

## Correction

## Correction to: Use of Physiologically Based Pharmacokinetic (PBPK) Modeling for Predicting Drug-Food Interactions: an Industry Perspective

Arian Emami Riedmaier,<sup>1,24</sup> Kevin DeMent,<sup>2</sup> James Huckle,<sup>3</sup> Phil Bransford,<sup>4</sup> Cordula Stillhart,<sup>5</sup> Richard Lloyd,<sup>6</sup> Ravindra Alluri,<sup>7</sup> Sumit Basu,<sup>8</sup> Yuan Chen,<sup>9</sup> Varsha Dhamankar,<sup>10,11</sup> Stephanie Dodd,<sup>12</sup> Priyanka Kulkarni,<sup>13</sup> Andrés Olivares-Morales,<sup>14</sup> Chi-Chi Peng,<sup>13,15</sup> Xavier Pepin,<sup>16</sup> Xiaojun Ren,<sup>17</sup> Thuy Tran,<sup>18</sup> Christophe Tistaert,<sup>19</sup> Tycho Heimbach,<sup>20</sup> Filippos Kesisoglou,<sup>21</sup> Christian Wagner,<sup>22</sup> and Neil Parrott<sup>23</sup>

Published online 26 November 2020

Erratum to: The AAPS Journal volume 22, Article number: 123 (2020)

https://doi.org/10.1208/s12248-020-00508-2

The BCS classification for furosemide in Table 3 should read IV (not III).

The online version of the original article can be found at https://doi.org/10.1208/s12248-020-00508-2



<sup>&</sup>lt;sup>1</sup> DMPK and Translational Modeling, AbbVie Inc., North Chicago, Illinois, USA.

<sup>&</sup>lt;sup>2</sup> Global DMPK, Takeda Pharmaceutical Co., Ltd., San Diego, California, USA.

<sup>&</sup>lt;sup>3</sup> Drug Product Technology, Amgen, Thousand Oaks, California, USA.

<sup>&</sup>lt;sup>4</sup> Modeling & Informatics, Vertex Pharmaceuticals, Boston, Massachusetts, USA.

<sup>&</sup>lt;sup>5</sup> Pharmaceutical R&D, Formulation & Process Sciences, F.Hoff-mann-La Roche Ltd., Basel, Switzerland.

<sup>&</sup>lt;sup>6</sup> Computational & Modelling Sciences, Platform Technology Sciences, GlaxoSmithKline R&D, