

**The Israel Science
Foundation
F.I.R.S.T. and
NEST – PROMISE Programs**



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The ISF's Mission

To evaluate, select and support Israeli basic research through competitive grants based on excellence and scientific merit within the wide range of :

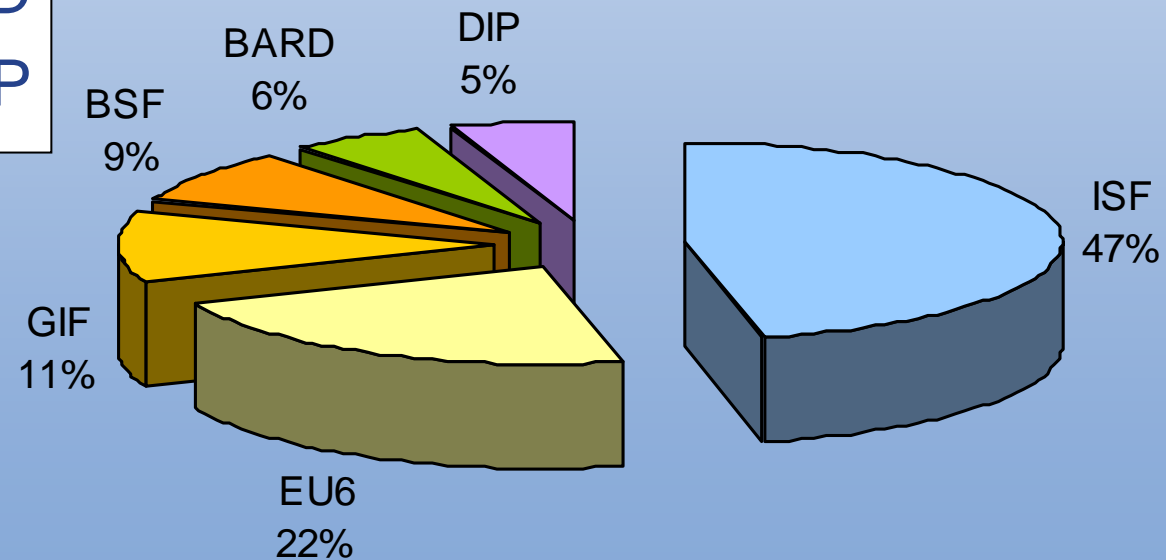
- **Exact Sciences and Technology**
- **Life Sciences and Medicine**
- **Humanities and Social Sciences**



