NSERC CRSNG

vision and mission

Prosperity and high quality of life for Canadians

NSERC

We invest in:

discovery

Competitive research in science and engineering, providing access to new knowledge from around the world

innovation

Productive use of new knowledge in all sectors of the economy and society

EXCELLENCE

people

Highly skilled, well educated and capable of lifelong learning

Our goal is Canadian excellence in:

We do this through peer-reviewed competitions in three programs

CREATING KNOWLEDGE

Research Grants for **basic research** in the universities

WORKING IN ALL AREAS OF SCIENCE AND TECHNOLOGY

Scholarships and fellowships for undergraduate students, postgraduate students, postdoctoral fellows and some university faculty

USING NEW KNOWLEDGE

Partnerships of universities with industry and other sectors for **project research**

NSERC Information Session
University or Society Name
Date xx, 2006

Name 1	Institution	DEPT	Type of participation on GSC (ie
Name 2	Institution	DEPT	GSC# and name, role, year)

Agenda

- New at NSERC
  - NSERC Updates
  - Program Updates
- Preparing a Grant Application

NSERC Updates

- New President
- Federal Budget News
- Reallocations Exercise
- New allocation mechanism
- NSERC Regional Offices
- Electronic submission of applications

New President

- Dr. Suzanne Fortier
- Started in January 2006 - five-year term
- Formerly VP Research and VP Academic at Queen's University
- Chemist, specializing in crystallography
- Served three terms on NSERC Council (1996-2005)

Federal Budget News – R & D

- $40M/yr for the Indirect Costs Program
- $20M/yr to CFI (Leaders Opportunity Fund)
- $17M/yr for NSERC
- $17M/yr for CIHR
- $6M/yr for SSHRC
- Various measures to help post-secondary students

NSERC Budget News
($17 million for NSERC)

2006-07

- $14.15 M – Research Tools & Instruments
- $2 M – Strategic Partnerships

2007-08

- $7.9 M – Research Tools & Instruments
- $1.75 M – Discovery Grants Program
- $4 M – Strategic Partnerships
- $1 M – Major Resources Support
- $1.5 M – Special Research Opportunity

Reallocations Exercise

- For 2007 DG applications, refer to our Web site to see what reallocations funds may be available to the GSC.
- The 2007 competition is the last year for the implementation of the 2002 exercise.
- Reallocations Exercise in its current format will not be repeated.

New Allocation Mechanism

- Unlike other exercises, no specific amount would be identified at the outset.
- Process based on GSC population dynamics and cost of research.
- Either a Reallocation or an allocation of funds depending on the budget situation of the Council.

NSERC Regional Offices

What they do:

- Ensure a visible presence in the region
- Promote participation in the programs
- Participate in activities to promote science and math education

Status:

- Atlantic/Moncton (N.B.), operating since July 2004
- Prairie/Winnipeg (Man.), operating since Sept. 2005
- British Columbia – Vancouver, opened May 2006
- Ontario & Québec – Location TBD, 2006-07

Electronic Submission of Applications

- Fall 2005: 83% of the applications were received electronically
- Improvements for the 2007 competition:
  - Improved stability and access
  - Pre-converted PDF attachments
  - Linking process improved

Program Updates

- New Major Resources Support (MRS) Program
- Revised University Faculty Awards Program (UFA)
- Discovery Accelerator Supplement
- Reporting HQP – Required Consent
- Research Tools and Instruments (RTI)

Major Resources Support (MRS)

(replacing Major Facility Access Grant - MFA)

- **Goal**: Covers operational costs
- **Eligibility:** Major regional, national or international Experimental research facilities or theoretical research Organizations (institutes) **not** standard in a discipline And **not** commonly available in Canadian universities.
- **Notification of Intent to Apply (Form 181) deadline**: August 15, 2006. May 1, 2007 for competition 2008, as Form 181 will be used for screening purposes.
- **Application deadline**: October 1

Major Resources Support (MRS)

(replacing Major Facility Access Grant - MFA) (cont'd)

Key features

- Includes theoretical and thematic research organizations (such as institutes)
- Re-focused and expanded selection criteria. A total of eight criteria, and all must be met.
- Up to 5 years duration of grants
- Explicit eligible and ineligible costs
- Form 181 (Notification of Intent to Apply) will be used for screening purposes starting competition 2008. Next year's deadline to submit Form 181: May 1st 2007.

