

# Performance Audit of Incurred Costs – Emory University

NATIONAL SCIENCE FOUNDATION  
OFFICE OF INSPECTOR GENERAL

May 13, 2021  
OIG 21-1-008





## At a Glance

### Performance Audit of Incurred Costs – Emory University

Report No. OIG 21-1-008

May 13, 2021

#### AUDIT OBJECTIVE

The objective of this audit was to determine whether costs Emory claimed on NSF awards were allowable, allocable, reasonable, and in conformity with NSF award terms and conditions and applicable Federal financial assistance requirements. The audit scope included approximately \$12 million of costs Emory claimed from NSF on 36 selected awards as of July 25, 2019.

#### AUDIT RESULTS

NSF conducted Desk Reviews in 2009 and 2015, which revealed that Emory University had not fully developed policies and procedures related to the review of expenditure requests for compliance with Office of Management and Budget cost principles. Since then, Emory has taken steps to strengthen its oversight process, and was revising and updating its procedures to improve monitoring of grant expenditures during our audit. However, Emory did not provide sufficient guidance and oversight to ensure all costs claimed are allowable, reasonable, or necessary to NSF awards. We questioned \$89,884 of unallowable and unsupported expenses claimed on seven awards.

#### RECOMMENDATIONS

The report includes eight recommendations for NSF to resolve the \$89,884 in questioned costs and to ensure Emory strengthens its administrative and management controls.

#### AWARDEE RESPONSE

In its response to the report, Emory did not contest or dispute the facts of the report findings and stated it is prepared to repay the questioned costs. Emory also described steps it plans to take to strengthen its administrative and management procedures in response to our findings. Emory's response is attached in its entirety in Appendix A.

**FOR FURTHER INFORMATION, CONTACT US AT [OIGPUBLICAFFAIRS@NSF.GOV](mailto:OIGPUBLICAFFAIRS@NSF.GOV).**



**National Science Foundation • Office of Inspector General**

2415 Eisenhower Avenue, Alexandria, Virginia 22314

**MEMORANDUM**

**DATE:** May 13, 2021

**TO:** Dale Bell  
Director  
Division of Institution and Award Support

Jamie French  
Director  
Division of Grants and Agreements  
*Elizabeth Kearns*  
for Mark Bell  
Assistant Inspector General  
Office of Audits

**FROM:**

**SUBJECT:** Final Report No. 21-1-008, *Performance Audit of Incurred Costs – Emory University*

Attached is the final report for the audit of costs charged by Emory University (Emory) to its sponsored agreements with the National Science Foundation. This report includes eight recommendations. We have included Emory's response to the report as an appendix.

Please coordinate with our office during the 6-month resolution period, as specified by Office of Management and Budget Circular A-50, to develop a mutually agreeable resolution of the audit findings. The findings should not be closed until NSF determines that all recommendations have been adequately addressed and the proposed corrective actions have been satisfactorily implemented.

We appreciate the courtesies and assistance that was extended during this audit. If you have questions, please contact Jennifer Miller, Audit Director, at 703.292.7100 or [oigpublicaffairs@nsf.gov](mailto:oigpublicaffairs@nsf.gov).

cc:

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# Abbreviations

<b>Emory</b>	Emory University
<b>FORT</b>	Financial Outlook Reporting Tool
<b>MTDC</b>	Modified Total Direct Costs
<b>OMB</b>	Office of Management and Budget
<b>PI</b>	Principal Investigator
<b>PSC</b>	Participant Support Costs
<b>RAS</b>	Research Administrative Services
<b>REU</b>	Research Experience for Undergraduates
<b>SOP</b>	Standard Operating Procedures



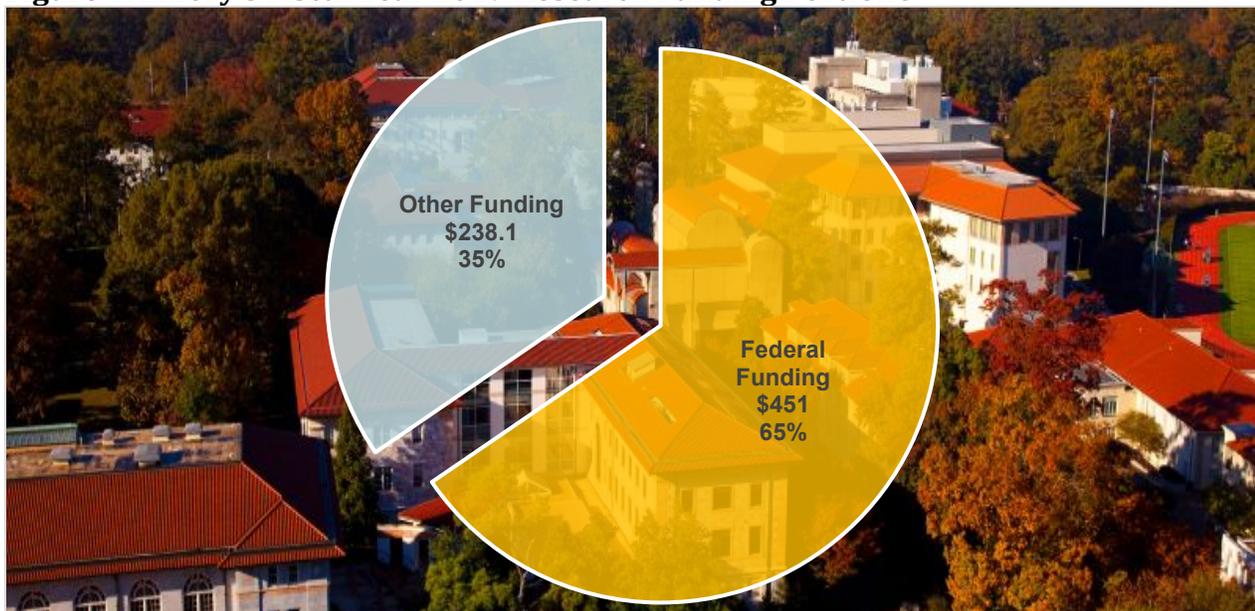
## Background

The National Science Foundation is an independent Federal agency created “to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense” (Pub. L. No. 81-507). NSF funds research and education in science and engineering by awarding grants and contracts to educational and research institutions in all parts of the United States.

Our office provides independent oversight of NSF’s programs and operations. This oversight includes audits of NSF awardees, which must follow Federal and NSF award regulations and guidance in administering NSF awards.

