

Developing Budgets for Grant Applications

Joanne Simala-Grant Bsc PhD

Director, CIHR Special Project
Faculty of Medicine & Dentistry



Outline

- A. How **important** is a well put together budget?
- B. What **process** should/could one use to create a budget?
- C. What are **key features** of exemplary budgets?
- D. What **additional issues** should be considered when creating a budget?

How **important** is a well
put together budget?



Importance of Budgets to CIHR

- CIHR Instructions to Peer Reviewers:
 - questions about the budget should not influence the rating of the application, unless they bear directly on the scientific merit.
 - <http://www.cihr-irsc.gc.ca/e/4656.html>

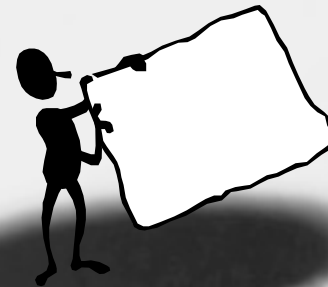
“My experience has been that budget never impacts on a grant's score.”

Every piece of the application adds to or takes away from the opinion the reviewer has of the candidate.

“A well prepared budget always brings more \$\$\$ if the application is successful.”



What **process** do you use to create a budget?



Budget Processes

- Trying to determine actual costs.
- Ballparking or working back from the dollar value of the potential award (i.e. \$100K).

- Expendables: 100 strains x 5 antibiotics x 10 concentrations x triplicate plates x triplicate experiments x \$0.25/plate = \$45,000

- Human Resources: 2 strains/week 100 strains = 50 weeks = yearly salary x 1.23 (to include benefits) = \$55,000

- Antibiotics \$22,500
- Media \$22,500
- Human resources \$55,000

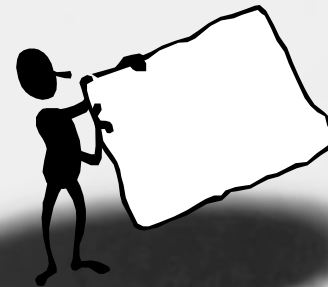
Budget Processes

- Trying to determine actual costs.
- Ballparking

Advantages?

Disadvantages?

What **process** will you to use to create your CIHR operating grant budget and why?





Questions to ask
before getting started

How much can one ask for?

- **Capped Budget**
 - Ask - what is the cap?
 - i.e. 100K
- **Uncapped Budget**
 - Ask – what is the average value of the grant awarded by the agency for the competition in question?

What about a **CIHR Operating Grant**?

March 2011 CIHR Operating Grant awarded in the Open Competition
Average \$600K/4.2 years (141K/year after 19.5% reduction)

- 
- Uncapped Budget

Would the budget development process chosen be impacted with whether the budget is capped or uncapped?

- Capped Budget

How accurate does one need to be when designing a budget?

- Very Accurate

- Actual expenses must fall within budget lines provided in the awarded application.


- Not as Accurate

- Actual expenses must fall within total budget estimate (rather than a given budget line) provided in application.

What about a **CIHR Operating Grant**?

- Rebudgeting of budget lines/expense categories is not allowed.

- Rebudgeting to cover necessary and reasonable costs of the research project is allowable without prior approval.

- 
- Rebudgeting of budget lines/expense categories is **not allowed**.

What process would be most appropriate if rebudgeting is **not allowed**?

- Rebudgeting across lines is **allowable** without prior approval.

Potential Resources

- Using someone else's successful budget as a starting point.
 - Visit the resource that lists: *Successful UA Applicants From Each Peer Review Committee*
 - <http://hdl.handle.net/10402/era.23213>
 - Contact a successful applicant
- Using an old grant of one's own as a starting point.
- Obtaining a spreadsheet of a lab's actual expenses for the last year.

If Trying to Determine **Actual Costs**

- Go through each aim and each procedure
- List what one would need based on the categories in the budget table
- Start calculating
 - Company websites for expendables costs
 - UA webpages for human resources costs

What are **key features** of exemplary budgets?



Key features of exemplary budgets

- Expenses are well justified.
 - See example 1
- Discussion of trainees and employees is given (i.e. strengths, what they are to accomplish [reference aims], names).
 - See example 2

Key features of exemplary budgets

- Calculations are easy to follow.
 - See example 3
- Overlap or lack thereof with other grants is clearly detailed.
 - See example 4

Contingency for the Unexpected

- Experiments that don't work the first or second time...
- Trainees/Employees will not be focused 100% of the time on research deliverables.

