



(Billing Code: 4150-31)

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Secretary

Findings of Research Misconduct

AGENCY: Office of the Secretary, HHS

ACTION: Notice.

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

Brandi M. Baughman, Ph.D., National Institutes of Health (NIH): Based on Respondent's admission and analysis conducted by ORI, ORI found that Dr. Brandi M. Baughman, former Intramural Research Training Awardee, National Institute of Environmental and Health Sciences (NIEHS), NIH, engaged in research misconduct in research supported by National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), NIH, grant R01 DK101645 and the NIEHS, NIH, Postdoctoral Intramural Research Training Award (IRTA).

ORI found that falsified and/or fabricated data were included in eleven (11) figures in *PLoS One* 11(10):e0164378, 2016 (hereafter referred to as "*PLoS One* 2016").

ORI found that Respondent falsified and/or fabricated data and text published in *PLoS One* 2016, in Figures 2, 3, 4, 5, 6, 8, S1, S2, S3, S4, and S5, by claiming that a screening strategy of the kinase

focused libraries, PKIS and 5K, was performed, when original data do not exist to support the claims. Respondent also claimed that three (3) inhibitory compounds for the inositol phosphate kinase, PPIP5K, were identified from the 5K library, when these compounds, UNC10112646, UNC10225354, and UNC10225498, were not part of the data set for the 5K library. Specifically, Respondent falsified and/or fabricated the characterization of the inhibitor compounds in:

- Figures 2 and 3 results for Z' -factor, %CV, signal:background ratio, and a 10-point dose response titration experiment for inhibitor UNC10225354
- claims in the text of *PLoS One* 2016 that eight molecules from the PKIS library and fifteen molecules from the 5K library inhibited PPIP5K activity by >50%
- Figure 4D results for the inhibition by UNC10112646, UNC10225354, and UNC10225498, in dose response assays against the kinase domain of PPIP5K
- Figures 5A and 5B results for isothermal titration calorimetry (ITC) assays for quantifying intermolecular interactions between PPIP5K and the inhibitors, UNC1011264 and UNC10225498, and Figure S5 for UNC10225354
- Figure 6 results for the analysis of the mechanisms of inhibition of PPIP5K by UNC10112646 and UNC10225498

- Figures 8A and 8B results for high performance liquid chromatography (HPLC) analysis for the effects of UNC10112646 or UNC10225498 on PPIP5K activity and IP6K activity
- Figures S1-S4 for experimental results further characterizing UNC10112646, UNC10225498, and other inhibitors, when the results were not supported by the experimental records.

As a result of Respondent's admission, NIH recommended that the *PLoS One* 2016 paper be retracted.

Dr. Baughman has entered into a Voluntary Settlement Agreement with ORI, in which she voluntarily agreed:

- (1) to have her research supervised for a period of three (3) years beginning on May 17, 2017; Respondent agreed to ensure that prior to the submission of an application for U.S. Public Health Service (PHS) support for a research project on which Respondent's participation is proposed and prior to Respondent's participation in any capacity on PHS-supported research, Respondent shall ensure that a plan for supervision of Respondent's duties is submitted to ORI for approval; the supervision plan must be designed to ensure the scientific integrity of Respondent's research contribution; Respondent agreed that she will not participate in any PHS-supported research until a plan for supervision is submitted to and approved by ORI; Respondent agreed to maintain responsibility for compliance with the agreed upon supervision plan;

- (2) that for a period of three (3) years beginning on May 17, 2017, any institution employing her shall submit, 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 in the application, report, manuscript, or abstract;
- (3) to exclude herself from serving in any advisory capacity to PHS including, but not limited to, service on any PHS advisory committee, board, and/or peer review committee, or as a consultant for a period of three (3) years, beginning on May 17, 2017; and
- (4) as a condition of the Agreement, to the retraction or correction of *PLoS One* 11(10):e0164378d, 2016 (PMID: 27736936).

FOR FURTHER INFORMATION CONTACT:

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