



Corrigendum: Clinical Protocol for a Longitudinal Cohort Study Employing Systems Biology to Identify Markers of Vaccine Immunogenicity in Newborn Infants in The Gambia and Papua New Guinea

OPEN ACCESS

Approved by:

Frontiers Editorial Office,
Frontiers Media SA, Switzerland

*Correspondence:

Olubukola T. Idoko
bukkyidoko@gmail.com;
Olubukola.Idoko@lshtm.ac.uk
Ofer Levy
ofer.levy@childrens.harvard.edu
Beate Kampmann
bkampmann@mrc.gm

†These authors have contributed
equally to this work and shares senior
authorship

Specialty section:

This article was submitted to
Pediatric Immunology,
a section of the journal
Frontiers in Pediatrics

Received: 25 September 2020

Accepted: 28 September 2020

Published: 17 November 2020

Citation:

Idoko OT, Smolen KK, Wariri O,
Imam A, Shannon CP, Dibassey T,
Diray-Arce J, Darboe A, Strandmark J,
Ben-Othman R, Odumade OA,
McEnaney K, Amenyogbe N,
Pomat WS, van Haren S,
Sanchez-Schmitz G, Brinkman RR,
Steen H, Hancock REW, Tebbutt SJ,
Richmond PC, van den
Biggelaar AHJ, Kollmann TR, Levy O,
Ozonoff A and Kampmann B (2020)
Corrigendum: Clinical Protocol for a
Longitudinal Cohort Study Employing
Systems Biology to Identify Markers of
Vaccine Immunogenicity in Newborn
Infants in The Gambia and Papua New
Guinea. *Front. Pediatr.* 8:610461.
doi: 10.3389/fped.2020.610461

Olubukola T. Idoko^{1,2,3,4*}, Kinga K. Smolen^{2,5}, Oghenebrume Wariri¹, Abdulazeez Imam¹, Casey P. Shannon⁶, Tida Dibassey¹, Joann Diray-Arce^{2,5}, Alansana Darboe¹, Julia Strandmark¹, Rym Ben-Othman⁷, Oludare A. Odumade^{2,4,8}, Kerry McEnaney^{2,9}, Nelly Amenyogbe¹⁰, William S. Pomat¹¹, Simon van Haren^{2,5}, Guzmán Sanchez-Schmitz^{2,5}, Ryan R. Brinkman^{12,13}, Hanno Steen^{2,5,14}, Robert E. W. Hancock¹⁵, Scott J. Tebbutt^{6,16,17}, Peter C. Richmond^{10,18}, Anita H. J. van den Biggelaar¹⁰, Tobias R. Kollmann^{10†}, Ofer Levy^{2,5,19*†}, Al Ozonoff^{2,5†}, Beate Kampmann^{1,4*†} and on behalf of The EPIC Consortium

¹ Vaccines and Immunity Theme, Medical Research Council Unit the Gambia at London School of Hygiene and Tropical Medicine, Fajara, Gambia, ² Precision Vaccines Program, Division of Infectious Diseases, Boston Children's Hospital, Boston, MA, United States, ³ CIH LMU Center for International Health, Medical Center of the University of Munich (LMU), Munich, Germany, ⁴ The Vaccine Centre, London School of Hygiene and Tropical Medicine, London, United Kingdom, ⁵ Harvard Medical School, Boston, MA, United States, ⁶ PROOF Centre of Excellence, Vancouver, BC, Canada, ⁷ Department of Pediatrics, BC Children's Hospital, University of British Columbia, Vancouver, BC, Canada, ⁸ Division of Medicine Critical Care, Harvard Medical School, Boston Children's Hospital, Boston, MA, United States, ⁹ Department of Cardiology, Boston Children's Hospital, Boston, MA, United States, ¹⁰ Wesfarmers Centre of Vaccines and Infectious Diseases, Telethon Kids Institute, University of Western Australia, Nedlands, WA, Australia, ¹¹ Papua New Guinea Institute of Medical Research, Goroka, Papua New Guinea, ¹² BC Cancer Agency, Vancouver, BC, Canada, ¹³ Department of Medical Genetics, University of British Columbia, Vancouver, BC, Canada, ¹⁴ Department of Pathology, Boston Children's Hospital, Boston, MA, United States, ¹⁵ Department of Microbiology & Immunology, University of British Columbia, Vancouver, BC, Canada, ¹⁶ Centre for Heart Lung Innovation, University of British Columbia, Vancouver, BC, Canada, ¹⁷ Division of Respiratory Medicine, Department of Medicine, UBC, Vancouver, BC, Canada, ¹⁸ Division of Pediatrics, School of Medicine, Perth Children's Hospital, University of Western Australia, Nedlands, WA, Australia, ¹⁹ Broad Institute of MIT & Harvard, Cambridge, MA, United States

Keywords: markers, newborn, vaccine, immunogenicity, systems biology, OMICS

A Corrigendum on

Clinical Protocol for a Longitudinal Cohort Study Employing Systems Biology to Identify Markers of Vaccine Immunogenicity in Newborn Infants in The Gambia and Papua New Guinea

by Idoko, O. T., Smolen, K. K., Wariri, O., Imam, A., Shannon, C. P., Dibassey, T., et al. (2020). *Front. Pediatr.* 8:197. doi: 10.3389/fped.2020.00197

In the original article, there was an omission in the legend for **Figure 2** as published. "FW" in the figure stands for **Field worker**. The correct legend appears below.

