



NATIONAL SCIENCE FOUNDATION
Division of Institution & Award Support

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January 19, 2023

Nate Martinez-Wayman
Senior Director
Office of Post Award Administration
Duke University
2200 W Main Street, Suite 800
Durham, NC 27705

Reference: OIG Report No. 20-1-008

Dear Nate Martinez-Wayman,

The National Science Foundation (NSF) has completed the review and resolution of the Office of Inspector General (OIG) audit report on costs incurred under NSF awards by Duke University (Duke) during the period of October 1, 2015, through September 30, 2018.

The audit report identified a total of \$708,906 in questioned costs claimed on NSF awards and recommended that Duke strengthen its administrative and management controls for the areas in which findings and questioned costs were identified. As a result of its resolution efforts, NSF has determined that \$45,622 will be allowed and that \$663,284 will be sustained and disallowed. The table below summarizes the sustained, disallowed, and allowed costs by finding number:

Finding	Description	Questioned	Sustained	Allowed	Disallowed
1	Unallowable Expenses	\$270,408	\$258,631	\$11,777	\$258,631
2	Inadequately Supported Expenses	\$246,635	\$246,635	\$0	\$246,635
3	Inappropriately Established Supplemental Salary Appointments	\$77,923	\$45,750	\$32,173	\$45,750
4	Inappropriate Drawdown of Expiring Appropriations	\$29,892	\$29,892	\$0	\$29,892
5	Expenses Not Appropriately Allocated to NSF Awards	\$28,719	\$28,719	\$0	\$28,719

Finding	Description	Questioned	Sustained	Allowed	Disallowed
6	Goods and Services Not Appropriately Procured	\$23,406	\$23,406	\$0	\$23,406
7	Insufficient Review of Payments to Consortium	\$12,526	\$10,854	\$1,672	\$10,854
8	Non-compliance with NSF Award Terms and Conditions	\$10,000	\$10,000	\$0	\$10,000
9	Indirect Costs Not Appropriately Applied	\$9,397	\$9,397	\$0	\$9,397
10	Indirect Costs Inappropriately Applied at the Provisional Rate	\$0	\$0	\$0	\$0
11	Non-compliance with Duke policies	\$0	\$0	\$0	\$0
Totals:		\$708,906	\$663,284	\$45,622	\$663,284

To resolve the audit findings and questioned costs, NSF conducted detailed reviews of applicable Federal and NSF requirements, proposal and award information maintained by NSF, and documentation provided by Duke. The summary below provides the bases for the management decisions reached by NSF:

- **Finding 1: Unallowable Expenses**

NSF sustains the finding. The auditor questioned a total of \$270,408 on 16 NSF awards in Recommendations 1 and 2. Based on documentation reviewed, NSF determined that \$11,777 of the questioned costs were supportable as allowable expenses. Based on Duke's agreement to reimburse \$106,386, and NSF's review of documentation provided for the remaining \$152,245, **NSF's management decision is to sustain and disallow costs of \$258,631 and to allow \$11,777.**

Corrective action: NSF requires that Duke repay the disallowed questioned costs of \$258,631.

Compliance and Internal Control Recommendation: Duke has proposed a corrective action plan for Recommendations 3-12. NSF requires that Duke strengthen its administrative and management controls and policies and procedures related to unallowable expenses charged to awards including salaries, airfare, conferences, visiting scholars, as well as ensuring there are no charges with extension denials and/or duplicative charges. Recommendations 3-12 will remain open until Duke completes its proposed actions.

Final action for Finding 1 will be complete upon repayment of \$258,631 and the determination by NSF that corrective actions taken are responsive to the report recommendations.

▪ **Finding 2: Inadequately Supported Expenses**

NSF sustains the finding. The auditors questioned a total of \$246,635 on nine (9) NSF awards in Recommendations 1 and 2 related to inadequate documentation to support the allocability, allowability and reasonableness of costs, as required under Federal regulations and NSF PAPPGs. Based on a review of documentation, NSF determined to sustain and disallow the questioned costs of \$237,141, related to unsupported charges made by Duke's Office of Information Technology, as well as inadequately supported participant support costs. Duke agreed to reimburse NSF \$9,464. **NSF's management decision is to sustain and disallow \$246,635.**

Corrective Action: NSF requires Duke to repay the disallowed questioned costs of \$246,635.

