

Budget Building Blocks for Investigators

NIH Regional Seminar on Program Funding & Grants Administration San Diego, CA

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Budget Basics

- Getting Started
- Types of Budgets
- Budget Components
- Preparing Budgets
- Other Considerations
- Award Policy Issues



Getting Started

Planning A Research Project

Project Title: quick summary

Principal Investigator(s) and Key Personnel: defines role, commitment

Overall goal: resolve an important issue in a timely manner

Specific goal: best stated as a hypothesis (a boastful claim, substantiated by data)

Impact: 2-3 sentences, define success, outline innovation and significance

RESEARCH Responsibilities, Costs, Milestones and Timeline Overseer Cost Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 1. Validate the ... (THIS AIM MUST WORK—i.e. no/low risk here!) 1a. Compare... confirm... 1b. Optimize the dose/time course... 2. Elucidate the mechanism... (May omit for high risk (e.g. R21) grants.) 2a. 2b. 2c. 3. Assess the biocompatibility of ... in a ... (Transition to next grant)

^{*} High-risk element. Propose and discuss alternatives. Decision point.

Tips for Getting Started

• Know your limits!

- FOAs may have caps and/or exclusions
- Some expenses are "unallowable" (e.g. lobbying, entertainment)

Identify what is necessary and reasonable

- Request for lots of new **equipment** suggests an insufficient environment to do the work
- Research grants are NOT training programs, but federal assistance to achieve a scientific goal. Assign **personnel** wisely!
- Direct costs: directly attributable to the project and allowable
 - o salaries w/ fringe benefits, student fees/tuition, consultants, equipment, supplies, travel, publication, shared facility fees...
- Indirect costs: "overhead" shared by all cost centers
 - Specific rate is negotiated by the institution with the government

NIH Grant Application Budget Basics:

http://grants.nih.gov/grants/developing_budget.htm

Types of Budgets

Detailed and Modular Budgets

Detailed [Categorical or Itemized]

- ❖ Fellowship Applications [F]: tuition & fees
- Career Development Awards [K]: salary, materials & supplies
- Institutional Training Grants [T]
- ❖ SBIR/STTR
- Research Project Grants*
- Multi-Project/Consortium*

