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## Findings of Research Misconduct

Copyright notice

#### **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:

Karen M. D'Souza, Ph.D., University of Chicago: Based on the report of an investigation conducted by the University of Chicago (UC) and additional analysis conducted by ORI in its oversight review, ORI found that Dr. Karen M. D'Souza, former Research Professional Associate, Department of Surgery, UC, engaged in research misconduct in research supported by National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health (NIH), grants K08 HL081472 and R01 HL107949.

ORI found that falsified and/or fabricated data were included in the following one (1) funded NIH grant, two (2) publications, two (2) posters, and one (1) presentation:

- R01 HL107949-01
- *J Biol Chem.* 285(18):13748-60, 2010 Apr 30 (hereafter referred to as "*JBC* 2010")
- *J Biol Chem.* 286(17):15507-16, 2011 Apr 29 (hereafter referred to as "*JBC* 2011")

PMID: 27737272

- Gordon Conference 2006 poster: "Regulation of Myocardial β-Adrenergic Receptor Signaling By Protein Kinase C" (hereafter referred to as "GC2006")
- Huggins 2010 poster:  $G\alpha q$ -mediated activation of GRK2 by mechanical stretch in cardiac myocytes; the role of protein kinase C" (hereafter referred to as "HP2010")
- Cardiac Research Day 2009 presentation: "Regulation of G protein-coupled receptor signaling by mechanical stretch in cardiac myocytes" (hereafter referred to as "CR2009")

ORI found that Respondent reused and falsely relabeled and/or falsely spliced Western blot images, falsified the related densitometry measurements based on the falsified Western blots, and falsified and/or fabricated data for experiments that were not performed or from unrelated experiments.

Specifically, Respondent falsified and/or fabricated data in the following:

• R01 HL107949-01 for:

Figure 1B for Western blots of  $\alpha$ -smooth muscle actin ( $\alpha$ -SMA), Vimentin, Collagen I and Glyceraldehyde 3-Phosphate Dehydrogenase (GAPDH) expression in human cardiac fibroblasts isolated from failing left ventricles (HF) and non-failing heart controls (CF)

Figure 2A for Western blots of G protein-coupled receptor kinase-2 (GRK2) and GAPDH expression in HF and CF, and the related densitometric analysis

• JBC 2011 for:

Figure 1A for a Western blot of Vimentin expression in HF and CF, and the related densitometric analysis

Figures 1D and 2D for Western blots of GAPDH expression in HF and CF, and the related densitometric analyses

• JBC 2010 for:

Figure 7A for Western blots of phosphorylated Rhodopsin (Rho) and GRK2 expression in non-transgenic (NTG) (lanes 1-4) and Protein Kinase  $C\alpha$  cardiac-specific activation (PKC $\alpha$ AC) transgenic (lanes 5-6) mice, and Figure 7B for the related densitometric analysis

• GC2006, Figure 7, HP2010, Figure 5, and CR2009, Slide 15 for:

Western blots of phosphorylated Rho and GRK2 expression in NTG and PKCαAC transgenic mice, and the related densitometric analysis

#### • HP2010 for:

Figure 5 for a Western blot of GRK2 expression in NTG and PKCαAC transgenic mice, and the related densitometric analysis

Dr. D'Souza has entered into a Voluntary Settlement Agreement with ORI, in which she voluntarily agreed to the administrative actions set forth below:

- (1) Respondent agreed that for two (2) years beginning on May 6, 2016, any institution employing her shall submit in conjunction with each application for U.S. Public Health Service (PHS) funds, or report, manuscript, or abstract involving PHS-supported research in which Respondent is involved, a supervision plan to ORI. Respondent agreed that prior to the submission of an application for PHS support for a research project on which the Respondent's participation is proposed and prior to Respondent's participation in any capacity on PHS-supported research, any institution employing her shall ensure that a plan for supervision of her duties is submitted to ORI for approval. The supervision plan must be designed to ensure the scientific integrity of Respondent's PHS-supported research contribution and include the specific elements as outlined below. Respondent agreed that she shall not participate in any PHS-supported research until such a supervision plan is submitted to and approved by ORI. Respondent agreed 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 senior faculty members and officials 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 two (2) years beginning on May 6, 2016. The committee will review PHS-supported primary data from Respondent and submit a report to ORI at six (6) month intervals, setting forth the committee meeting dates, Respondent's compliance with appropriate research standards, and confirming the integrity of Respondent's PHS-supported research.
- ii. The committee will conduct an advance review of any PHS grant application (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 that the data presented in the proposed application/publication is supported by the research record.

- (3) Respondent agreed that for two (2) years beginning on May 6, 2016, 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 at 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) Respondent agreed to exclude herself 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 two (2) years, beginning on May 6, 2016.
- (5) As a condition of the Agreement, Respondent agreed to the retraction of the *JBC* 2010 publication.

### FOR FURTHER INFORMATION CONTACT:

Director, Office of Research Integrity, 1101 Wootton Parkway, Suite 750, Rockville, MD 20852, (240) 453-8200.

Kathryn M. Partin, Director, Office of Research Integrity.