

SCIENTIFIC REPORTS

OPEN

Erratum: Interaction of cochlin and mechanosensitive channel TREK-1 in trabecular meshwork cells influences the regulation of intraocular pressure

Teresia A. Carreon^{1,2}, Aida Castellanos^{3,4,5}, Xavier Gasull ^{3,4,5} & Sanjoy K. Bhattacharya^{1,2}*Scientific Reports* 7:452; doi:10.1038/s41598-017-00430-2; Article published online 28 March 2017

The original version of this Article contained an error in the Abstract, which now reads:

“In the eye, intraocular pressure (IOP) is tightly regulated and its persistent increase leads to ocular hypertension and glaucoma. We have previously shown that trabecular meshwork (TM) cells might detect aqueous humor fluid shear stress via interaction of the extracellular matrix (ECM) protein cochlin with the cell surface bound and stretch-activated channel TREK-1. We provide evidence here that interaction between both proteins are involved in IOP regulation. Silencing of TREK-1 in mice prevents the previously demonstrated cochlin-overexpression mediated increase in IOP. Biochemical and electrophysiological experiments demonstrate that high shear stress-induced multimeric cochlin produces a qualitatively different interaction with TREK-1 compared to monomeric cochlin. Physiological concentrations of multimeric but not monomeric cochlin reduce TREK-1 current. Results presented here indicate that the interaction of TREK-1 and cochlin play an important role for maintaining IOP homeostasis.”

This has now been corrected in the HTML and PDF versions of this Article.



Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.

© The Author(s) 2017

¹Bascom Palmer Eye Institute, University of Miami, Miami, Florida, USA. ²Department of Biochemistry and Molecular Biology, University of Miami, Miami, USA. ³Department of Biomedicine, University of Barcelona, Barcelona, Spain. ⁴Institut d'Investigacions Biomediques August Pi I Sunyer (IDIBAPS), Barcelona, Spain. ⁵Institute of Neurosciences, University of Barcelona, Barcelona, Spain. Correspondence and requests for materials should be addressed to S.K.B. (email: Sbhattacharya@med.miami.edu)