Allocation to basic research in Israel

54	ISF
25.5	EU6
13.2	GIF
10.5	BSF
7.2	BARD
6.2	DIP

in millions of \$

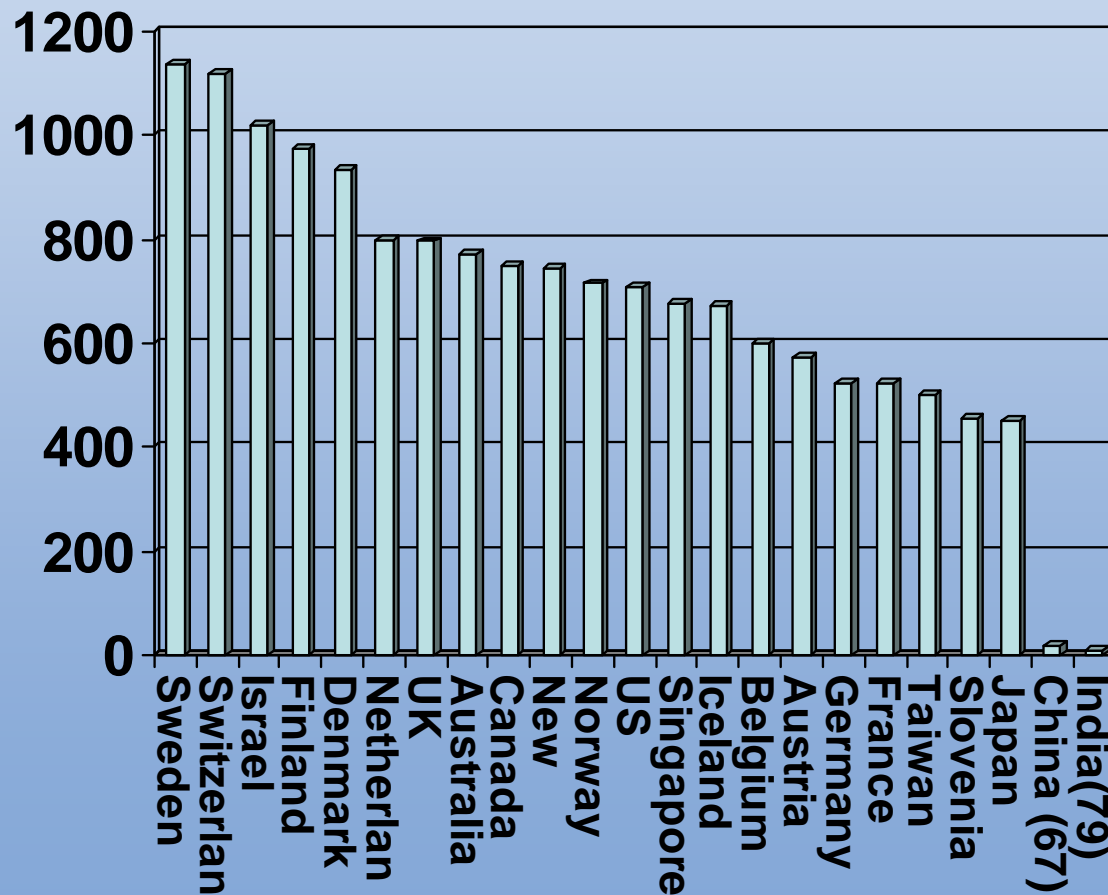


2005 data



Scientific papers per capita 2000-2003

NSF, Science & Engineering Indicators 2006



China – 19
India - 11



Description of Israel – Size



120 miles!



The ISF - FIRST program

A special independent program supporting highly original and/or risky and/or multidisciplinary research.

Budget \$2,000,000

- Programs
- Individual Scientist
 - Institutional
 - Post-Doctoral Fellowships



The need for FIRST like programs

- Agencies typically support projects demonstrating feasibility with preliminary results.
- Multidisciplinary research is difficult to review and assess.
- Reviewing boards (especially scientists) are conservative.
- Agencies want success, dislike high risk!
- Established scientists are afraid to embark on new adventures – need encouragement.
- Young scientists with “new” ideas need support.



The FIRST/ISF Mission

Funding for –

- ⇒ **Pioneering** ideas capable of opening new avenues of research
- ⇒ **High-risk, high-impact** research.
- ⇒ **Innovative** research with a **multi/inter disciplinary** character
- ⇒ Introduction of new and **innovative research areas** to the universities via junior faculty members or senior researchers introducing new fields



How FIRST operates?

FIRST is run by 5 board members all scientists representing different research disciplines and different institutes.

The board members serve for 3 years

They are all senior scientists with a broad overview of scientific activity in Israel.



FIRST Tracks

- ⇒ **Special Individual Researcher**
- ⇒ **Institutional**
- ⇒ **Post-Doctoral Fellowships**



Special Individual Researcher Track

- ⇒ Submission of proposals which are not suitable for submission to other ISF programs, **because of their highly innovative character, unconventional approach, and lack of preliminary results, or their multi or inter disciplinary approach.**
- ⇒ Pre-proposal screening
- ⇒ Peer reviewing
- ⇒ Decision by the board members + invited experts
- ⇒ 1-3 year projects; annual budget: \$30,000-\$60,000 (+ additional funding for “small” equipment – up to \$30,000)