Compliance and Internal Control Recommendation: Duke has proposed a corrective action plan for Recommendations 3-8. NSF requires that Duke strengthen its policies and procedures related to document retention, internal service centers, participant payment policies and incentive payments, medical expense reimbursements, and travel expense approvals. Recommendations 3-8 will remain open until Duke completes its proposed actions.

Final action for Finding 2 will be complete upon repayment of \$246,635 and the determination by NSF that corrective actions taken are responsive to the report recommendations.

▪ **Finding 3: Inappropriately Established Supplemental Salary Appointments**

NSF does not sustain the finding. The auditors questioned \$77,923 on six (6) NSF awards in Recommendation 1 for salary expenses related to establishing a supplemental salary appointment appropriately. NSF does not agree with the basis for disallowance based on zero-dollar (\$0) Institutional Base Salary rates or supplemental salary appointments for non-faculty appointments. It is not unusual for universities to set up \$0 IBS rates and to require employees in those positions to seek grant and other funding for their positions. The Uniform Guidance 2 CFR 200.430(h)(8) requires that salaries are supported, not that they are based on IBS rates or supplemental salary appointments for non-faculty appointments. However, NSF determined to disallow \$45,750 because the position in question was not included in the award proposal(s) or budget(s) and sufficient documentation was not provided to support the charges. **NSF's management decision is to allow \$32,173 and to disallow \$45,750.**

Corrective Action: NSF requires Duke to repay disallowed questioned costs of \$45,750.

Compliance and Internal Control Recommendation: Duke has proposed a corrective action plan for Recommendations 2-3. NSF requires that Duke strengthen its administrative and management processes and procedures to ensure that documentation is sufficient to support salaries for non-faculty appointments and for rehiring former employees as adjunct faculty. Recommendations 2 and 3 will remain open until Duke completes its proposed actions.

Final action for Finding 3 will be complete upon repayment of questioned costs of \$45,750 and the determination by NSF that corrective actions taken are responsive to the report recommendations.

▪ **Finding 4: Inappropriate Drawdown of Expiring Appropriations**

NSF sustains the finding. The auditors questioned costs of \$29,892 on two (2) awards related to inappropriate drawdowns from NSF Award Cash Management Service (ACM\$) to cover expenses that appear to have been incurred after funding appropriations expired. NSF's Division of Financial Management sends awardees an e-mail each year identifying all NSF awards with unliquidated balances that are funded by NSF appropriations that will be canceled at the end of the fiscal year. This

notification informs grantees that "NSF will not accept additional costs on the canceling funds after September 23 even if the project end date extends past this date". This language leaves no room for any other consideration. Spending in the absence of appropriations is prohibited and questioned costs will be disallowed. Duke University, as a recipient of Federal funds is expected to adhere to all requirements of the federal award, including compliance with Public Law 101-510, without exception.

NSF's management decision is to sustain and disallow \$29,892.

Corrective Action: NSF requires Duke to repay disallowed questioned costs of \$29,892.

Compliance and Internal Control Recommendation: Duke has proposed a corrective action plan for Recommendations 2 and 3. NSF requires that Duke strengthen its processes and procedures related to the drawing-down of funding from ACM\$ and awards with Federal appropriations that have expired, as well as to strengthen its award set-up procedures to ensure that charges are not applied to active awards if the Federal appropriation has expired. Recommendations 2 and 3 will remain open until Duke completes its proposed actions.

Final action for Finding 4 will be complete upon repayment of \$29,892 and the determination by NSF that corrective actions taken are responsive to the report recommendations.

▪ **Finding 5: Expenses Not Appropriately Allocated to NSF Awards**

NSF sustains the finding. The auditor questioned \$28,719 on eight (8) NSF awards in Recommendations 1 and 2 related to allocations that were not based on the awards received. Duke is aware that costs must be assignable to a particular cost objective in accordance with the relative benefits received or other equitable relationship, as prescribed in 2 CFR §200.405(a). Duke agreed to reimburse NSF for expenses not appropriately allocated. **NSF's management decision is to sustain and disallow questioned costs of \$28,719.**

Corrective Action: NSF requires Duke to repay disallowed questioned costs of \$28,719.

