



Recipient Information	Federal Award Information																						
<p>1. Recipient Name MISSOURI DEPARTMENT OF HEALTH & SENIOR SERVICES 920 WILDWOOD DR JEFFERSON CITY, MO 65109</p> <p>2. Congressional District of Recipient 03</p> <p>3. Payment System Identifier (ID) 1446000987B7</p> <p>4. Employer Identification Number (EIN) 446000987</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 Gina Henley gina.henley@health.mo.gov 573-526-6049</p>	<p>11. Award Number 4U01DA053893-02</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 Extension with or without funds (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 LEONARDO MARIA Angelone NATIONAL INSTITUTE ON DRUG ABUSE leonardo.angelone@nih.gov 301-827-5946</p>	<p>19. Budget Period Start Date 06/01/2022 – End Date 05/31/2024</p> <table border="1"> <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;">\$1,962,927</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;">\$1,962,927</td> </tr> <tr> <td colspan="2" style="text-align: center;">-----</td> </tr> <tr> <td>26. Project Period Start Date 01/01/2021 – End Date 05/31/2024</td> <td></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;">\$1,962,927</td> </tr> </table> <p>28. Authorized Treatment of Program Income Additional Costs</p> <p>29. Grants Management Officer - Signature Amy Connolly</p>	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	\$1,962,927	24. Total Approved Cost Sharing or Matching, where applicable	\$0	25. Total Federal and Non-Federal Approved this Budget Period	\$1,962,927	-----		26. Project Period Start Date 01/01/2021 – End Date 05/31/2024		27. Total Amount of the Federal Award including Approved Cost Sharing or Matching this Project Period	\$1,962,927
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<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>																							



RESEARCH PROJECT COOPERATIVE AGREEMENT
Department of Health and Human Services
National Institutes of Health

Notice of Award



NATIONAL INSTITUTE ON DRUG ABUSE

SECTION I – AWARD DATA – 4U01DA053893-02 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	\$7,480
Subawards/Consortium/Contractual Costs	\$1,489,633
ADP/Computer Services	\$11,780
Federal Direct Costs	\$1,886,940
Federal F&A Costs	\$75,987
Approved Budget	\$1,962,927
Total Amount of Federal Funds Authorized (Federal Share)	\$1,962,927
TOTAL FEDERAL AWARD AMOUNT	\$1,962,927
AMOUNT OF THIS ACTION (FEDERAL SHARE)	\$0

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

Fiscal Information:

Payment System Identifier: 1446000987B7
Document Number: UDA053893AC6
PMS Account Type: P (Subaccount)
Fiscal Year: 2022

IC	CAN	2022
OD	8050641	\$1,962,927

NIH Administrative Data:

PCC: TR/LMA / OC: 41029 / Released: Connolly, Amy 05/04/2023
Award Processed: 05/05/2023 12:06:40 AM

SECTION II – PAYMENT/HOTLINE INFORMATION – 4U01DA053893-02 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 – 4U01DA053893-02 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 represents the final year of the competitive segment for this grant. See the NIH Grants Policy Statement Section 8.6 Closeout for complete closeout requirements at: <http://grants.nih.gov/grants/policy/policy.htm#gps>.

A final expenditure Federal Financial Report (FFR) (SF 425) must be submitted through the eRA Commons (Commons) within 120 days of the period of performance end date; see the NIH Grants Policy Statement Section 8.6.1 Financial Reports, <http://grants.nih.gov/grants/policy/policy.htm#gps>, for additional information on this submission requirement. The final FFR must indicate the exact balance of unobligated funds and may not reflect any unliquidated obligations. There must be no discrepancies between the final FFR expenditure data and the Payment Management System's (PMS) quarterly cash transaction data. A final quarterly federal cash transaction report is not required for awards in PMS B subaccounts (i.e., awards to foreign entities and to Federal agencies). NIH will close the awards using the last recorded cash drawdown level in PMS for awards that do not require a final FFR on expenditures or quarterly federal cash transaction reporting. It is important to note that for financial closeout, if a grantee fails to submit a required final expenditure FFR, NIH will close the grant using the last recorded cash drawdown level. If the grantee submits a final expenditure FFR but does not reconcile any discrepancies between expenditures reported on the final expenditure FFR and the last cash report to PMS, NIH will close the award at the lower amount. This could be considered a debt or result in disallowed costs.

A Final Invention Statement and Certification form (HHS 568), (not applicable to training, construction, conference or cancer education grants) must be submitted within 120 days of the expiration date. The HHS 568 form may be downloaded at: <http://grants.nih.gov/grants/forms.htm>. This paragraph does not apply to Training grants, Fellowships, and certain other programs—i.e., activity codes C06, D42, D43, D71, DP7, G07, G08, G11, K12, K16, K30, P09, P40, P41, P51, R13, R25, R28, R30, R90, RL5, RL9, S10, S14, S15, U13, U14, U41, U42, U45, UC6, UC7, UR2, X01, X02.

