Budget Building Blocks for Investigators

>> Mike Sesma: Hi. I'm Mike Sesma. I'm the Program Officer for National Institute of General Medical Sciences with the National Institutes of Health.

>> Gabrial Hidalgo: Hello. My name is Gabrial Hidalgo. I am the Team Lead at the Grants Management branch at the National Institute of Dental and Craniofacial Research.

>> Mike Sesma: So we're here today to talk about budget building blocks for investigators, just like the slide says. This is for a new investigator that's putting together their first grant application and needs some more information and guidance about how to put together the budget. So these are the things we're going to cover today: budget basics, first getting started with types of budgets we use here, the budget components, other considerations related to the budget, award policy issues. And then at the end, we also have preparing a budget, a case study, after the main presentation that you can go through yourself. So getting started, I think it's important to remember what the NIH cost principles are. That means, what do you do with the money that NIH awards to you in your grant? So costs are charged to your award. They must be allowable costs, and they must be reasonable and necessary to conduct the grant research. They must be allocable, however you pronounce that word, incurred solely to advance the work on the grant. They must be consistently applied. They must conform to NIH terms and conditions. Now your institution may have some other policies that you'll have to comply to, but it's most important that you pay attention to what the grant award says. So your tips for getting started, the applications are submitted to the NIH. They must be in response to a Funding Opportunity Announcement. You need to carefully read the FOA, the Funding Opportunity Announcement, because that defines the period of support that the grant mechanism is eligible for. It might provide some limits on the support that you can request. For example, some, $100,000 total cost or 100,000 direct costs, those are two different numbers, and the amount of money that you can actually spend on your research is related to those two categories. The type of budget submission, whether it's a modular or a detailed budget, and whether or not you need prior approval to submit. And then there's a case that you might need prior approval for larger research projects. In other words, a grant application that exceeds $500,000 in direct costs in any one year, actually you have to have permission from an NIH institute to submit that application. And then the most important thing, whenever you have questions about the application process, you need to contact program staff and they're listed in the funding opportunities. You need to know what your limits are. Those limits are ... The FOA may have overall funding limits or spending caps or expense limits. Some expenses are unallowable, for example, lobbying and entertainment. Imagine that. And the Related Notices section of the FOA will provide updates and clarification about that. The most important thing about your budget is you need to identify what's necessary and reasonable. You need to provide a clear rationale for your requested budget, and so we're going to provide you with some pitfalls to avoid in constructing your budget and including it in your application. It's probably not a good idea to underestimate the costs of the proposed work. Larger requests for new equipment may suggest to reviewers or to program staff that the environment that you're working in is not sufficient or adequate to do the work. And then finally the lack of a rationale for grant-supported personnel is going to be a problem because it's not clear what role they have in the budget. So the other important thing to remember is that reviewers will review your budget, but they won't comment on the budget during the review of the scientific merit of your application. They won't consider it until after they have scored the application. So you can find more information in the section on the NIH web page on Grant Application Budget Basics.