Emory University (Emory) is a private, not-for-profit institution, located in Atlanta, Georgia. The Federal Government is Emory’s largest source of research funding, and in fiscal year 2019, \$451 million (65 percent) of Emory’s total \$689.1 million in research funding came from the Federal Government, including NSF.

**Figure 1. Emory’s Fiscal Year 2019 Research Funding Portfolio**



Source: Funding information was reported on Emory’s website. Aerial photo of Emory campus used with permission from Emory.

### NSF Desk Reviews at Emory University

NSF conducts desk reviews to assess the extent that an awardee maintains a control environment within which awards are likely to be administered in compliance with Federal financial and administrative regulations and NSF agreement provisions. During a desk review, NSF examines award-related general management practices, evaluates the organization’s accounting and financial systems, and reconciles accounting records to costs charged to a selected NSF award.



Desk reviews inform future NSF monitoring efforts, identify administration or compliance issues, and highlight the need for business assistance. The process also verifies that NSF's recipient institutions are using sound business and administrative practices to achieve the objectives of their grant-funded projects.

In June 2015, NSF completed a desk review at Emory to follow up on issues from a 2009 desk review. NSF found that Emory had not fully developed policies and procedures related to the review of expenditure requests for compliance with Office of Management and Budget (OMB) cost principles. Specifically:

- Emory did not have written policies and procedures for the individual(s) or role(s) responsible for reviewing expenditure requests for compliance with OMB cost principles.
- Emory had not documented policies and procedures tailored to meet the needs of Emory personnel who are responsible for determining the reasonableness, allocability, and allowability of costs charged to federally funded awards, and continued to refer employees to 2 CFR 220 – *Cost Principles for Educational Institutions*.

After NSF's 2015 desk review, Emory implemented Research Administrative Services (RAS) units across the University to provide research administration support services to Principal Investigators (PIs), departments, and the University. Although the primary responsibility for award monitoring and oversight rests with the PI, RAS staff work with PIs, departments/units, schools, and central research offices to promote compliance with institutional and sponsor policies.

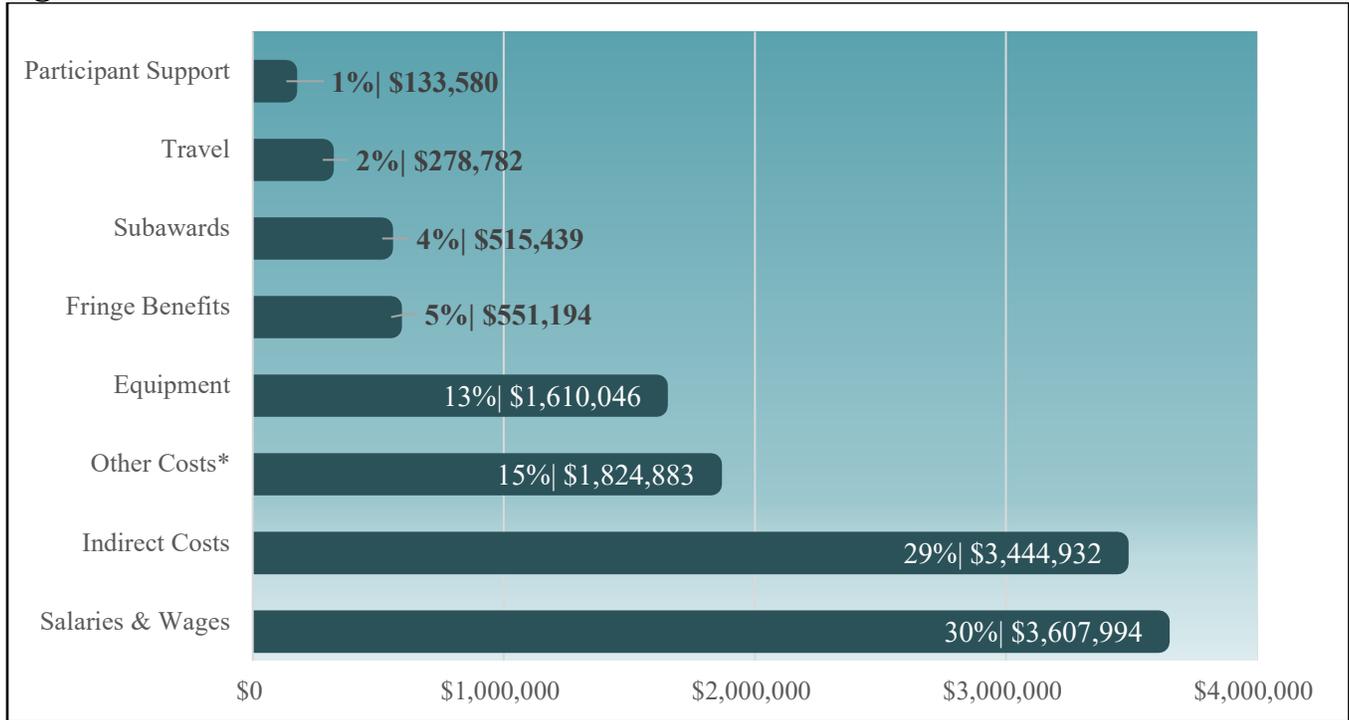
RAS's Standard Operating Procedures (SOP) for reconciling expenditures on sponsored projects direct RAS staff, in coordination with the PI, to identify unallowable, inappropriate, erroneous, or inaccurate transactions. RAS is revising its SOPs to implement its Financial Outlook Reporting Tool (FORT), which is a budget-based tool that provides a snapshot of current financial information, including budgeted amounts and actual expenses by expense type, to help streamline award monitoring.

### **Audit Scope**

We selected 36 NSF awards with a total of approximately \$12 million in costs that Emory claimed as of July 25, 2019. Costs claimed refer to expenditures that Emory filed with NSF for cost reimbursement on payment requests submitted to NSF. See Figure 2 for a summary of these costs by expense type. We judgmentally selected 40 transactions, totaling \$316,283 (see Table 1), and evaluated supporting documentation to determine if costs claimed on NSF awards were allowable, allocable, reasonable, and in conformity with NSF award terms and conditions and applicable Federal financial assistance requirements (refer to Appendix B for more information about our objective, scope, and methodology).



**Figure 2. Costs Claimed on Selected NSF Awards**



Source: OIG-developed graphic illustrating total costs by expense type using financial information provided by Emory University to support costs incurred on NSF awards selected for audit.

\*Other Costs include Materials & Supplies, Publication Costs, Consultant Services, and Other Direct Costs.