Compliance and Internal Control Recommendation: Duke has proposed a corrective action plan for Recommendations 3 and 4. NSF requires that Duke strengthen its administrative and management controls and processes related to allocating expenses to sponsored projects, including ensuring that appropriate personnel review allocation methodologies for all expenses charged to NSF awards less than 90 days before the award's period of performance expires. Recommendations 3 and 4 will remain open until Duke completes its proposed actions.

Final action for Finding 5 will be complete upon repayment of \$28,719 and the determination by NSF that corrective actions taken are responsive to the report recommendations.

▪ **Finding 6: Goods and Services Not Appropriately Procured**

NSF sustains the finding. The auditors questioned \$23,406 on two (2) NSF awards in Recommendation 1 related to questioned costs for supplies and services, including consultant and internal service provider services, that were not appropriately procured as required by Duke policies and procedures. Based on the documentation reviewed, **NSF's management decision is to sustain and disallow questioned costs of \$23,406.**

Corrective Action: NSF requires Duke to repay disallowed questioned costs of \$23,406.

Compliance and Internal Control Recommendation: Duke has proposed a corrective action plan for Recommendations 2 and 3. NSF requires that Duke strengthen its administration and management procedures related to competitive bidding as well as ensuring that documentation is sufficient for the appropriate procurement of consultant services in accordance with Duke policies. Recommendations 2 and 3 will remain open until Duke completes its proposed actions.

Final action for Finding 6 will be complete upon repayment of \$23,406 and a determination by NSF that corrective actions taken are responsive to the report recommendations.

▪ **Finding 7: Insufficient Review of Payments to the cited consortium.**

NSF sustains the finding. The auditor questioned costs of \$12,526 on one (1) NSF award in Recommendations 1 and 2. Duke agreed to reimburse NSF \$10,854 related to its administrative and management processes related to monitoring payments and reimbursement to cited consortium. Based on documentation reviewed, NSF determined to allow the remaining questioned costs of \$1,672. **NSF's management decision is to sustain and disallow costs of \$10,854 and to allow \$1,672.**

Corrective Action: NSF requires Duke to repay disallowed questioned costs of \$10,854.

Compliance and Internal Control Recommendation: Duke has proposed a corrective action plan for Recommendation 3. NSF requires that Duke strengthen its administrative and management processes and procedures related to the review of payments presented by vendors as well as the cited consortium and other organizations where Duke may have a legal or fiscal agent agreement. Recommendation 3 will remain open until Duke completes its proposed actions.

Final action for Finding 7 will be complete upon repayment of \$10,854 and a determination by NSF that corrective actions taken are responsive to the report recommendations.

▪ **Finding 8: Non-compliance with NSF Award Terms and Conditions**

NSF sustains the finding. The auditor questioned costs of \$10,000 on one (1) NSF award in Recommendation 1. Duke provided \$10,000 in Graduate Research Internship Program (GRIP) allowance payments, not stipends, to two Fellows but did not provide documentation to support expenses, though a GRFP Program Expense Report was required for each Fellow. NSF notes that the Dear Colleague Letter (DCL: NSF 16-015) states that the funding is an allowance. **NSF's management decision is to sustain and disallow questioned costs of \$10,000.**

Corrective Action: NSF requires Duke to repay disallowed questioned costs of \$10,000.

Compliance and Internal Control Recommendation: Duke has proposed a corrective action plan for Recommendation 2. NSF requires that Duke strengthen its controls to ensure personnel working on the award maintain compliance with NSF award terms and conditions, particularly when special costing and/or special terms and conditions exist. Recommendation 2 will remain open until Duke completes its proposed actions.

Final action for Finding 8 will be complete upon repayment of \$10,000 and the determination by NSF that corrective actions taken are responsive to the report recommendations.

▪ **Finding 9: Indirect Costs Not Appropriately Applied**

NSF sustains the finding. The auditor questioned a total of \$9,397 on two (2) NSF awards in Recommendation 1. Duke agreed to reimburse the questioned costs. **NSF's management decision is to sustain and disallow costs totaling \$9,397 under two NSF awards.**

Corrective Action: NSF requires that Duke repay disallowed questioned costs of \$9,397.

