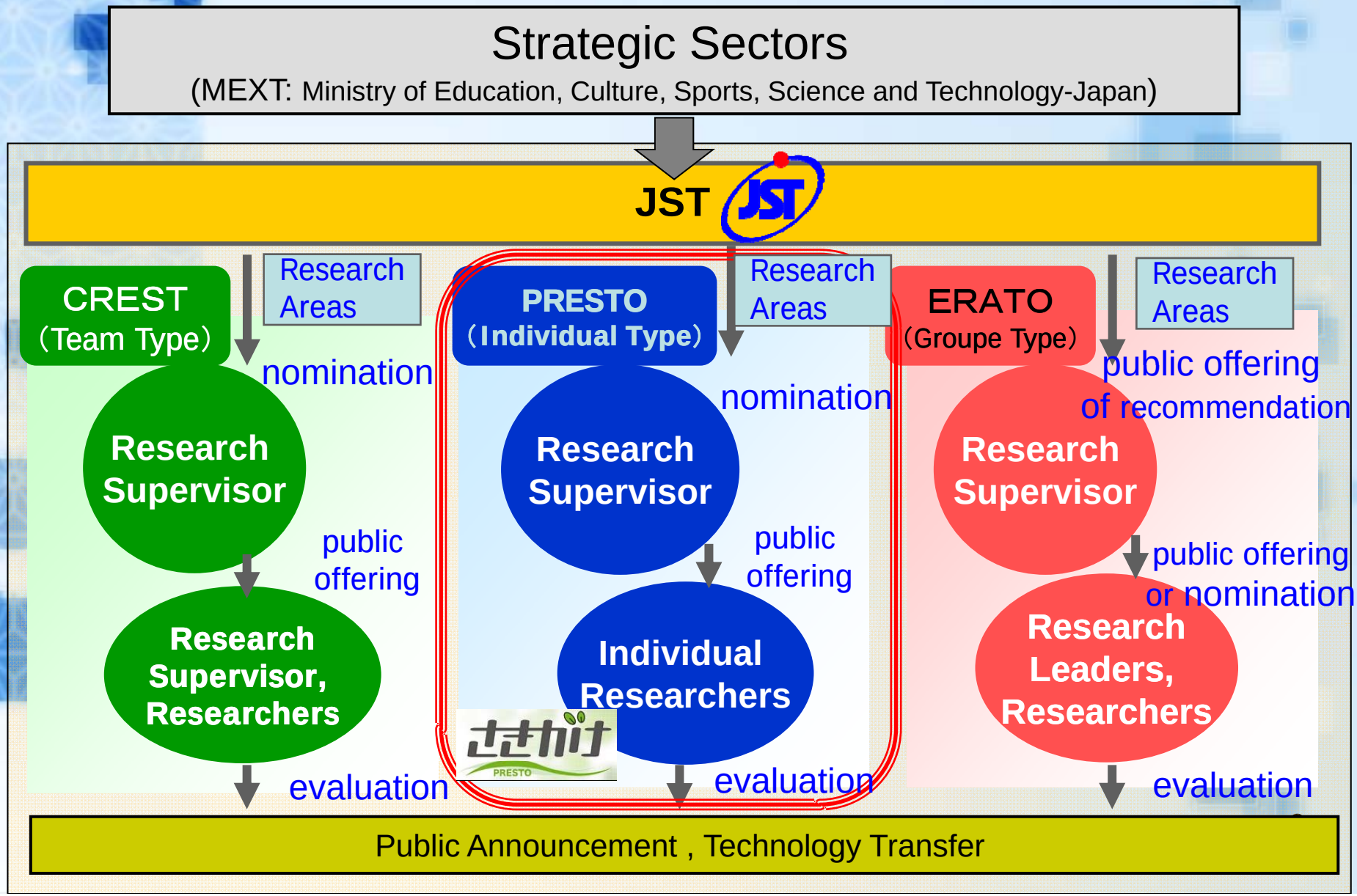
Outline of PRESTO Program

Japan Science and Technology Agency

JST Basic Research Programs



Program	Type of Promotion	# of Teams/ Researchers In a Research Area	Annual Research Expenses for a Team / a Researcher	Research Period	Annual Budgets (In total)
CREST (1996-)	Research Supervisor & Research Teams	10~15	0.3~0.5 M$ or 0.6~1 M$ (Not including indirect costs)	5 yrs	About 270 M$
PRESTO (1991-)	Research Supervisor & Individual Researchers	15~25	0.1~0.2 M$ (Not including indirect costs)	3 or 5 yrs	about 90 M$
ERATO (1981-)	Research Director & His/Her Operating Research Groups	Director: 1 Gr. Leader: 3~4 Post-docs: 10~15	< 3 M$ (Including indirect costs)	5 yrs	about 60 M$

What is PRESTO ?

PRESTO: Precursory Research for Embryonic Science and Technology

- Started in 1991 (nearly 20 years old!)
- Promoting Individual-type research
- 1,240 researchers have been funded since 1991
- about 360 researchers participate in PRESTO now
- Average age : 37 years old

Promote research based on each researcher's originality and ideas

To cultivate the seeds of precursory science and technology

Overall Structure of PRESTO

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

Strategic Sectors

JST

Research Area

Research Supervisor

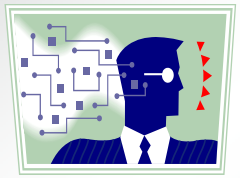
Advisers

Proposal Selection

Agreement

Sponsorship

Individual Researchers



Concurrent Researcher

Researchers who belong to Universities, Independent Administrative Institutions, National and Public Institutes and Special Corporations, etc.

Full-time Researcher

Postdoctoral fellows, researchers who are retiring or leaving the current institution

Temporarily transferred Researcher

Researchers who belong to private enterprises

