



Corrigendum: *Leishmania*-Specific Promiscuous Membrane Protein Tubulin Folding Cofactor D Divulges Th₁/Th₂ Polarization in the Host via ERK-1/2 and p38 MAPK Signaling Cascade

OPEN ACCESS

Edited and reviewed by:

Pedro A. Reche,
Complutense University of
Madrid, Spain

*Correspondence:

Shubhankar K. Singh
shubhankar30@gmail.com
Swaleha Zubair
swalehazubair@yahoo.com
Mohammad Owais
mdowais2012@gmail.com

Specialty section:

This article was submitted to
Vaccines and Molecular Therapeutics,
a section of the journal
Frontiers in Immunology

Received: 07 July 2020

Accepted: 24 July 2020

Published: 09 September 2020

Citation:

Jamal F, Singh MK, Hansa J,
Pushpanjali, Ahmad G, Dikhit MR,
Umar MS, Bimal S, Das P, Mujeeb AA,
Singh SK, Zubair S and Owais M
(2020) Corrigendum:
Leishmania-Specific Promiscuous
Membrane Protein Tubulin Folding
Cofactor D Divulges Th₁/Th₂
Polarization in the Host via ERK-1/2
and p38 MAPK Signaling Cascade.
Front. Immunol. 11:2019.
doi: 10.3389/fimmu.2020.02019

Fauzia Jamal¹, Manish K. Singh², Jagadish Hansa², Pushpanjali², Ghufran Ahmad²,
Manas Ranjan Dikhit³, Mohd Saad Umar¹, Sanjiva Bimal⁴, Pradeep Das⁵,
Anzar Abdul Mujeeb¹, Shubhankar K. Singh^{2*}, Swaleha Zubair^{6*} and Mohammad Owais^{1*}

¹ Interdisciplinary Biotechnology Unit, Aligarh Muslim University, Aligarh, India, ² Department of Microbiology, Rajendra Memorial Research Institute of Medical Sciences, Patna, India, ³ Department of Bioinformatics, Rajendra Memorial Research Institute of Medical Sciences, Patna, India, ⁴ Department of Immunology, Rajendra Memorial Research Institute of Medical Sciences, Patna, India, ⁵ Department of Molecular Biology, Rajendra Memorial Research Institute of Medical Sciences, Patna, India, ⁶ Department of Computer Science, Aligarh Muslim University, Aligarh, India

Keywords: tubulin folding cofactor D, *Leishmania donovani*, immunoprophylaxis, Th₁ response, T-cell proliferation, MAPK signaling, peptide cocktail, humoral response

A Corrigendum on

Leishmania-Specific Promiscuous Membrane Protein Tubulin Folding Cofactor D Divulges Th₁/Th₂ Polarization in the Host via ERK-1/2 and p38 MAPK Signaling Cascade by Jamal, F., Singh, M. K., Hansa, J., Pushpanjali, Ahmad, G., Dikhit, M. R., et al. (2020). *Front. Immunol.* 11:817. doi: 10.3389/fimmu.2020.00817

In the original article, there was a error in **Figure 9C** as published. The flow panels were inadvertently misarranged. The corrected **Figure 9** appears below.

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 © 2020 Jamal, Singh, Hansa, Pushpanjali, Ahmad, Dikhit, Umar, Bimal, Das, Mujeeb, Singh, Zubair and Owais. 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.

