2017 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\$ 185 million in FY2017. The charts below show research fund totals classified in various ways.

Research Funds by Type		(\$=¥110) Thousand US Dollars
Types of Funds	Number of Projects	Amount
University Funds	724	5,049
Subsidies	1,145	48,919
Grants	207	3,365
Specified Contributions	1,291	21,259
Commissioned Research	703	83,660
Joint Research	772	22,504
Contracts	12	879
Others	23	235
Total	4,877	185,869

*As of April 30, 2018

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

Definition

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

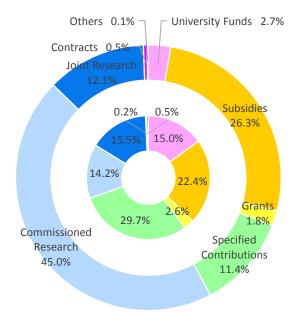
Grants: Research expenses provided mainly by foundations for the purpose of improvement or accomplishment of research.

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.

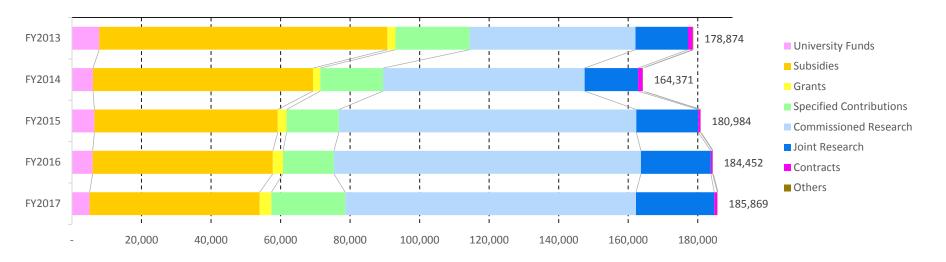


Amount <outer ring>, Number. of Projects <inner ring>

- University FundsSubsidies
- Grants
- Specified Contributions
- Commissioned Research
- Joint Research

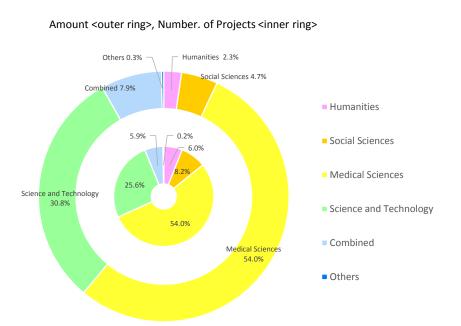
Research Funds at Keio University in FY2017

Research Funds by Type over the Past 5 Years					
Type of Research Funds	FY2013	FY2014	FY2015	FY2016	FY2017
University Funds	7,826	6,031	6,434	5,961	5,049
Subsidies	82,903	63,296	52,738	51,809	48,919
Grants	2,348	2,089	2,565	2,924	3,365
Specified Contributions	21,282	18,043	15,022	14,646	21,259
Commissioned Research	47,731	58,017	85,560	88,338	83,660
Joint Research	15,118	15,344	17,804	20,110	22,504
Contracts	1,302	1,305	647	502	879
Others	364	247	214	164	235
Total	178,874	164,371	180,984	184,452	185,869



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.

Research Funds by Field		(\$=¥110) Thousand US Dollars
Research Fields	Number of Projects	Amount
Humanities	292	4,243
Social Sciences	401	8,756
Medical Sciences	2,636	100,458
Science and Technology	1,248	57,206
Combined	288	14,682
Others	12	524
Total	4,877	185,869



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

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	159	2,855
Faculty / Graduate School of Economics	111	2,603
Faculty / Graduate School of Law	68	917
Faculty / Graduate School of Business and Commerce	84	2,705
Faculty / Graduate School of Medicine	2,408	95,124
Faculty / Graduate School of Science and Technology	952	33,941
Faculty of Policy Management	164	2,894
Faculty of Environment and Information Studies	354	27,196
Faculty of Nursing and Medical Care	42	531
Faculty of Pharmacy / Graduate School of Pharmaceutical Sciences	127	3,040
Graduate School of Human Relations	1	6
Graduate School of Media and Governance	125	4,200
Graduate School of Health Management	16	631
Graduate School of Business Administration	45	721
Graduate School of System Design and Management	82	3,041
Graduate School of Media Design	34	2,212
Law School	31	437
Others	74	2,814
Total	4,877	185,869

