



| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|---|-----|--------------------------|-----|----------------------------|-----|---------------------------------|--|-------------------|--|---|-------------|--|-----|--|-------------|-------|--|---|--|--|-------------|
| <p>Recipient Information</p> <p>1. Recipient Name HEALTH AND SENIOR SERVICES, MISSOURI DEPARTMENT OF 920 WILDWOOD DR JEFFERSON CITY, 65109</p> <p>2. Congressional District of Recipient 03</p> <p>3. Payment System Identifier (ID) [REDACTED]</p> <p>4. Employer Identification Number (EIN) [REDACTED]</p> <p>5. Data Universal Numbering System (DUNS) 878092600</p> <p>6. Recipient's Unique Entity Identifier UETLXV8NG8F4</p> <p>7. Project Director or Principal Investigator Jeff Wenzel, BS jeff.wenzel@health.mo.gov (573) 522-2101</p> <p>8. Authorized Official Marcia Mahaney GRANTS@HEALTH.MO.GOV (573) 526-6049</p> | <p>Federal Award Information</p> <p>11. Award Number 1U01DA053893-01</p> <p>12. Unique Federal Award Identification Number (FAIN) U01DA053893</p> <p>13. Statutory Authority 42 USC 241 31 USC 6305 42 CFR 52</p> <p>14. Federal Award Project Title Wastewater Detection of COVID-19</p> <p>15. Assistance Listing Number 93.310</p> <p>16. Assistance Listing Program Title Trans-NIH Research Support</p> <p>17. Award Action Type New Competing (REVISED)</p> <p>18. Is the Award R&D? Yes</p> | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Federal Agency Information</p> <p>9. Awarding Agency Contact Information Amy Connolly Grants Management Specialist NATIONAL INSTITUTE ON DRUG ABUSE connolla@mail.nih.gov (301) 827-4457</p> <p>10. Program Official Contact Information Tamara Slipchenko NATIONAL INSTITUTE ON DRUG ABUSE tamara.slipchenko@nih.gov 301-435-7696</p> | <p>Summary Federal Award Financial Information</p> <table border="1"> <tr> <td colspan="2">19. Budget Period Start Date 01/01/2021 – End Date 07/31/2022</td> </tr> <tr> <td>20. Total Amount of Federal Funds Obligated by this Action</td> <td style="text-align: right;">\$0</td> </tr> <tr> <td> 20 a. Direct Cost Amount</td> <td style="text-align: right;">\$0</td> </tr> <tr> <td> 20 b. Indirect Cost Amount</td> <td style="text-align: right;">\$0</td> </tr> <tr> <td>21. Authorized Carryover</td> <td></td> </tr> <tr> <td>22. Offset</td> <td></td> </tr> <tr> <td>23. Total Amount of Federal Funds Obligated this budget period</td> <td style="text-align: right;">\$2,000,000</td> </tr> <tr> <td>24. Total Approved Cost Sharing or Matching, where applicable</td> <td style="text-align: right;">\$0</td> </tr> <tr> <td>25. Total Federal and Non-Federal Approved this Budget Period</td> <td style="text-align: right;">\$2,000,000</td> </tr> <tr> <td colspan="2">-----</td> </tr> <tr> <td colspan="2">26. Project Period Start Date 01/01/2021 – End Date 05/31/2023</td> </tr> <tr> <td>27. Total Amount of the Federal Award including Approved Cost Sharing or Matching this Project Period</td> <td style="text-align: right;">\$2,000,000</td> </tr> </table> <p>28. Authorized Treatment of Program Income Additional Costs</p> <p>29. Grants Management Officer - Signature Amy Connolly</p> | 19. Budget Period Start Date 01/01/2021 – End Date 07/31/2022 | | 20. Total Amount of Federal Funds Obligated by this Action | \$0 | 20 a. Direct Cost Amount | \$0 | 20 b. Indirect Cost Amount | \$0 | 21. Authorized Carryover | | 22. Offset | | 23. Total Amount of Federal Funds Obligated this budget period | \$2,000,000 | 24. Total Approved Cost Sharing or Matching, where applicable | \$0 | 25. Total Federal and Non-Federal Approved this Budget Period | \$2,000,000 | ----- | | 26. Project Period Start Date 01/01/2021 – End Date 05/31/2023 | | 27. Total Amount of the Federal Award including Approved Cost Sharing or Matching this Project Period | \$2,000,000 |
| 19. Budget Period Start Date 01/01/2021 – End Date 07/31/2022 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20. Total Amount of Federal Funds Obligated by this Action | \$0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 a. Direct Cost Amount | \$0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 b. Indirect Cost Amount | \$0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 21. Authorized Carryover | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22. Offset | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23. Total Amount of Federal Funds Obligated this budget period | \$2,000,000 | | | | | | | | | | | | | | | | | | | | | | | | |
| 24. Total Approved Cost Sharing or Matching, where applicable | \$0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 25. Total Federal and Non-Federal Approved this Budget Period | \$2,000,000 | | | | | | | | | | | | | | | | | | | | | | | | |
| ----- | | | | | | | | | | | | | | | | | | | | | | | | | |
| 26. Project Period Start Date 01/01/2021 – End Date 05/31/2023 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27. Total Amount of the Federal Award including Approved Cost Sharing or Matching this Project Period | \$2,000,000 | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>30. Remarks Acceptance of this award, including the "Terms and Conditions," is acknowledged by the recipient when funds are drawn down or otherwise requested from the grant payment system.</p> | | | | | | | | | | | | | | | | | | | | | | | | | |