>> Gabrial Hidalgo: Now we're going to be talking about the types of budgets. What are the different types of budgets to request in a grant application? We have the detailed and modular budgets. There are two types of budgets. One is the modular budget as you can see in this slide. The other one is the categorical budget, also known as the detailed. The difference between these two types of budgets is based on the total direct costs required, the activity code, and the Funding Opportunity Announcement, or FOA. The modular budget, also known as the PHS 398 because of the form that the applicant needs to use, is usually used in RPG applications, such as the RO1, RO3s or R21s. The detailed budget, also known as categorical or itemized budget, will use the SF424 R&R Budget Form. This is usually used in fellowship applications, career development award applications, institutional training applications, some other research program grants, RPGs, and for multi-project applications, such as center grants or cooperative agreements. If the budget format is detailed in the application and the proposal includes a consortium agreement or a subaward, this component would also necessitate a detailed budget. So now what is a consortium agreement? It is an agreement whereby programmatic or scientific work of the proposal is performed in one or more organizations outside or separate from the prime applicant. Thus, they are separate legal entities. The award is made to the prime recipient where the programmatic, administrative and fiscal responsibility would weigh on it. If the multiple-PI model is used, all program directors and principal investigators are responsible for the programmatic aspect of the proposal. However, the prime institution of the contact, PD/PI, would be the one responsible for the administrative and fiscal aspects of the proposal. The prime recipient cannot be a mere conduit of funds to other parties, which is why the prime recipient is responsible for all matters concerning the grant application. Going back now to modular budgets, they are used for grant applications with annual direct costs equal or less than $250,000 in direct costs. Each module equals $25,000. The applicant is not required to submit a detailed breakdown of the budget costs. However, it can be asked by the NIH, which is why it is always advisable for the principal investigator to create a detailed budget for each year of support requested. Total itemized direct costs can be rounded to the nearest $25,000 increment. However, future-year escalations are not allowed. Additionally, consortium direct costs are to be included in the total direct costs being requested. This is a modular budget flow chart that you might want to use in case you have questions about whether or not you need to include in your application a modular budget. So that is, you will ask yourself in your application if the total direct costs are equal or less than $250,000 per year. If it's yes, then are you applying to an RO1, RO3, R15, R21 and R34 grants, which are RPG grants. Then if it says yes, if the application organization is based in the United States, that is, if it's a domestic institution, if yes, means that you can use a modular budget. Always check your Funding Opportunity Announcement however. Now talking about the modular budget justification, what to include in the budget justification. For instance, a list of all personnel involved working on the proposal must be included. You need to include the name, role and the level of effort, preferably in person months. If there is any consortium or subaward, you need to also include that in the justification as well as any other narrative justification needed on the application, such as differences in the module numbers requested annually, or a difference in the base for indirect cost calculation, such as equipment costs or tuition costs. Again, the NIH may request a detailed budget if there are any particular issues needing to be addressed. Thus, it's always advisable to start with a detailed breakdown budget for the applicant's records. More information about modular budgets can be found in the NIH web page. All right. So now we're going to be talking about budget components. Let's start with costs, which is an NIH prime. The different types of costs that we have in the budget request. So we have direct costs, which are directly attributable to the project, and they should be allowable by NIH and federal policy. You can include in this direct costs salaries with fringe benefits, student tuition costs as well as consultant costs, equipment, supplies, materials, travel, publication, et cetera. Then, the modified total direct costs, or MTDC, it is basically the base that is used to calculate the indirect costs, which is the next type of cost that is going to be included in the budget request. Indirect costs, or facilities and administrative costs, or overhead, it's what's shared by all the cost centers. They are based on the specific rate negotiated by the institution with the federal government. Then the total costs are equal to the allowable costs plus the applicable F&A or indirect costs and also a fee for SBIR and STTR budget requests. The fee in this small business type of request is a reasonable profit factor available for for-profit organizations, which is consistent with the normal profit margin. Per policy, it cannot exceed seven percent of the total costs. You can see or you can read more information about the different types of costs that are included in the budget request in the NIH page listed here. Section A and B personnel, you will need to include the effort of each personnel included in the grant application, what is the amount of time or effort committed to the project by the PI or PIs if it's a multiple PI application and also other personnel included in the application. You need to keep in mind the difference between calendar and academic summer months. More information about person months and the effort can be found in this web page listed in this slide. Listed also here is a note about including the number, the qualifications and the amount of time needed for other personnel, such as co-investigators, technicians, postdocs and undergrad and graduate students. More information about Sections A and B personnel and salary requests. The percent salary cannot exceed the percent effort being provided in the application. For example, if you devote 9 person months to the proposal, you can request between zero and 75 percent of your salary, which will equal the 9 person months being applied, effort being applied to the actual proposal. Again, this is up to the legislated salary cap in that specific fiscal year. Personnel, more information about personnel. Each individual listed in the budget should have a specific role on the project, and this role needs to be included in the budget justification. You need to be realistic about what each individual can accomplish and what is the time that is necessary for the work to be performed. There is no magic algorithm or magic formula regarding the qualifications and/or number of individuals needed for each aim. Again, needs to be allocable to the project itself. It needs to be allowable, and it needs to be necessary for this project. Also in the budget justification, you will need to explain any fluctuations in effort levels between years. Talking about the salary cap. The current salary cap for fiscal year '20 is listed here under this notice. It's one of the congressional mandates in the NIH appropriation. It restricts the amount of direct salary that can be paid with federal funds under a grant or contract under a federal grant. It restricts it to the Executive Level II, which currently it's set at $197,300. However, the participants' actual base salary should be used on the budget page. So that is, if your base salary is higher than the Executive Level II salary in the federal executive pay scale on that particular fiscal year, you can request up to that. However, it will be capped if/when the proposal is awarded. Section C, equipment. A piece of equipment is defined as having an acquisition cost of over $5,000 and a service life of over 1 year. Otherwise, it should be listed under the materials and supplies category. It is excluded from the indirect cost base, or F&A base. Some other considerations for equipment, most equipment is usually requested in the first year of the grant unless it's justified in the budget-justification section. For a modular budget, an extra module can be requested to cover equipment costs. Again, for anything that is being requested, justification is required, especially if similar equipment is already available at the institution. Also considering submitting a price quote on the application. Part of the just-in-time information that the grants management specialist review in your application will include a price quote or different price quotes for the piece or pieces of equipment you are requesting. Next section on travel. On the grant application, you can generally request support for travel to present the results of the grant, can be between one or two meetings per year, and it can cover the cost for travel for two or three personnel. Requests are usually small, and it is not something that is written in policy, but it's usually is between $1,000 and $2,000 per meeting unless it's listed on the Funding Opportunity Announcement as a limit to request. Travel for data collection, to access resources or unique instrumentation or tools may be also requested, and that needs to be included in your budget justification. Next section on participant/trainee support costs, or Section E. Unless it's stated in the Funding Opportunity Announcement, this section should be left blank for most of the NIH applications. Tuition requests should be included on Section F, or Other Direct Costs. Other direct costs of Section F where you will list your estimated materials and supply costs needed for the personnel involved in that application. Usually and depending on the type of research you are proposing, it's between $12,000 and $15,000 per year, per FTEs. Any animal-intensive studies, studies involving human-subject research or extensive bioinformatic or nanofabrication/foundry expenses tend to be more costly, and of course you need to include that on your budget justification. Publication costs, equipment maintenance, tuition, shared facility fees and consortium or subcontract costs need to also be included under other direct costs for Section F.

