

Accepted Manuscript

Role of the calcium sensing receptor in cardiomyocyte apoptosis via mitochondrial dynamics in compensatory hypertrophied myocardium of spontaneously hypertensive rat

Siting Hong, Xin Zhang, Xiaohui Zhang, Wenxiu Liu, Fu Yu, Yue Liu, Zhiyu Shi, Jinyu Chi, Meng Zhao, Xinhua Yin

PII: S0006-291X(17)30808-2

DOI: [10.1016/j.bbrc.2017.04.126](https://doi.org/10.1016/j.bbrc.2017.04.126)

Reference: YBBRC 37684

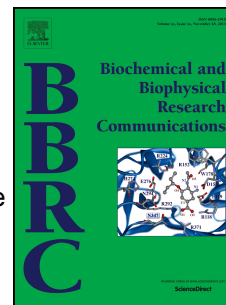
To appear in: *Biochemical and Biophysical Research Communications*

Received Date: 14 April 2017

Accepted Date: 23 April 2017

Please cite this article as: S. Hong, X. Zhang, X. Zhang, W. Liu, F. Yu, Y. Liu, Z. Shi, J. Chi, M. Zhao, X. Yin, Role of the calcium sensing receptor in cardiomyocyte apoptosis via mitochondrial dynamics in compensatory hypertrophied myocardium of spontaneously hypertensive rat, *Biochemical and Biophysical Research Communications* (2017), doi: 10.1016/j.bbrc.2017.04.126.

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 review of the resulting proof before it is published in its final 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.



**Role of the Calcium Sensing Receptor in Cardiomyocyte Apoptosis
via Mitochondrial Dynamics in Compensatory Hypertrophied
Myocardium of Spontaneously Hypertensive Rat**

Siting Hong, Xin Zhang, Xiaohui Zhang, Wenxiu Liu, Fu Yu, YueLiu, Zhiyu Shi,
Jinyu Chi, Meng Zhao, Xinhua Yin*

Department of Cardiology, the First Affiliated Hospital of Harbin Medical University,
Harbin150001, Heilongjiang Province, China

***Corresponding Author:**

Department of Cardiology, the First Affiliated Hospital of Harbin Medical University,
No.23, YouZheng Street, NanGang District, Harbin 150001, Heilongjiang Province,
China

Tel.: +86 451 85555063, +86 18645106868; fax: +86 18645106868.

Email: yinxinhua5063@163.com

ABSTRACT

Calcium sensing receptor (CaSR) mediates pathological cardiac hypertrophy. Mitochondria maintain their function through fission and fusion and disruption of mitochondrial dynamic is linked to various cardiac diseases. This study examined how inhibition of CaSR by the inhibitor Calhex₂₃₁ affected the mitochondrial dynamics in a hypertensive model in rats. Spontaneously hypertensive rats (SHRs) and Wistar Kyoto (WKY) rats were used in this study. Cardiac function and blood pressure was evaluated at the end of the study. SHRs showed increases in the ratio of heart weight to body weight and the levels of CaSR; all of these increases were suppressed by Calhex₂₃₁. Additionally, Calhex₂₃₁ treatment of SHRs changed the expression of proteins involved in mitochondrial dynamics. Our results demonstrated

Download English Version:

<https://daneshyari.com/en/article/5505871>

Download Persian Version:

<https://daneshyari.com/article/5505871>

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