

Author's Accepted Manuscript

Loss of C/EBP δ enhances IR-induced cell death by promoting oxidative stress and mitochondrial dysfunction

Sudip Banerjee, Nukhet Aykin-Burns, Kimberly J. Krager, Sumit K. Shah, Stepan B. Melnyk, Martin Hauer-Jensen, Snehalata A. Pawar



www.elsevier.com

PII: S0891-5849(16)30403-8
DOI: <http://dx.doi.org/10.1016/j.freeradbiomed.2016.08.022>
Reference: FRB12976

To appear in: *Free Radical Biology and Medicine*

Received date: 1 April 2016
Revised date: 26 July 2016
Accepted date: 17 August 2016

Cite this article as: Sudip Banerjee, Nukhet Aykin-Burns, Kimberly J. Krager, Sumit K. Shah, Stepan B. Melnyk, Martin Hauer-Jensen and Snehalata A. Pawar. Loss of C/EBP δ enhances IR-induced cell death by promoting oxidative stress and mitochondrial dysfunction, *Free Radical Biology and Medicine* <http://dx.doi.org/10.1016/j.freeradbiomed.2016.08.022>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and a review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Loss of C/EBP δ enhances IR-induced cell death by promoting oxidative stress and
mitochondrial dysfunction

Sudip Banerjee¹, Nukhet Aykin-Burns¹, Kimberly J. Krager¹, Sumit K. Shah¹, Stepan B.
Melnyk², Martin Hauer-Jensen^{1,3}, Snehalata A. Pawar^{1*}

¹Division of Radiation Health, Department of Pharmaceutical Sciences, College of
Pharmacy, University of Arkansas for Medical Sciences, Little Rock, AR, 72205

²Arkansas Children's Hospital Research Institute, Little Rock, AR, 72205

³Surgical Services, Central Arkansas Veterans Healthcare System, Little Rock, AR,
72205.

*Correspondence: Snehalata A. Pawar, Division of Radiation Health, Department of
Pharmaceutical Sciences, University of Arkansas for Medical Sciences, Little Rock,
Arkansas-72205. Tel.: 501-686-5784, fax: 501-686-6057. SAPawar@uams.edu

Abstract

Exposure of cells to ionizing radiation (IR) generates reactive oxygen species
(ROS). This results in increased oxidative stress and DNA double strand breaks (DSBs)
which are the two underlying mechanisms by which IR causes cell/tissue injury. Cells
that are deficient or impaired in the cellular antioxidant response are susceptible to IR-
induced apoptosis. The transcription factor CCAAT enhancer binding protein delta
(Cebpd, C/EBP δ) has been implicated in the regulation of oxidative stress, DNA

Download English Version:

<https://daneshyari.com/en/article/8267365>

Download Persian Version:

<https://daneshyari.com/article/8267365>

[Daneshyari.com](https://daneshyari.com)