University Faculty Awards (UFA) Changes for 2007 competition

New Objective:

- Enhancement of retention and early career progression of women and aboriginal people in tenure-track faculty positions in NSE

Eligibility:

- Nominees recently hired into tenure-track positions (<1 year) at nominating university now eligible under certain conditions

New Selection Criteria Weightings:

- Need for female/Aboriginal representation: 30%
- Institutional commitment: 30%

Duration and Renewal:

- Initial Discovery Grant no longer truncated to 3 years
- Duration of UFA = DG; if DG<5 years, must renew DG to receive subsequent UFA instalments. Total maximum duration of UFA: 5 years.
- UFA progress report and evaluation at year 3

Discovery Accelerator Supplement

- Aim is fostering excellence as part of the Discovery Grant Program
- To provide increases to outstanding researchers at a key point in their career
- GSCs will propose applicants in the upcoming Discovery Grant competition

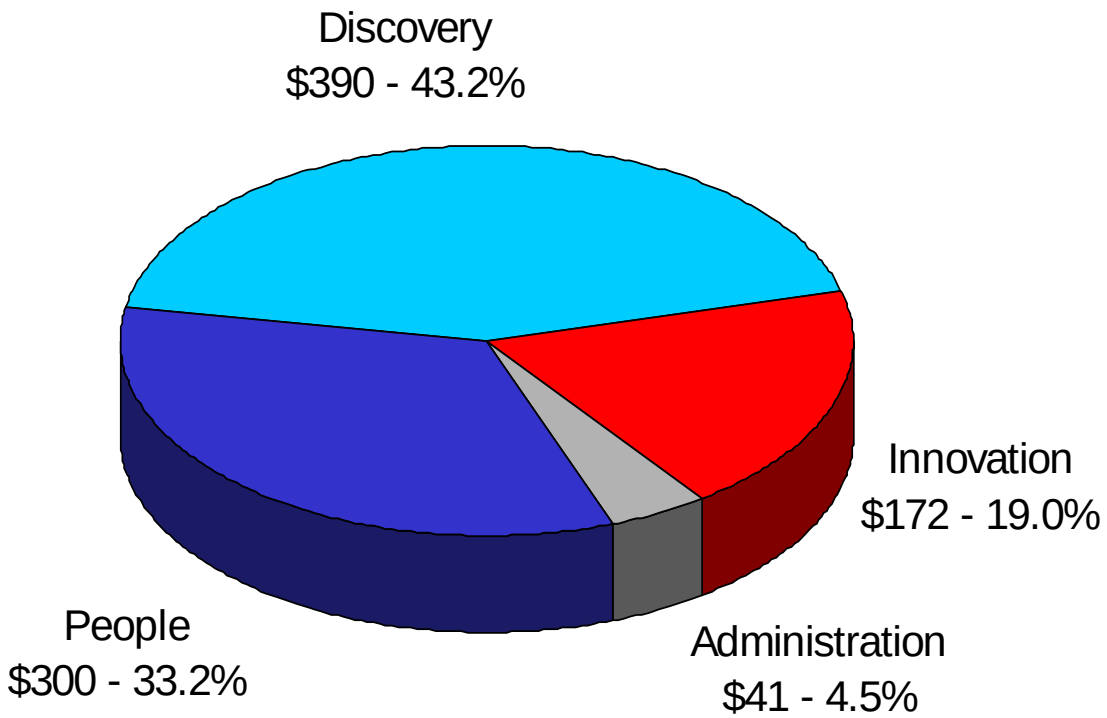
Reporting HQP

Name	Type of HQP Training	Years supervised or co-supervised	Title of project or thesis	Present position
Consent obtained				
Roy, Marie	Masters (completed)	Supervised 2003-2005	Isotope geochemistry in petroleum engineering	V-P (research), Earth Analytics Inc., Calgary, AB
Consent not obtained				
(name withheld)	Masters (completed)	Supervised 2003-2005	Isotope geochemistry	Research executive in petroleum industry – Western Canada