**Table 1. Summary of Selected Transactions**

Emory Expense Account Description	Transaction Count	Expense Amount	Applied Indirect Costs
Equipment	3	\$64,417	-
Salary & Wages	10	\$43,964	24,610
Materials and Supplies	8	\$41,857	23,440
Other Costs	8	\$40,351	4,258
Consultant Services	2	\$26,657	14,928
Travel	8	\$19,738	11,053
Participant Support	1	\$1,000	-
<b>Subtotal</b>	<b>40</b>	<b>\$237,983</b>	<b>\$78,289</b>
<b>Grand Total</b>	<b>40</b>	<b>\$316,273</b>	

Source: OIG-developed summary of transaction selections. Unless otherwise noted, all amounts in this report are rounded to the nearest dollar.

\*Some Participant Support Costs, Materials & Supplies, and Equipment costs were miscoded, and Emory applied indirect cost to some miscoded participant support and equipment costs (See Finding 3).



## Results of Audit

Emory claimed \$89,884 of unallowable and unsupported costs (\$3,110 of unsupported costs and \$86,774 of unallowable costs) on seven NSF awards. See Table 2 for a summary by finding area and Appendix C for a summary by award.

**Table 2. Summary of Questioned Costs by Finding Area**

Finding Description	Questioned Costs		Total
	Unsupported	Unallowable	
Grant Transfer Resulted in Unreasonable Equipment Expense		\$54,419	\$54,419
Expenses Not Appropriately Allocated to NSF Awards	-	\$21,057	\$21,057
Inappropriate Allocation of Indirect Cost	-	\$11,298	\$11,298
Unsupported Supplemental Pay	\$3,110	-	\$3,110
<b>Grand Total</b>	<b>\$3,110</b>	<b>\$86,774</b>	<b>\$89,884</b>

Source: OIG-developed summary of questioned costs by finding area.

Emory was revising and updating its procedures to improve its process for monitoring expenditures on federally sponsored awards during our audit. We made eight recommendations to Emory to continue efforts to strengthen its administrative and management procedures for monitoring Federal funds and to return sustained questioned costs to NSF.

### Finding 1: Grant Transfer Resulted in Unreasonable Equipment Expense

Emory purchased \$54,419 in equipment needed for an NSF award originally awarded to the University of Utah, anticipating that NSF would approve the transfer of the award to Emory and then reimburse Emory for these costs. However, Emory did not provide accurate and complete information to NSF to allow NSF to make an informed decision whether to approve the transfer.

#### Emory Purchased Equipment Needed for NSF Award Prior to Requesting a Transfer

In November 2017, NSF approved a PI's request to transfer an award originally issued to the University of Utah to Emory. The original proposal indicated that the University of Utah had the equipment needed to perform the award, including a specialized piece of equipment that was critical to the project: a fluorescence plate reader. However, the PI found that this key piece of equipment could not be transferred from the University of Utah to Emory and then learned that Emory did not have a plate reader that would allow the PI to continue grant work at Emory.

The PI began employment at Emory University in August 2017, several months before submitting a transfer request to NSF. Prior to the PI's arrival, Emory had requested a quote from a vendor for the fluorescent plate reader. After the PI's arrival, but before Emory submitted the transfer



request to NSF, Emory purchased the equipment using University funds. Then, after NSF approved the transfer of the award, Emory charged the equipment cost to the NSF award.

### Emory Did Not Notify NSF of Equipment Needs Due to Administrative Oversight

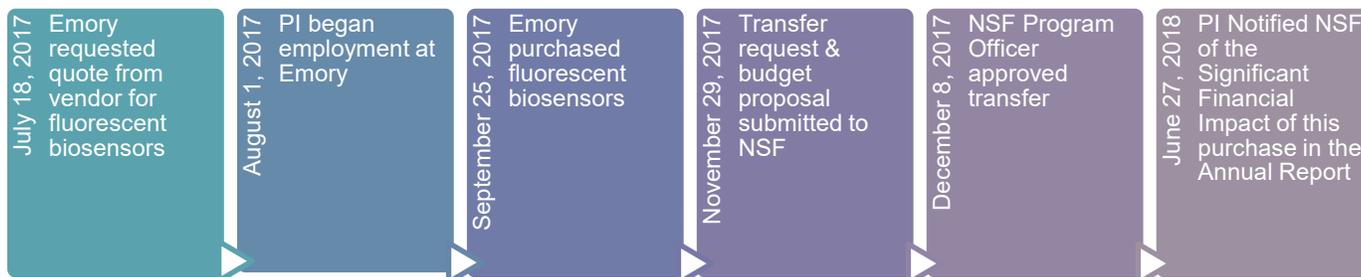
The PI did not notify NSF, upon beginning employment at Emory, that Emory did not have the necessary equipment to conduct the grant project. Additionally, Emory did not notify NSF that Emory had purchased the equipment, anticipating that NSF would approve the transfer and that it could use grant funds to cover the cost. In addition, Emory did not disclose the need for the \$54,419 of equipment on the budget justification submitted with the transfer request. The PI said the equipment was not included in the transfer proposal budget due to an administrative oversight. This indicates that Emory did not have sufficient controls in place to identify a significant administrative error on the budget proposal it certified and submitted to NSF along with the transfer request.<sup>1</sup>

Per NSF’s *Proposal and Award Policies and Procedures Guide*,<sup>2</sup> NSF relies on information in the proposal to assess the adequacy of the resources available to perform the effort when approving proposals and expects that the resources identified will be provided, or made available, should the proposal be funded. Since the plate reader was listed in the original University of Utah proposal, and Emory’s transfer proposal did not reflect any equipment costs, the NSF program officer did not have complete and accurate information when deciding whether to approve the request to transfer the grant from the University of Utah.

### Equipment Purchase Had a Significant Impact on the NSF Award Expenditures

The PI later acknowledged that this purchase had a significant impact on the grant expenditures and disclosed this to NSF in the June 2018 annual report. According to the report, “... we were not able to move our plate reader to Emory from the University of Utah. Thus, we used \$54,419 of grant funds to purchase a new ... fluorescence plate reader ...” As illustrated in Figure 3, by this time, NSF had already approved the transfer.

**Figure 3. Timeline of Specialized Equipment Purchase and Grant Transfer**



Source: OIG-developed timeline from documents Emory provided, including vendor quote and invoice for equipment purchase, and from documents Emory provided to NSF, including PI transfer request, budget proposal, and annual reports.