Participation

Research Area Meeting

Research Promotion System

Office of Basic Research Programs

Research Area

Research Supervisor

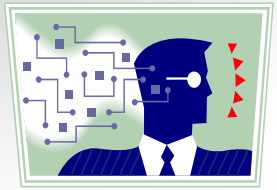
Advisers

Research Office

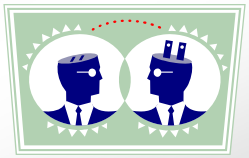
Research Manager

Administrative Manager

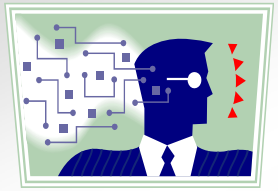
Support for Researchers



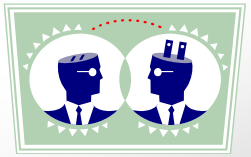
Individual Researcher



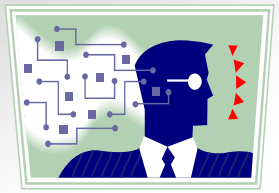
Research Assistant(s)



Individual Researcher



Research Assistant(s)



Individual Researcher

Ongoing Research Areas (1/3)

Name of Research Areas	Research Supervisors	Start Year
Understanding life by iPS cells technology L	Shin-Ichi Nishikawa (Deputy Director, Center for Developmental Biology, RIKEN)	FY2008
Innovative use of light and materials/life L C P I E	Hiroshi Masuhara (Professor, Graduate School of Materials Science, Nara Institute of Science and Technology)	
Nanosystem and function emergence L C P I E	Yoshihito Osada (Deputy Director, Advanced Science Institute, RIKEN .)	
Decoding and controlling brain information L P I	Mitsuo Kawato (Director, ATR Fellow, ATR Computational Neuroscience Laboratories)	
Synthesis of Knowledge for information oriented society I	Hideyuki Nakashima (President, Future University-Hakodate)	
Materials and processes for innovative next-generation devices C P I E	Katsuaki Sato (Emeritus Professor, Tokyo University of Agriculture and Technology)	FY2007
Alliance for breakthrough between mathematics and sciences L C P I E	Yasumasa Nishiura (Professor, Research Institute for Electronic Science, Hokkaido University)	
Innovative model of biological processes and its development L P I	Nanako Shigesada (Professor, Faculty of Culture and Science, Doshisha University)	