Research Tools and Instruments

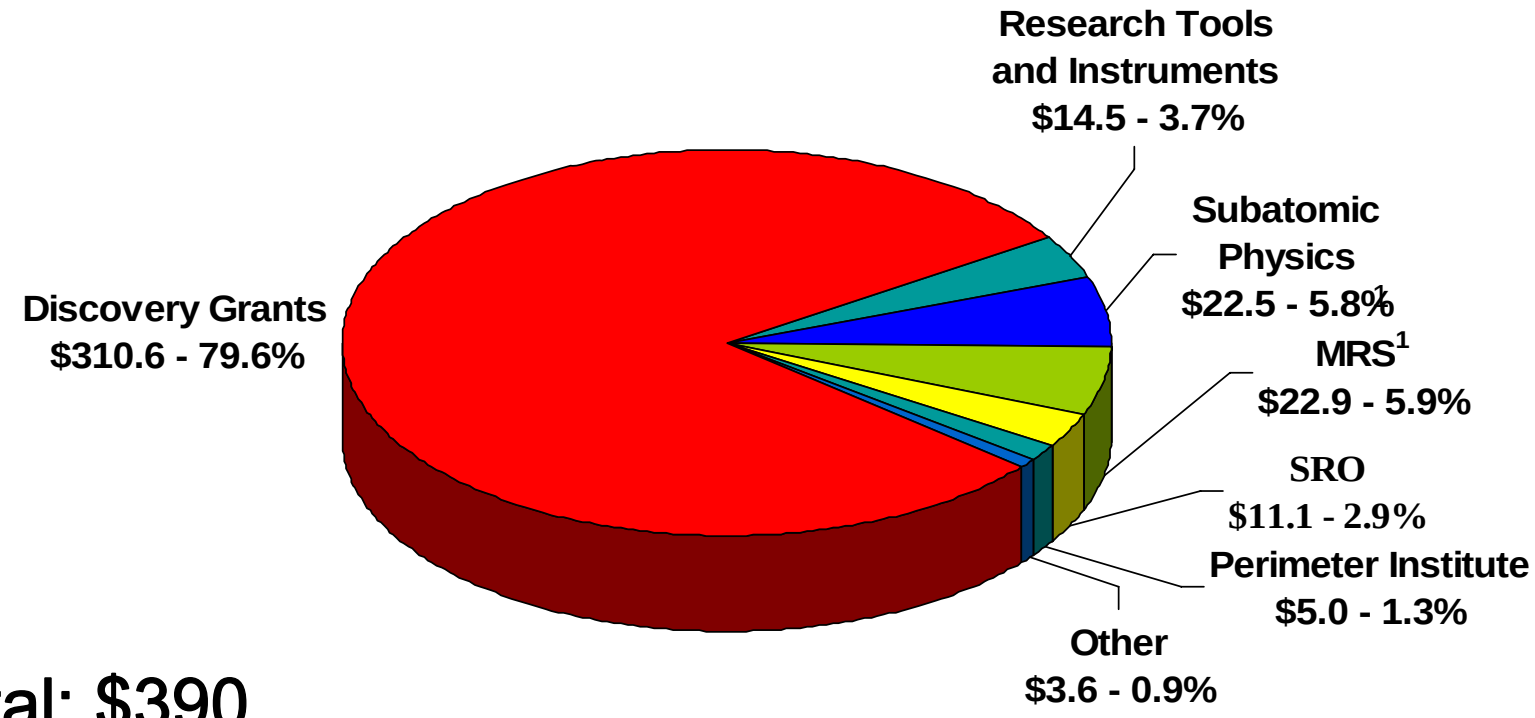
- Deadline date – October 25th
- Moratorium on Categories 2 and 3
- Total net cost up to $250K
- $150K or less from NSERC
- Must hold or have submitted an NSERC research grant

NSERC Budget 2006-07 (millions of dollars)



Total: $902

Discovery Programs Budget 2006-07 (millions of dollars)