Research

Research Funds at Keio University in FY2017

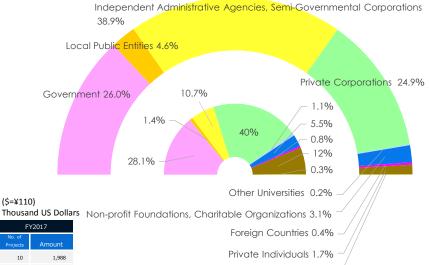
(\$=¥110)

Types of External Entities Contributing Research Funds 10 11440

		(S=#110) Thousand US Dollars
Type of External Entities	Number of Projects	Amount
Government *1	1,165	47,080
Local Public Entities	59	8,329
Independent Administrative Agencies, Semi- Governmental Corporations *2	444	70,422
Private Corporations *3	1,663	44,986
Other Universities	47	383
Non-profit Foundations, Charitable Organizations	227	5,596
Foreign Countries	35	780
Private Individuals	500	3,124
Others	13	120
Total	4,153	180,820

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*1	Government	F	Y2013	Εţ	y2014	F	Y2015	F	Y2016	F	Y2017
-	Funding source	No. of Projects	Amount								
	Ministry of Internal Affairs and Communications	14	1,196	13	1,527	9	629	10	1,506	10	1,988
	Ministry of Education	1,022	57,826	1,050	53,621	1,030	37,259	1,066	36,091	1,064	38,067
	Ministry of Health, Labor and Welfare	151	11,243	193	12,315	75	3,652	61	2,311	71	1,749
	Ministry of Environment	7	1,714	11	1,550	11	1,920	8	1,334	4	301
	Others	39	14,152	36	6,417	41	5,227	12	863	16	4,976
	Total	1,233	86,131	1,303	75,430	1,166	48,687	1,157	42,106	1,165	47,080
*2	Independent Administrative Agencies, Semi-Governmental Corporations	F	Y2013	F	y2014	F	Y2015	F	Y2016	F	Y2017
	Funding source	No. of Projects	Amount								
	NICT *a	12	1,131	14	1,216	19	1,114	20	1,784	10	1,352
	JST *b	116	26,748	114	26,167	81	19,611	81	24,814	88	20,778
	AMED *c		0		0	201	50,825	216	48,634	220	43,108
	NEDO *d	14	1,420	16	2,399	12	1,096	18	1,866	16	2,173
	Others	100	2,584	107	2,606	91	1,689	111	2,158	110	3,010
	Total	242	31,882	251	32,388	404	74,336	446	79,256	444	70,422
*3	Private Corporations	F	Y2013	F	y2014	F	Y2015	F	Y2016	F	Y2017
	Funding source	No. of Projects	Amount								
	Specified Contributions	920	16,350	821	15,273	795	12,617	794	12,012	734	15,525
	Commissioned Research	169	6,051	211	7,416	224	7,128	222	10,212	228	7,819
	Joint Research	427	14,083	488	14,394	587	16,868	597	18,345	597	20,388
	Others	17	368	14	114	64	620	46	401	104	1,255
	Total	1,533	36,852	1,534	37,197	1,670	37,232	1,659	40,969	1,663	44,986

Contribution Share by External Entity Type Amount <outer ring>, Number of Projects <inner ring>



Others 0.1%

Government

- Local Public Entities
- Independent Administrative Agencies, Semi-Governmental Corporations
- Private Corporations
- 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 at Keio University in FY2017

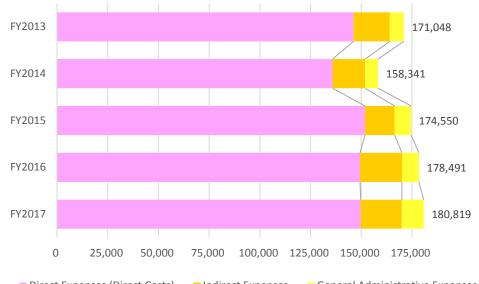
Types of External Entities Contributing Research Funds to Each Campus						(\$=¥110) Thousand US Dollars
Campuses		Government Organizations	Non- Government Public Organizations	Private Corporations	Others	Total
Mita Campus	No. of Projects	159	8	13	2	182
	Amount	7,759	86	204	135	8,184
Hiyoshi Campus	No. of Projects	113	13	99	10	235
	Amount	4,263	369	3,495	140	8,268
Shinanomachi Campus	No. of Projects	806	133	904	457	2,300
	Amount	58,414	3,069	26,805	1,394	89,682
Yagami Campus	No. of Projects	342	64	291	25	722
	Amount	23,830	1,111	5,033	195	30,168
Shonan Fujisawa Campus	No. of Projects	115	74	288	62	539
	Amount	13,238	2,671	8,096	2,007	26,012
Shiba-Kyoritsu Campus	No. of Projects	54	17	18	4	93
	Amount	2,064	392	143	127	2,726
Shin-Kawasaki Town Campus	No. of Projects	6	3	16	0	25
	Amount	1,987	38	492	0	2,517
Tsuruoka Town Campus	No. of Projects	13	7	30	2	52
	Amount	1,943	6,537	344	62	8,885
Tonomachi Town Campus	No. of Projects	2	0	4	0	6
	Amount	4,004	0	375	0	4,379
Total	No. of Projects	1,609	319	1,663	562	4,153
	Amount	117,502	14,272	44,986	4,059	180,820

* 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, and General Administrative Expenses over the Past 5 Years

					(\$=¥110) Thousand US Dollar:
Type of Research Funds	FY2013	FY2014	FY2015	FY2016	FY2017
Direct Expenses (Direct Costs)	146,283	135,817	151,884	149,453	149,758
Indirect Expenses	17,784	16,088	14,581	20,654	20,234
General Administrative Expenses	6,981	6,436	8,085	8,385	10,827
Total	171,048	158,341	174,550	178,491	180,819

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



Direct Expenses (Direct Costs) Indirect Expenses Gene

General Administrative Expenses

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.

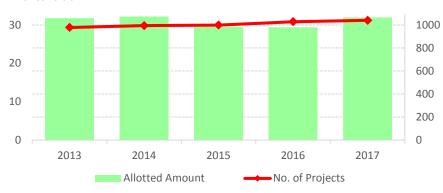
The Grants-in-Aid for Scientific Research (KAKENHI) Program

Instit	(\$=¥110) Million US Dollars		
Rank	Name of Organization	No. of Projects	Amount
1	The University of Tokyo	3,787	199
2	Kyoto University	2,948	123
3	Osaka University	2,511	98
4	Tohoku University	2,428	89
5	Kyushu University	1,908	66
6	Nagoya University	1,773	67
7	Hokkaido University	1,649	56
8	University of Tsukuba	1,248	37
9	Kobe University	1,145	28
10	Hiroshima University	1,105	24
11	Keio University	1,040	32
12	Waseda University	964	23
13	Tokyo Institute of Technology	900	42
	Amount Awarded to all organizations		1,924

Institution by	/ Number of	Projects	(FY2017)
			/ . /

■ Number of Projects Total Funding at Keio University (over the Past 5 years) (S=¥110)					
		Million US Dollars			
Fiscal Year	Rank	No. of Projects	Allotted	Total funds awarded to all	
			Amount	organizations	
2013	11	978	32	2,048	
2014	11	994	32	1,938	
2015	11	999	30	1,882	
2016	11	1,028	29	1,906	
2017	11	1,040	32	1,924	

(\$=¥110) Million US Dollars



*Source: MEXT website (Japanese language only)

http://www.mext.go.jp/a menu/shinkou/hojyo/1396984.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.

No. of Projects

Number of Researchers

Campuses	Tenured/ Semi-tenured Researchers	Project Researchers (Non-tenured)	Researchers (Non-tenured)
Mita Campus	406	11	3
Hiyoshi Campus	333	18	24
Shinanomachi Campus	547	174	140
Yagami Campus	263	29	20
Shonan Fujisawa Campus	181	51	7
Shiba-Kyoritsu Campus	63	3	0
Total	1,793	286	194

Development of Future Researchers

Graduate Schools	No	o. of Doctorates Conferred	No. of Students Enrolled in Doctoral Courses		
	Course Doctorates	Dissertation Doctorates	Maximum Occupancy	No.of Students Enrolled	
Graduate School of Letters	5	2	135	108	
Graduate School of Economics	5	1	45	39	
Graduate School of Law	8	6	90	76	
Graduate School of Human Relations	7	3	33	42	
Graduate School of Business and Commerce	5	1	60	25	
Graduate School of Medicine	71	42	320	412	
Graduate School of Science and Technology	71	0	450	299	
Graduate School of Business Administration	0	0	24	2	
Graduate School of Media and Governance	18	4	150	137	
Graduate School of Health Management	0	1	30	34	
Graduate School of System Design and Management	9	0	33	63	
Graduate School of Media Design	6	0	30	60	
Graduate School of Pharmaceutical Sciences	13	0	29	48	
Subtotal	218	60	1,429	1,345	
Total		278			