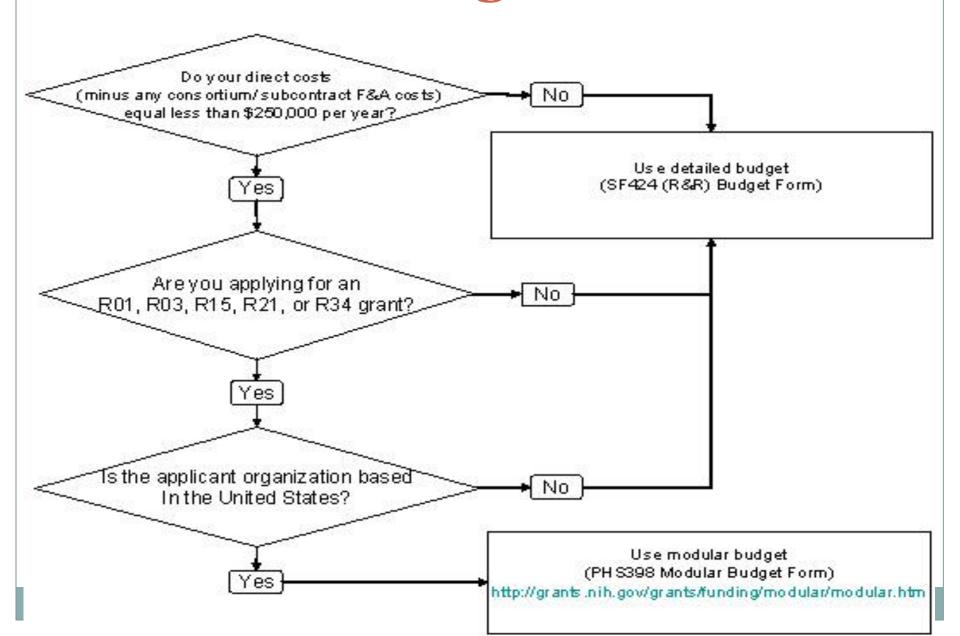
Modular

❖ Research Project Grants*

Modular Budgets

- o Grant applications with annual direct costs ≤
 \$250,000 use Modular Budgets
 - Applicable for Ro1, Ro3, R15, R21 and R34 applications
- Built on modules of \$25,000: no future year escalations
- No categorical budget* [unless asked]
 - at time of application
 - at time of award
- No difference in allowable costs
- No difference in post-award financial management requirements
- PHS SF424 Research & Related Budget: 5.4 Modular Budget
 Component forms

Modular Budget Flow Chart



Modular Budgets (continued)

- > List all personnel at Applicant Organization
- List all personnel associated with Consortia/Contractual arrangements
- NIH may request detailed budget to address specific issues

Additional information on modular budgets:

HTTP://GRANTS.NIH.GOV/GRANTS/FUNDING/MODULAR/MODULAR.HTM

Components

Application Guide

❖PHS SF424 Research & Related Budget

http://grants.nih.gov/grants/funding/424/index.htm#inst

- 4.7 R&R Budget Component
 - x 4.7.1 Section A and B
 - Senior/Key Persons; Other Personnel
 - ▼ 4.7.2 Sections C through E
 - Equipment; Travel; Participant/Trainee Support costs
 - × 4.7.3 Sections F through K
 - Other Direct Costs; Total Direct; Indirect Costs
 - Justification
 - × 4.7.4 Cumulative Budget

Sections A & B: Personnel

EFFORT: Person-Months

- *Amount of time (effort) on project by PI.
 - Calendar vs. Academic/Summer months
- The number, qualifications and amount of time needed for other personnel
 - Co-investigators
 - Technicians
 - Postdoctoral Fellows
 - Undergraduate & Graduate Students

Calculating "person months":

https://grants.nih.gov/grants/policy/person_months_faqs.htm

Sections A & B: Personnel

SALARY REQUESTS

***** Percent SALARY ≤ Percent EFFORT

- Example:
 - * You devote 9 person-months [75%] effort
 - You can request between 0% to 75% of your salary*

* up to legislated salary cap

Salary Cap

- * Salary Limitation (Section 203) is one of the congressional mandates in the NIH Appropriation
- *Restricts the amount of **direct salary** that can be paid with federal funds under a grant or contract to Executive Level II of the Federal Executive Pay Scale (\$183,300)
- * However, the participants **actual base** salary (even if exceeding the cap) should be used on the budget page.
 - Helps NIH know the current pay scales and justify increases
 - Grants Specialist will adjust to meet the cap at the time of award

http://grants.nih.gov/grants/guide/notice-files/NOT-OD-15-049.html

Personnel (continued)

- No magic numbers regarding the qualifications and/or number of individuals needed for each aim.
- * Be realistic about what each individual can accomplish and the time necessary for the work.
- * Explain any fluctuations in effort levels and/or staffing levels in out years (in the budget justification).

Section C: Is Equipment Needed?

- ❖ Additional expensive equipment (defined as > \$5000) can be requested.
- Equipment should be project specific be sure to include a written justification.
- Most equipment is requested during the first year of the grant.
- If using a modular budget format, extra module(s) may be requested to cover equipment.