Key features of exemplary budgets

- Only eligible expenses are requested.
 - See example 5
- Expenses are linked to specific aims.
 - See examples 2 and 4

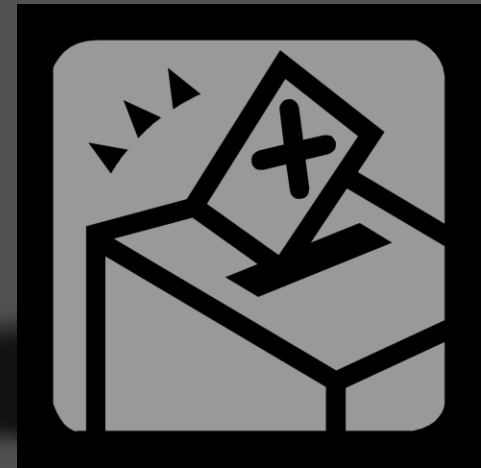
Key features of exemplary budgets

- Justification follows headings from budget proper.
 - See example 7
- Justification continues to convince the reviewer of the excellence of the research environment.
 - See example 8

Key features of exemplary budgets

- Reasonable ask based on what is needed and what the funding agency is willing to give.

How important is it for the 'ask' to be within 20% of the average \$ value given for the award?



CIHR Operating Grants

- Funding Opportunity Details

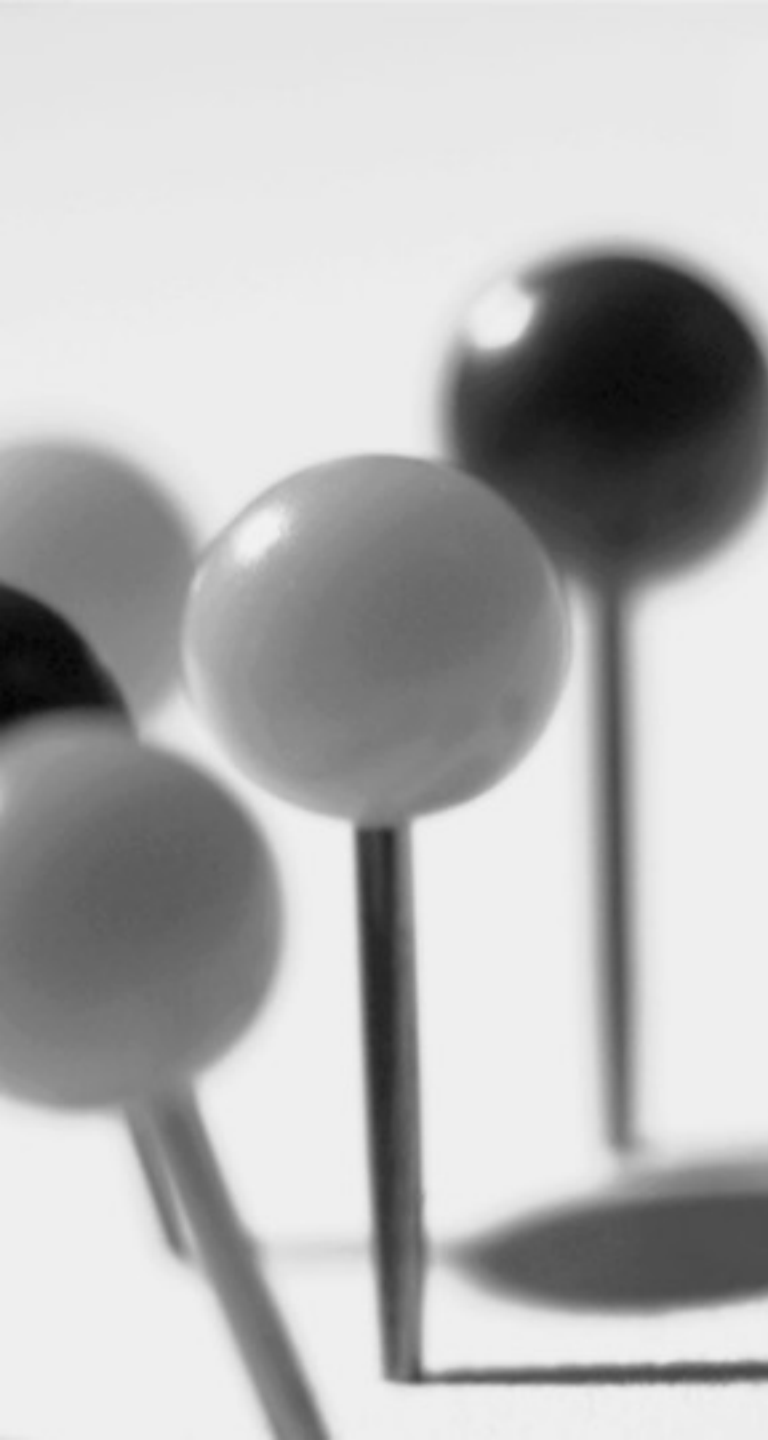
- <http://www.researchnet-recherchenet.ca/rnr16/vwOpprtntyDtls.do?prog=1295&&view=currentOpps&org=CIHR&type=AND&resultCount=25&sort=program&all=1&masterList=true>