Total: $390

1. Includes funding for Canadian Light Source

2006 COMPETITION RESULTS

Discovery Grants
Research Tools and Instruments

2006 Discovery Grants Results: All Disciplines

Disciplines	First Time Applicants			Returning Applicants		
	No App.	Success (%)	Avg. Grant ($)	No App.	Success (%)	Avg. Grant ($)
Life Sciences	303	53.1	29,518	760	65.7	34,901
Physical Sciences	155	71.0	27,721	507	81.7	36,754
Math, Stats	73	82.2	12,273	204	81.9	17,866
Computer Science	69	79.7	18,673	219	86.3	26,937
Engineering	194	65.5	22,323	696	77.2	28,692
Subatomic Physics	10	100	44,825	30	80.0	57,021
Interdisciplinary	15	53.3	27,000	23	65.2	31,475
Total for all GSCs	**819**	**64.8**	**24,603**	**2439**	**75.6**	**31,412**

2006 Discovery Grants Results: Life Sciences

Grant Selection Committee (GSC)	First Time Applicants			Returning Applicants		
	No. App.	Success (%)	Avg. Grant ($)	No. App.	Success (%)	Avg. Grant ($)
(1011) Integrative Animal Biology	62	50.0	29,185	174	62.6	36,907
(32) Cell Biology	62	53.2	34,545	100	60.0	38,279
(33) Molecular & Dev. Genetics	42	42.9	39,589	101	59.4	47,575
(03) Plant Biology & Food Sci.	32	50.0	34,000	98	58.2	36,827
(18) Evolution & Ecology	54	63.0	25,700	160	75.6	28,855
(12) Psychology: Brain, Behaviour and Cognitive Science	51	56.9	19,908	127	72.4	28,815
Total for Life Sciences	**303**	**53.1**	**29,518**	**760**	**65.7**	**34,901**

2006 Discovery Grants Results: Physical Sciences

Grant Selection Committee (GSC)	First Time Applicants			Returning Applicants		
	No. App.	Success (%)	Avg. Grant ($)	No. App.	Success (%)	Avg. Grant ($)
(08) Solid Earth Sciences	20	80.0	21,675	88	86.4	34,029
(09) Environmental Earth Sci.	35	68.6	20,463	93	78.5	24,968
(24) Inorganic & Organic Chem.	22	59.1	35,283	91	72.5	52,970
(26) Analytical & Physical Chem.	30	63.3	32,363	91	79.1	41,256
(17) Space & Astronomy	14	71.4	26,300	51	82.4	30,841
(28) Condensed Matter Physics	19	84.2	37,202	51	88.2	39,581
(29) General Physics	15	80.0	23,357	42	95.2	31,614
Total for Physical Sciences	**155**	**71.0**	**27,721**	**507**	**81.7**	**36,754**

2006 Discovery Grants Results: Math, Stats & CIS

Grant Selection Committee (GSC)	First Time Applicants			Returning Applicants		
	No. App.	Success (%)	Avg. Grant ($)	No. App.	Success (%)	Avg. Grant ($)
(336) Pure & Applied Math. – A	17	88.2	11,827	79	81.0	16,559
(337) Pure & Applied Math. – B	21	81.0	12,941	57	87.7	17,130
(14) Statistical Sciences	35	80.0	12,107	68	77.9	20,140
(330) Computing & Info. Sci. – A	36	83.3	19,167	104	80.8	24,252
(331) Computing & Info. Sci. – B	33	75.8	18,080	115	91.3	29,085
Total for Math, Stats & CIS	**142**	**81.0**	**15,334**	**423**	**84.2**	**22,682**

2006 Discovery Grants Results: Engineering

Grant Selection Committee (GSC)	First Time Applicants			Returning Applicants		
	No. App.	Success (%)	Avg. Grant ($)	No. App.	Success (%)	Avg. Grant ($)
(334) Comm., Comp. & Components Eng.	39	79.5	22,387	110	89.1	29,905
(335) Electro. & Elect. Sys. Eng.	25	76.0	25,816	76	77.6	33,539
(20) Industrial Engineering	16	50.0	17,625	72	61.1	23,975
(04) Chem. & Metallurgical Eng.	36	63.9	24,043	133	86.5	31,805
(06) Civil Engineering	30	50.0	22,333	152	71.1	26,433
(13) Mechanical Engineering	48	64.6	20,048	153	73.9	25,939
Total for Engineering	**194**	**65.5**	**22,323**	**696**	**77.2**	**28,692**

