Check for updates

OPEN ACCESS

APPROVED BY Frontiers Editorial Office, Frontiers Media SA, Switzerland

*CORRESPONDENCE Karsten-H. Weylandt, i karsten.weylandt@mhb-fontane.de Julia Benckert, i julia.benckert@charite.de

[†]These authors have contributed equally to this work and share last authorship

RECEIVED 12 December 2023 ACCEPTED 13 December 2023 PUBLISHED 11 January 2024

CITATION

Leineweber CG, Rabehl M, Pietzner A, Rohwer N, Rothe M, Pech M, Sangro B, Sharma R, Verslype C, Basu B, Sengel C, Ricke J, Schebb NH, Weylandt K-H and Benckert J (2024), Corrigendum: Sorafenib increases cytochrome P450 lipid metabolites in patient with hepatocellular carcinoma. *Front. Pharmacol.* 14:1354581. doi: 10.3389/fphar.2023.1354581

COPYRIGHT

© 2024 Leineweber, Rabehl, Pietzner, Rohwer, Rothe, Pech, Sangro, Sharma, Verslype, Basu, Sengel, Ricke, Schebb, Weylandt and Benckert. This is an openaccess 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.

Corrigendum: Sorafenib increases cytochrome P450 lipid metabolites in patient with hepatocellular carcinoma

Can G. Leineweber^{1,2,3}, Miriam Rabehl^{1,2}, Anne Pietzner^{1,2}, Nadine Rohwer^{1,2,4}, Michael Rothe⁵, Maciej Pech⁶, Bruno Sangro⁷, Rohini Sharma⁸, Chris Verslype⁹, Bristi Basu¹⁰, Christian Sengel¹¹, Jens Ricke¹², Nils Helge Schebb¹³, Karsten-H. Weylandt^{1,2*†} and Julia Benckert^{14*†}

¹Medical Department B, Division of Hepatology, Gastroenterology, Oncology, Hematology, Palliative Care, Endocrinology, and Diabetes, Brandenburg Medical School, University Hospital Ruppin Brandenburg, Neuruppin, Germany, ²Faculty of Health Sciences, Joint Faculty of the Brandenburg University of Technology, Brandenburg Medical School and University of Potsdam, Potsdam, Germany, ³Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain, ⁴Department of Molecular Toxicology, German Institute of Human Nutrition Potsdam-Rehbruecke, Nuthetal, Germany, ⁵Lipidomix, Berlin, Germany, ⁶Department of Radiology and Nuclear Medicine, Otto-von-Guericke University, Magdeburg, Germany, ⁷Liver Unit and HPB Oncology Area, Clinica Universidad de Navarra and CIBEREHD, Pamplona, Spain, ⁸Department of Surgery and Cancer, Imperial College London, London, United Kingdom, ⁹Department of Digestive Oncology, University Hospitals Leuven, Leuven, Belgium, ¹⁰Department of Oncology, University of Cambridge, Cambridge, United Kingdom, ¹¹Radiology Department, Grenoble University Hospital, La Tronche, France, ¹²Department of Radiology, University Hospital, Ludwig-Maximilians-University (LMU) Munich, Munich, Germany, ¹³Chair of Food Chemistry, Faculty of Mathematics and Natural Science, University of Wuppertal, Wuppertal, Germany, ¹⁴Department of Hepatology and Gastroenterology, Charité–Universitätsmedizin Berlin, Corporate Member of Freie Universität Berlin and Humboldt-Universität zu Berlin, Berlin, Germany

KEYWORDS

hepatocellular carcinoma, cytochrome P450, sorafenib, EET, EDP, omega-3 fatty acids, oxylipins, lipidomics

A Corrigendum on

Sorafenib increases cytochrome P450 lipid metabolites in patient with hepatocellular carcinoma

by Leineweber CG, Rabehl M, Pietzner A, Rohwer N, Rothe M, Pech M, Sangro B, Sharma R, Verslype C, Basu B, Sengel C, Ricke J, Schebb NH, Weylandt K-H and Benckert J (2023). Front. Pharmacol. 14:1124214. doi: 10.3389/fphar.2023.1124214

In the published article, there was an error in Figures 2, 3, 5 as published. In an earlier version of the article, the asterisks in the figures mentioned above were not displayed as a visualization of the p-values. The corrected Figures and their unchanged captions appear below.

In the published article, there was an error in the **Funding** statement. The correct Funding statement appears below:

The author(s) declare financial support was received for publication of this article. Publication was funded by the Brandenburg Medical School (Medizinische Hochschule Brandenburg, MHB) publication fund supported by the German Research Foundation (Deutsche



FIGURE 2

Effects on the concentrations of (A) AA-, (B) DHA-, and (C) EPA-derived epoxy-PUFA EETs, EDPs, and EEQs; and (D) AA-derived epoxy-PUFA plus dihydroxy-PUFA, (E) DHA-derived epoxy-PUFA plus dihydroxy-PUFA, and (F) EPA-derived epoxy-PUFA plus dihydroxy-PUFA in the plasma of n = 43 patients with hepatocellular carcinoma (HCC) without and undergoing sorafenib treatment (ng/mL \pm standard error of the mean). Statistical differences were determined using the Wilcoxon signed-rank test (**p < 0.01; ****p < 0.001; ****p < 0.0001).



FIGURE 3

(A) Relative n-3 (docosahexaenoic acid, DHA; eicosapentaenoic acid, EPA) and n-6 (arachidonic acid, AA) PUFA levels in plasma from n = 43 patients with hepatocellular carcinoma (HCC) without and during sorafenib treatment individually, summarized and as a ratio. (B) Relative content of saturated fatty acids (SFA), monounsaturated fatty acids (MUFA) and polyunsaturated fatty acids (PUFA) in plasma from n = 43 patients with HCC without and undergoing sorafenib treatment. Statistical differences were determined using the Wilcoxon signed-rank test (*p < 0.05, **p < 0.01, ****p < 0.001).



N-3 and n-6 PUFA-derived epoxides plus dihydroxy compounds as a marker for the presence of CYP metabolites in plasma from n = 43 patients with HCC without and undergoing sorafenib treatment. (A) Ratio of AA-derived products divided by AA plasma content, (B) ratio of DHA-derived products divided by DHA plasma content, (C) ratio of EPA-derived products divided by EPA plasma content (*p < 0.05, **p < 0.01; ***p < 0.001; ****p < 0.001).

Forschungsgemeinschaft, DFG) and by the Ministry of Science, Research and Culture of the State of Brandenburg.

In the published article, there was a typographical error. A correction has been made to the Introduction. The original sentence stated:

"These epoxymetabolites are then further metabolized via she into their biologically less active corresponding dihydroxy metabolites"

The corrected sentence appears below:

"These epoxymetabolites are then further metabolized via sEH into their biologically less active corresponding dihydroxy metabolites"

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

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.