<sup>1</sup> Per Chapter II.C.1.d of NSF’s *Proposal and Award Policies and Procedures Guide* (NSF-17-1), the Authorized Organizational Representative (AOR) or Individual Proposer must complete certifications regarding the accuracy and completeness of statements contained in the proposal when submitting a proposal via FastLane.

<sup>2</sup> Per Chapter II.C.2.i of NSF-17-1 “Facilities, Equipment, and Other Resources”



Emory used funds budgeted for other expenses, such as salaries and wages, to fund the equipment purchase. The \$54,419 equipment purchase made up 21 percent of the \$258,857 cumulative budget transferred to Emory. Although Emory had the discretion to rebudget grant funding to meet project needs, its lack of transparency in the grant transfer request did not give NSF the opportunity to assess whether transferring the award from the University of Utah to Emory was in the best interest of the grant or whether it would be detrimental to the grant.

## Conclusion

It was not reasonable<sup>3</sup> for Emory to charge the NSF award for equipment purchased in response to a potential transfer from another university without first notifying NSF of the significant impact the transfer would have on the award expenditures. Specifically, Emory did not have adequate controls to ensure it submitted an accurate transfer proposal to NSF, which led to a lack of transparency in the request. We question the \$54,419 in unreasonable equipment expenses that were not properly disclosed on the proposal Emory certified as complete and accurate when it was submitted to NSF.

Emory told us that, at the time this occurred, department officials — who likely did not have sufficient knowledge and training in research administration — handled the pre-award process. With the implementation of RAS, Emory said that RAS officials, who are specifically trained in research administration, are now included in the proposal preparation process and Emory expects this change to prevent this type of situation from occurring again.

## Recommendations

We recommend that NSF's Director of the Division of Institution and Award Support:

- 1.1 Resolve the \$54,419 of unreasonable equipment costs, directing Emory to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 1.2 Direct Emory to strengthen its administrative and management procedures to ensure its proposals accurately reflect anticipated costs.

## Emory's Response

Emory did not contest or dispute the facts of Finding 1 and stated it is prepared to repay the questioned costs. However, Emory did note that the university believes that the cost would have been deemed reasonable and allowable if it had been included within the initial proposal or subsequent prior NSF approval for this expenditure was requested timely. Emory also noted that implementation of RAS was underway at the time of the purchase, but approval of equipment purchases was not yet included in the financial system workflow for sponsored awards. Emory stated that such administrative oversight would no longer occur under Emory's current expenditure approval model.

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<sup>3</sup> Refer to the glossary in Appendix E for definitions of legal terms underscored throughout this report.



See Appendix A for the complete response.

### **OIG Comments**

We acknowledge Emory's concurrence with Finding 1. Our position regarding the finding remains unchanged. RAS Standard Operating Procedures were undergoing updates at the time of our audit, but the 2008 SOP that was in effect, and the drafts of the revised SOPs that we reviewed, did not provide guidance for pre-award purchases. Therefore, we were unable to conclude whether full implementation of the RAS and the revision of RAS SOPs would prevent this type of oversight from occurring in the future.

### **Finding 2: Expenses Not Appropriately Allocated to NSF Awards**

Emory did not always [allocate](#) expenses to NSF awards based on relative benefits received, as required by Federal regulations. Specifically, Emory inappropriately allocated a total of \$21,057 to three NSF awards.

#### **Participant Support Costs Not Properly Allocated**

Emory charged \$4,000 for a supplemental scholarship under a CAREER: Arithmetic, Algebraic, and Non-Archimedean Geometry grant. However, the support for this transaction shows the payment was for a student listed as a participant in the Number Theory Research Experience for Undergraduates (REU) grant. Emory personnel said that the participant was employed at Emory, and employees may not be reimbursed for [participant support costs \(PSC\)](#) on NSF awards. Additionally, the employee's scholarship expense was not allocable to the CAREER award. Emory personnel indicated that they expect the implementation of RAS units, along with the FORT and updated SOPs, to prevent this from occurring in the future.

#### **Unsupported Allocation Method**

Emory transferred \$9,998 of expenses for equipment from a University department account to an NSF award, evenly split into two separate transactions for \$4,999 each. These expenses related to the purchase of a SpextraMaxID3 for \$33,523. Emory did not include an allocation method to support the amount charged to the NSF award, relative to the benefit received. Emory personnel stated that the allocation of the costs was made during the distribution of the expense via journal; however, Emory did not provide support for this allocation and could not explain why the transfer was split into separate transactions.

#### **Charges Near Award Expiration**

Emory purchased a multi-year subscription for software at the end of an award's period of performance and did not allocate the expenses based on the relative benefits to the NSF award. Specifically, Emory charged \$4,525 to an NSF award for statistical software 2 days prior to the award's expiration date and did not include support to indicate how a multi-year subscription was



allocable to an award that had 2 days remaining. The PI stated that the software was required to complete analysis of data for the final report; however, the PI could have purchased a stand-alone version of the software for 1 month at a rate of less than \$200. It is not reasonable to charge the full cost of this expense to this NSF award, as the software was available for less than 1 percent of the award period (2 out of 729 days).

**Conclusion**

Emory did not have adequate controls to ensure that it allocated costs to NSF awards based on the relative benefit to the awards. As a result, Emory charged NSF awards for expenses that were not allocable to the NSF awards; therefore, we question \$21,057 of inappropriately allocated direct and associated indirect costs (see Table 3).

**Table 3. Unallocable Costs**

Award No.	Expense Description	Invoice Amount	Questioned Indirect Costs	Questioned Total
[REDACTED]	REU Stipend	\$4,000	\$0	\$4,000
[REDACTED]	FCS Express 6 Plus Professional	\$4,525	\$2,534	\$7,059
[REDACTED]	SpectraMax iD3	\$4,999	\$0	\$4,999
[REDACTED]	SpectraMax iD3	\$4,999	\$0	\$4,999
<b>Total</b>		<b>\$18,523</b>	<b>\$2,534</b>	<b>\$21,057</b>

Source: OIG-developed summary of questioned costs.

**Recommendations**

We recommend that NSF’s Director of the Division of Institution and Award Support:

- 2.1 Resolve the \$21,057 of unallowable expenses, directing Emory to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 2.2 Direct Emory to strengthen its administrative and management procedures to ensure Emory personnel accurately allocate costs to NSF awards based on the relative benefit to the awards.

**Emory’s Response**

Emory did not contest or dispute the facts of Finding 2, and stated it is prepared to repay the questioned costs. Regarding *Participant Support Costs Not Properly Allocated*, Emory noted that it has updated RAS SOPs to prevent future occurrences of these classification of costs that are not allocable to specific awards. Emory also said it will provide better guidance on participant support costs to the research administration community via newsletter articles and guidance documents.