SECTION I – AWARD DATA – 1U01DA053893-01 REVISED

Principal Investigator(s):

Jeff Wenzel, BS

Award e-mailed to: grants@health.mo.gov

Dear Authorized Official:

The National Institutes of Health hereby revises this award (see “Award Calculation” in Section I and “Terms and Conditions” in Section III) to MISSOURI STATE DEPT/ HEALTH & SENIOR SRV in support of the above referenced project. This award is pursuant to the authority of 42 USC 241 31 USC 6305 42 CFR 52 and is subject to the requirements of this statute and regulation and of other referenced, incorporated or attached terms and conditions.

Acceptance of this award, including the "Terms and Conditions," is acknowledged by the recipient when funds are drawn down or otherwise requested from the grant payment system.

Each publication, press release, or other document about research supported by an NIH award must include an acknowledgment of NIH award support and a disclaimer such as “Research reported in this publication was supported by the National Institute On Drug Abuse of the National Institutes of Health under Award Number U01DA053893. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.” Prior to issuing a press release concerning the outcome of this research, please notify the NIH awarding IC in advance to allow for coordination.

Award recipients must promote objectivity in research by establishing standards that provide a reasonable expectation that the design, conduct and reporting of research funded under NIH awards will be free from bias resulting from an Investigator’s Financial Conflict of Interest (FCOI), in accordance with the 2011 revised regulation at 42 CFR Part 50 Subpart F. The Institution shall submit all FCOI reports to the NIH through the eRA Commons FCOI Module. The regulation does not apply to Phase I Small Business Innovative Research (SBIR) and Small Business Technology Transfer (STTR) awards. Consult the NIH website <http://grants.nih.gov/grants/policy/coi/> for a link to the regulation and additional important information.

If you have any questions about this award, please direct questions to the Federal Agency contacts.

Sincerely yours,

Amy Connolly
Grants Management Officer
NATIONAL INSTITUTE ON DRUG ABUSE

Additional information follows

Cumulative Award Calculations for this Budget Period (U.S. Dollars)

| | |
|--|--------------------|
| Salaries and Wages | \$232,644 |
| Fringe Benefits | \$145,403 |
| Personnel Costs (Subtotal) | \$378,047 |
| Materials & Supplies | \$935 |
| Subawards/Consortium/Contractual Costs | \$1,533,251 |
| ADP/Computer Services | \$11,780 |
| | |
| Federal Direct Costs | \$1,924,013 |
| Federal F&A Costs | \$75,987 |
| Approved Budget | \$2,000,000 |
| Total Amount of Federal Funds Authorized (Federal Share) | \$2,000,000 |
| TOTAL FEDERAL AWARD AMOUNT | \$2,000,000 |
| | |
| AMOUNT OF THIS ACTION (FEDERAL SHARE) | \$0 |

| SUMMARY TOTALS FOR ALL YEARS (for this Document Number) | | |
|---|-------------|-------------------|
| YR | THIS AWARD | CUMULATIVE TOTALS |
| 1 | \$2,000,000 | \$2,000,000 |
| 2 | \$1,962,927 | \$1,962,927 |

Recommended future year total cost support, subject to the availability of funds and satisfactory progress of the project

Fiscal Information:

Payment System Identifier: [REDACTED]
Document Number: UDA053893AC4
PMS Account Type: P (Subaccount)
Fiscal Year: 2021

| IC | CAN | 2021 | 2022 |
|----|---------|-------------|-------------|
| OD | 8047869 | \$2,000,000 | \$1,962,927 |

Recommended future year total cost support, subject to the availability of funds and satisfactory progress of the project

