## **READ THIS FIRST**

## How to use this template:

## **Instructions are provided in green text; examples are provided in blue text.**

To maintain consistent formatting, begin text at the designated [start text here] prompt (remove the brackets).

## Click [HERE](https://grants.nih.gov/grants/policy/nihgps/HTML5/section_7/7.9_allowability_of_costs_activities.htm) to check allowability of costs and activities based on NIH Grants Policy Statement.

**DELETE ALL GREEN AND BLUE TEXT BERORE SUBMITTING.**

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# Budget Justification

## Senior/Key Personnel

**[Name], [credentials], *[Role]***, is [position/title] at [institution]. Remove brackets as you fill in information. Include a brief description of the person’s qualifications and experience. Describe their role and responsibilities in the proposed project. State effort in months and state number of years for which salary support is requested (effort is reported in calendar months).

*EXAMPLE:*

**First name Last name, credentials, *Principal Investigator***, is an Assistant Professor in the Department of Pharmacology and Toxicology, College of Medicine, at the University of Arkansas for Medical Sciences (UAMS). Dr. Last name is an experienced investigator in hemodynamics, endothelial cell biology, efferocytosis, and aging-related cardiovascular diseases. They will be responsible for overall project design, analyzing and interpreting data, and writing manuscripts and annual NIH progress reports. They also will be responsible for communicating with collaborators, writing IACUC and biosafety protocols, supervising laboratory staff, and presenting results at national conferences. Dr. Last name will devote 2.4 calendar months (20% effort) to this project; salary support is requested in all years.

**Best Scientist, PhD, *Co-Investigator***, is a Biostatistician in the Department of Biostatistics at UAMS. They will manage and analyze data and present results for this project. Dr. Scientist will devote 0.72 calendar months (6% effort) to the proposed project. Salary support is requested in all 5 years of the proposed project.

## Other Personnel

**[Name], [credentials], *[Role]***, is [position/title] at [institution]. Remove brackets as you fill in information. Include a brief description of the person’s qualifications and experience. Describe their role in the proposed project. State effort in months and state number of years for which salary support is requested (effort is reported in calendar months; learn more [here](https://grants.nih.gov/faqs#/person-months.htm?anchor=50734)).

*EXAMPLE:*

**First name Last name, credentials, *Postdoctoral Fellow***, has extensive experience analyzing cellular and molecular features of myeloma using flow cytometry and single-cell RNA sequencing. Dr. Last name will perform the proposed flow cytometry experiments, generate CAR-T cells, and coordinate with the core facility for single-cell RNA sequencing analysis. They will supervise the laboratory technician for molecular and biochemical experiments. Dr. Last name will interact regularly with Dr. Other both informally in the laboratory daily and formally at weekly laboratory meetings, where he will present his progress. Dr. Last name will devote 3.0 calendar months (25% effort) to the proposed project. Salary support is requested in all 5 years of the proposed project.

**First name Last name, credentials, *Research Associate***, has vast experience in cardiovascular research. They will carry out the experiments about effects of blood-flow patterns on SOX9 biology and contributions of endothelial dysfunction and atherosclerosis. Dr. Last name also will be involved in training new laboratory members for the experiments in partial carotid artery ligation, mounting and cryostat-sectioning arteries, and immunostaining. Dr. Last name will devote 6 calendar months (50% effort) to this study; salary support is requested in all years.

**To Be Named, *Research Technician***, will have the necessary skills in animal handling and/or molecular biology to assist Dr. Last name in performing a number of tasks and experiments as described in the experimental approach. The Research Technician will be trained by both Dr. Other and Dr. Another and will be responsible for helping with animal husbandry, genotyping, harvesting bone tissue, and bone histomorphometry. They will devote 12 calendar months (100% effort) to this project in all years of the proposed project. Salary support is requested.

## Fringe Benefits

[start text here]

Fringe benefits are allowances and services provided by employers to their employees as compensation in addition to regular salaries and wages.

*EXAMPLE:*

Fringe benefits are based on an institutional average of 30% for all personnel and include leave, retirement, medical insurance, and other benefits.

