

Influence of COMT Val¹⁵⁸Met polymorphism on emotional decision-making: a sex-dependent relationship?

Danielle de Souza Costa, Antoine Bechara, Jonas Jardim de Paula, Marco Aurélio Romano-Silva, Humberto Correa, Guilherme Menezes Lage, Débora Marques de Miranda, Leandro Fernandes Malloy-Diniz



PII: S0165-1781(16)30031-2
DOI: <http://dx.doi.org/10.1016/j.psychres.2016.10.073>
Reference: PSY10075

To appear in: *Psychiatry Research*

Received date: 7 January 2016
Revised date: 9 August 2016
Accepted date: 30 October 2016

Cite this article as: Danielle de Souza Costa, Antoine Bechara, Jonas Jardim de Paula, Marco Aurélio Romano-Silva, Humberto Correa, Guilherme Menezes Lage, Débora Marques de Miranda and Leandro Fernandes Malloy-Diniz Influence of COMT Val¹⁵⁸Met polymorphism on emotional decision-making: a sex-dependent relationship?, *Psychiatry Research* <http://dx.doi.org/10.1016/j.psychres.2016.10.073>

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 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.

Influence of *COMT Val¹⁵⁸Met* polymorphism on emotional decision-making: a sex-dependent relationship?

Danielle de Souza Costa^{a,*}, Antoine Bechara^{b,c}, Jonas Jardim de Paula^{a,d}, Marco Aurélio Romano-Silva^{a,e}, Humberto Correa^{a,e}, Guilherme Menezes Lage^{a,f}, Débora Marques de Miranda^{a,g}, Leandro Fernandes Malloy-Diniz^{a,e}

^aNational Institute of Science and Technology of Molecular Medicine (INCT-MM), Federal University of Minas Gerais, Belo Horizonte, MG, Brazil

^bDepartment of Psychology, University of Southern California, Los Angeles, CA, USA

^cBrain and Creativity Institute, University of Southern California, Los Angeles, CA, USA

^dDepartment of Psychology, Faculdade de Ciências Médicas de Minas Gerais, MG, Brazil

^eDepartment of Mental Health, Federal University of Minas Gerais, Belo Horizonte, MG, Brazil

^fDepartment of Physical Education, Federal University of Minas Gerais, Belo Horizonte, MG, Brazil

^gDepartment of Pediatrics, Federal University of Minas Gerais, Belo Horizonte, MG, Brazil

***Corresponding author.** Danielle de Souza Costa School of Medicine, Federal University of Minas Gerais, 190 Prof. Alfredo Balena Avenue, Santa Efigênia, 30130-10 Belo Horizonte, MG, Brazil daniellesouza.psi@gmail.com

Abstract

The biological underpinnings of sex-related differences in decision-making are still under-explored. The *COMT* gene is related to sexual dimorphism and with different choices made under uncertainty, albeit no study has specifically investigated a moderation effect of sex on the association between the *COMT* gene and the performance on decision-making paradigms. In this study, we investigated the influence of the *COMT Val¹⁵⁸Met* polymorphism on Iowa Gambling Task (IGT) performance depending on sex in a healthy adult sample. Participants were 192 healthy adults (84 men and 108 women). The first 40 choices in the IGT were considered decisions under ambiguity and the last 60 choices decisions under risk. To test our moderation hypothesis we used a separate regressions approach. The results revealed a sex-dependent effect of *COMT Val158Met* polymorphism on decision-making as measured by the IGT. Val/Val women showed the best performance in the last trials of the IGT. Therefore, the

Download English Version:

<https://daneshyari.com/en/article/4933849>

Download Persian Version:

<https://daneshyari.com/article/4933849>

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