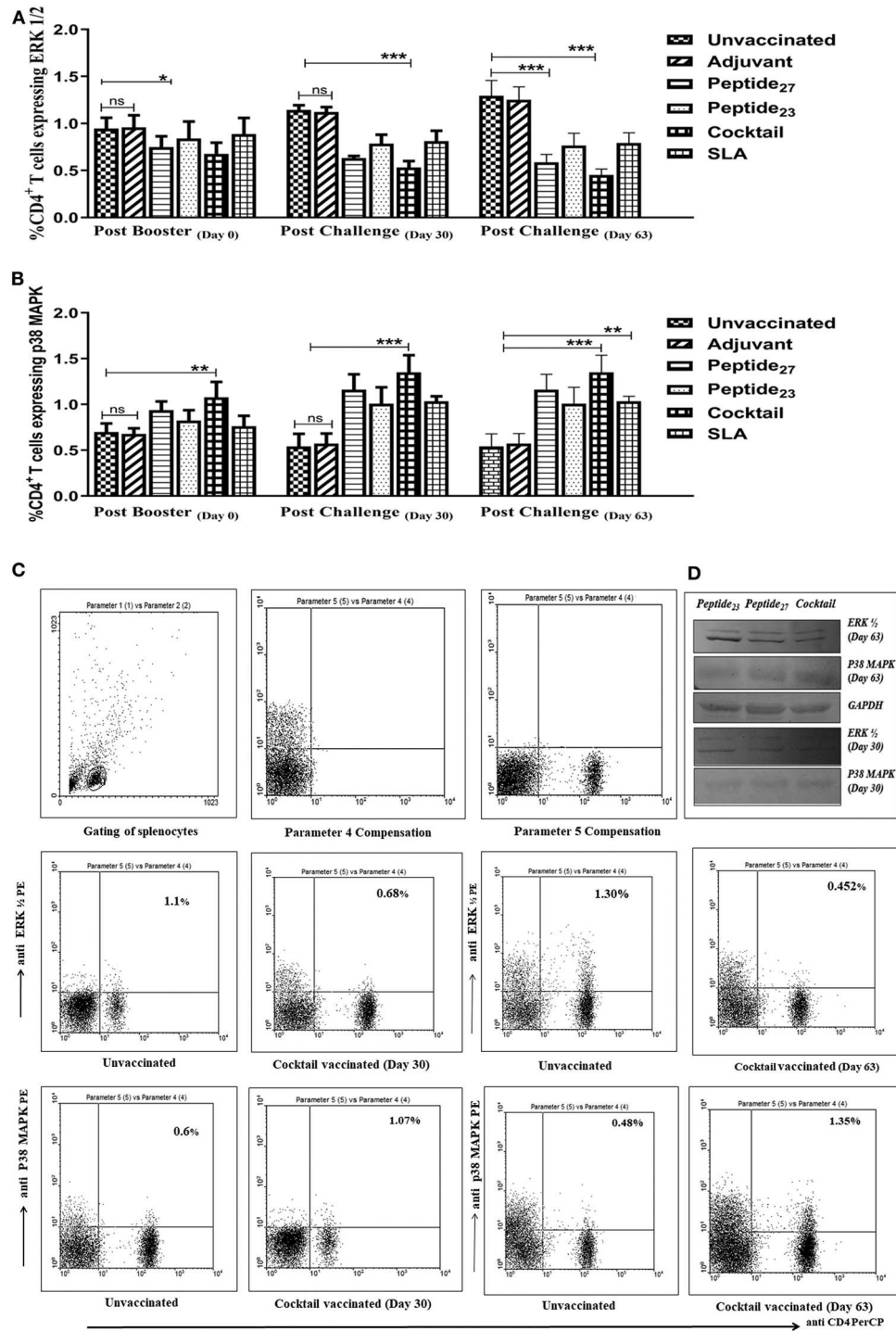


FIGURE 9 | Vaccine-mediated modulation of MAPK signaling cascade as revealed by the estimation of expressed phosphorylated ERK-1/2 and p38 MAPK in CD4⁺ T-cells belonging to various groups of animals immunized with peptide-based vaccines. **(A)** Percentage of CD4⁺ T-cells co-expressing phosphorylated ERK-1/2 in various groups of immunized animals. **(B)** Percentage of CD4⁺ T-cells expressing phosphorylated p38 MAPK in CD4⁺ T-cells belonging to various groups of immunized animals. **(C)** Dot plot showing the mean percentage of CD4⁺ T-cell expressing phosphorylated ERK-1/2 and p38 MAPK on day 30 and 63 in various groups of animals immunized with a peptide-based vaccine. **(D)** Western blot showing the down-regulation of ERK-1/2 and the up-regulation of p38 MAPK in the immune cells of immunized mice. The cell lysate was subjected to SDS-PAGE, followed by blotting to nitrocellulose paper. The blot was probed with specific primary antibodies and horseradish peroxidase-conjugated secondary antibodies at 1:500 and 1:1,000 dilutions, respectively. Each experiment was performed thrice and a value ≤ 0.05 was considered to be significant (* $p \leq 0.05$, ** $p \leq 0.005$, *** $p \leq 0.001$).