## Equipment

[start text here]

Equipment is defined as an item of property that has an acquisition cost of $5,000 or more and an expected service life of more than 1 year. List each item of equipment separately and justify how each is directly related to your proposed research. Allowable items ordinarily will be limited to research equipment and apparatus not already available for the conduct of the work.

*EXAMPLE:*

**Computer for Testing.** We request $5,500 in year 1 to purchase a computer specifically for administering computer-based testing to research participants and collecting testing results. This study needs a computer dedicated solely to the project so that it is available to collect and maintain data for the research participants at any given time and not restrict our ability to complete the experimental sessions. Moreover, this computer will not be connected to the internet or university servers and must not contain any sensitive data or other information because it will be used by study participants.

## Travel

[start text here]

Clearly state how the travel is directly related to your proposed research. Request funds for domestic travel separately from funds for foreign travel. Domestic travel includes Canada, Mexico, and US possessions. Foreign travel includes any destination outside of the US, Canada, Mexico, or US possessions. Include the destination, number of people traveling, and dates and duration of travel (if known) for each trip. If the dates of travel are not known, specify estimated length of trip (e.g., 3 days).

*EXAMPLE:*

Funds are requested in the amount of $2,500 each year for either Dr. Last name or a co-investigator to attend a national meeting or international meeting each year to present research findings. These funds will be used to cover registration fees, airfare, meals, lodging, and ground transportation.

*EXAMPLE:*

Funds in the amount of $2,000 are requested for Dr. Last name to attend the American Society for Bone and Mineral Research annual meeting in all years of the proposed project.

## Other Direct Costs

## ***Materials and Supplies***

[start text here]

List total funds requested for materials and supplies. Indicate general categories such as glassware, chemicals, animal costs, including an amount for each category. Items that include costs less than $1,000 do not have to be itemized.

*EXAMPLE:*

Funds in the amount of $9,401 are requested in years 1-2 and $3,543 in years 3-5 for supplies, as described below.

* PCR reagents: $983 in year 1, $2,983 in year 2, and $2,125 in years 3-5 to purchase Taq polymerase, master mix, and primers for PCR genotyping of the large number of mice.
* Cell culture supplies: $850/year in years 1-5 to purchase cell culture medium, fetal calf serum, various additives that may be needed for tissue culture, and related plasticware (e.g., cell culture plates).
* General supplies and chemical reagents: $568/year in years 1-5 to purchase all necessary chemical reagents (e.g., ethanol, fixatives, mounting media) for the assays to be performed.
* CMDR Genetic Models Core for Crtap-floxed allele + mice: $5,000 in years 1-2 to generate the Crtap-floxed allele with CRISPR/Cas9 and to screen founder mice to identify correct insertions of LoxP sites at the Crtap locus.

*EXAMPLE:*

Funds are requested in years 1–5 for the following supplies:

* Consumable laboratory supplies: $24,000 per year.
* Biochemical and enzymatic assays: $10,000 per year.
* scRNA-seq: $20,000 per year.
* Flow/CYTOF analysis and cell sorting: $12,000 per year.
* Molecular biology: $45,000 per year.
* Protein analysis (ELISA and western blots): $8,000 per year.
* Immunohistochemistry: $3,000 per year.

*EXAMPLE:*

Funds are requested as follows:

|  |  |
| --- | --- |
| **Supply** | **Cost** |
| Tissue culture supplies, including media and sera | $7,000 |
| Plasticware and general laboratory chemicals | $5,000 |
| Reagents for protein and RNA isolation, ELISA, etc. | $7,000 |
| Antibodies and flow cytometry detection reagents | $5,530 |
| QPCR probes and supplies | $6,000 |
| **TOTAL** | **$30,530** |

## ***Animal Costs***

[start text here]

While included under "Materials and Supplies," it is helpful to include more specific details about your estimated animal costs. Include the number of animals you expect to use, the purchase price for the animals, and your animal facility's per diem care rate (if available).

*EXAMPLE:*

Funds are requested in years 1-5 for the following supplies:

* Purchase of mouse strains from The Jackson Laboratory: $2,000 in year 1 to purchase EIIA-Cre mice and C57B6 breeder mice to expand needed strains.
* Animal housing: $10,000 per year.