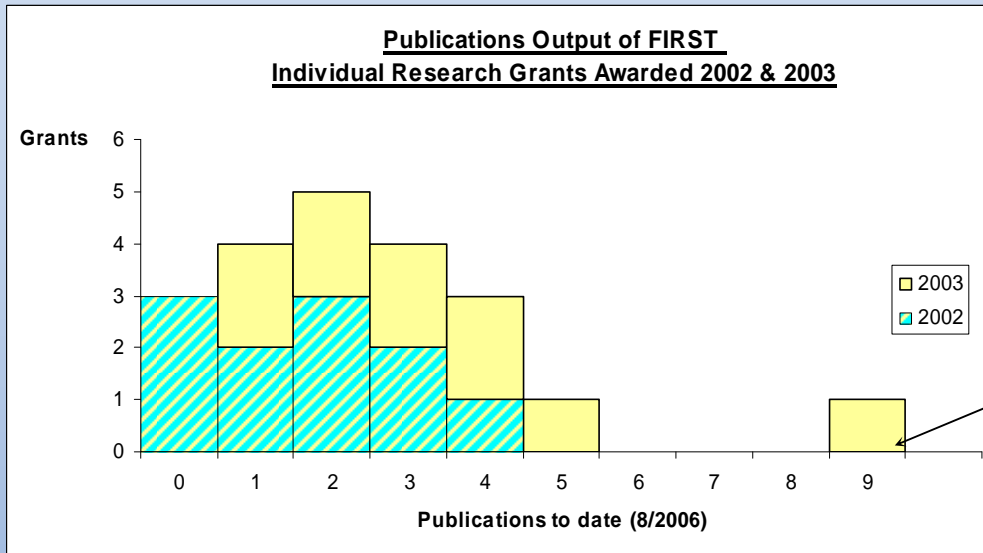
Special Individual Researcher Track

Year	Submitted			Funded		Total Annual Budget (\$)	
	Pre-proposals	Full Proposals	%	Number	%	Grants	Dedicated Equipment
2002	54	21	39	11	20	445,000	157,000
2003	63	24	38	8	13	320,000	110,000
2004	55	27	49	14	25	585,000	137,000
2005	76	33	43	12	16	510,000	190,000
2006	73	30	42	9	12	450,000	81,400
2007	86	36	42				

The problem: The overall success rate should not be below 20%.



Publications Output and Impact of FIRST Individual Grants Awarded 2002 & 2003



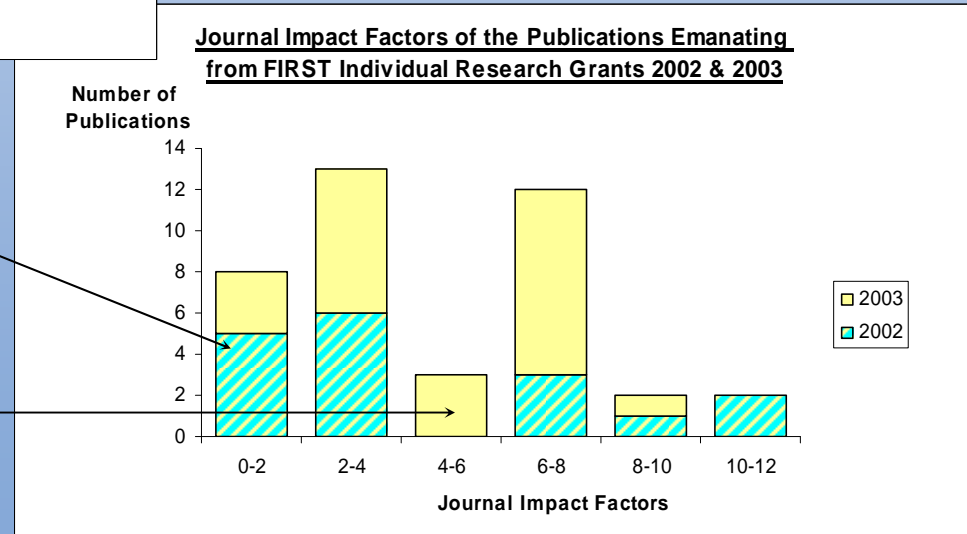
2002 11 grants, 18 articles.

