Findings of Research Misconduct
Notice Number:
NOT-OD-21-037

Key Dates

Release Date:

December 9, 2020

Related Announcements

None

Issued by

Office of The Director, National Institutes of Health (OD)

Purpose

SUMMARY: Findings of research misconduct have been made against Dr. David J. Panka (Respondent), former Harvard Medical School (HMS) Instructor of Medicine, and former HMS Associate Professor of Medicine at Beth Israel Deaconess Medical Center (BIDMC). Dr. Panka engaged in research misconduct in research supported by U.S. Public Health Service (PHS) funds, specifically National Cancer Institute (NCI), National Institutes of Health (NIH), grants P50 CA093683 and P50 CA101942. The administrative actions, including supervision for a period of three (3) years, were implemented beginning on November 9, 2020, and are detailed below.

FOR FURTHER INFORMATION CONTACT: Elisabeth A. Handley, 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:

Dr. David J. Panka, Harvard Medical School and Beth Israel Deaconess Medical Center: Based on the report of an inquiry conducted by BIDMC and HMS and additional analysis conducted by ORI in its oversight review, ORI found that Dr. Panka, former HMS Instructor of Medicine, and former HMS Associate Professor of Medicine at BIDMC, engaged in research misconduct in research supported by PHS funds, specifically NCI, NIH, grants P50 CA093683 and P50 CA101942.

ORI found that Respondent engaged in research misconduct by intentionally, knowingly, and/or recklessly falsifying and/or fabricating Western blot images by selectively cutting, flipping,

reordering, and reusing the same source images or non-correlated images to represent different results in the following three (3) published papers and one (1) conference presentation:

- The Raf inhibitor BAY 43-9006 (Sorafenib) induces caspase-independent apoptosis in melanoma cells. *Cancer Res*. 2006 Feb 1;66(3):1611-9 (hereafter referred to as "*Cancer Res*. 2006"). Retraction in: *Cancer Res*. 2019 Oct 15;79(20):5459.

- Differential modulatory effects of GSK-3b and HDM2 on sorafenib-induced AIF nuclear translocation (programmed necrosis) in melanoma. *Mol Cancer* 2011 Sep 19;10:115 (hereafter referred as to "*Mol Cancer* 2011").

- Effects of HDM2 antagonism on sunitinib resistance, p53 activation, SDF-1 induction, and tumor infiltration by CD11b+/Gr-1+ myeloid derived suppressor cells. *Mol Cancer* 2013 Mar 5;12:17 (hereafter referred to as "*Mol Cancer* 2013").

- Presentation #5328, "BAY 43-9006 induces apoptosis in melanoma cell lines", presented during Cellular and Molecular Biology session #63 "('Apoptosis 4: Chemotherapeutic Agents II')" on April 20, 2005, at the 96th Annual American Association for Cancer Research (AACR) meeting, held in Anaheim, California (hereafter referred to as the "2005 AACR Presentation").

Specifically, ORI found that Respondent knowingly, intentionally, and/or recklessly falsified and/or fabricated:

- Western blot images in twelve (12) figures of three (3) published papers and one (1) conference presentation by editing, reusing, and relabeling the same source images or the non-correlated blots to represent different results from different experiments. Specifically:

- Respondent reused and relabeled the same source bands to falsely represent different protein expression in the following two figures in *Cancer Res*. 2006 and to represent more than one lane within a single row:

  - Figure 1A, bottom row, in *Cancer Res*. 2006, representing MEK expression in A375, A2058, and SK MEL 5 cells treated by different doses of Bay 43-9006

  - Figure 2C, bottom row, in *Cancer Res*. 2006, representing the expression of Vinculin in the same three cell types without or with Bay 43-9006 treatment at different time points

- Respondent reused and relabeled the same source bands to falsely represent different protein expression in two figures as follows and to represent more than one lane within a single row:

  - Figure 5, bottom row, in the 2005 AACR Presentation, representing the expression of Total Bad in A375 cells with different treatments

  - Figure 2C, second row, in *Cancer Res*. 2006, representing the expression of Bax in three different cell types

- Respondent reused and relabeled the bands that were used for Figure 4, bottom row, in *Cancer Res*. 2006, representing ERK expression in A2058 cell type with different treatments at different time points, to falsely represent the expression of ERK in three different cell types in Figure 1A, second row, in *Cancer Res*. 2006.

- Respondent reused and relabeled the same source bands to falsely represent unrelated experimental results in two rows of Figure 3A in *Cancer Res*. 2006 as follows:

  - Figure 3A, fourth row, in *Cancer Res*. 2006, representing the expression of pBad ser 75 in A2058 cell type with different treatments at different time points

  - Figure 3A, seventh row, in *Cancer Res*. 2006, representing pBad ser 75 expression in A375 cell type with the same treatments and at the same time points as the representation of the fourth row

- Respondent reused and relabeled the source bands to falsely represent unrelated experimental results in two rows of Figure 3A in *Cancer Res*. 2006 as follows:

  - Figure 3A, first row, in *Cancer Res*. 2006, representing the expression of pBad ser 75 in SK MEL 5 cell type with different treatments at different time points

  - Figure 3A, eighth row, in *Cancer Res*. 2006, representing pBad ser 99 expression in A375 cell type with the same treatments and at the same time points as the representation of the first row

- Respondent fabricated the bands that were used for Figure 3A, second row, in *Cancer Res*. 2006, representing the expression of pBad ser 99 in SK MEL 5 cell type with different treatments at different time points by using an unrelated image.

