



# Corrigendum: Copper and Cobalt Ions Released From Metal Oxide Nanoparticles Trigger Skin Sensitization

Sung-Hyun Kim, Jin Hee Lee, Kikyung Jung, Jun-Young Yang, Hyo-Sook Shin, Jeong Pyo Lee, Jayoung Jeong, Jae-Ho Oh\* and Jong Kwon Lee\*

Division of Toxicological Research, National Institute of Food and Drug Safety Evaluation, Ministry of Food and Drug Safety, Osong, South Korea

## OPEN ACCESS

### Edited by:

Fatma Mohamady El-Demerdash,  
Alexandria University, Egypt

### \*Correspondence:

Jae-Ho Oh  
mfdsmc@korea.kr  
Jong Kwon Lee  
jkleest@korea.kr

### Specialty section:

This article was submitted to  
Predictive Toxicology,  
a section of the journal  
Frontiers in Pharmacology

**Received:** 22 February 2021

**Accepted:** 11 March 2021

**Published:** 14 April 2021

### Citation:

Kim S-H, Lee JH, Jung K, Yang J-Y, Shin H-S, Lee JP, Jeong J, Oh J-H and Lee JK (2021) Corrigendum: Copper and Cobalt Ions Released From Metal Oxide Nanoparticles Trigger Skin Sensitization. *Front. Pharmacol.* 12:670581. doi: 10.3389/fphar.2021.670581

**Keywords:** skin sensitization, alternative test, KeratinoSens™, LLNA, dissolving nanoparticles, nanoparticles, copper, cobalt

## A Corrigendum on

**Copper and Cobalt ions Released from Metal Oxide Nanoparticles Trigger Skin Sensitization** by Kim S-H, Lee JH, Jung K, Yang J-Y, Shin H-S, Lee JP, Jeong J, Oh J-H and Lee JK (2021). *Front. Pharmacol.* 12:627781. doi: 10.3389/fphar.2021.627781

In the original article, there was an error. The value 0.00  $\mu\text{M}$  was mistakenly inserted instead of 316.57  $\mu\text{M}$ .

A correction has been made to **Results, Evaluation of NPs-Induced Sensitization in the KeratinoSens™ Assay, Paragraph 1:**

“The five metal oxide NPs were assessed for their skin sensitization potential using the KeratinoSens™ assay; the data are shown in Table 2 and Figure 2. CuO and CoO NPs induced activity of the luciferase reporter by over 1.5-fold, suggesting their ability to cause skin sensitization. The other NPs did not increase luciferase activity in the KeratinoSens™ assay. The  $\text{EC}_{1.5}$  value for CuO and CoO NPs was 1.38 and 316.57  $\mu\text{M}$  respectively, classifying them as sensitizers, whereas the values were >1,000  $\mu\text{M}$  for the remaining NPs, classifying them as non-sensitizers.”

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

Copyright © 2021 Kim, Lee, Jung, Yang, Shin, Lee, Jeong, Oh and Lee. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.