L Life C Chemical P Physical I Information Science E Energy and Environmental

Ongoing Research Areas(2/3)

Name of Research Areas	Research Supervisors	Start Year
RNA and biofunctions	Akio Nomoto (Professor, Department of Microbiology, Graduate School of Medicine, the University of Tokyo)	FY2006
Structures and control of interfaces	Maki Kawai (Professor at Graduate School of Frontier Sciences, the University of Tokyo)	
Search for nanomanufacturing technology and its development	Naoki Yokoyama (Fellow and General Manager at Nanotechnology Research Center at Fujitsu Laboratories Ltd.)	
Photons and soft materials	Tetsuo Tsutsui (Professor Emeritus, Kyushu University)	
The dynamic mechanism of and fundamental technology for biological system	Shigetada Nakanishi (Director, Osaka Bioscience Institute)	
Metabolism and Cellular Function	Masahiro Nishijima (Director General, The National Institute of Health Sciences)	FY2005
Evolution of Light Generation and Manipulation	Hiromasa Ito (Professor, Graduate School of Engineering, Tohoku University)	
Structure Control and Function	Yoshio Okamoto (Guest Professor, EcoTopia Science Institute, Nagoya University)	
Life Phenomena and Measurement Analysis	Isao Morishima (Visiting Professor, Ritsumeikan University)	

Ongoing Research Areas(3/3)

Name of Research Areas	Research Supervisors	Start Year
Structure Function and Measurement Analysis	**Shigeru Terabe (Professor Emeritus, University of Hyogo Prefecture)**	FY2004
Foundational Technologies to Support Creation of Digital Media Content	**Hiroshi Harashima (Professor, Interfaculty Initiatives in Information Studies, Graduate School of Interdisciplinary Information Studies, the University of Tokyo)**	

Two Kinds of Application Type of PRESTO (1/2)

$1=100 Yen

	Standard Type	
Research Period	**3years**	**5years（since2008）**
Research Expenses	**～$ 100,000 /year** **Total：** **$300,000~$400,000**	**$100,000~$200,000/year** **Total：** **$500,000 ~$1,000,000**
Number of researchers	**One person**	
Eligible Applicants	**Researchers with Japanese nationality, or foreign researchers in Japan**	

Two Kinds of Application Type of PRESTO (2/2)

Overview of the High-impact Type PRESTO

(Newly started in FY2009)

Definition:

The possibility of attainment is not clearly envisioned; however, a significant and revolutionary result is promised when achieved.

- **High-Impact and Ripple Effect on Society, Economy and Science in the Future .**
- **The novel and innovative ideas that breakthrough the existing common assumptions .**

Two Kinds of Application Type of PRESTO (2/2)

$1=100 Yen

	High-impact Type(since2009)
Research Period	**Initial:3 or 5years** **Variable:1～5years**
Research Expenses	**Initial:** **(3y)～$ 100,000 /year Total：$300,000-$400,000** **(5y)$100,000-$200,000/year Total：$500,000 -$1,000,000** **Variable:** **Total: $2,000,000 maximum**
Number of researchers	**One person**
Eligible Applicants	**Researchers with Japanese nationality, or foreign researchers in Japan**