Section D: Travel funds

- *Amount is usually small:
 - -\$1,000 2,000 per scientific meeting per individual per year
- *Generally supports travel for presenting the results of the effort
 - 1 2 meetings per year
 - 2 3 personnel

Section E: Participant/Trainee Support Costs

*Unless stated in the FOA, this section should be left blank for NIH applications

Include tuition remission under Section F: Other Direct Costs

Section F: Other Direct Costs

- ***** Estimate the materials and supplies needed for the personnel involved.
 - *Usually* ~\$12,000–15,000/year per FTE
 - Animal intensive studies, studies involving human subjects, or extensive bioinformatics, nanofabrication/foundary expenses tend to be more costly.
 - *In silico* or *in vitro* studies tend to be less costly for supplies.
- Publication costs
- * Equipment maintenance
- Consortium/subcontracts
- Tuition remission
- Shared facility fees

Budget Justification

- ➤ Reviewers and Administrators use this to determine if scope of work matches the request
- > Explain the specific responsibilities for each team member
- Justify unusual/large expenses
- > Show the value of subcontracts/consortia
 - Provide a separate budget request and justification for any subcontract/consortium

How is the Budget used by Reviewers and Program Officials?

- *Budget is <u>not</u> used to assess scientific merit
- *Budget is discussed/reviewed after the scientific merit is assessed and application is scored
- *But reveals the applicant's understanding of what it takes to accomplish the proposed research

Budget Preparation

Ro1 Modular Budget

- 1. Start with an itemized budget (R&R budget component 4.7.1)
- 2. Create out-year budgets
- Divide total budget for all years by number of years
- 4. Request same number of modules each year*
- 5. Consortia total costs are calculated separately and may be rounded to nearest \$1,000

^{*} exception for equipment

Add it all Up - Year 1

	Cal Mon	Req. Salary	Fringe Benefits Req	Funds
A. Senior/Key Person				
PI	2	15,333	4,293	19,626
co-investigator	1	Ο	0	O
B. Other Personnel				
Postdoc Assoc	12	38,976	10,913	49,889
Grad Student	12	20,772	5,454	26,226
Grad Student	12	20,772	5,454	26,226
C. Equipment – Micros		19,000		
D. Travel - (2 meetings)				4,000
E. Participant/Trainee			usua	ally left blank
F. Other Direct Costs				
Materials/Supplies				25,533
Publication Costs		1,500		
Subaward/Consortiu		none		
Tuition Remission		7,000		
G. Total Direct Costs			179,000	

Add it all up

- Calculate the direct costs for the first year.
 - (in the example, Year 1 budget = \$179,000)
- *Calculate the direct costs for subsequent years taking into account salary increases and changes in funds requested for equipment.
 - Year 2 = \$164,800
 - Year 3 = \$169,744
 - Year 4 = \$174,836
 - Year 5 = \$180,081

Determining the Need for a Modular Budget?

- Calculate the total direct costs for all years
 - Total direct costs for 5 years = \$868,461
- Divide total by the number of years requested
 - Average direct costs = \$173,692/yr

- Investigator-initiated Ro1s up to \$250,000/yr must use modular format*
 - * Except applications from foreign (non-U.S.) institutions

Converting Average Direct Costs to the Modular Format

- *Round up to the next module (number divisible by \$25,000)
 - In the example, \$173,692/yr rounds up to \$175,000/yr
- No yearly increases for inflation
- First year may include additional modules for onetime expenses like equipment
 - In the example, add one additional module to year 1 = \$200,000

Ro1 Budget with Consortium Costs

- Prepare an itemized budget for the parent award
- Prepare an itemized budget for consortium/subcontract costs, including:
 - Personnel
 - salary and benefits
 - Travel
 - professional or investigator meeting
 - Other Direct Costs
 - Materials and Supplies