Compliance and Internal Control Recommendation: Duke has proposed a corrective action plan for Recommendation 2. NSF requires Duke to strengthen its procedures related to accounting for

participant support costs and exclusion of indirect costs in conjunction with planned revisions in Finding 1, Recommendation 7. Recommendation 2 will remain open until Duke completes its proposed actions.

Final action for Finding 9 will be complete upon repayment of questioned costs of \$9,397 and the determination by NSF that corrective actions taken are responsive to the report recommendations.

▪ **Finding 10: Indirect Costs Inappropriately Applied at the Provisional Rate**

NSF does not sustain the finding. No costs were questioned under this finding. NSF agrees that in the event that at the time of award only provisional rates are established for an award period of performance, the grantee must wait until the next NICRA is issued that establishes rates during the awarded period and apply that NICRA as if it were in effect at the time of award. However, NSF requires that grantees must have internal controls to ensure that awards are not charged indirect costs in excess of the rate(s) in effect at the time of the award, not at the time budgeted.

Compliance and Internal Control Recommendation: Duke has proposed a corrective action plan for Recommendation 1. NSF requires that Duke provide evidence of its updated internal control and policies and procedures to ensure that awards are not charged indirect costs in excess of the rate(s) in effect at the time of the award. Recommendation 1 will remain open until Duke completes its proposed actions.

Final action for Finding 10 will be complete upon the determination by NSF that corrective actions taken are responsive to NSF guidance.

▪ **Finding 11: Non-compliance with Duke policies**

NSF sustains the finding. No costs were questioned under this finding and seven (7) Recommendations were made to Duke to strengthen its administrative and management processes and policies and procedures for 1) procuring consultant services; 2) subaward payment approval process; 3) cost transfer that involve equipment purchases; 4) ensuring personnel certify effort timely; 5) competitive bidding process; 6) corporate purchase cards; 7) internal service provider billings.

Corrective Action: NSF requires that Duke must provide evidence of updated policies and procedures in response to the recommendations.

Compliance and Internal Control Recommendation: Duke has taken and/or proposed corrective actions for Recommendations 1-7. NSF has determined that the corrective actions taken for recommendations 2, 3, 4, 6, and 7 by Duke are responsive to the compliance and internal control recommendations. Recommendations 1 and 5 will remain open until Duke completes its proposed actions.

Final action for Finding 11 will be complete upon the determination by NSF that remaining corrective actions taken are responsive to the report recommendations.

Based on the above, the total disallowed amount is \$663,284. **Repayment of \$663,284 must be made via www.pay.gov.** Please reference OIG Audit Report No. 20-1-008 in the comments section as well as on all documentation. Any necessary adjustments to ACM\$ as a result of the repayment will be made by the NSF Division of Financial Management (DFM). **Repayment of disallowed costs must be received no later than 90 days from the date of this letter. Failure to provide timely repayment may result in DFM initiating formal collection through the Department of Treasury, Debt Management Services.**

Compliance and Internal Control Recommendations for Finding 7 -Recommendation 3 and Finding 11- Recommendations 2, 3, 4, 6, and 7 were resolved. The remaining compliance and internal control recommendations (1: 3-12; 2: 3-8; 3: 2-3; 4: 2-3; 5: 3-4; 6: 2-3; 8: 2; 9: 2; 10: 1; 11: 1 and 5) are addressed in the resolution plan proposed by Duke. **NSF has agreed to the resolution plan and timeline.**

Attached is a Summary Schedule of Allowed and Disallowed Costs, which includes the Compliance and Internal Control Recommendations requiring final action. Upon verification that repayment of the remaining \$663,284 of disallowed costs has been completed and that corrective actions are responsive to the compliance and internal control recommendations in the audit report, OIG Audit Report 20-1-008 will be fully closed out by NSF.

Please be aware that Duke University's right to appeal cost disallowances by NSF is outlined in Chapter XII.B of the NSF Proposal and Award Policies and Procedures Guide (PAPPG), which may be found online at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg. An appeal must be filed within 30 days from the date of this letter, or February 18, 2023.

The University's timely responses and cooperation with the NSF audit resolution process are greatly appreciated. Should you have any questions regarding this letter or the NSF audit resolution process, please feel free to contact Liz DeHart at edehart@nsf.gov or Charlotte Grant-Cobb at cgrantco@nsf.gov.