Regarding the *Unsupported Allocation Method*, Emory believes that the charges were allowable and necessary to the award but agreed that the cost transfer did not include sufficient detail to determine the allocation method used to support the transfer. Emory said it is already revising its



cost transfer policy to require standardized documentation and will facilitate further education for, and enforcement by, the RAS.

Regarding the *Charges Near Award Expiration*, Emory said that the PI who maintained the software was required to complete analysis of data for the final report but indicated such an assertion should have been contested for proper allocation of the subscription cost in keeping with proportional direct benefit to the award. Emory is confident that RAS's implementation of the FORT & new SOPs regarding award reconciliation will prevent such an occurrence in the future.

See Appendix A for the complete response.

### OIG Comments

We acknowledge Emory's concurrence with Finding 2. In its response, Emory described several steps it is implementing to strengthen its administrative and management procedures over allocation of costs to NSF awards, including issuing additional guidance for participant support costs, revising its Cost Transfer policy, and implementing the FORT and revised SOPs for RAS. Once implemented, these steps should strengthen Emory's administrative and management procedures and help to ensure that Emory allocates costs to NSF awards based on the relative benefits to the awards.

### Finding 3: Unallowable Indirect Costs Charged to NSF Awards

Emory charged \$11,298 in unallowable indirect cost applied to equipment and participant support costs.

#### Unallowable Indirect Costs Applied to Miscoded Equipment Expenses

Emory purchased a UGA-42 Firefly scanner for \$10,982 and an iMac computer for \$6,039 under two NSF awards. Because the acquisition cost was more than \$5,000, and each item had a useful life greater than 1 year, both purchases met the definition of [equipment](#). However, Emory accounted for both expenses as [supply costs](#) instead of charging them to an equipment expense account.<sup>4</sup>

Emory's financial system automatically applies [indirect costs](#) to expenses under its supplies expense categories. As a result, Emory applied indirect cost to both purchases, using the rate of 56 percent that was in effect at the time of the purchases.

Equipment is excluded from the [Modified Total Direct Cost \(MTDC\)](#) base,<sup>5</sup> and indirect costs should not have been applied to these expenses. Emory's financial system has a control to ensure

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<sup>4</sup> A "computing device" can be accounted for as a supply if the cost is less than the lesser of the capitalization level established by the non-Federal entity for financial statement purposes, or \$5,000, regardless of the length of its useful life (2 CFR § 200.94).

<sup>5</sup> See Appendix E for more information about MTDCs.



indirect cost is not applied to expenses under the equipment expense category, but Emory did not have procedures to ensure that personnel administering awards accurately reviewed and accounted for equipment expenses.

We question the \$9,532 in unallowable applied indirect costs. Emory’s current and draft SOPs do not provide guidance for reviewing acquisitions over \$5,000 to determine if they are accurately classified as equipment or supplies. Such reviews could help ensure Emory accurately accounts for equipment costs.

**Unallowable Indirect Costs Applied to Miscoded Participant Support Expenses**

Emory charged a total of \$3,154 for meals on an NSF award under Emory’s Business Meals expense code. During the audit, Emory noted that these meals were for participants on the NSF award. However, indirect costs are unallowable on PSC,<sup>6</sup> which include expenses such as stipends, travel allowances, and registration fees paid to or on behalf of participants, but not employees, related to conferences or training projects.

Emory’s financial system had system controls to prevent indirect cost from being applied to PSC, but because Emory accounted for the meals as business meals instead of PSC, Emory’s financial system automatically applied indirect costs to the expenses. As a result, Emory applied \$1,766 of indirect cost to these expenses, using the indirect cost rate of 56 percent that was in effect at the time of the purchases.

Emory did not have procedures and guidance to ensure Emory personnel accurately accounted for PSC. Therefore, we question the \$1,766 of unallowable indirect costs claimed on participant support expenses.

**Conclusion**

Emory did not have adequate procedures and guidance to ensure personnel accurately accounted for all equipment and PSC expenses. We question \$11,298 of unallowable indirect cost applied to equipment and PSC on 3 NSF awards (see Table 4).

**Table 4. Indirect Cost Applied to Miscoded Equipment & PSC Expenses**

Award No.	Expense Description	Invoice Amount	Questioned Indirect Costs	Questioned Total
	iMac Computer	\$6,039	\$3,382	\$3,382
	UGA-42-Firefly	\$10,982	\$6,150	\$6,150
	Business Meals	\$3,154	\$1,766	\$1,766
<b>Total</b>		<b>\$20,175</b>	<b>\$11,298</b>	<b>\$11,298</b>

Source: OIG-developed summary of questioned costs.

<sup>6</sup> NSF Proposal and Award Policies and Procedures Guide (NSF-15-1), Part I, Chapter 2 Section C.2.g.v



## Recommendations

We recommend that NSF's Director of the Division of Institution and Award Support:

- 3.1 Resolve the \$11,298 of unallowable indirect costs, directing Emory to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 3.2 Direct Emory to strengthen its administrative and management procedures for equipment purchases and participant support costs. For example, Emory could develop a process to review materials and supplies purchases with an acquisition cost near \$5,000 to determine if the items purchased were coded correctly and implement a process to review business meals expenses to determine if they are being properly categorized as PSC, when appropriate.

## Emory's Response

Emory did not contest or dispute the facts of Finding 3, and stated it is prepared to repay the questioned costs. Emory noted that the purchases of the iMac Computer & UGA-42-Firefly occurred prior to RAS's inclusion in the expenditure workflow approval for procurement items within Emory's financial system.

Regarding *Unallowable Indirect Costs Applied to Miscoded Participant Support Expenses*, Emory said these expenses predated a process Emory implemented to create projects within an award, specifically for participant support costs, to ensure indirect costs are not applied to any participant costs.

See Appendix A for the complete response.

## OIG Comments

We acknowledge Emory's concurrence with Finding 3. Implementation of the revised RAS SOPs, to include full implementation of the FORT, should strengthen Emory's administrative and management procedures for equipment and PSC purchases. These steps, combined with the PSC guidance that Emory intends to issue in response to Finding 2, as well as the use of separate PSC projects for NSF awards, should help ensure unallowable indirect cost is not applied to equipment and participant support costs.