Total Direct Costs = \$38,300

Total Consortium Costs

Consortium Direct Costs = \$38,300

- Consortium F&A
 - consortium institution (at 50%) = \$19,150

Consortium Total Costs = \$57,450

*Remember you may round to the nearest \$1,000

Add it all up

BUI	DGET - R01 with Consortium	Base Salary	Cal. Month	Requested Salary	Fringe Benefits	Funds Requested
Α	Senior/Key Person Pl Assistant Res. Sci.	92,000 58,000	2 6	15,333 29,000	4,293 8,120	,
В	Other Personnel Post Doctoral Associates Graduate Students		12 12	38,976 20,772	10,913 5,816	,
С	Equipment microscope					19,000
D	Travel Travel to 3 meetings					6,000
E	Participant/Trainee Support Costs					usually left blank
F	Other Direct Costs Materials and Supplies Publication Costs Subawards/Consortium/Contractuition remission	ctual Co	sts *			32,000 1,500 57,450 7,000
G	Total Direct Costs		She	ould you r	equest	256,174
			a n	nodular bu	ıdget?	

Ro1 Grant with Consortium Budget

Submit as a modular budget when requesting Direct Costs at or below \$250,000 per year...

... excluding Consortium F&A costs.

Modular Grant with Consortium Budget

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In the example,
Year 1 – Itemized Total DC = $256,124
minus Consortium F&A = $ 19,150
Year 1 – Itemized DC excluding F&A = $236,974
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Year 2 – Itemized DC excluding F&A = $224,513
Year 3 – Itemized DC excluding F&A = $231,249
Year 4 – Itemized DC excluding F&A = $238,186
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Year 5 – Itemized DC excluding F&A = \$245,332

Average Direct Cost per yr (less consortia F&A) = \$235,251

Round up to the next module = \$250,000

Record Modular Budget with Consortium: PHS 398 Modular Budget, Period 1

A. Direct Costs

Funds Requested (\$)

*Direct Cost less Consortium F&A \$250,000

Consortium F&A \$19,150

*Total Direct Costs \$269,150

The total direct costs requested are allowed to exceed the modular maximum (\$250,000) by the amount of F&A associated with the subcontract.

Ro1 Budget Reminders

- *All budget requests to NIH for Ro1 applications use:
 - the <u>modular format</u> when requesting direct costs of \$250,000 or less each year
 - the <u>non-modular format</u> when requesting direct costs greater than \$250,000 in any year or if the application is submitted from a foreign institution
- When including collaborators at different institutions
 - Consortium F&A costs are not factored into the modular direct cost limit

More Money?

- **Applications requesting ≥ \$500,000 DC** in any single year applicant **must** seek permission to submit from Institute staff at least 6 weeks before submission.
- * Multiple Principal Investigator Ro1 is intended for projects that clearly require a "team science" approach. The Multiple PI option should not be used as a means to justify a large budget request.
- * Well-funded investigators should consult with Institute staff regarding policies for support of new research in well-funded laboratories.

Other Considerations

- * Budgets must be consistent with grantee institutional policies and practice
- Request reasonable amounts based on current conditions and need
- Don't request contingencies or uncommitted promotions
- Justify everything, especially the unusual and large ticket items
- Ideally science drives the budget and justification

I Didn't Receive the Amount Requested?

Study section may recommend reductions in amount and time

 Discuss with Program Officer if IRG-recommended reductions can be restored

Funding institute may reduce budget further and limit years of support

- Funding decisions are cannot be appealed
- Discuss with Program Officer if causes hardship
 - Renegotiate specific aims if budget (or time!) reduction is more than 25% of requested

Research Based on the Awarded budget...

***Build a budget for the dollars and years that are indicated in the Notice of Award**

For modular grants, build in any increases in spending over duration of grant

Prioritize research work and get started

To Whom is the Grant Awarded?

The Institution

Who is Responsible for Financial Management of a grant?

- The Institution
- The Principal Investigator
- The Departmental Administrator
- The Department Chair



Pre-Award Costs

- At grantee's own risk and expense
- Up to 90 days prior to the start date of a competing award if costs:
 - Are necessary to conduct the project, <u>and</u>
 - Would be allowable under a potential award without prior approval
- Greater than 90 days requires prior approval
- Costs need to be allowable and carefully managed

Cost Sharing

- Not required for receiving unsolicited NIH awards
- There is mandatory cost sharing for salary in excess of current salary cap
- Be sure you intend to commit to cost sharing when you propose an item at no cost to the government.