*EXAMPLE:*

Funds are requested in the amount of $1,000 per year. We will purchase 126 C57BL6 mice from The Jackson Laboratory ($25/mouse x 126 mice = $3,150; shipping and handling for 2 shipments is approximately $1,850). We will spread the total cost over the 5-year funding period.

*EXAMPLE:*

Funds are requested in the amount of $13,432 in years 1-2 and $16,790 in years 3-5. The UAMS Division of Laboratory Animal Medicine per diem rates for mice are $0.92 for basic housing, max 5 mice/cage. This cost has been calculated as follows: to generate and maintain the mice required for all aims, we estimate that we will require an average of 40 cages per day in years 1-2 and an average of 50 cages per day in years 3-5 for the study and maintenance of 4-6 different strains. Based on a rate of $0.92/cage/day, we calculated 40 cages x $0.92/cage/day x 365 days = $13,432 for years 1-2 and 50 cages x $0.92/cage/day x 365 days = $16,790 for years 3-5.

## ***Publication Costs***

[start text here]

List the total publication funds requested. Request funds for the costs of documenting, preparing, publishing, distributing, promoting, and general handling of the work conducted for the proposed research.

*EXAMPLE:*

Funds in the amount of $2,500 per year are requested for 1-3 publications in years 3-5 in peer-reviewed and well-respected journals such as the *Journal of Bone and Mineral Research*, *Bone*, *Nature Communications*, and *PLoS Genetics*.

*EXAMPLE:*

Funds in the amount of $1,500 per year are requested to cover costs of publishing study findings in peer-reviewed journals.

## ***Consultant Costs***

**[Name], [credentials], *[Role]***, is [position/title] at [institution]. Remove brackets as you fill in information. Identify each consultant, their organization affiliations (other than those involved in consortium/contractual arrangements), the services they will perform, total number of days, travel costs, and the total estimated costs. Include consultant physicians in connection with patient care and persons who are confirmed to serve on external monitoring boards or advisory committees to the project. Describe the services to be performed. A signed letter from the consultant with hours and rate should match that requested in the justification.

*EXAMPLE:*

Funds in the amount of $2,500 are requested to pay a consultant in year 1 of the project for approximately 25 hours at a rate of $100 per hour.

**First name Last name, credentials, *Consultant*,** is a Professor in the Department of Biochemistry and Biophysics at University of North Carolina at Chapel Hill. Dr. Last name's research involves multiomics approach to understand the mechanisms of cancer. Their bioinformatics skill set includes proteomics, epigenetics, genomics, metagenomics, biostatistics and functional analysis. They will be consulted to help evaluate and analyze the data.

***ADP/Computer Services***

[start text here]

These services should be research-specific computer services, such as reserving computing time on super computers or getting specialized software to run stats. Should NOT include standard desktop computers, laptops, or standard tech support.

*EXAMPLE:*

GraphPad Prism license: A total of $312/year is requested in years 1-5 for the yearly renewal of the GraphPad Prism license on 2 computers. This software allows preparation of graphs for data presentation and publication, as well as basic statistical analyses.

## ***Alterations and Renovations***

[start text here]

Can be used for altering a room to make space for a new grant-related piece of equipment. Do NOT include projects exceeding $500,000 (considered "construction" projects), and if these costs exceed $300,00, limitations apply and additional documentation will be necessary. Justify basis for costs, itemize by category. Include total funds requested, and provide square footage if applicable.

Routine maintenance and repair of the organization's physical plant or equipment is treated as a Facilities and Administrative cost. Certain allowable costs of installing equipment, such as temporary removal and replacement of wall sections and door frames to place equipment in its permanent location, or the cost of connecting utility lines, replacing finishes and furnishings, and installing any accessory devices required for the equipment's proper and safe use may be considered either equipment costs or A&R costs, depending on the recipient's accounting system.

*EXAMPLE:*

Funds in the amount of $162,000 are requested for demolition and construction in altering the existing laboratory layout to create space for new equipment.