## Finding 4: Unsupported Supplemental Pay Charged to NSF Awards

Emory did not document detailed explanations to adequately support supplemental pay requests, as required by Emory Policy 4.58: *Supplemental Pay Process*.<sup>7</sup> Emory provided \$2,000 of Extra

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<sup>7</sup> Emory's Supplemental Pay Process Policy went into effect March 30, 2007, and was last updated July 31, 2018. According to the policy, supplemental payments include extra duty pay, bonuses, honorariums, and award payments. Per the policy "All requests must include a detailed explanation for the payment. Payment requests automatically go through a predetermined electronic approval chain."



Duty Pay to two Ph.D. students and allocated an additional \$1,110 of indirect costs to the \$2,000 in Extra Duty Pay for a total of \$3,110 in unsupported supplemental pay. Specifically:

- Emory charged \$1,000 of Extra Duty Pay to an NSF Award for a Ph.D. student. The PI requested this payment via email by informing department staff that the Ph.D. student should get \$1,000 in a one-time payment in the summer.
- Emory charged an NSF Award \$1,000 of Extra Duty Pay for a Ph.D. student. The PI requested this payment via email by asking department staff to “...arrange a 1 month payment/fellowship...” for a Ph.D. student for “...\$1,000 for March (or February if it is not too late).”

Although both supplemental payment requests were approved through Emory’s electronic approval chain, Emory’s policy requires all requests for supplemental pay to include a detailed explanation for the payment. Emory personnel confirmed that the email requests did not adequately support these payments and explained that because supplemental pay is not tracked in Emory’s effort reporting system, these expenses were not included in the RAS workflow for review. Once the FORT is implemented, RAS personnel indicated that supplemental pay requests would be subject to additional scrutiny because the payroll expense amounts would exceed the amount forecasted for employee compensation, triggering a review of the source documentation. Emory expects implementation of the FORT and the additional scrutiny of source documentation to help ensure that supplemental pay requests are adequately supported in the future.

**Conclusion**

Emory did not have sufficient procedures in place to ensure it complied with the University’s supplemental pay policy. Therefore, we question \$3,110 in unsupported supplemental pay on two NSF awards (see Table 5).

**Table 5. Unsupported Payroll Expenses**

Award No.	Expense Description	Invoice Amount	Questioned Indirect Costs	Questioned Total
██████████	Extra Duty Pay	\$1,000	\$560	\$1,560
██████████	Extra Duty Pay	\$1,000	\$550	\$1,550
<b>Total</b>		<b>\$2,000</b>	<b>\$1,110</b>	<b>\$3,110</b>

Source: OIG-developed summary of questioned costs.

**Recommendations**

We recommend that NSF’s Director of the Division of Institution and Award Support:

- 4.1 Resolve the \$3,110 of unsupported supplemental pay, directing Emory to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 4.2 Direct Emory to strengthen its administrative and management procedures to ensure Emory personnel adequately support supplemental pay requests.



### **Emory's Response**

Emory did not contest or dispute the facts of Finding 4, and stated it is prepared to repay the questioned costs. Emory acknowledged that the explanations provided to support supplemental pay requests, as required by Emory policy, were insufficient. Emory also noted that these expenses predated RAS and Emory's FORT implementation.

See Appendix A for the complete response.

### **OIG Comments**

We acknowledge Emory's concurrence with Finding 4. Implementation of the revised of RAS SOPs, to include full implementation of the FORT, should strengthen Emory's administrative and management procedures by providing an additional level of oversight to help ensure that personnel adequately support supplemental pay requests.



## Appendix A: Emory's Response



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April 20, 2021

### RE: Performance Audit of Incurred Costs - Emory University

Dear Ms. Snow,

Emory University has reviewed the draft audit report your team issued on behalf of the National Science Foundation. Emory's formal response to the individual audit findings are contained below. Emory University does not believe the findings listed below represent any systemic issues in relation to award management.

#### Finding 1: Grant Transfer Resulted in Unreasonable Equipment Expense

Emory purchased \$54,419 in equipment needed for an NSF award originally awarded to the University of Utah, anticipating that NSF would approve the transfer of the award to Emory and then reimburse Emory for these costs. However, Emory did not provide accurate and complete information to NSF to allow NSF to make an informed decision whether to approve the transfer.

**EMORY RESPONSE:** Emory acknowledges the timeline set forth of events regarding specialized equipment purchase & grant transfer as noted in the finding above. Implementation of RAS (Research Administrative Services) while underway at the time of the purchase was not yet included in Emory's financial system workflow approval of equipment purchases for sponsored awards. We maintain that such administrative oversight subsequently would no longer occur under our current expenditure approval model. The Principal investigator (PI) as noted did disclose this equipment purchase within their annual report to NSF, but Emory did not seek prior approval for the expenditure or disclose it in the proposal. We believe the cost would have been deemed reasonable & allowable if included within the initial proposal or subsequent prior NSF approval for this expenditure was requested timely. Consequently, per *NSF Proposal and Award Policies and Procedures Guide* Emory acknowledges the finding above and is prepared to provide repayment of \$54,419 resulting from this finding if deemed appropriate by NSF OIG.

#### Finding 2: Expenses Not Appropriately Allocated to NSF Awards

Emory charged \$4,000 for a supplemental scholarship under a CAREER: Arithmetic, Algebraic, and Non-Archimedean Geometry grant. However, the support for this transaction shows the payment was for a student listed as a participant in the Number Theory Research Experience for Undergraduates (REU) grant.



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Emory transferred \$9,998 of expenses for equipment from a University department account to an NSF award, evenly split into two separate transactions for \$4,999 each. These expenses related to the purchase of a SpextraMaxID3 for \$33,523. Emory did not include an allocation method to support the amount charged to the NSF award, relative to the benefit received.

Emory purchased a multi-year subscription for software at the end of an award's period of performance and did not allocate the expenses based on the relative benefits to the NSF award.

### EMORY RESPONSE:

#### Participant Support Costs Not Properly Allocated

As already noted within the finding, Emory has subsequently implemented a new data analytics tool to allow for more focused & consolidated financial reconciliation on a standard and recurring basis. Alongside the FORT (Financial Outlook Reporting Tool) Emory has also updated RAS standard operating procedures (SOPs) to prevent future occurrences of these classification of costs that are not allocable to specific awards. Emory provides and will continue to provide better guidance on participant support costs to the research administration community via newsletter articles and guidance documents. As a result, Emory acknowledges the finding above and is prepared to provide repayment of \$4,000 resulting from this finding if deemed appropriate by NSF OIG.