- Respondent reused and relabeled the bands to falsely represent AIF expression in mitochondria of the three cell types with different treatments in Figure 6A, the bottom row, in *Cancer Res*. 2006, by:

  - Duplicating the bands in the second to fourth lanes to represent mitochondria expression in A375 cell type with Bay 43-9006 (second lane), PD 98059 (third lane), and U0126 (fourth lane) treatments

  - duplicating the band for both the fifth and seventh lanes to represent AIF expression in mitochondria of A2058 cell type with no treatment control (fifth lane) and PD 98059 treatment (seventh lane)

- Respondent reused and relabeled the same source bands to falsely represent different experimental results in Figure 3A in *Mol Cancer* 2011 as follows:

  - Figure 3A, first four lanes in the middle row of the left panel, in *Mol Cancer* 2011, representing c-myc expression in nucleus of A375 cell type

- Figure 3A, first four lanes in the middle row of the right panel, in *Mol Cancer* 2011, representing c-myc expression in nucleus of SK MEL 5 cell type

- Respondent reused and relabeled the same source bands to falsely represent different experimental results in Figure 5 in *Mol Cancer* 2011 as follows:

- Figure 5, sixth to eighth lanes of the middle row, in *Mol Cancer* 2011, representing BCL-XL expression in A375-GSK cells with DOX

- Figure 5, last three lanes of the middle row, in *Mol Cancer* 2011, representing BCL-XL expression in SK MEL 5 S9A

- Respondent reused and relabeled the unrelated source bands to falsely represent different experimental results in Figure 5 of *Mol Cancer* 2011 as follows:

- Figure 5, thirteenth to fifteenth lanes of the top row, in *Mol Cancer* 2011, representing BCL2 expression in SK MEL 5 S9A

- Figure 5, thirteenth to fifteenth lanes of the bottom row, in *Mol Cancer* 2011, representing VINCULIN expression in SK MEL 5 S9A

- Respondent reused and relabeled the same source bands to falsely represent different experimental results in Figure 1 in *Mol Cancer* 2013; specifically respondent:

- Reused the bands that were used for Figure 1, fourth to fifth lanes of the second row, in *Mol Cancer* 2013, representing noxa expression in the control group of A498 cell type, to falsely represent noxa expression in the sunitinib resistant group of A498 cells in the same figure, eleventh to twelfth lanes of the second row

- reused the band that was used for Figure 1, eighth lane of the second row, in *Mol Cancer* 2013, representing noxa expression in the third sample of the sunitinib responding group, to falsely represent noxa expression in the fifth sample of the sunitinib responding group in the same figure, tenth lane of the second row

- Respondent reused and relabeled the same source bands to falsely represent different experimental results in Figure 6B in *Mol Cancer* 2013 as follows:

- Figure 6B, first two lanes of the bottom row, in *Mol Cancer* 2013, representing vinculin expression in control group

- Figure 6B, eleventh and twelfth lanes of the bottom row, in *Mol Cancer* 2013, representing vinculin expression in dox + sunitinib Group

- Respondent reused and relabeled the same source bands to falsely represent different experimental results in the following three figures:

- Figure 10, second rows of both upper and lower panels, in the 2005 AACR Presentation, representing pSRC-Y416 expression in A2058 (upper) and A375 (lower) cell types

- Figure 4 in Cancer Res. 2006 and Figure 6 in the 2005 AACR Presentation, second rows of middle and lower panels, representing Bcl-XL expression in A2058 (middle) and SK MEL 5 (lower) cell types

- Respondent reused and relabeled the same source band to falsely represent two different experimental results in Figure 5 in the 2005 AACR Presentation as follows:

- Figure 5, lane 1 of the seventh row, in the 2005 AACR Presentation, representing pBad ser 75 expression at 0 hour in control group

- Figure 5, lane 2 of the seventh row, in the 2005 AACR Presentation, representing pBad ser 75 expression at 1 hour in control group

Dr. Panka entered into a Voluntary Settlement Agreement and agreed to the following:

1. Respondent agreed to have his research supervised for a period of three (3) years beginning on November 9, 2020. Respondent agrees that 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 anticipation 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 agrees that he shall not participate in any PHS-supported research until such a supervision plan is submitted to and approved by ORI. Respondent agrees to maintain responsibility for compliance 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 three (3) 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 any PHS grant applications (including supplements, resubmissions, etc.), manuscripts reporting PHS-funded research submitted for publication, and abstracts. 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/publication are supported by the research record.

3. Respondent agreed that for a period of three (3) years beginning on November 9, 2020, any institution employing him shall submit, in conjunction with each application of 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.

4. If no supervisory plan is provided to ORI, Respondent agreed to provide certification to ORI at the conclusion of the supervision period that he has not engaged in, applied for, or had his name included on any application, proposal, or other request for PHS funds without prior notification to ORI.

5. Respondent agreed to exclude himself voluntarily 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 November 9, 2020.

6. As a condition of the Agreement, Respondent will request that the following papers and conference abstract be corrected or retracted in accordance with 42 CFR 93.407(a)(1) and Sec. 93.411(b):

- *Mol Cancer* 2011 Sep 19;10:115
- *Mol Cancer* 2013 Mar 5;12:17
- 2005 AACR Presentation

Respondent will copy ORI and the Research Integrity Officer at HMS and BIDMC on the correspondence.

Inquiries

Please direct all inquiries to:

Elisabeth A. Handley
Office of Research Integrity
Telephone: 240-453-8200

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