Always Read the Notice of Award!

- **Explains the details of the grant award**
 - Drawing down funds constitutes acceptance of terms
- Special Terms and Conditions
- Other Terms of Award
 - Program regulations
 - 42 CFR Part 52 Grants for Research Projects
 - Program and appropriation legislation
 - 45 CFR Part 74 or 92 HHS rules and requirements that govern the administration of grants
 - NIH Grants Policy Statement compendium of several regulatory requirements applicable to grants and cooperative agreements

Award Restrictions

- Only applied to a particular grant for cause
- Will be enumerated on the NoA in Section IV
- Restricted funds must be tracked by grantee to ensure compliance
- Examples:
 - restrict equipment funds pending receipt of current price quote;
 - prohibit human subjects research pending IRB review

Additional Thoughts

- ***Most taxpayers think a \$1M+ award is a lot of money. Spend it wisely.**
- Start-up and staffing delays?
 - OK to carry unspent funds forward for good cause, if justified/explained.
- *Budget problems or questions
 - Consult NIH Program and Grants Staff

Resources

- NIH OER Grants and Funding Information
 - http://grants.nih.gov/grants/about_grants.htm
- ❖ SF424 R&R guides and FAQs
 - http://grants.nih.gov/grants/funding/424/index.htm#inst
 - http://grants.nih.gov/grants/ElectronicReceipt/faq_full.htm
 - http://grants.nih.gov/grants/funding/modular/modular.htm
- PHS 398 instructions (paper submissions only)
 - http://grants.nih.gov/grants/funding/phs398/phs398.html
- ❖ The grantee institution's Sponsored Programs Office
- NIH Program and Grants Management staff
- Other experienced personnel at your institution

R&R Budget (itemized) — Sections A & B

RESEARCH & RELATED BUDGET - SECTION A & B, BUDGET PERIOD 1

	* ORGA	NIZATIONAL DUNS:													
	^ Budge	t Type: Projec	[Subav	ward/Consortium	_									
	Enter na	ame of Organization	: [
	Reset E	ntries * Start	Date:		* End Date:	Bu	idget Pe	riod: 1							
(If the Rese	l Entries button is pre	ssed, ple	ase navig	ate to previous year to	enable the	submiss	ion of the form.)							
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	Prefix	* First Name	Middle	Name	* Last Name	Suffix		* Project Role	Base Salary (\$)				Salary (\$)		* Funds Requested (\$)
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		r Personnel													
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		Total	Number (Other Pe	rsonnel								Total	Other Personnel	
Total Salary, Wages and Fringe Benefits (A+B)															

RESEARCH & RELATED BUDGET - SECTION C, D, & E, BUDGET PERIOD 1

* ORGANIZATIONAL DUNS:	
* Budget Type: Project Subaward/Consortium	
Enter name of Organization:	Sections C – E
Reset Entries * Start Date: * End Date: Budget Period	
(If the Reset Entries button is pressed, please navigate to previous year to enable the submission	of the
C. Equipment Description	
List items and dollar amount for each item exceeding \$5,000	
Equipment item	* Funds Requested (\$)
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11. Total funds requested for all equipment listed in the attached file	
Total Equipment	
Additional Equipment: Add Attac	Delete Attachment View Attachment
D. Travel	Funds Requested (\$)
Domestic Travel Costs (Incl. Canada, Mexico and U.S. Possessions)	
2. Foreign Travel Costs	
Total Travel Cost	
E. Participant/Trainee Support Costs	Funds Requested (\$)
1. Tuition/Fees/Health Insurance	
2. Stipends	
3. Travel	
4. Subsistence	
5. Other	
Number of Participants/Trainees Total Participant/Trainee Support Costs	
<u> </u>	