#### Unsupported Allocation Method

Emory believes that the charges were allowable and necessary to the award. However, the cost transfer did not include sufficient detail to determine the allocation method used to support the transfer. Due to the subsequent time frame that had passed since the initial transaction a definitive method could no longer be supported due to staff turnover and the inability to locate the official original documentation. It appears proportional benefit and an allocation method was attempted but fell short of the required justification to substantiate the transfer.

Subsequently, Emory is already in the process of revising its cost transfer policy to require standardized documentation and will facilitate further education for and enforcement by RAS. Emory acknowledges the finding above and is prepared to provide repayment of \$9,998 resulting from this finding if deemed appropriate by NSF OIG.

#### Charges Near Award Expiration

PI maintained the software was required to complete analysis of data for the final report such an assertion should have been contested for proper allocation of the subscription cost in keeping with proportional direct benefit to the award. Emory is confident that RAS implementation of FORT & new RAS SOPs regarding award reconciliation would have prevented



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such an occurrence in the future. Emory acknowledges the finding above and is prepared to provide repayment of \$7,059 resulting from this finding if deemed appropriate by NSF OIG.

### Finding 3: Inappropriate Allocation of Indirect Cost

Emory purchased a UGA-42 Firefly scanner for \$10,982 and an iMac computer for \$6,039 under two NSF awards. Because the acquisition cost was more than \$5,000, and each item had a useful life greater than 1 year, both purchases met the definition of equipment. However, Emory accounted for both expenses as supply costs instead of charging them to an equipment expense account.

Emory's financial system automatically applies indirect costs to expenses under its supplies expense categories. As a result, Emory applied indirect cost to both purchases, using the rate of 56 percent that was in effect at the time of the purchases.

Emory charged a total of \$3,154 for meals on an NSF award under Emory's Business Meals expense code. During the audit, Emory noted that these meals were for participants on the NSF award.

#### EMORY RESPONSE:

##### Unallowable Indirect Costs Applied to Miscoded Equipment Expenses

Purchase of iMac Computer & UGA-42-Firefly occurred prior to RAS' inclusion in the expenditure workflow approval for procurement items within Emory's financial system. As noted in finding number one such a subsequent allocation within Emory's procurement system would have been questioned due to the threshold amount and description of charges. However, this predated those changes as a result, miscoding of expenses within the financial system did result in inappropriate indirect costs charged to the award. Emory acknowledges the finding above and is prepared to provide repayment of \$9,532 resulting from this finding if deemed appropriate by NSF OIG.

##### Unallowable Indirect Costs Applied to Miscoded Participant Support Expenses

Emory has established a process to create projects within an award specifically for participant support costs to ensure indirect costs are not applied to any participant costs. This award predates the establishment of this process, but these types of costs are now and will continue to be segregated in individual projects. Emory acknowledges the finding above and is prepared to provide repayment of \$1,766 resulting from this finding if deemed appropriate by NSF OIG.

### Finding 4: Unsupported Supplemental Pay



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Emory did not document detailed explanations to adequately support supplemental pay requests, as required by Emory Policy 4.58: *Supplemental Pay Process*. Emory provided \$2,000 of Extra Duty Pay to two Ph.D. students and allocated an additional \$1,110 of indirect costs to the \$2,000 in Extra Duty Pay for a total of \$3,110 in unsupported supplemental pay.

**EMORY RESPONSE:**

As noted within the finding these expenses predated RAS and Emory's FORT implementation. Supplemental pay requests would be subject to additional scrutiny because the payroll expense amounts would exceed the amount *forecasted* for employee compensation, triggering a review of the source documentation. Detailed explanations to adequately support supplemental pay requests, as required by Emory Policy in these instances were insufficient. Emory acknowledges the finding above and is prepared to provide repayment of \$3,110 resulting from this finding if deemed appropriate by NSF OIG.

Thank you,



Robert Nobles, DrPH, MPH  
Vice President for Research Administration  
Emory University



## Appendix B: Objective, Scope, and Methodology

### Audit Objective

We conducted a performance audit of costs Emory claimed on NSF awards. The audit objective was to determine whether costs claimed were allowable, allocable, reasonable, and in conformity with NSF award terms and conditions and applicable Federal financial assistance requirements.

### Audit Scope

The audit population included 36 awards to Emory University with an award period beginning on or after July 25, 2015. Our audit included assessing the allowability, allocability, and reasonableness of 40 transactions judgmentally selected from a population of 26,736 transactions provided by Emory.

### Audit Methodology

We conducted this performance audit from July 2019 to February 2021 in accordance with *Generally Accepted Government Auditing Standards*. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions, based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions.

### Internal Control Assessment

In planning and performing our audit, we gained an understanding of controls significant to our audit objective and performed testing to the extent necessary to address the audit objective. Specifically, we:

- reviewed Emory and NSF policy and OMB guidance;
- conducted interviews and system and process walkthroughs with Emory personnel;
- tested a sample of 40 expenditures, selected judgmentally, for compliance with grant terms and conditions;
- requested and reviewed supporting documentation from Emory for each sample item to ensure validity and compliance with grant requirements; and
- reviewed prior audits and reports to determine if Emory corrected any deficiencies significant to our audit objective.

### Data Reliability Assessment

We relied on financial data from Emory and NSF to complete this audit. Emory provided transaction data to support costs charged to NSF awards during the audit period, and we obtained NSF award data by directly accessing NSF's data systems. To assess the reliability of the data, we conducted basic reasonableness checks, including reconciliations and analytic testing procedures;



conducted system and process walkthroughs; and traced the sample of 40 transactions to source documentation. We did not identify any obvious problems with the accuracy or completeness of the data and determined that the data were sufficiently reliable for the purposes of this report.

### **Criteria**

We reviewed supporting documentation for the 40 transactions selected for testing to determine the allowability, allocability, and reasonableness of these expenditures in accordance with NSF award documentation; NSF and Emory policy; OMB Uniform Administrative Requirements, *Cost Principles and Audit Requirements for Federal Awards* (2 CFR 200); and NSF Award Specific Terms and Conditions.

When necessary, we obtained additional support or explanations from Emory to determine whether the transactions were valid.

We reported the results and findings within the body of this performance audit report.

### **OIG Staff Acknowledgments**

Jennifer Miller, Director, Compliance Analytics; Holly Snow, Audit Manager; Jeremy Hall, Senior Management Analyst; Elizabeth Argeris Lewis, Executive Officer/Communications Analyst; and Melissa Prunchak, Independent Report Referencer, made key contributions to this report.



