



DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Secretary

Findings of Research Misconduct

AGENCY: Office of the Secretary, HHS.

ACTION: Notice.

SUMMARY: Findings of research misconduct have been made against Surangi (Suranji) Jayawardena, Ph.D. (Respondent), who was an Assistant Professor of Chemistry, University of Alabama in Huntsville (UAH). Respondent engaged in research misconduct in grant applications submitted for U.S. Public Health Service (PHS) funds, specifically R21 AI154256, R21 AI152064, R21 AI149142, and R15 AI146978 submitted to the National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH). The administrative actions, including supervision for a period of four (4) years, were implemented beginning on August 18, 2023, and are detailed below.

FOR FURTHER INFORMATION CONTACT:

Sheila Garrity, JD, MPH, MBA
Director
Office of Research Integrity
1101 Wootton Parkway, Suite 240
Rockville, MD 20852
(240) 453-8200

SUPPLEMENTARY INFORMATION: Notice is hereby given that the Office of Research Integrity (ORI) has taken final action in the following case:

Surangi (Suranji) Jayawardena, Ph.D., University of Alabama in Huntsville: Based on the report of an investigation conducted by UAH, an admission by Respondent, and additional analysis conducted by ORI in its oversight review, ORI found that Surangi (Suranji) Jayawardena, Ph.D., who was an Assistant Professor of Chemistry, UAH, engaged in research misconduct in grant applications submitted for PHS funds, specifically R21 AI154256, R21 AI152064, R21 AI149142,

and R15 AI146978 submitted to NIAID, NIH.

ORI found that Respondent engaged in research misconduct by intentionally, knowingly, or recklessly falsifying and/or fabricating data in twelve (12) figure panels in the following four (4) NIH grant applications:

- R21 AI154256, “Designing artificial glycoforms to inhibit binding of *Clostridioides difficile* flagellin to TLR5,” submitted to NIAID, NIH, on October 16, 2019, withdrawn on November 5, 2019
- R21 AI152064, “Multivalent glycoconjugates to inhibit binding of *Clostridioides difficile* flagella to TLR5,” submitted to NIAID, NIH, on June 14, 2019, administratively withdrawn on November 1, 2021
- R21 AI149142, “Rapid Low-cost Diagnostics Assay for Mycobacteria through Magnetic Concentration,” submitted to NIAID, NIH, on February 15, 2019, administratively withdrawn on July 1, 2021
- R15 AI146978, “BACTERIA HOMING-IN GLYCAN SENSING,” submitted to NIAID, NIH, on October 25, 2018, administratively withdrawn on March 1, 2021

Specifically, ORI found that Respondent intentionally, knowingly, or recklessly falsified and/or fabricated the following image data by reusing data from the same source and falsely relabeling the data as representing different experimental conditions with antibiotic particles or bacteria:

- Transmission electron microscopy (TEM) images of:
 - (left) NeuNAc-AuNPs and (middle) enlarged image showing binding of NeuNAc-AuNP binding to flagella and (right) Man-AuNPs in Figure 1b of R21 AI152064
 - (left) NeuNAc-[60]fullerene and (middle) enlarged image showing binding of NeuNAc-[60]fullerene binding to flagella and (right) Man-[60]fullerene in Figure 1e of R21 AI154256
- photos of the formation of magnetic precipitate in a microcentrifuge tube representing:
 - CSL3-magSNPs binding *Pseudomonas aeruginosa* in Figure 3a of R15 AI146978

- ConA-mag beads binding *Mycobacterium bovis* in Figure 2A of R21 AI149142
- photos of the lack of magnetic precipitate in a microcentrifuge tube representing CSL3 magSNPs remaining in solution in the presence of:
 - *Staphylococcus aureus* in Figure 3b of R15 AI146978
 - *Mycobacteria smegmatis* in Figure 3d of R15 AI146978

Additionally, Respondent reported the following images that were falsely relabeled to represent different bacterial experimental conditions:

- photos of the formation of magnetic precipitate in a microcentrifuge tube representing:
 - lectin or antibody treated magnetic beads binding *Mycobacterium bovis* in Figures 2A, 2B, and 2C of R21 AI149142

Respondent entered into a Voluntary Settlement Agreement (Agreement) and voluntarily agreed to the following:

- (1) Respondent will have her research supervised for a period of four (4) years beginning on August 18, 2023 (the “Supervision Period”). Prior to the submission of an application for PHS support for a research project on which Respondent’s participation is proposed and prior to Respondent’s participation in any capacity in PHS-supported research, Respondent will submit a plan for supervision of Respondent’s duties to ORI for approval. The supervision plan must be designed to ensure the integrity of Respondent’s research. Respondent will not participate in any PHS-supported research until such a supervision plan is approved by ORI. Respondent will comply with the agreed-upon supervision plan.
- (2) The requirements for Respondent’s supervision plan are as follows:
 - i. A committee of 2-3 senior faculty members at the institution who are familiar with Respondent’s field of research, but not including Respondent’s supervisor or collaborators, will provide oversight and guidance for a period of four (4) years from the effective date of the Agreement. The committee will review primary data from Respondent’s laboratory on a quarterly basis and submit a report to ORI at six (6)

month intervals setting forth the committee meeting dates and Respondent's compliance with appropriate research standards and confirming the integrity of Respondent's research.

- ii. The committee will conduct an advance review of each application for PHS funds, or report, manuscript, or abstract involving PHS-supported research in which Respondent is involved. The review will include a discussion with Respondent of the primary data represented in those documents and will include a certification to ORI that the data presented in the proposed application, report, manuscript, or abstract are supported by the research record.
- (3) During the Supervision Period, Respondent will ensure that any institution employing her submits, in conjunction with each application for PHS funds, or report, manuscript, or abstract involving PHS-supported research in which Respondent is involved, a certification to ORI that the data provided by Respondent are based on actual experiments or are otherwise legitimately derived and that the data, procedures, and methodology are accurately reported and not plagiarized in the application, report, manuscript, or abstract.
 - (4) If no supervision plan is provided to ORI, Respondent will provide certification to ORI at the conclusion of the Supervision Period that her participation was not proposed on a research project for which an application for PHS support was submitted and that she has not participated in any capacity in PHS-supported research.
 - (5) During the Supervision Period, Respondent will exclude herself voluntarily from serving in any advisory or consultant capacity to PHS including, but not limited to, service on any PHS advisory committee, board, and/or peer review committee.

Dated: August 29, 2023.

Sheila Garrity,

Director, Office of Research Integrity,

Office of the Assistant Secretary for Health.

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