OMB Number: 4040-0001

* 0	RGANIZATIONAL DUNS:								
* B	sudget Type: Project Subaward/Consortium								
Ent	ter name of Organization:								
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(If the	(If the Reset Entries button is pressed, please navigate to previous year to enable the submission of the								
F. 0	Other Direct Costs	Funds Requested (\$)							
1.	Materials and Supplies								
2.	Publication Costs								
3.	Consultant Services								
4.	ADP/Computer Services								
5.	Subawards/Consortium/Contractual Costs								
6.	Equipment or Facility Rental/User Fees								
7.	Alterations and Renovations								
8.									
9.									
10.									
	Total Other Direct Costs								
	7538 5305 2305								
G.	Direct Costs	Funds Requested (\$)							
	Total Direct Costs (A thru F)								
Н. І	Indirect Cost Indirect Cost Indirect Cost								
	Indirect Cost Type Rate (%) Base (\$)	Funds Requested (\$)							
1.									
2.									
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(Ag	gency Name, POC Name, and POC Phone Number) Total Direct and Indirect Costs Total Direct and Indirect Institutional Costs (G + H)	Funds Requested (\$)							

Sections F – K

Add Attachment Delete Attachment View Attachment

RESEARCH & RELATED BUDGET - Cumulative Budget

	iotais	(3)
Section A, Senior/Key Person		
Section B, Other Personnel		
Total Number Other Personnel		
Total Salary, Wages and Fringe Benefits (A+B)		
Section C, Equipment		
Section D, Travel		
1. Domestic		
2. Foreign		
Section E, Participant/Trainee Support Costs		
1. Tuition/Fees/Health Insurance		
2. Stipends		
3. Travel		
4. Subsistence		
5. Other		
6. Number of Participants/Trainees		
Section F, Other Direct Costs		
1. Materials and Supplies		
2. Publication Costs		
3. Consultant Services		
4. ADP/Computer Services		
5. Subawards/Consortium/Contractual Costs		
6. Equipment or Facility Rental/User Fees		
7. Alterations and Renovations		
8. Other 1		
9. Other 2		
10 . Other 3		
Section G, Direct Costs (A thru F)		
Section H, Indirect Costs		
Section I, Total Direct and Indirect Costs (G + H)		
Section J. Fee		

Cumulative Budget

PHS 398 Modular Budget, Periods 1 and 2

OMB Number: 0925-0001

Budget Period: 1				
Reset Entries Start Date:	End Date:			
A. Direct Costs				* Funds Requested (
	*	Direct Cost le	ess Consortium F&A	
			Consortium F&A	
			* Total Direct Costs	
B. Indirect Costs Indirect Cost Type		Indirect Co Rate (%)	st Indirect Cost Base (\$)	* Funds Requested (\$
1.				
2.				1
2.				
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4.		1		
Cognizant Agency (Agency Name, POC Name and Phone Number)				
			Tatal Indiana Conta	
Indirect Cost Rate Agreement Date			Total Indirect Costs	
C. Total Direct and Indirect Costs (A + B)			Funds Requested (\$)	
o. Total bliest and muliest oosts (A + B)				
Budget Period: 2				
Reset Entries Start Date:	End Date:			
A. Direct Costs			Г	* Funds Requested (
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			Consortium F&A	
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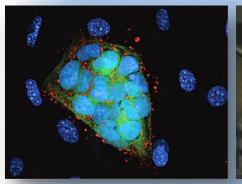
Modular Budget

WE VALUE YOUR INPUT!

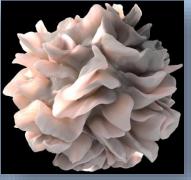
2015 NIH REGIONAL SEMINAR

Session Evaluations: http://surveymonkey.com/s/nihsessions

Overall Evaluations: http://surveymonkey.com/s/nihoverall









NIH - Turning Discovery Into Health