Reallocations for 2006
Life Sciences

GSC	Proposal	$ allocated
3	#2- New opportunities for knowledge discovery #3- Meeting the growing demand for HQP	133K 55K
12	#2- Imaging & animal care costs #3- Increased costs of training students	105.4K 55K
18	#4- Modern technologies #5- Field research	98K
32/33	#2- Number of new applicants	219K
1011	#3- Molecular biology #4- Animal care costs #5- Emerging technologies	219.4K

Reallocations for 2006
Chemistry

GSC	Proposal	$ Allocated
24	#1- New applicants #2- Meritorious early-career scientists #4- Interdisciplinary materials research	244K
26	#1- New applicants to be competitive internationally #2- Meritorious early-career scientists #4- Interdisciplinary materials research	292K

Reallocations for 2006
Physics

GSC	Proposal	$ Allocated
28	#1- New applicants	165K
	#3 - Synthesis & characterization of novel materials & the fabrication of new structures	68K
	#4 - Novel experimental and computational tools & methods	51.5K
	Interdisciplinary materials research	28K
29	#1 - New applicants	25K
	#2 – Photonics	52.5K
	Interdisciplinary materials research	18.8K

Reallocations for 2006
Space and Astronomy & Subatomic Physics

GSC	Proposal	$ Allocated
17	#1 - “New Opportunities” PDF in key areas	96.5K
19	#2, 3, 4 - Science return for the highest priority projects	123K
	#5 - Particle astrophysics	43K
	#6 - Subatomic physics theory new researchers and research environment	230K
	#7 - Advanced technology development	63K

Reallocations for 2006
Earth and Environmental Sciences

GSC	Proposal	$ Allocated
08	#3 - Field Research	65.8K
09	#3 - Field Research	53 K

Reallocations for 2006
Stats, Maths & Computing

GSC	Proposal	$ Allocated
14	#1 - Best researchers #2 - Emerging areas	69K
336	#1 - New applicants	73K
337	#1 - New applicants	88K
330	#1 - New and Senior New applicants	328K
331	#1 - New and Senior New applicants	289K

Reallocations for 2006 Engineering

GSC	Proposal	$ Allocated
04	#1 - New technologies in Canadian resource industries	48K*
	#2 - Research in sustainable emerging technologies	112K*
06	#1 - Research on infrastructure for sustainable development	124K
	#2 - Research in smart systems and infrastructure	24K
	#3 - Research in decision support systems	12K
334/335	#1 - Emerging and speculative research	210K*
	#2 - Exceptional innovation supplements	105K*
20	#1 - HQP for e-business /e-society	60K*
13	#1 - Research in biomedical engineering	48K
	#2 - Fundamental research in alternative energy systems	20K
	* Amount allocated was added to the GSC's base budget	

2006 Research Tools & Instruments (RTI-1)

	All RTI			RTI for FTAs	
Disciplines	No. App.	Success Rate (%)	Funding ($)	No App.	Success Rate (%)
Life Sciences	460	47.4	9,021,737	81	49.4
Physical Sciences	411	39.4	11,988,758	61	59.0
Math, Stats	9	44.4	293,213	1	0
Computer Science	60	48.3	1,490,758	13	46.2
Engineering	465	38.7	12,462,826	65	38.5
Interdisciplinary	21	52.4	698,988	5	40.0
Total for all GSCs	**1426**	**42.4**	**35,956,280**	**226**	**48.2**