Sincerely,

Charlotte D. Grant-Cobb

Charlotte D. Grant-Cobb, Lead Analyst
Resolution and Advanced Monitoring Branch
Division of Institution and Award Support

Attachment: Schedule of Allowed and Disallowed Costs

OIG 20-1-008 Duke University (Duke)					
ATTACHMENT 1: Summary Schedule of Allowed and Disallowed Costs					
Finding	Audit Report Description	Questioned	Allowed	Disallowed	To Repay via Pay.gov
1	<i>Unallowable Expenses</i>				
Sustained	Award No. 1326646	\$94,817	\$0	\$94,817	\$94,817
	Award No. 1457690	\$2,293	\$0	\$2,293	\$2,293
	Award No. 0635449	\$2,463	\$0	\$2,463	\$2,463
	Award No. 0951690	\$6,775	\$0	\$6,775	\$6,775
	Award No. 1453343	\$4,853	\$0	\$4,853	\$4,853
	Award No. 1456832	\$1,871	\$0	\$1,871	\$1,871
	Award No. 1534412	\$13,923	\$0	\$13,923	\$13,923
	Award No. 1534412	\$7,417	\$7,417	\$0	\$0
	Award No. 1534412	\$2,021	\$2,021	\$0	\$0
	Award No. 1534412	\$0	\$2,339	\$0	\$0
	Award No. 0905606	\$43,505	\$0	\$43,505	\$43,505
	Award No. 1326646	\$5,034	\$0	\$5,034	\$5,034
	Award No. 1705963	\$22,717	\$0	\$22,717	\$22,717
	Award No. 1705963	\$22,931	\$0	\$22,931	\$22,931
	Award No. 1146383	\$19,680	\$0	\$19,680	\$19,680
	Award No. 1338694	\$942	\$0	\$942	\$942
	Award No. 1423963	\$2,616	\$0	\$2,616	\$2,616
	Award No. 0635449	\$488	\$0	\$488	\$488
	Award No. 0951690	\$280	\$0	\$280	\$280
	Award No. 1119715	\$5,417	\$0	\$5,417	\$5,417
	Award No. 1534412	\$935	\$0	\$935	\$935
	Award No. 1534412	\$1,110	\$0	\$1,110	\$1,110
	Award No. 1460180	\$1,231	\$0	\$1,231	\$1,231
	Award No. 1614593	\$1,700	\$0	\$1,700	\$1,700
	Award No. 1808108	\$3,050	\$0	\$3,050	\$3,050
	Subtotal Finding 1	\$270,408	\$11,777	\$258,631	\$258,631
2	<i>Inadequately Supported Expenses</i>				
Sustained	Award No. 1443014	\$228,141	\$0	\$228,141	\$228,141
	Award No. 1503177	\$3,000	\$0	\$3,000	\$3,000
	Award No. 1614593	\$600	\$0	\$600	\$600
	Award No. 1417750	\$6,000	\$0	\$6,000	\$6,000
	Award No. 1461565	\$4,700	\$0	\$4,700	\$4,700
	Award No. 1460180	\$945	\$0	\$945	\$945
	Award No. 1456832	\$2,296	\$0	\$2,296	\$2,296
	Award No. 1208809	\$317	\$0	\$317	\$317
	Award No. 1644868	\$636	\$0	\$636	\$636
	Subtotal Finding 2	\$246,635	\$0	\$246,635	\$246,635

OIG 20-1-008 Duke University (Duke)
ATTACHMENT 1: Summary Schedule of Allowed and Disallowed Costs