* Demolition: $25,000
* Construction: $100,000
* Mechanical work: $15,000
* Electrical: $20,000
* Overhead: $2,000

## ***Participant Patient Care Costs***

[start text here]

If inpatient or outpatient costs are requested, provide information for each separately. Also include names of any hospitals/clinics and amounts requested for each; cost breakdown, number of days, number of patients, costs of tests/treatments; justify the costs associated with standard care or research care. Learn more [HERE](https://grants.nih.gov/grants/policy/nihgps/HTML5/section_19/19_research_patient_care_costs.htm?tocpath=19%20Research%20Patient%20Care%20Costs%7C_____0). May be listed in table format.

*EXAMPLE:*

Funds in the amount of $51,250 are requested for participant costs:

* Screening visit payments: $4,000 per year is requested for participant screening visits. We need to conduct laboratory screening visits with approximately 500 potential participants during the course of the study to achieve our targeted enrollment of 100 participants. Participants will be compensated $40 for completing the initial screening interview; $40/participant x 100 participants = $4,000.
* Stress reactivity visit payments: $6,000 per year is requested for stress reactivity session payments. Participants will be compensated $120 for completing both stress reactivity sessions; $120/participant x 50 participants = $6,000.
* Neuroimaging visit payments: $7,000 per year is requested for neuroimaging visit payments. Participants will be compensated $140 for completing this final laboratory session visit; $140/participant x 50 participants = $7,000.
* Timeline follow-up payments: $2,500 per year is requested for the timeline follow-up assessment payments. Participants will be paid $25 at both the 3-month and 6-month timeline follow-up assessments; $25/participant x 2 assessments x 50 participants = $2,500.
* Parent payments: $2,000 per year is requested for parent payments. Parents of consenting participants will be paid $40 for completing a telephone interview on family history information; $40/participant x 50 participants = $2,000.
* Taxi travel to Arkansas Children’s Hospital for MRI scans: $1,000 per year is requested for taxi travel for 50 participants to undergo MRI scans at Arkansas Children’s Hospital, which is located approximately 2 miles from the Psychiatric Research Institute at UAMS.
* MRI costs: $28,750 per year is requested for MRI scans. The cost of each MRI is $575;   
  $575/scan x 50 participants each year = $28,750 per year.

## Tuition

[start text here]

For graduate students, include school's tuition rates.

*EXAMPLE:*

Tuition and fees for 1 graduate student: Tuition for PhD students is $10,006 (in state) for the academic year 2024-2025; required fees are estimated at $2,500. Thus, we have budgeted annual tuition and fees in the amount of $12,507 in year 1, $13,382 in year 2, $14,319 in year 3, $15,321 in year 4, and $16,709 in year 5.

## Human Fetal Tissue from Elective Abortions

[start text here]

If used, explain the costs. Also include a line item on the budget form titled "Human Fetal Tissue Costs."

## Other

[start text here]

Avoid including unallowable costs in your budget. See a list of the most common questionable items [HERE](https://grants.nih.gov/grants/policy/nihgps/HTML5/section_7/7_cost_consideration.htm).

*EXAMPLE:*

License Fees: Funds in the amount of $2,200 are requested per year for licensing fees.

*EXAMPLE:*

Recruitment/Advertising Costs: We request advertising costs for participant recruitment in each year of the proposed project. We have budgeted $750 per month for internet and radio advertisements targeting the Little Rock metropolitan area. Estimated advertising costs are $9,000 per year.

## Subawards/Consortium/Contractual Costs

[start text here]

Each consortium you include must have an independent budget form filled out. Consortiums should each provide a budget justification following their detailed budget. The justification should be separate from the primary recipient's justification and address just those items that pertain to the consortium.

*EXAMPLE:*

A subaward will be made to [institution] in the amount of $250,000 to assist with CRISPR analysis. See subaward budget for additional details.

## Facilities and Administrative Costs

[start text here]

These costs are determined by applying your organization's negotiated F&A (Facilities and Administrative) rate to your direct cost base. Most educational, hospital, or nonprofit organizations have negotiated their rates with other Federal agencies.

*EXAMPLE:*

In accordance with the institution's federally negotiated rates for on-campus organized research activities, indirect costs are calculated at 53%. Facilities and administrative rates are predetermined and are applied to Modified Total Direct Costs consisting of all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first $25,000 of each subaward. Modified Total Direct Costs exclude equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs, and the portion of each subaward in excess of $25,000.