2006 RTI-1 Results
Life Sciences

Grant Selection Committee (GSC)	ALL RTI			RTI for FTAs	
	No. App.	Success Rate (%)	Funding ($)	No. App.	Success Rate (%)
(1011) Integrative Animal Biology	108	49.1	2,325,380	21	52.4
(32) Cell Biology	60	46.7	1,259,369	10	50.0
(33) Molecular & Dev. Genetics	45	55.6	965,765	7	42.9
(03) Plant Biology & Food Sci.	101	46.5	2,153,196	12	50.0
(18) Evolution & Ecology	97	39.2	1,479,108	18	44.4
(12) Psychology: Brain, Behaviour and Cognitive Sci.	49	55.1	838,919	13	53.8
Total for Life Sciences	**460**	**47.4**	**9,021,737**	**81**	**49.4**

2006 RTI-1 Results
Physical Sciences

Grant Selection Committee (GSC)	All RTI			RTI for FTAs	
	No. App.	Success Rate (%)	Funding ($)	No. App.	Success Rate (%)
(08) Solid Earth Sciences	37	48.6	939,143	8	37.5
(09) Environmental Earth Sciences	56	44.6	1,359,575	10	80.0
(24) Inorganic & Organic Chem.	113	34.5	3,305,823	12	50.0
(26) Analytical & Physical Chem.	99	39.4	3,256,170	20	65.0
(17) Space & Astronomy	10	40.0	231,954	1	100
(28) Condensed Matter Physics	63	41.3	1,882,219	6	50.0
(29) General Physics	33	33.3	1,013,874	4	50.0
Total for Physical Sciences	**411**	**39.4**	**11,988,758**	**61**	**59.0**

2006 RTI-1 Results
Math, Stats & CIS

Grant Selection Committee (GSC)	All RTI			RTI for FTAs	
	No. App.	Success Rate (%)	Funding ($)	No. App.	Success Rate (%)
(336) Pure & Applied Math – A	1	100	97,793	0	0
(337) Pure & Applied Math – B	1	0	0	1	0
(14) Statistical Sciences	7	42.9	195,420	0	0
(330) Computing & Info Sci. – A	37	59.5	1,077,047	9	66.7
(331) Computing & Info Sci. – B	23	30.4	413,711	4	0
Total for Math, Stats & CIS	**69**	**42.3**	**1,783,971**	**14**	**42.9**

2006 RTI-1 Results
Engineering

Grant Selection Committee (GSC)	All RTI			RTI for FTAs	
	No. App.	Success Rate (%)	Funding ($)	No. App.	Success Rate (%)
(334) Comm., Comp. & Components Eng.	52	42.3	1,463,194	10	30.0
(335) Electro. & Elect. Sys. Eng.	47	36.2	1,068,498	7	28.6
(20) Industrial Engineering	8	37.5	184,216	0	0
(04) Chem. & Metallurgical Eng.	130	36.2	4,076,728	16	56.3
(06) Civil Engineering	103	40.8	2,505,899	12	41.7
(13) Mechanical Engineering	125	39.2	3,164,291	20	30.0
Total for Engineering	**465**	**38.7**	**12,462,826**	**65**	**38.5**

Preparing a Discovery Grant Application

Are You Eligible?

- Hold, or have a firm offer of, an academic appointment at a Canadian university (minimum three-year term position)
- Position requires independent research and allows supervision of students
- Researchers holding a position of any kind outside Canada must spend a minimum of six months per year at an eligible Canadian institution

Inform NSERC when a change in your status occurs (including sabbatical and leave periods)

Discovery Grants

- Promotes and maintains a diversified base of research capability in the NSE in Canadian universities
- Supports on-going programs of research, rather than projects
- Inherent flexibility in the research program
- Largest program in NSERC – **44% of NSERC budget (approx. $370 million) and 8,700 researchers funded annually**
- Success rate: approx. 75% Average grant: $30K

Eligibility of Subject Matter

- Supports research programs in the NSE (other than health sciences)
- Interdisciplinary research is encouraged but should be predominantly in NSE
- Significance, impact, advancement of knowledge or its practical application in NSE

Form 180: Intent to Apply

- For Discovery Grants, Discovery Project Grants (Subatomic Physics only), and/or University Faculty Award (UFA) applications
- Used to initiate the competition process
- Can have adverse consequences if not submitted
- First time applicants who have not yet submitted Form 180 should do so immediately