Finding	Audit Report Description	Questioned	Allowed	Disallowed	To Repay via Pay.gov
	<i>Inappropriately Established Supplemental Salary Appointments</i>				
3 Not Sustained	Award No. 1146383	\$773		\$773	\$773
	Award No. 1352672	\$11,102		\$11,102	\$11,102
	Award No. 1418333	\$13,008		\$13,008	\$13,008
	Award No. 1558113	\$20,867		\$20,867	\$20,867
	Award No. 1257882	\$23,107	\$23,107	\$0	\$0
	Award No. 1745595	\$9,066	\$9,066	\$0	\$0
	<i>Subtotal Finding 3</i>	<i>\$77,923</i>	<i>\$32,173</i>	<i>\$45,750</i>	<i>\$45,750</i>
	<i>Inappropriate Drawdown of Expiring Appropriations</i>				
4 Sustained	Award No. 0846437	\$28,593	\$0	\$28,593	\$28,593
	Award No. 1046065	\$1,299	\$0	\$1,299	\$1,299
	<i>Subtotal Finding 4</i>	<i>\$29,892</i>	<i>\$0</i>	<i>\$29,892</i>	<i>\$29,892</i>
	<i>Expenses Not Appropriately Allocated to NSF Awards</i>				
5 Sustained	Award No. 1441497	\$9,137	\$0	\$9,137	\$9,137
	Award No. 1121107	\$1,089	\$0	\$1,089	\$1,089
	Award No. 1146383	\$2,019	\$0	\$2,019	\$2,019
	Award No. 1554181	\$1,789	\$0	\$1,789	\$1,789
	Award No. 1534412	\$9,939	\$0	\$9,939	\$9,939
	Award No. 1501954	\$1,687	\$0	\$1,687	\$1,687
	Award No. 1550911	\$2,592	\$0	\$2,592	\$2,592
	Award No. 1644757	\$467	\$0	\$467	\$467
	<i>Subtotal Finding 5</i>	<i>\$28,719</i>	<i>\$0</i>	<i>\$28,719</i>	<i>\$28,719</i>
	<i>Goods and Services Not Appropriately Procured</i>				
6 Sustained	Award No. 1044191	\$6,280	\$0	\$6,280	\$6,280
	Award No. 1624645	\$17,126	\$0	\$17,126	\$17,126
	<i>Subtotal Finding 6</i>	<i>\$23,406</i>	<i>\$0</i>	<i>\$23,406</i>	<i>\$23,406</i>

OIG 20-1-008 Duke University (Duke)		ATTACHMENT 1: Summary Schedule of Allowed and Disallowed Costs				To Repay via
Finding	Audit Report Description	Questioned	Allowed	Disallowed	Pay.gov	
	<i>Insufficient Review of Payments to Consortium</i>					
7						
Sustained	Award No. 1249135	\$10,144	\$1,672	\$8,472	\$8,472	
	Award No. 1249135	\$1,984	\$0	\$1,984	\$1,984	
	Award No. 1249135	\$360	\$0	\$360	\$360	
	Award No. 1249135	\$38	\$0	\$38	\$38	
	<i>Subtotal Finding 7</i>	<i>\$12,526</i>	<i>\$1,672</i>	<i>\$10,854</i>	<i>\$10,854</i>	
	<i>Non-Compliance with NSF Award Terms and Conditions</i>					
8						
Sustained	Award No. 1644868	\$10,000	\$0	\$10,000	\$10,000	
	<i>Subtotal Finding 8</i>	<i>\$10,000</i>	<i>\$0</i>	<i>\$10,000</i>	<i>\$10,000</i>	
	<i>Indirect Costs Not Appropriately Applied</i>					
9						
Sustained	Award No. 1045153	\$8,183	\$0	\$8,183	\$8,183	
	Award No. 1708741	\$1,214	\$0	\$1,214	\$1,214	
	<i>Subtotal Finding 9</i>	<i>\$9,397</i>	<i>\$0</i>	<i>\$9,397</i>	<i>\$9,397</i>	
	<i>Indirect Costs Inappropriately Applied at the Provisional Rate</i>					
10						
Not Sustained	Multiple awards	\$0	\$0	\$0	\$0	
	<i>Non-compliance with Duke Policies</i>					
11						
Sustained	Multiple awards	\$0	\$0	\$0	\$0	
TOTALS		<i>\$708,906</i>	<i>\$45,622</i>	<i>\$663,284</i>	<i>\$663,284</i>	

OIG 20-1-008 Duke University (Duke) ATTACHMENT 1 (continued)

COMPLIANCE AND INTERNAL CONTROL RECOMMENDATIONS

Finding	Recommendation(s)	Final Action Required
1	3-12	yes
2	3-8	yes
3	2-3	yes
4	2-3	yes
5	3-4	yes
6	2-3	yes
7	3	no
8	2	yes
9	2	yes
10	1	yes
11	1	yes
	2	no
	3	no
	4	no
	5	yes
	6	no
	7	no