Figure 2 | Field algorithm for management of intercurrent illness during the EPIC-002 study. Green, amber and red signs are as defined in Supplementary Table 2. FW, Field worker.

TABLE 1 | Clinical cohort table for infants recruited in The Gambia (discovery cohort) and Papua New Guinea (validation cohort).

Day of Life (DOL)	Site 1 - The Gambia												Site 2 - Papua New Guinea			
	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10	Group 11	Group 12	Group 1	Group 2	Group 3	Group 4
	HepB only w/ blood draw at Day 1	HepB only w/ blood draw at Day 3	HepB only w/ blood draw at Day 7	BCG only w/ blood draw at Day 1	BCG only w/ blood draw at Day 3	BCG only w/ blood draw at Day 7	HepB & BCG only w/ blood draw at Day 1	HepB & BCG only w/ blood draw at Day 3	HepB & BCG only w/ blood draw at Day 7	NONE with blood draw at Day 1	NONE with blood draw at Day 3	NONE with blood draw at Day 7	NONE	HepB only	BCG only	HepB & BCG
Maternal blood (peripartal)	●												●			
Cord	● [N = 20 pristine samples (pre-vaccine)]												● [N = 20 pristine samples (pre-vaccine)]			
0 (0-24 hrs)	● BCG ● OPV	● BCG ● OPV	● BCG ● OPV	● BCG ● OPV	● BCG ● OPV	● BCG ● OPV	● BCG ● OPV ● HepB	● BCG ● OPV ● HepB	● BCG ● OPV ● HepB	● BCG ● OPV	● BCG ● OPV	● BCG ● OPV	● BCG ● OPV ● HepB	● BCG ● OPV ● HepB	● BCG ● OPV ● HepB	● BCG ● OPV ● HepB
1 (21-27 hrs from Day 0)	● BCG ● OPV			● BCG ● OPV			● BCG ● OPV ● HepB	● BCG ● OPV					● BCG ● OPV ● HepB	● BCG ● OPV ● HepB	● BCG ● OPV ● HepB	● BCG ● OPV ● HepB
3 (65-79 hrs from Day 0)		● BCG ● OPV			● BCG ● OPV		● BCG ● OPV ● HepB	● BCG ● OPV			● BCG ● OPV		● BCG ● OPV ● HepB	● BCG ● OPV ● HepB	● BCG ● OPV ● HepB	● BCG ● OPV ● HepB
7 (6-8 days from Day 0)			● BCG ● OPV			● BCG ● OPV		● BCG ● OPV			● BCG ● OPV		● BCG ● OPV ● HepB			
30 (26-35 days from Day 0)	● EPI	● EPI	● EPI	● EPI	● EPI	● EPI	● EPI	● EPI	● EPI				● EPI	● EPI	● EPI	● EPI
42 (±7 days)	● EPI	● EPI	● EPI		● EPI	● EPI	● EPI	● EPI	● EPI				● EPI	● EPI	● EPI	● EPI
70* (±7 days)	● EPI	● EPI	● EPI		● EPI	● EPI	● EPI	● EPI	● EPI				● EPI	● EPI	● EPI	● EPI
96* (±7 days)	● EPI	● EPI	● EPI		● EPI	● EPI	● EPI	● EPI	● EPI				● EPI	● EPI	● EPI	● EPI
128 (26 to 35 days after EPI 3)	● EPI ● Cell mediated immunity assay	● EPI ● Cell mediated immunity assay	● EPI ● Cell mediated immunity assay	● EPI ● Cell mediated immunity assay	● EPI ● Cell mediated immunity assay	● EPI ● Cell mediated immunity assay	● EPI ● Cell mediated immunity assay	● EPI ● Cell mediated immunity assay	● EPI ● Cell mediated immunity assay				● EPI	● EPI	● EPI	● EPI

* DOL 70 and 96 visits take their reference from the previous visit

LEGEND:

- *in vitro* modeling (tissue construct & whole blood assay)
- OMICs
- Hepatitis B serology
- Cell mediated immunity assay
- HepB Hepatitis B Vaccine
- BCG Bacillus Calmette-Guerin Vaccine
- OPV Oral Polio Vaccine
- EPI Expanded Program on Immunization (OPV, DPT-HepB-Hib, PCV and Rotarix) (Rotarix only at Day 42 and 70) (IPV only at Day 96)
- EPI Expanded Program on Immunization (BCG, HepB and OPV only)
- Rectal swab

In the original article, there was a mistake in **Table 1** as published. Column headings below groups 4, 5, and 6 should read BCG and not HepB. The corrected **Table 1** appears above.

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 Idoko, Smolen, Wariri, Imam, Shannon, Dibasse, Diray-Arce, Darboe, Strandmark, Ben-Othman, Odumade, McEnaney, Amenyogbe, Pomat, van Haren, Sanchez-Schmitz, Brinkman, Steen, Hancock, Tebbutt, Richmond, van den Biggelaar, Kollmann, Levy, Ozonoff and Kampmann. 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.