A Complete Grant Application Must Include:

- Form 101: Application for a Grant with supporting documentation
- Form 100: Personal Data form for applicant and ALL co-applicants with appropriate appendices
- Samples of research contributions (e.g., prints)
- Environmental Assessment, if required

Life Cycle of a DG Application

August 1 to mid-September
Form 180 - Assignment of GSC and Referees

November 1
Submission of Grant Application

November 19
Chairs' Meeting – Confirmation of GSC

November 20-28
Mail-out to External Referees

Mid-December
Mail-out to GSC Members

February
Grants Competition

March – April
Announcement of Results

Peer Review Process

NSERC Role

- Replace members who completed three-year membership on GSC
- Oversee competition process and present at all times during deliberations
- Advise committees on procedures
- Ensure no conflicts of interest
- Provide feedback to applicants

GSC Role

- Advise on assignments
- Evaluate proposals
- Make funding recommendations
- Prepare comments to applicants
- Membership suggestions

Selection Criteria

- Merit of the proposal
- Training of highly qualified personnel (potential HQP)
- Need for funds (budget, justification, relationship to other sources of funds)

→ **FORM 101**

- Excellence of the researcher(s)
- Training of highly qualified personnel (past HQP record)
- Need for funds (list of other sources of funds)

→ **FORM 100**

FORM 101

Merit of the Proposal

- Originality and innovation
- Significance and expected contribution to research
- Clarity and scope of objectives
- Clarity and appropriateness of methodology
- Feasibility of program

100 & 101

Excellence of Researcher(s)

- Knowledge, expertise and experience
- Contribution to research
- Importance of contributions
- Complementarity of expertise and synergy for group application

100 & 101

Training of HQP

- Quality and extent of past and potential contributions
- Appropriateness of proposed work for training
- Training in collaborative or interdisciplinary environment

100 & 101

Need for Funds

- Appropriateness and justification of budget
- Other sources of funding
  - Availability
  - Relationship to current proposal

Additional Considerations

Within the framework of the selection criteria, the committees consider factors such as:

- The potential/merit/plans of new applicants
- Applicant's role in collaborations/joint publications
- The context of Interdisciplinary/Engineering and Applied Science
- Appendix C for Adjunct / Emeritus and Part-time Professors

FORM 100

Personal Data Form Tips

- List ALL sources of support (past four years)
- Describe five most significant research contributions
- List other research contributions (2000-2006)
- Describe contributions to training (2000-2006)
- Give other evidence of impact of work
- Explain any delays in research activity

FORM 101

Application Tips

- Write summary in plain language
- Provide a progress report on related research
- Position the research within the field
- Articulate short- and long-term objectives
- Provide a detailed methodology

FORM 101

Application Tips

- Describe plans for training
- Prepare realistic budget
  - And look at the Reallocations opportunities
- Discuss any relationship to other research support
- Address previous GSC comments

FORM 101

Research Tools and Instruments- RTI- Category 1

- What research is being done with equipment?
- Justify each item
- Explain need and urgency of overall request
- Suitability of proposed equipment for research program
- Indicate impact on training

Final Advice

- Use the 2006 Web version of forms/guide
- Read all instructions carefully and follow presentation standards
- Ensure completeness of application
- Remember that two audiences read your application
- Ask colleagues for comments on your application
- Read other successful proposals
- Read 2006 Peer Review Manual (http://www.nserc.gc.ca/commit/prm2006/table_e.htm)

Contacts

Deadlines, Acknowledgement of Applications, Results	Your Research Grant Officer (RGO)
Your Account, Statement of Account (F-300)	Your Business Officer
NSERC Web site	www.nserc.gc.ca
Discovery Grants	resgrant@nserc.ca 613- 995-5829
Use of Grant Funds	casdfinance@nserc.ca
eBusiness Team	webapp@nserc.ca
NSERC staff	firstname.familyname@nserc.ca

NSERC Needs Your Feedback!

Your completed survey will help us:

- evaluate and improve these sessions
- obtain your feedback on our peer review process

Hand it in as soon as possible after this session!

or

Fax to NSERC at 613-947-3847