Number of JSPS Research Fellows at Keio University

Research Fellows by Affiliation

Faculties, Graduate Schools, Research Institutions	FY2013	FY2014	FY2015	FY2016	FY2017
Faculty/Graduate School of Letters, Graduate School of Human Relations	30	30	23	19	18
Faculty/Graduate School of Economics	7	4	4	10	13
Faculty/Graduate School of Law	9	7	8	5	8
Faculty/Graduate School of Business and Commerce	1	1	3	4	4
Faculty/Graduate School of Medicine	35	32	30	33	32
Faculty/Graduate School of Science and Technology	49	48	48	61	65
Faculty of Policy Management, Faculty of Environment and Information Studies, Graduate School of Media and Governance	23	15	15	15	19
Faculty of Nursing and Medical Care, Graduate School of Health Management	0	0	0	0	0
Faculty of Pharmacy/Graduate School of Pharmaceutical Sciences	1	0	4	7	4
Graduate School of Business Administration	0	0	0	0	0
Graduate School of System Design and Management	1	1	0	0	0
Graduate School of Media Design	2	0	1	1	1
Law School	0	0	0	1	1
Affiliated Research Institutes	2	1	2	2	8
Total	160	139	138	158	173

Number of JSPS Research Fellow by Qualification

Category	FY2013	FY2014	FY2015	FY2016	FY2017
DC1	55	56	59	60	56
DC2	41	34	31	42	44
PD	51	38	31	35	48
SPD	1	1	0	0	1
RPD	6	5	6	9	9
foreign Researchers	6	5	11	12	15
Total	160	139	138	158	173

*The "Research Fellowship for Young Researchers" program is divided into 4 categories, DC, PD, SPD, and RPD.

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

*The fixed number of JSPS Research Fellows for 2017: 5,636

Research Funds at Keio University in FY2017

Researchers from Outside Keio

※Figures show the totals for FY2017

Number of Researchers Accepted — Breakdown by Job Title and Status

Job Titels, Status	Number of Researchers	Qualification
School of Medicine Researchers	455	Researchers employed by research, educational, or medical institutions other than the School of Medicine.
Research Associates of Faculty of Science and Technology	16	Researchers participating in research without a contract for commissioned researc
Researchers of KLL, Keio Leadingedge Laboratory of Science and Technology	57	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	357	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	182	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	28	Researchers participating in research without a contract for commissioned research.
Research Associates, Keio Advanced Research Centers	102	External researchers assigned for Keio Advanced Research Centers projects.
Visiting Professors and Researchers (See Table A)	498	
Others (See Table B)	558	
Total	2,255	

Table A : Number of Visiting Professors and Researchers

Job Titles, Status	Mita/Hiyoshi	Shinanomachi	Yagami	Shonan Fujisawa	Shiba- Kyoritsu	Total
Visiting Professors	34	13	16	6	1	70
Visiting Associate Professors	16	16	4	2	0	38
Visiting Assistant Professors	13	9	5	13	0	40
Visiting Instructors	0	8	11	0	0	19
Visiting Research Fellows	101	128	55	16	0	300
Visiting Junior Research Fellows	16	7	5	1	2	31
Total	180	181	96	38	3	498

Table B : Others

		* No. of	No. of	
Campuses	Research Institute	Researchers at	Researchers from	Total
campuses		Keio University	Outside Keio	. otal
Mita	Keio University Art Center	24	18	42
	Teacher Training Center	43	48	91
	Global Security Research Institute	75	44	119
	Institute for Economic Studies	63	51	114
	The Keio Institute of Cultural and Linguistic Studies	27	89	116
	International Center	17	31	48
	Keio Economic Observatory	49	54	103
	Institute of Oriental Classics (Shido Bunko)	10	4	14
	Center for Japanese Studies	10	49	59
	Keio Institute of East Asian Studies	22	34	56
	Fukuzawa Memorial Center for Modern Japanese Studies	26	38	64
	Institute for Journalism, Media and Communications Studies	13	21	34
Hiyoshi	Research Institute for Digital Media and Content (DMC)	9	0	9
	Institute of Physical Education	19	0	19
	Health Center	16	0	16
	Keio Research Center for Foreign Language Education	39	1	40
	Sports Medicine Research Center	7	19	26
	Keio Research Center for the Liberal Arts	199	0	203
	Research and Education Center for Natural Sciences	66	57	123
Total		734	558	1292

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 researcher of each.

Intellectual Property Rights and Technology Transfer

Research Funds at Keio University in FY2017

Number of Patent Applications and Registrations



Domestic Patent Cooperation Treaty(PCT) Foreign

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