Applicable Areas of FY2009

Start year	Name of Research Areas	Research Period	Standard Type	High Impact Type
FY2009	Information Environment and Humans	3yr	○	○
		5yr	○	○
	Photoenergy conversion systems and materials for the next Generation solar cells	3yr	○	○
		5yr	○	○
	Light energy and chemical conversion	3yr	○	○
		5yr	○	○
	Formation of and information processing by neural networks, and control	3yr	○	○
		5yr	○	○
	Epigenetic control and biological functions	3yr	○	○
		5yr	○	○
FY2008	Understanding life by iPS cells technology	3yr	○	○
		5yr	○	○
	Innovative use of light and materials/life	3yr	○	○
		5yr	○	○
	Nanosystem and function emergence	3yr	○	○
		5yr	○	○
	Decoding and controlling brain information	3yr	○	○
		5yr	○	○
	Synthesis of Knowledge for Information Oriented Society	3yr	○	○
		5yr	○	○
FY2007	Materials and processes for innovative next-generation devices	3yr only	○	
	Alliance for Breakthrough between Mathematics and Sciences	3yr only	○	
	Innovative model of biological processes and its development	3yr only	○	

Selection Criteria

a. Research proposals should contribute to attain strategic sectors

b. Research proposals should be consistent with the aim of their respective Research Areas.

c. The research concept is his/her own conception.

d. It is original.

e. The approach and clues to realizing the research concept have already been identified.

f. It has potential to impact scientific technology in future (e.g. creating intellectial properties, new technology and solving important issues).

g. The expected size of the research is appropriate.

The following criterion is added to the High-impact Type:

h. The possibility of attainment is not clearly envisioned: however, a significant and revolutionary result is promised when achieved.

Selection Process of PRESTO

Submit Research Proposal

Screening of Application Documents
(1st Screening Process by each research area)

Interview Screening
(2nd Screening Process by each research area)

High-impact Type (Since 2009)

Recommendation from Research Supervisor

Screening by High-impact Type Review Committee (3rd Screening Process)
***Masking Screening**

Research areas started inFY2008,2009

Standard Type

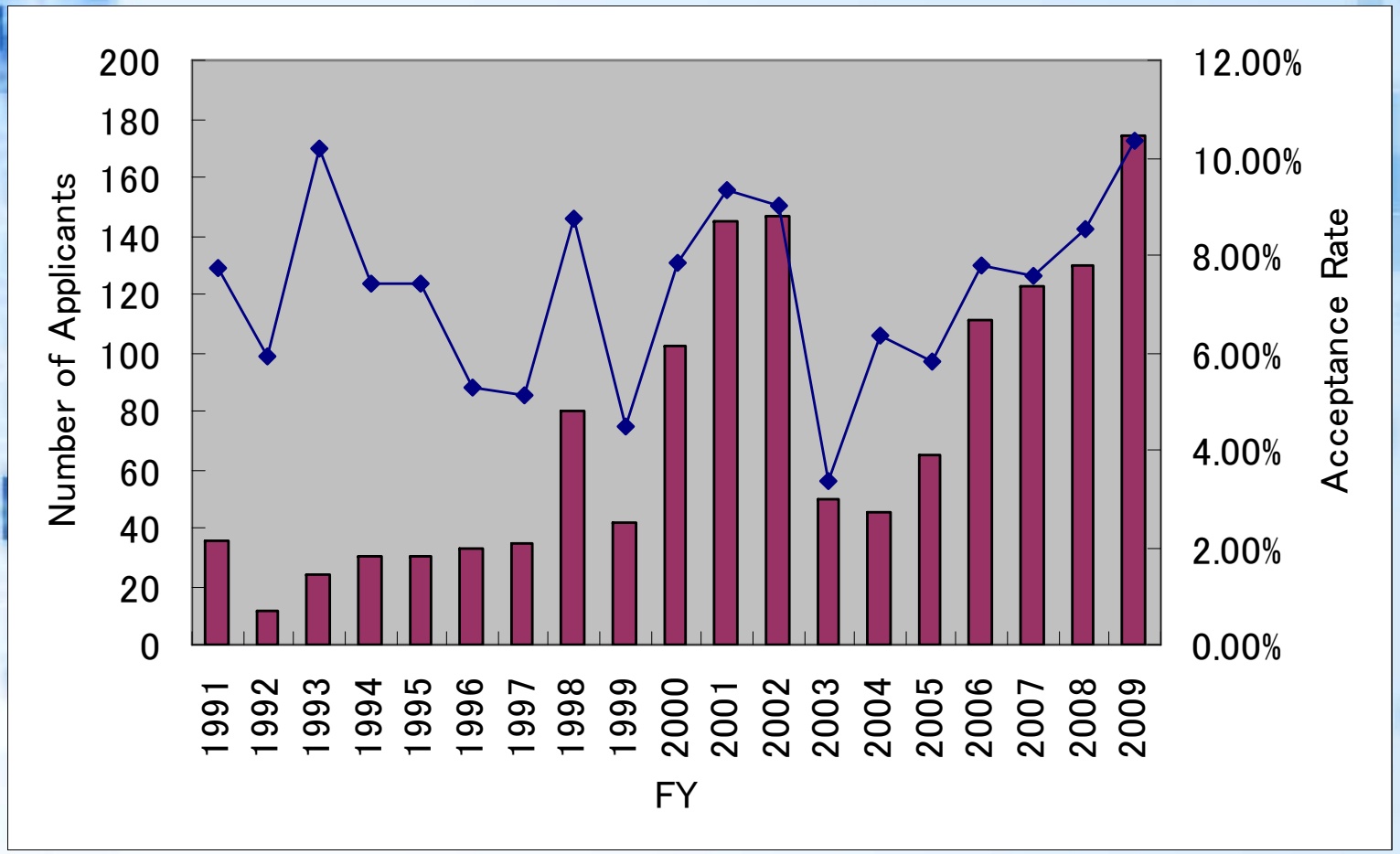
JST's determination of the research subjects