>> Mike Sesma: So now that you know those budget categories, it's important to know why the budget justification is important because the details of those categories are not actually divided in the modular budget, only in the detailed budget. So how do we use the budget justification in those cases? Well, the reviewers and the administrator, the program officer and grant specialist use this to determine if the scope of the work matches the request made in the budget. You need to explain the specific responsibilities of each member of your research team or people involved in the project. You need to justify unusual or large expenses, whether it's for equipment or supplies and personnel. You also need to show the value of subcontracts or consortium. In fact, for subcontract or consortia, you'll need to prepare a separate budget request and justification for those elements. It's important to remember that significant over or underestimation of budget requests of your budget suggest often to the reviewer a lack of the investigative understanding of the scope of the work the proposal would do. Remember that the reviewers are investigators just like you, and they probably have more experience about costs of research, but that's the information and experience that they're using to evaluate your budget request. Now other considerations. How do we do that? Budget considerations are administrative. The budget is not used by reviewers to assess the scientific merit. Remember that I told you that the budget is reviewed and discussed after the scientific merit of the project is scored. But the reviewers use every part of your application to make an assessment about the merit of what your proposal will do. The budget presentation and justification reveals to the reviewers what your understanding of what it takes to accomplish the proposed research. So they know what things cost. They know what people cost. They know what supplies and materials cost. They know what equipment costs. Don't sell yourself short and try and submit a budget with a lower cost because you think the reviewers will like it better, and don't overestimate it because the reviewers will know you're trying to pad the budget as well. Reviewers' recommendations on the budget, the study section of recommendation on the budget are usually followed by program staff. So a panel may recommend the budget reduced by a module or two based on what you proposed to do and the budget you've requested. They'll also let you know if they think that the budget is insufficient. So more money, more money, it's always important to have the money to do the research. Applications requesting a budget exceeding $500,000 direct costs in any single year, the applicant must seek permission from the institute to submit the application at least 6 weeks before the submission. A 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 larger budget. It needs to be justified by the scope and scale of the science that's proposed. And then finally well-funded investigators should consult with program staff regarding policies at the particular institute where the application is being submitted regarding the support of new research projects in laboratories that are already well funded. What if you didn't receive your budget request? I already told you, the study section may recommend reductions in the amount and time of the budget. If that happens, then that's one of the things you're going to discuss with the program officer if it looks like you're going to be funded and also after the review. The funding institute may have cost-saving practices in place as well that will reduce the budget further to limit both the years of support and the total amount that's awarded. It's important to remember that the funding strategy for most of the NIH institutes and centers include an administrative cut. Funding decisions can not be appealed. You need to discuss with your program officer if the reduction of the budget is going to cause a problem in you accomplishing your goals and objectives or aims of the project. So a grantee seeking to revise project aims because of reductions in time or budget may do so only with prior approval from the program officer. So it may be possible to rebudget the budget that you've been awarded, but you need to prioritize the ... Once you have an award, you need to prioritize it to figure out how you're going to get the work done. The important considerations are that ideally the science drives the budget, and the justification explains what that budget is going to be used for. The budgets must be consistent with grantee institutional policies and practices. You need to request reasonable amounts based on current conditions and the means you have in your laboratory. Don't request contingencies or uncommitted promotions. And then justify everything clearly and thoroughly, especially unusually large ticket items and year-to-year variations. Remember, the reviewers have seen it all. So common errors in the budget. You might submit a budget that exceeds the FOA budget amount. You might use a modular budget format when a detailed budget is needed or required. You might have a problem submitting a budget where you've exceeded $500,000 in direct costs, and you didn't seek permission prior to submission to submit that application. Your modular budget request did not include a request for the F&A for consortia. The costs in your budget may differ from the budget justification. Your salaries may exceed an NIH salary cap. The calendar month efforts did not equate to the requested salary, or you miscalculate, or someone has miscalculated the F&A. And then finally, NIH staff, both the grant specialists and the program officer, are here to help you, so often you can clarify any questions about how to put a budget together as you develop your applications simply by contacting us by e-mail.

