

Allegation and Admission Report: Venkata Sudheer Kumar Ramadugu, PhD

July 30, 2018

Ranjini Ambalavanar, BVSc, PhD
Acting Director, Division of Investigative Oversight
Office of Research Integrity
U.S. Department of Health and Human Services
1101 Wootton Parkway, Suite 750
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Dear Dr. Ambalavanar,

On Monday, June 18, 2018, the UM Research Integrity Office received an email from Robert Kennedy, PhD, Professor and Chair of the UM Chemistry Department, indicating that Ayyalusamy Ramamoorthy, PhD, Robert W. Parry Collegiate Professor of Chemistry and Biophysics (*Complainant*), had a "research compliance" issue involving a postdoctoral researcher in his lab that he would like to discuss.

UM Assistant Research Integrity Officer, Jess Peirson, PhD, spoke with Professor Ramamoorthy on the phone on the morning of Tuesday, June 19, 2018. The Complainant indicated that a colleague had contacted him in early June 2018 with concerns about data in a recent publication. The Complainant told the Assistant RIO that his review of the situation supported his colleague's concerns and that he suspected that data/figures from experiments performed by Venkata Sudheer Kumar Ramadugu, PhD, a postdoctoral researcher in his lab (*Respondent*), had been falsified and/or fabricated. The implicated publication was:

Ramadugu, VSK, Di Mauro, GM, Ravula, T, Ramamoorthy, A. 2017. Polymer nanodiscs and macro-nanodiscs of a varying lipid composition. *Chemical Communications* 53(78): 10824-10826.

A review of Ramadugu et al. (2017) indicated the following two NIH R01 grants to the University of Michigan with A. Ramamoorthy as Contact PI / Project Leader as funding sources: *Investigation of Membrane-bound Cytochromes-p450-b5 Interactions* (Project Number: 5R01GM084018-08) and *Membrane Interaction and Disruption by the Alzheimer's Amyloid-Beta Peptide* (Project Number: 5R01AG048934-03).

Based on the initial conversation with the Complainant, we proceeded with an assessment, during which we interviewed the Complainant, the Respondent, and the two other co-authors on the above-indicated publication. Prior to interviewing the Respondent, we sequestered digital records (UM email and cloud-based storage systems) from all authors on the publication. We also sequestered one computer from the Complainant's lab; the Respondent's departmental laptop computer, his thumb drive, and his laboratory notebooks; and the laboratory notebooks from the two other co-authors, all of which may have contained relevant information or files. Forensic images of the drives were made by the Information Assurance office at UM.

Interviews of the Complainant and the two co-authors on Ramadugu et al. (2017) led to the following initial allegations involving data/figures that were derived from NMR spectroscopy performed by the Respondent:

The spectrum shown in Fig. 2 at the top left (A) is incorrect and was likely modified from a previous experiment (with the x-axis shifted). Two spectra shown in Fig. 3 (DSPC at right-most bottom) are likely falsified or fabricated, as they are identical spectra with the axis manipulated and the original data files could not be located. The spectra shown in Fig. S4 are likely manipulated, as the original data files could not be located. [Please see annotated version of Ramadugu et al. (2017).]

Dr. Peirson and I interviewed the Respondent on the morning of Thursday, June 28, 2018, at which time we explained the general allegations to him. We asked the Respondent to take us through the figures and data in the implicated publication. The Respondent walked us through the publication and made the general admission that some of the data and figures in the manuscript were wrong. We then asked the Respondent if he could provide us with a written report on the validity of all of the figures/data in Ramadugu et al. (2017), including the supplementary material.

The Respondent agreed, and on June 28, 2018, he sent us his report / admission statement. We reviewed the report and returned it to the Respondent for clarification on Tuesday, July 24, 2018. The Respondent provided clarification and returned the signed report to us on the morning of Thursday, July 26, 2018. The Respondent also gave us access to a Google Doc version of the report, in which he had provided comments to our specific questions. We downloaded and reviewed that document on July 26, 2018.

It is my conclusion that the Respondent's report / admission statement encompasses the allegations made by the Complainant and two co-authors on Ramadugu et al. (2017). Based on my review to date, his admission covers the extent of his research misconduct (data fabrication / falsification) as related to Ramadugu et al. (2017). The Respondent has also attested that he did not manipulate any data in his other four co-authored publications published while at the University of Michigan. His co-authors on those publications have also expressed confidence in the validity of those data, and I have no reason at this time to suspect otherwise.

Given the extent of data manipulation, I have asked the Complainant to contact the journal and begin the process for retraction of Ramadugu et al. (2017). We have also informed the Complainant that he may initiate personnel actions, as consistent with University policy.

Based on the Respondent's admission and the lack of any indication of misconduct in his other publications, it is the University's intention to issue its finding of research misconduct at this time, without moving forward to the Inquiry stage. The University considers this case closed.

Best regards,



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