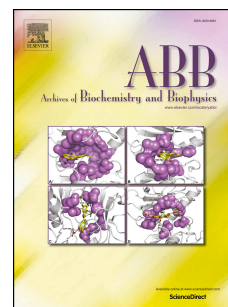


Accepted Manuscript

Effects of quercetin on heart nitric oxide metabolism in I-NAME treated rats

Valeria Calabró, María C. Litterio, César G. Fraga, Monica Galleano, Barbara Piotrkowski



PII: S0003-9861(18)30148-6

DOI: [10.1016/j.abb.2018.03.041](https://doi.org/10.1016/j.abb.2018.03.041)

Reference: YABBI 7701

To appear in: *Archives of Biochemistry and Biophysics*

Received Date: 23 February 2018

Revised Date: 30 March 2018

Accepted Date: 31 March 2018

Please cite this article as: V. Calabró, Mari.C. Litterio, Cé.G. Fraga, M. Galleano, B. Piotrkowski, Effects of quercetin on heart nitric oxide metabolism in I-NAME treated rats, *Archives of Biochemistry and Biophysics* (2018), doi: 10.1016/j.abb.2018.03.041.

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.

Effects of quercetin on heart nitric oxide metabolism in L-NAME treated rats

Valeria Calabró^{a,b}, María C. Litterio^{a,b}, César G. Fraga^{a,b,c}, Monica Galleano^{a,b}, Barbara Piotrkowski^{a,b}

^aFisicoquímica, Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires, Buenos Aires, Argentina.

^bInstituto de Bioquímica y Medicina Molecular (IBIMOL), UBA-CONICET, Buenos Aires, Argentina

^cDepartment of Nutrition, University of California, Davis, USA.

Corresponding author

Monica Galleano

Fisicoquímica

Facultad de Farmacia y Bioquímica

Universidad de Buenos Aires

Junín 956, 1113-Buenos Aires, Argentina

mgallean@ffyb.uba.ar

Declarations of interest: none'

Abstract

This study investigated the effects of a quercetin-supplemented diet on the biochemical changes installed in the heart of NO-deficient rats in terms of oxidants production and NO bioavailability determinants. Sprague-Dawley rats were subjected to N^ω-nitro-L-arginine methyl ester (L-NAME) treatment (360 mg/L L-NAME in the drinking water, 4 d) with or without supplementation with quercetin (4 g/kg diet). L-NAME administration led to increased blood pressure (BP) (30%), decreased nitric oxide synthase (NOS) activity (50%), and increases in NADPH oxidase (NOX)-dependent superoxide anion production (60%) and p47^{phox} protein level (65%). The co-administration of quercetin prevented the increase in BP and the activation of NOX but did not modify the decrease in NOS activity caused by L-NAME. In addition, quercetin affected oxidative stress parameters as glutathione oxidation, and the activities of oxidant detoxifying

Download English Version:

<https://daneshyari.com/en/article/8288582>

Download Persian Version:

<https://daneshyari.com/article/8288582>

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