## Appendix C: Summary of Questioned Costs

### Summary of Questioned Costs by NSF Award Number

NSF Award No.	No. of Transactions	Invoice Amount	Questioned Indirect Costs	Questioned Total
██████████	3	\$4,000	\$5,148	\$9,148
██████████	1	\$1,000	\$550	\$1,550
██████████	1	-	\$6,150	\$6,150
██████████	1	\$4,525	\$2,534	\$7,059
██████████	2	\$9,998		\$9,998
██████████	1	\$1,000	\$560	\$1,560
██████████	1	\$54,419	-	\$54,419
<b>7</b>	<b>10</b>	<b>\$74,942</b>	<b>\$14,942</b>	<b>\$89,884</b>

### Summary of Questioned Costs by NSF Award Number and Expense Description

Finding Description	Award No.	Expense Description	Invoice Amount	Questioned Indirect Cost	Questioned Total
1) Grant Transfer Resulted in Unreasonable Equipment Expense	██████████	Equipment	\$54,419	\$0	\$54,419
2) Expenses Not Appropriately Allocated to NSF Awards	██████████	REU Stipend	\$4,000	\$0	\$4,000
	██████████	FCS Express 6 Plus Professional	\$4,525	\$2,534	\$7,059
	██████████	SpectraMax iD3	\$4,999		\$4,999
	██████████	SpectraMax iD3	\$4,999		\$4,999
3) Inappropriate Allocation of Indirect Cost	██████████	iMac Computer	\$6,039*	\$3,382	\$3,382
	██████████	UGA-42-Firefly	\$10,982*	\$6,150	\$6,150
	██████████	Business Meals	\$3,154*	\$1,766	\$1,766
4) Unsupported Supplemental Pay	██████████	Extra Duty Pay	\$1,000	\$560	\$1,560
	██████████	Extra Duty Pay	\$1,000	\$550	\$1,550
<b>Total</b>			<b>\$74,942</b>	<b>\$14,942</b>	<b>\$89,884</b>

\*The direct portion of expense was not questioned and is included for context only. These amounts are not included in the totals.



## Appendix D: Summary of Recommendations

We recommend that NSF's Director of the Division of Institution and Award Support:

- 1.1 Resolve the \$54,419 of unreasonable equipment costs, directing Emory to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 1.2 Direct Emory to strengthen its administrative and management procedures to ensure its proposals accurately reflect anticipated costs.
- 2.1 Resolve the \$21,057 of unallowable expenses, directing Emory to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 2.2 Direct Emory to strengthen its administrative and management procedures to ensure Emory personnel accurately allocate costs to NSF awards based on the relative benefit to the awards.
- 3.1 Resolve the \$11,298 of unallowable indirect costs, directing Emory to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 3.2 Direct Emory to strengthen its administrative and management procedures for equipment purchases and participant support costs. For example, Emory could develop a process to review materials and supplies purchases with an acquisition cost near \$5,000 to determine if the items purchased were miscoded and implement a process to review of Business Meals expenses to determine if they are allowable PSC.
- 4.1 Resolve the \$3,110 of unsupported supplemental pay, directing Emory to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 4.2 Direct Emory to strengthen its administrative and management procedures to ensure Emory personnel adequately support supplemental pay requests.



## Appendix E: Glossary

**Allocable cost.** A cost is allocable to a particular Federal award or other cost objective if the goods or services involved are chargeable or assignable to that Federal award or cost objective in accordance with relative benefits received. This standard is met if the cost:

- (1) Is incurred specifically for the Federal award;
  - (2) Benefits both the Federal award and other work of the non-Federal entity and can be distributed in proportions that may be approximated using reasonable methods; and
  - (3) Is necessary to the overall operation of the non-Federal entity and is assignable in part to the Federal award in accordance with the principles in this subpart.
- (2 CFR § 200.405) [↗ Navigate Back to Report Finding 2](#)

**Equipment** means tangible personal property (including information technology systems) having a useful life of more than 1 year and a per-unit acquisition cost which equals or exceeds the lesser of the capitalization level established by the non-Federal entity for financial statement purposes, or \$5,000 (2 CFR § 200.33). [↗ Navigate Back to Report Finding 3](#)

**Indirect (facilities & administrative (F&A)) Costs** means those costs incurred for a common or joint purpose benefitting more than one cost objective, and not readily assignable to the cost objectives specifically benefitted, without effort disproportionate to the results achieved. To facilitate equitable distribution of indirect expenses to the cost objectives served, it may be necessary to establish a number of pools of indirect (F&A) costs. Indirect (F&A) cost pools must be distributed to benefitted cost objectives on bases that will produce an equitable result in consideration of relative benefits derived (2 CFR § 200.56). [↗ Navigate Back to Report Finding 3](#)

**Modified Total Direct Cost (MTDC)** means all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first \$25,000 of each subaward (regardless of the period of performance of the subawards under the award). MTDC excludes 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. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs (2 CFR § 200.68). [↗ Navigate Back to Report Finding 3](#)

**Participant support costs (PSC)** means direct costs for items such as stipends or subsistence allowances, travel allowances, and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with conferences or training projects (2 CFR § 200.75).  
[↗ Navigate Back to Report Finding 2](#)



**Reasonable costs.** A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person under the circumstances prevailing at the time the decision was made to incur the cost. The question of reasonableness is particularly important when the non-Federal entity is predominantly federally funded. In determining reasonableness of a given cost, consideration must be given to:

- a) Whether the cost is of a type generally recognized as ordinary and necessary for the operation of the non-Federal entity or the proper and efficient performance of the Federal award.
- b) The restraints or requirements imposed by such factors as: sound business practices; arm's-length bargaining; Federal, state, local, tribal, and other laws and regulations; and terms and conditions of the Federal award.
- c) Market prices for comparable goods or services for the geographic area.
- d) Whether the individuals concerned acted with prudence in the circumstances considering their responsibilities to the non-Federal entity, its employees, where applicable its students or membership, the public at large, and the Federal Government.
- e) Whether the non-Federal entity significantly deviates from its established practices and policies regarding the incurrence of costs, which may unjustifiably increase the Federal award's cost (2 CFR § 200.404). [↑ \*Navigate Back to Report Finding 1\*](#)

**Supplies** means all tangible personal property other than those described in § 200.33 Equipment. A computing device is a supply if the acquisition cost is less than the lesser of the capitalization level established by the non-Federal entity for financial statement purposes or \$5,000, regardless of the length of its useful life (2 CFR § 200.94). [↑ \*Navigate Back to Report Finding 3\*](#)



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