>> Gabrial Hidalgo: This last section of the presentation deals with award policy issues. First, a difference in what is allowable and not allowable in budget requests. Here you can find a list of budget costs and the allowability per NIH policy. You can find more examples in the NIH Grants Policy Statement. I will not go through all of them as you will have this on your presentation, but I wanted to quickly highlight just a couple. As we have taught before in this presentation, the salary cap is usually updated every year. Consult the NIH Guide to see the current cap. Also, listed on the unallowable costs category, alcohol, although listed as an unallowable cost, it is something that might depend as research can be done in alcoholism, for instance, but again, any specifics will be listed on the Funding Opportunity Announcement. All costs need to be justified. Always contact the NIH staff. So just a reminder that the grant is awarded to the institution, but who is responsible for the award? You have the institution. You have the Authorized Organizational Representative, or AOR, or sponsor program's office, the principal investigator, the departmental administrator and the department chair. However, the official communication should be between the business office or the Authorized Organization Representative from your institution and the grants management office of the institute or center. A reminder of what preaward costs are. Preaward costs are those costs incurred prior to the beginning of the date of the project period, or the initial budget period of a competitive segment. The grantee does not necessitate prior approval if the costs to be charged incur up to 90 days prior to the project start date. Spending on these preaward costs are at the grantee's own risk and expense. If these costs happen beyond this 90-day window, a prior approval request must be submitted. The request needs to be justified, and the costs must be necessary for the project and allowed per policy. There are certain mechanisms not allowing preaward costs, such as fellowships and training grants. The Notice of Award. Besides signifying that the federal government is committing funds for the proposed project, the Notice of Award is a very important document. I recommend you all read carefully the Notice of Award as it explains all the details concerning the grant award, includes the budget awarded and any other special terms and conditions, such as restrictions. The funds can be restricted, and you need to adhere to those restrictions and obtain the needed documentation to remove such restrictions. Follow the funding regulations and policies. If you have any questions on your Notice of Award, please contact the grants management specialist and the program officer also listed on your Notice of Award. Now talking award restrictions. Special restrictions on your Notice of Award will be listed on Section IV of the Notice of Award. All restrictions will include information about what is needed in order to lift such restrictions. Keep in mind that all restricted funds must be tracked by the granting institution. Examples of restrictions may include restricting equipment costs pending the necessary quotes or prohibiting grant costs for human subject research pending IRB review or very rare animal research pending IACUC review. If there are any questions about any restriction, contact the NIH, and always read your Notice of Award. Other terms of award included in the Notice of Award are listed in this slide right here. They may not be listed in the Notice of Award in their entirety but are included by citing them. The grantee institution needs to be knowledgeable on all of these. The research is based on the award budget. You need to build a budget for the dollars and year that are indicated in the Notice of Award. For modular grant, build any increases in spending over the duration of the grant award. Prioritize research work and get started. If there are any changes, please contact your Grants Management specialist and program staff before you implement these changes. If there are any delays or any unspent funds that need to be carried forward in the years after, please justify it and explain them on your RPPR or your annual report. Some additional thoughts. Keep in mind that the NIH program and grants management staff are stewards of the taxpayer funds, and most taxpayers think that $1 million in an award is a lot of money, so spend it wisely. Contact the NIH staff with any questions and start early. It is better to err on the side of caution. Listed in the slides are some resources, especially important are your folks at your institution's sponsored programs office. They need to be your best friends and of course your NIH Grants Management and your program staff. We're always here to help you. We both thank you for your attention, and we will open it up for questions and discussions. If you have any questions regarding this presentation or general questions regarding the items discussed, please do not hesitate to contact us using the information listed here.

>> Mike Sesma: Thank you very much.