Unless an application for competitive renewal is submitted, a Final Research Performance Progress Report (Final RPPR) must also be submitted within 120 days of the period of performance end date. If a competitive renewal application is submitted prior to that date, then an Interim RPPR must be submitted by that date as well. Instructions for preparing an Interim or Final RPPR are at: https://grants.nih.gov/grants/rppr/rppr_instruction_guide.pdf. Any other specific requirements set forth in the terms and conditions of the award must also be addressed in the Interim or Final RPPR. *Note that data reported within Section I of the Interim and Final RPPR forms will be made public and should be written for a lay person audience.*

NIH strongly encourages electronic submission of the final invention statement through the Closeout feature in the Commons, but will accept an email or hard copy submission as indicated below.

Email: The final invention statement may be e-mailed as PDF attachments to: NIHCloseoutCenter@mail.nih.gov.

Hard copy: Paper submissions of the final invention statement may be faxed to the NIH Division of Central Grants Processing, Grants Closeout Center, at 301-480-2304, or mailed to:

National Institutes of Health
Office of Extramural Research
Division of Central Grants Processing
Grants Closeout Center
6705 Rockledge Drive
Suite 5016, MSC 7986
Bethesda, MD 20892-7986 (for regular or U.S. Postal Service Express mail)
Bethesda, MD 20817 (for other courier/express deliveries only)

NOTE: If this is the final year of a competitive segment due to the transfer of the grant to another institution, then a Final RPPR is not required. However, a final expenditure FFR is required and should be submitted electronically as noted above. If not already submitted, the Final Invention Statement is required and should be sent directly to the assigned Grants Management Specialist.

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)
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Recipients must administer the project in compliance with federal civil rights laws that prohibit discrimination on the basis of race, color, national origin, disability, age, and comply with applicable conscience protections. The recipient will comply with applicable laws that prohibit discrimination on the basis of sex, which includes discrimination on the basis of gender identity, sexual orientation, and pregnancy. Compliance with these laws requires taking reasonable steps to provide meaningful access to persons with limited English proficiency and providing programs that are accessible to and usable by persons with disabilities. The HHS Office for Civil Rights provides guidance on complying with civil rights laws enforced by HHS. See <https://www.hhs.gov/civil-rights/for-providers/provider-obligations/index.html> and <https://www.hhs.gov/>.

- Recipients of FFA must ensure that their programs are accessible to persons with limited English proficiency. For guidance on meeting the legal obligation to take reasonable steps to ensure

meaningful access to programs or activities by limited English proficient individuals, see <https://www.hhs.gov/civil-rights/for-individuals/special-topics/limited-english-proficiency/fact-sheet-guidance/index.html> and <https://www.lep.gov>.

- For information on an institution's specific legal obligations for serving qualified individuals with disabilities, including providing program access, reasonable modifications, and to provide effective communication, see <http://www.hhs.gov/ocr/civilrights/understanding/disability/index.html>.
- HHS funded health and education programs must be administered in an environment free of sexual harassment; see <https://www.hhs.gov/civil-rights/for-individuals/sex-discrimination/index.html>. For information about NIH's commitment to supporting a safe and respectful work environment, who to contact with questions or concerns, and what NIH's expectations are for institutions and the individuals supported on NIH-funded awards, please see <https://grants.nih.gov/grants/policy/harassment.htm>.
- For guidance on administering programs in compliance with applicable federal religious nondiscrimination laws and applicable federal conscience protection and associated anti-discrimination laws, see <https://www.hhs.gov/conscience/conscience-protections/index.html> and <https://www.hhs.gov/conscience/religious-freedom/index.html>.

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 – 4U01DA053893-02 REVISED

Clinical Trial Indicator: No

This award does not support any NIH-defined Clinical Trials. See the NIH Grants Policy Statement Section 1.2 for NIH definition of Clinical Trial.

REVISION #1 - NO COST EXTENSION APPROVED

This revised award changes the budget and project period end dates from 5/31/2023 to 5/31/2024 in accordance with the request submitted on 4/20/23 from Gina Henley (Missouri Department of Health and Senior Services).

This revision supersedes Notice of Award (NoA) issued 4/29/2022. All other terms below remain applicable.

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 American Rescue Plan (ARP) Act of 2021, Public Law 117-2.

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.

- *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.*

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 publication date. Please see the NIDA Special Considerations Page for guidance on coordination with the NIDA Press Office at <https://www.drugabuse.gov/funding/special-considerations-for-nida-funding>, or contact the NIDA Press Office at media@nida.nih.gov.

Please see Special Considerations for NIDA Funding Opportunities and Awards at <https://www.drugabuse.gov/funding/special-considerations-for-nida-funding>

SPREADSHEET SUMMARY

AWARD NUMBER: 4U01DA053893-02 REVISED

INSTITUTION: MISSOURI STATE DEPT/ HEALTH & SENIOR SRV

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

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