

CORRECTION

Open Access



# Correction: The ability of Interleukin–10 to negate haemozoin-related pro-inflammatory effects has the potential to restore impaired macrophage function associated with malaria infection

Dumizulu Tembo<sup>1\*</sup>, Visopo Harawa<sup>1</sup>, Tam C. Tran<sup>2</sup>, Louise Afran<sup>1,3,4,7</sup>, Malcolm E. Molyneux<sup>1,3,4</sup>, Terrie E. Taylor<sup>5,6</sup>, Karl B. Seydel<sup>5,6</sup>, Tonney Nyirenda<sup>7</sup>, David G. Russell<sup>2</sup> and Wilson Mandala<sup>8\*</sup>

**Correction: Malaria Journal (2023) 22:125**  
<https://doi.org/10.1186/s12936-023-04539-w>

Following publication of the original article [1], it was brought to the authors' attention that there was an error in panel A of Fig. 3: the purple lines in the graphs had been rendered in blue while the blue ones had been

rendered in purple. This formatting error has since been corrected in the published article and the corrected Fig. 3 may be seen in this erratum for reference.

The authors thank you for reading this erratum and apologize for any inconvenience caused.

Published online: 20 July 2023

The original article can be found online at <https://doi.org/10.1186/s12936-023-04539-w>.

\*Correspondence:

Dumizulu Tembo

dtembo@mlw.mw

Wilson Mandala

wmandala@must.ac.mw

<sup>1</sup> Malawi-Liverpool-Wellcome Trust Clinical Research Programme, Blantyre, Malawi

<sup>2</sup> Department of Microbiology and Immunology, College of Veterinary Medicine, Cornell University, Ithaca, NY, USA

<sup>3</sup> Liverpool School of Tropical Medicine, Liverpool, UK

<sup>4</sup> University of Liverpool, Liverpool, UK

<sup>5</sup> Blantyre Malaria Project, Blantyre, Malawi

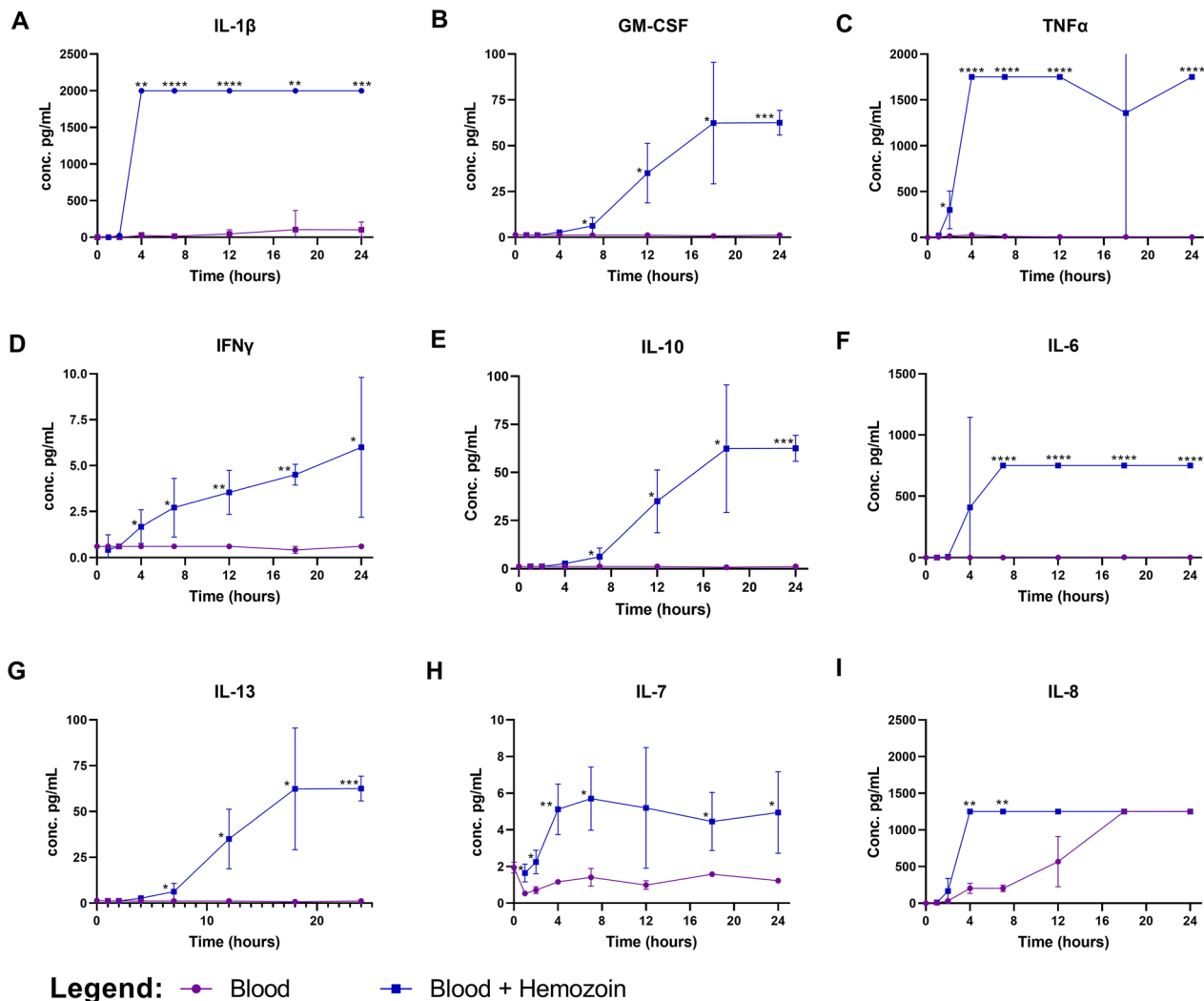
<sup>6</sup> Michigan State University, Michigan, USA

<sup>7</sup> Kamuzu University of Health Sciences, Blantyre, Malawi

<sup>8</sup> Academy of Medical Sciences, Malawi University of Science and Technology, Blantyre, Malawi



© The Author(s) 2023. **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 licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence 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 licence, visit <http://creativecommons.org/licenses/by/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.



**Fig. 3** The effect of haemozoin on cytokine production in vitro: Diluted whole blood from healthy volunteers were stimulated with haemozoin at a final concentration of 60 nmol/mL at 37 °C. Supernatants were collected at 4, 8, 12, 16, 20 and 24 h. Cytokines IL-1β (A), GM-CSF (B), TNF (C), IFN-γ (D), IL-10 (E), IL-6 (F), IL-13 (G), IL-7 (H), and IL8 (I) are measured over time. The 95% confidence interval for each cytokine is reported. Asterisks show significant differences found between unstimulated blood (purple) and blood stimulated with haemozoin (blue) with multiple comparison t-test. \*, p ≤ 0.05; \*\*, p ≤ 0.001; \*\*\*, p ≤ 0.0001; \*\*\*\*, p < 0.0001

**Reference**

1. Tembo D, Harawa V, Tran TC, Afran L, Molyneux ME, Taylor TE, Seydel KB, Nyirenda T, Russell DG, Mandala W. The ability of Interleukin-10 to negate haemozoin-related pro-inflammatory effects has the potential to restore impaired macrophage function associated with malaria infection. *Malar J*. 2023;22:125. <https://doi.org/10.1186/s12936-023-04539-w>.

**Publisher’s Note**

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.