NIH Administrative Data:

PCC: TR/TXS / OC: 41026 / Released: Connolly, Amy 04/29/2022
Award Processed: 05/02/2022 12:09:30 AM

SECTION II – PAYMENT/HOTLINE INFORMATION – 1U01DA053893-01 REVISED

For payment and HHS Office of Inspector General Hotline information, see the NIH Home Page at <http://grants.nih.gov/grants/policy/awardconditions.htm>

SECTION III – STANDARD TERMS AND CONDITIONS – 1U01DA053893-01 REVISED

This award is based on the application submitted to, and as approved by, NIH on the above-titled project and is subject to the terms and conditions incorporated either directly or by reference in the following:

- a. The grant program legislation and program regulation cited in this Notice of Award.
- b. Conditions on activities and expenditure of funds in other statutory requirements, such as those included in appropriations acts.
- c. 45 CFR Part 75.
- d. National Policy Requirements and all other requirements described in the NIH Grants Policy Statement, including addenda in effect as of the beginning date of the budget period.
- e. Federal Award Performance Goals: As required by the periodic report in the RPPR or in the final progress report when applicable.

f. This award notice, INCLUDING THE TERMS AND CONDITIONS CITED BELOW.

(See NIH Home Page at <http://grants.nih.gov/grants/policy/awardconditions.htm> for certain references cited above.)

Research and Development (R&D): All awards issued by the National Institutes of Health (NIH) meet the definition of “Research and Development” at 45 CFR Part§ 75.2. As such, auditees should identify NIH awards as part of the R&D cluster on the Schedule of Expenditures of Federal Awards (SEFA). The auditor should test NIH awards for compliance as instructed in Part V, Clusters of Programs. NIH recognizes that some awards may have another classification for purposes of indirect costs. The auditor is not required to report the disconnect (i.e., the award is classified as R&D for Federal Audit Requirement purposes but non-research for indirect cost rate purposes), unless the auditee is charging indirect costs at a rate other than the rate(s) specified in the award document(s).

Carry over of an unobligated balance into the next budget period requires Grants Management Officer prior approval.

This award is subject to the requirements of 2 CFR Part 25 for institutions to obtain a unique entity identifier (UEI) and maintain an active registration in the System for Award Management (SAM). Should a consortium/subaward be issued under this award, a UEI requirement must be included. See <http://grants.nih.gov/grants/policy/awardconditions.htm> for the full NIH award term implementing this requirement and other additional information.

This award has been assigned the Federal Award Identification Number (FAIN) U01DA053893. Recipients must document the assigned FAIN on each consortium/subaward issued under this award.

Based on the project period start date of this project, this award is likely subject to the Transparency Act subaward and executive compensation reporting requirement of 2 CFR Part 170. There are conditions that may exclude this award; see <http://grants.nih.gov/grants/policy/awardconditions.htm> for additional award applicability information.

In accordance with P.L. 110-161, compliance with the NIH Public Access Policy is now mandatory. For more information, see NOT-OD-08-033 and the Public Access website: <http://publicaccess.nih.gov/>.

This award is funded by the following list of institutes. Any papers published under the auspices of this award must cite the funding support of all institutes.

| |
|--|
| Office Of The Director, National Institutes Of Health (OD) |
|--|

In accordance with the regulatory requirements provided at 45 CFR 75.113 and Appendix XII to 45 CFR Part 75, recipients that have currently active Federal grants, cooperative agreements, and procurement contracts with cumulative total value greater than \$10,000,000 must report and maintain information in the System for Award Management (SAM) about civil, criminal, and administrative proceedings in connection with the award or performance of a Federal award that reached final disposition within the most recent five-year period. The recipient must also make semiannual disclosures regarding such proceedings. Proceedings information will be made publicly available in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System (FAPIIS)). Full reporting requirements and procedures are found in Appendix XII to 45 CFR Part 75. This term does not apply to NIH fellowships.

Treatment of Program Income:

Additional Costs

SECTION IV – DA SPECIFIC AWARD CONDITIONS – 1U01DA053893-01 REVISED

Clinical Trial Indicator: No

REVISION #4 - NO COST EXTENSION APPROVED

This revised award changes the budget period end dates from 5/31/2022 to 7/31/2022 in accordance with the request submitted on 3/30/2022 from Elissa Biggers (Missouri State Department of Health and Senior Services). The project period end date remains unchanged.