2003 8 grants, 30 articles in peer-reviewed, highly-ranked, international journals.

2003 “star” project has produced 9 articles to date.

2002 18 articles – range of journal impact factors from 0 to 10.2 (PNAS). Average journal impact factor 4.3

2003 30 articles – range of journal impact factors from 0 to 9.1 (Advanced Materials). Average journal impact factor 4.8



The Institutional Track

- ⇒ Israel's seven research universities are invited to submit one research proposal each, in a **new high-priority field of research**, preferably via junior faculty, which can open new areas both within Israel and worldwide
- ⇒ Up to 3 year projects with a total budget of maximum **\$800,000**
- ⇒ Peer reviewing and decision made by the board members



The Institutional Track

Year	Submitted	Funded	Total Annual Budget
2002	6	2	480,000
2003	6	2	340,000
2004	6	1	200,000
2005	5	1	234,000
2006	6	2	234,000
2007	7		

Publications Output of FIRST Institutional Grants Awarded 2002 & 2003

<u>2002</u>						
<u>Name</u> <small>(& funding^{*1})</small>	<u>Publications</u>	<u>Journal</u>	<u>Impact factor</u>	<u>Rank^{*2}</u>	<u>From</u>	<u>Subject Category</u>
Bar-Ziv (\$400,000 over 3 years)	4	Current Opinion in Chemical Biology	8.5	20	261	Biochemistry & Molecular Biology
		Chemistry & Biology	6.1	35	261	Biochemistry & Molecular Biology
		J. Biological Chemistry	5.8	38	261	Biochemistry & Molecular Biology
		Biochemistry	3.8	72	261	Biochemistry & Molecular Biology
Simon (\$800,000 over 3 years)	3	Nature Genetics	25.8	1	124	Genetics & Heredity
		BMC Bioinformatics	5	13	139	Biotechnology & Applied Microbiology
		BMC Genomics	4.1	17	139	Biotechnology & Applied Microbiology
7						
<u>2003</u>						
Gazit (\$510,000 over 3 Years)	13	Nano Letters	9.8	4	178	Materials Sci., multidisciplinary
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		Nano Letters	9.8	4	178	Materials Sci., multidisciplinary
		Nano Letters	9.8	4	178	Materials Sci., multidisciplinary
		Advanced Materials ^{*3}	9.1	5	178	Materials Sci., multidisciplinary
		JACS	7.4	6	125	Chemistry, multidisciplinary
		Faseb Journal	7.1	3	65	Biology
		Analytical Chemistry	5.6	1	70	Chemistry, analytical
		Proteins-structure function & bioinformatics	4.7	49	261	Biochemistry & Molecular Biology
		Supramolecular Chemistry	1.7	32	125	Chemistry, multidisciplinary
		Physical Biology	new publ. 2004	n/a	65	Biophysics
		Current Nanoscience	new publ. 2003	n/a	178	Materials Sci., multidisciplinary
		Israel J. Chemistry	0.8	68	125	Chemistry, multidisciplinary
Alon (\$510,000 over 3 Years)	9	Science	30.9	1	48	Multidisciplinary Sciences
		Nature Genetics	25.8	1	124	Genetics & Heredity
		Nature Genetics	25.8	1	124	Genetics & Heredity
		Nature Methods	6.7	4	53	Biochemical Research Methods
		Bioinformatics	6	1	83	Computer Sci., interdisciplinary appl.
		Physical Review E	2.4	2	38	Physics, mathematical
		Physical Review E	2.4	2	38	Physics, mathematical
		Cell Biology Lab. Handbook	book chapter	n/a	n/a	n/a
		Physical Biology	new publ. 2004	n/a	65	Biophysics
22						