Acceptance

Selection Results of FY2009

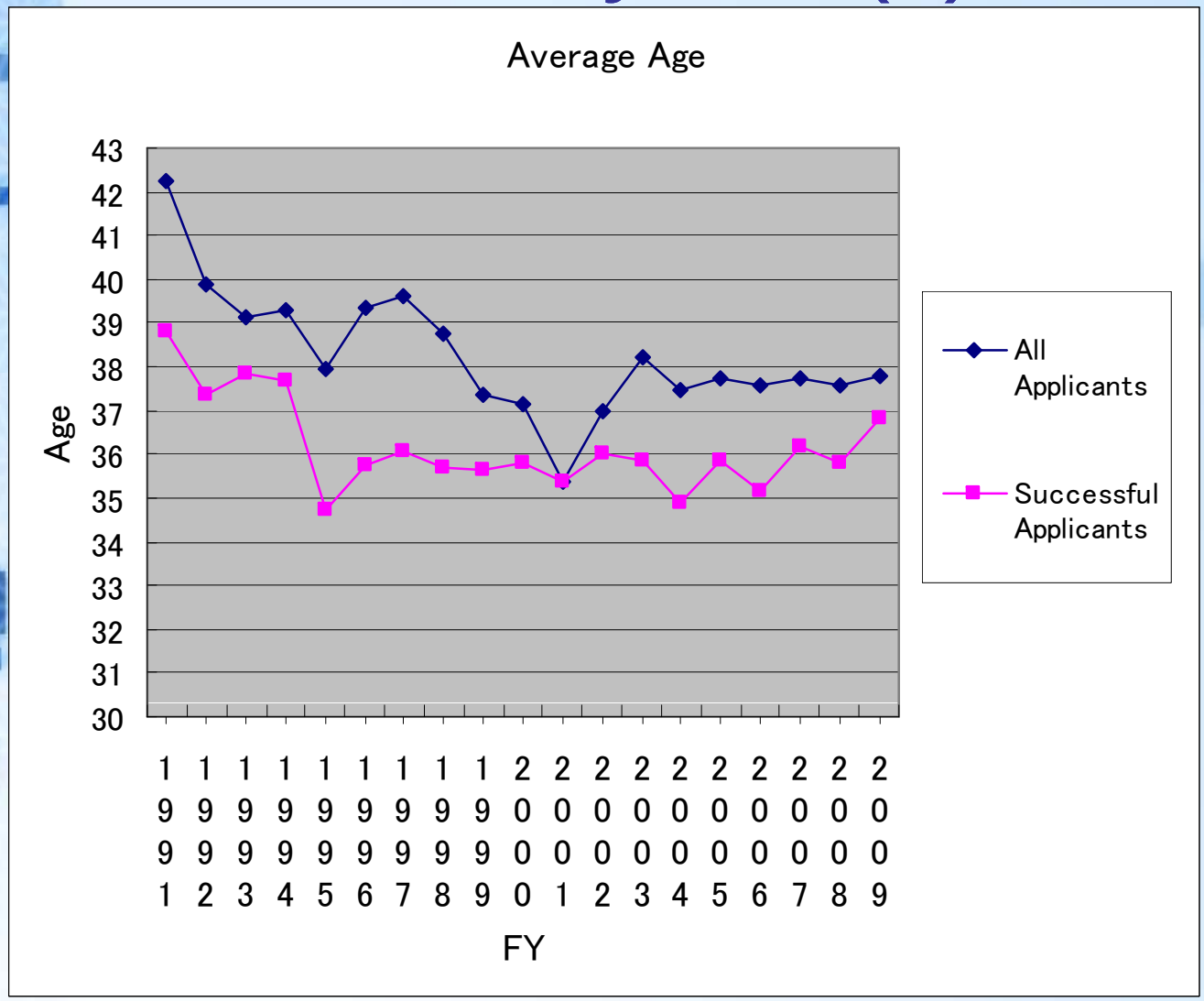
Start year	Name of Research Areas	Research Period	Adoption		Applicant
			Standard Type	High Impact Type	All types
FY 2009	Information Environment and Humans	3yr	8		68
		5yr	4		31
	Photoenergy conversion systems and materials for the next Generation solar cells	3yr	11		80
		5yr	3	1	26
	Light energy and chemical conversion	3yr	9		87
		5yr	4	1	25
	Formation of and information processing by neural networks, and control	3yr	11	1	145
		5yr	5	1	63
	Epigenetic control and biological functions	3yr	11	1	118
		5yr	2		44
FY 2008	Understanding life by iPS cells technology	3yr	8		55
		5yr	3	1	23
	Innovative use of light and materials/life	3yr	15		165
		5yr	1	1	24
	Nanosystem and function emergence	3yr	13	1	146
		5yr	2		31
	Decoding and controlling brain information	3yr	10	1	79
		5yr	4	1	37
	Synthesis of Knowledge for Information Oriented Society	3yr	12	1	56
		5yr	0		8
FY 2007	Materials and processes for innovative next-generation devices	3yr only	12		120
	Alliance for Breakthrough between Mathematics and Sciences	3yr only	12		73
	Innovative model of biological processes and its development	3yr only	14		176
Total			174	11	1680

Trend Analyses (1)



- Average acceptance rate : **7.2%**
  1 par 12 applicant is accepted
- **20 ~ 500** applicants/Research area/year

Trend Analyses (2)



・Average age (FY2009)

All Applicants: 37.8 years

Successful Applicants: 36.7 years

External Evaluation of PRESTO program

- Presto has provided successful and impressive results in stimulating young and prominent researchers who are often unrecognized.

- Mentor system is very effective. Mentors help creating networking among researchers and we highly appreciate the work done by mentors.

(The Report of International Evaluation of
JST Basic Research Programs (2006))

Thank you for your kind attention!