- Open Operating Grants (MOP)-
ResearchNet "Application" Phase
Instructions

- <http://www.cihr-irsc.gc.ca/e/35674.html>

- Use of Grant Funds

- http://www.nserc-crsng.gc.ca/Professors-Professeurs/FinancialAdminGuide-GuideAdminFinancier/FundsUse-UtilisationSubventions_eng.asp



Additional Considerations

Benefits

Indirect Costs

Missed Expenses

A decorative background on the left side of the slide features several spheres of varying shades of gray and black, connected by thin black lines. The spheres are arranged in a way that suggests a network or a flow of information. The overall aesthetic is clean and modern.

Considerations: Benefits

Human Resources at the UA is recommending requesting 23-25% for benefits for non-academic and academic staff.

Summary of Benefits Costs

- Actual costs vary depending on the category of employee.
- Some agencies are requesting documentation as to the actual costs of benefits.
 - For **support staff**:
 - <http://www.hrs.ualberta.ca/Benefits/Support/Costs.aspx>
 - For **academic staff**:
 - <http://www.hrs.ualberta.ca/Benefits/Academic/Costs.aspx>

Benefits for Post-doctoral Fellows and Graduate Students

- **Post-doctoral Fellows**
 - \$396 (single); or \$1,165 (family) per year.
 - <http://www.postdoc.ualberta.ca/en/HealthCoverage/SupplementalHealthCare.aspx>
- **Graduate Students**
 - \$378 per year
 - http://www.gsa.ualberta.ca/index.php/services/content/health_dental_plan

Considerations: Indirect costs



UA Policies and Procedures Online (UAPPOL)

- Indirect Costs of Research Policy

- https://www.conman.ualberta.ca/stellent/groups/public/@research/documents/policy/pp_cmp_057464.hcsp

- Indirect Costs of Research Procedure

- https://www.conman.ualberta.ca/stellent/groups/public/@research/documents/procedure/pp_cmp_057465.hcsp

- Schedule A: Indirect Cost Recovery Distribution

- https://www.conman.ualberta.ca/stellent/groups/public/@research/documents/infodoc/cmp_057463.doc

Inclusion of Indirect costs

CIHR, NSERC, SSHRC pay directly to the UA

- Do not include (examples)

- Alberta Cancer Research Institute
- Canadian Diabetes Association
- Canadian Foundation of Pharmacy
- Crohn's and Colitis Foundation of Canada

- Include (examples)

- Lawson Foundation: 15%
- National Institutes of Health: 8% the if the lead PI is at the UA, or follow indirect costs allowed for lead at the other University.
- USA Department of Defense: 61.3%
- USA Government: 61.1%

Contact Information:

Joanne Simala-Grant

E: jls24@ualberta.ca

P: 780-492-1566

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EXAMPLES: Key Features of Exemplary Budgets

Example 1

- Expenses are well justified.

SERVICES

Maintenance contracts:

Maintenance contracts are required for the heavy equipment in the laboratory. This includes a Beckman L-80 ultracentrifuge (11 years old), a Beckman TL-100 Ultracentrifuge (8 years old), and a Beckman Avanti J-25 preparative centrifuge (9 months old). Unfortunately Alberta Innovates Health Solutions, Department nor Faculty have funds allocated for maintenance contracts. These pieces of equipment are critical to the centrifugal work required to complete the research outlined in this proposal. This project utilizes the L-80 and L25 centrifuges for 50% of their use, and the T-100 for 100% of its use. Consequently we are requesting funds for 50% of the maintenance contracts for the L-80 and L-25 and 100% of the maintenance contract for the T-100.

Beckman Ultracentrifuge L-80 (50% of quotation)	\$ 603.00
Beckman Ultracentrifuge T-100 (100% of quotation)	\$1,550.00
Beckman Centrifuge J25 (50% of quotation)	<u>\$ 335.00</u>
TOTAL	\$2,488.00

Example 2

- Discussion of trainees and employees is given (i.e. strengths, what they are to accomplish, names).

RESEARCH STAFF

Technician Grade 7, step 1	\$42,424.20
Benefits (23%)	<u>\$ 9,757.57</u>
	\$52,181.77

Ms. X (BSc Department of Biological Sciences [Microbiology], University of Alberta) has worked in my laboratory since 2005 and is currently at Grade 6 step 7. She is a tremendous resource, is a co-author on 3 publications, and has expertise in isolation of high molecular weight plasmids as well as reverse transcriptase polymerase chain reaction. She will primarily work on aim 4. She will be promoted to Grade 7 step 1 in 2012 due to her outstanding performance.