This revision supersedes Notice of Award (NoA) issued 12/6/2021. All other terms below remain applicable.

REVISION #3 - MID-PROJECT EXTENSION

This revision authorizes an administrative no-cost extension due to **large unobligated balance** and supersedes previous grant award issued 3/24/2021. The revised budget period end date is 5/31/2022. The project period end date has also been adjusted.

An updated Research Performance Progress Report (RPPR) is due on or before 4/1/2022.

REVISION #2 - EIN CHANGE

This award is revised to re-obligate funds under the correct Entity Identification Number for the Recipient.

Supersedes Notice of Award (NoA) issued 03/23/21.

REVISION #1 - FUNDING ADJUSTMENT

This award is revised to deobligate funds that were issued to the Entity Identification Number listed on this Notice of Award (NoA). This award will be revised again to re-obligate funds under the correct EIN # for the Recipient.

Supersedes Notice of Award (NoA) issued 12/21/20.

OD FUNDING

This award is funded as part of the RADx-rad Wastewater Detection of SARS-COV-2 (RADx-rad) initiative, Office of the Director, NIH, and administered by the National Institute on Drug Abuse (NIDA). This initiative is funded by appropriations provided by the Paycheck Protection Program and Health Care Enhancement Act, Public Law 116-139.

COOPERATIVE AGREEMENT

This award is issued as a Cooperative Agreement, a financial assistance mechanism in which substantial NIH scientific and/or programmatic involvement is anticipated in the performance of the activity. This award is subject to the Cooperative Agreement Terms and Conditions of Award as set forth in **RFA-OD-20-015, "Emergency Awards: RADx-rad Wastewater Detection of SARS-COV-2 (COVID-19) (U01 - Clinical Trials Not Allowed),"** release date **08/06/20**, which are incorporated by reference as special terms and conditions of this award.

This RFA may be accessed at <https://grants.nih.gov/grants/guide/rfa-files/RFA-OD-20-015.html>

The NIH Project Scientist for this Cooperative Agreement is: **Danielle Carlin**

Email: danielle.carlin@nih.gov

Phone: 984-287-3244

Office of Communications and Public Liaison (OCPL) REQUIREMENT

Prior to publicly communicating about your award, including a press release, web content, social media, etc., please coordinate with NIH by providing the name and contact information for the Public Information Officer (PIO) at your university to renate.myles@nih.gov, amanda.fine@nih.gov, and emma.wojtowicz@nih.gov at the NIH Office of Communications and Public Liaison, who will work with your PIO to coordinate the timing of announcements.

SPECIAL AWARD CONDITION- MILESTONES

Future NIDA support for this grant is contingent upon the following milestones as approved in the grant application. In the event that the actual milestones are not met, NIDA may consider withholding future support and/or negotiating an orderly phase-out of this grant:

- *FY2021 Quarter 1: Begin assembling program team; receive funding from federal award agency; communicate with potential project partners; begin sample collection and data analysis when possible; develop messaging and outreach strategies around data and findings; manage and communicate data weekly to partners, governor's office, and key decision-makers; participate in monthly RADx-rad Data Coordinating Center (DCC)-organized progress meetings; the existing RT-qPCR method will be fully optimized to further improve the precision, accuracy, reproducibility, performance/cost ratio and analytical capacity; initiate the metabolomic global profiling analysis to identify the molecules in the wastewater that significantly reduce the stability of the genetic markers. Initiate studies to characterize biophysical properties of RNA in wastewater.*
- *FY2021 Quarter 2: Begin sample collection and data analysis; manage and communicate data weekly to partners, governor's office, and key decision-makers; present findings and progress to LPHAs and facilities in organized meeting; participate in monthly RADx-rad DCC-organized progress meetings; participate in twice annual meetings with all RADx-rad awardees; continue on metabolomic global profiling and statistical analysis using XCMS-METLIN metabolomic platform; perform bioassay-guided purification to identify the bioactive molecules. Complete biophysical property characterization.*
- *FY2021 Quarter 3: Continuation of sample collection and data analysis; manage and communicate data weekly to partners, governor's office, and key decision-makers; participate in monthly RADx-rad DCC organized progress meetings; complete Aim 1 Component 2 by determining best sample frequency for public health actions; perform step-wise regression and correlation analysis with the chemical profiling among the samples from different facilities to identify the cluster of the molecules that are associated with the signal suppression; compile the list of the identified biomolecules in the wastewater that significantly suppress the signals of the genetic markers.*
- *FY2021 Quarter 4: Continuation of sample collection and data analysis; manage and communicate data weekly to partners, governor's office, and key decision-makers; present findings and progress to LPHAs and facilities in organized meeting; participate in monthly RADx-rad DCC-organized progress meetings; participate in twice annual meetings with all RADx-rad awardees; develop the LCMSMS to quantify the levels of these molecules in the affected wastewater.*
- *FY2022 Quarter 1: Evaluate project to determine method of continuation and data analysis; manage and communicate data weekly to partners, governor's office, and key decision-makers; participate in monthly RADx-rad DCC-organized progress meetings; initiate the growth chamber study to evaluate the effects of the identified compounds (fortified into the simulated wastewater) on the stability of SARS-COV-2 signals. FY2022 Quarter 2: Continuation of sample collection and data analysis; manage and communicate data weekly to partners, governor's office, and key decision-makers; present findings and progress to LPHAs and facilities in organized meeting; participate in monthly RADx-rad DCC-organized progress meetings; participate in twice annual meetings with all RADx-rad awardees; continue on metabolomic global profiling and statistical analysis using XCMS-METLIN metabolomic platform; perform bioassay-guided purification to identify the bioactive molecules.*
- *FY2022 Quarter 3: Continuation of sample collection and data analysis; manage and communicate data weekly to partners, governor's office, and key decision-makers; participate in monthly RADx-rad DCC organized progress meetings; work closely with the team members, PIs and CO-PIs to develop the correction factors needed to achieve more reliable and unbiased surveillance results for the affected wastewater treatment facilities receiving the wastewater from the industries.*
- *FY2022 Quarter 4: Continuation of sample collection and data analysis; manage and communicate data weekly to partners, governor's office, and key decision-makers; present findings and progress to LPHAs and facilities in organized meeting; participate in*