^{*1} ISF grant & institutional matching

^{*2} Journal rank in primary field

^{*3} Cover featured article

4 grants

27 articles

in peer-reviewed,
highly-ranked,
international
journals

6 articles in
top-ranked
journals

Cover-featured article



Post-Doctoral Fellowships

- ⇒ Supports training of young PhDs at top institutions abroad in **pre-selected** subjects
- ⇒ The chosen researchers obtain a grant that supports their research upon returning to Israel
- ⇒ Thus far the four fields chosen were **Evolution, Environmental Sciences, Virology and Analytical Chemistry**
- ⇒ For 2007 the field is: **interdisciplinary science**



Post-Doctoral Fellowships

During the six years of operation

68 applications were submitted

27 received postdoctoral fellowships:

Environmental Sciences - **8**

Evolution - **5**

Analytical Chemistry - **3**

Virology - **5**

Interdisciplinary Science - **6**

14 received tenure at Israeli Universities



NEST – PROMISE

www.nest-promise.net



- NEST – New and Emerging Science and Technology
- PROMISE - Promoting Research on Optimal Methodology and Impacts

Coordinator

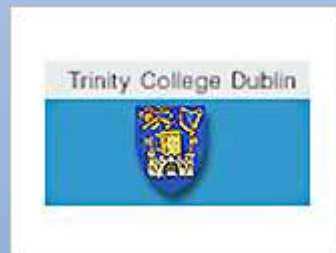


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Partners



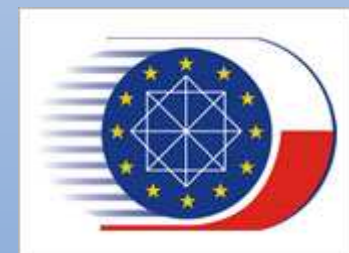
Fraunhofer Institute
for Systems and
Innovation Research
(Germany)
www.isi.fhg.de



Trinity College,
Trinity Centre for
Bioengineering, (Ireland)
www.biomechanics.ie
www.pspa.ie



Consorzio Pisa Recerche
Information Technology
and Telecommunications
Division (Italy)
www.meta.cpr.it



NEST NCP,
Institute for Fundamental
& Technological Research,
Polish Academy of
Sciences
www.pr6.pl

NEST-PROMISE GOALS

www.nest-promise.net



- Survey European and other programs supporting innovative, high risk, interdisciplinary, original research:
 - successes and failures
 - problems and solutions
 - social impacts – young and female scientists
- Analyse performance of NEST like programs:
 - overlap
 - benefit optimization
 - cost effectiveness
- Raise awareness for funding of NEST like programs .
- Provide experience validated tools to refine and optimize:
 - efficiency
 - fairness
 - impact and benefit
 - strategies and procedureof NEST like programs.

The bottom line:

Encourage original, innovative path breaking research.



Nest-Promise Activities

- Visit our website

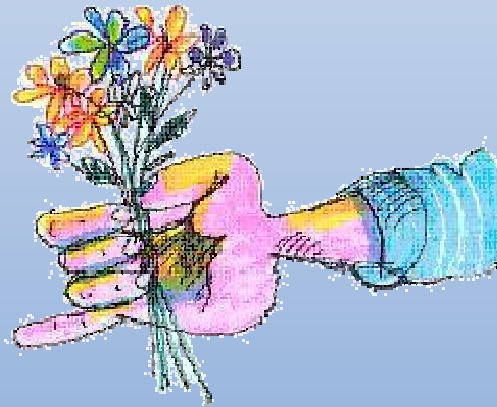
<http://www.nest-promise.net/>

- Join our network - receive our newsletter
- Come to our

Final Dissemination & Brokerage Event
July 9,10, 2007 in Brussels



Thank you for your attention



Please visit us at: www.isf.org.il