Example 3

- Calculations are easy to follow.

Automated Sequencing

We are requesting \$12,600 to cover the costs of sequencing. We expect to sequence 75 clones (as part of aim 2). The Applied Genomics Center charges \$15 per reaction. Our preliminary results indicate each sequencing run will cover the full length of the clone, however we have found that approximately 20% of the sequencing runs fail. We would like to cover the sequence of each clone four times, twice in both the forward and reverse directions. Consequently: 75 clones X \$15 per run X 1.2 (to account for failed sequencing reactions) X 4 (two passes in each direction) = \$5,400.

Example 4

- Overlap or lack thereof with other grants is clearly detailed.

i.e. I am also requesting funds for Mr. A, our experienced professional technician (Grade 7 step 4; 50% of [\$47,483 + 10,921]). A will be working on aim 1 from this proposal (50% of his time) as well as on our Heart and Stroke Foundation of Canada proposal. Consequently, we are only requesting 50% of her salary and benefits.

While I hold funding from CIHR for X, the proposed research described in this proposal is distinct and does not overlap with the proposed aims in my other funded applications. Salary for the technician that supports both proposal is split across the two budgets.

Example 5

- Only eligible expenses are requested.

Definition of "Equipment" at CIHR: (2009-08-06) <http://www.cihr-irsc.gc.ca/e/39922.html>

CIHR has decided to introduce a definition of "equipment" effective for application deadlines of August 1, 2009 and later.

"Research Equipment: Any item (or interrelated collection of items comprising a system) of nonexpendable tangible property, having a useful life of more than 1 year and a cost of \$2,000 or more, which is used wholly or in part for research."

Note that all three conditions must be met for an item to be considered equipment, i.e.:

1. nonexpendable tangible property; and,
2. useful life of more than 1 year; and,
3. a cost of \$2,000 or more.

To be considered materials or supplies an item must meet only one of the following conditions:

1. expendable tangible property; or,
2. useful life of 1 year or less; or,
3. a cost of less than \$2,000.

i.e a laptop computer would be considered as materials or supplies even though it is a nonexpendable tangible item with a useful life of more than one year.

Not Allowable	Acceptable								
We plan to purchase X, Y and Z required for the completion of aim 3. The total cost of these three items is \$4,195.	<table> <tr> <td>X will be used to study protein Y (aim 3).</td> <td>\$1,900</td> </tr> <tr> <td>Y will be used to quantify to DNA (aim 3)</td> <td>\$1,800</td> </tr> <tr> <td>A lap top will be purchased to analyze data</td> <td><u>\$495</u></td> </tr> <tr> <td></td> <td>TOTAL \$4,195</td> </tr> </table>	X will be used to study protein Y (aim 3).	\$1,900	Y will be used to quantify to DNA (aim 3)	\$1,800	A lap top will be purchased to analyze data	<u>\$495</u>		TOTAL \$4,195
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	TOTAL \$4,195								

Example 6

- Expenses are linked to specific aims. (See other examples.)

Financial Assistance Required
Research Staff (excluding trainees)
Research Assistants
Technicians
Other personnel (as specified in Employment History)
Research Trainees
Postdoctoral Fellows (post PHD, MD, etc.)
Graduate Students
Summer Students
Materials, Supplies and Services
Animals
Expendables
Services
Other (as specified in the Details of Financial ,
Travel
Total Operating
Total Equipment
Total Request

Example 7

- Justification follows headings from budget proper.

See CIHR Budget Proper Left: i.e. the headings Research Staff, Research Trainees, Materials Supplies and Services, should be used in the budget justification in conjunction with the appropriate subheadings (i.e. Research Assistants, Technicians, Other personnel) to allow the reviewer to move back and forth easily from the budget proper to the budget justification.

Example 8

- Justification continues to convince the reviewer of the excellence of the research environment.

Research Trainees

Post-doctoral Fellow

Salary and benefits (\$40,000, \$1,284) are requested for one post-doctoral fellow. This will be an excellent opportunity for Dr. X to participate in a world-class multidisciplinary team in the discovery of X and analysis of Y. Our team has expertise in disciplines of X, Y and Z. We have state of the art equipment including two B's, a C and a D which may be used by Dr. X in the completion on Aim 3.

Most common errors with grant application budgets:

- Cannot correlate expenses between budget justification and budget table.
 - Incorrect calculations (consider having an independent eye verify the math).
 - Missing items from the budget proper or budget justification (i.e. an item is listed on one, but not both).
 - Variance between the amount listed for an item on the budget proper and the amount listed for the same item on the budget justification.
 - Incorrect amounts for benefits.
 - Ineligible expenses.
 - Poor justification.
 - Missing overhead or incorrect %.
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