monthly RADx-rad DCC-organized progress meetings; participate in twice annual meetings with all RADx-rad awardees; dissemination of our findings to scientific communities, health professionals, government agencies, wastewater treatment engineers, industries, through webinars, conferences, workshops, reports, and peer-reviewed publication.

CONSORTIUM ACTIVITY

This award includes funds awarded for consortium activities. Consortia are to be established and administered as described in the NIH Grants Policy Statement (NIH GPS), Section on Consortium Agreements - <http://grants.nih.gov/policy/nihgps/index.htm>.

NIDA TERMS

In conjunction with the Acknowledgment of Federal Funding Requirement (as specified in the NIH Grants Policy Statement, Appropriation Mandates- <http://grants.nih.gov/policy/nihgps/index.htm>), in order to most effectively disseminate research results, advance notice should be given to NIDA that research findings are about to be published so that we may coordinate accurate and timely release to the media. This information will be embargoed until the irg/ date. Any press notification should be coordinated with the NIDA Press Officer who can be reached at (301) 443-6245.

The National Institute on Drug Abuse (NIDA) encourages data harmonization to increase comparability, collaboration, and scientific yield of research on drug abuse. Towards that end, NIDA strongly encourages human-subject studies to incorporate a series of measures from the Substance Abuse and Addiction Core and Specialty collections, which are available in the PhenX Toolkit at <http://www.phenxtoolkit.org>. For more information about NIDA's data harmonization efforts, please see NOT-DA-12-008 at <http://grants.nih.gov/grants/guide/notice-files/NOT-DA-12-008.html>.

SPREADSHEET SUMMARY

AWARD NUMBER: 1U01DA053893-01 REVISED

INSTITUTION: MISSOURI STATE DEPT/ HEALTH & SENIOR SRV

| Budget | Year 1 | Year 2 |
|--|-------------|-------------|
| Salaries and Wages | \$232,644 | \$232,644 |
| Fringe Benefits | \$145,403 | \$145,403 |
| Personnel Costs (Subtotal) | \$378,047 | \$378,047 |
| Materials & Supplies | \$935 | \$7,480 |
| Subawards/Consortium/Contractual Costs | \$1,533,251 | \$1,489,633 |
| ADP/Computer Services | \$11,780 | \$11,780 |
| TOTAL FEDERAL DC | \$1,924,013 | \$1,886,940 |
| TOTAL FEDERAL F&A | \$75,987 | \$75,987 |
| TOTAL COST | \$2,000,000 | \$1,962,927 |

| Facilities and Administrative Costs | Year 1 | Year 2 |
|-------------------------------------|-----------|-----------|
| F&A Cost Rate 1 | 20.1% | 20.1% |
| F&A Cost Base 1 | \$378,047 | \$378,047 |
| F&A Costs 1 | \$75,987 | \$75,987 |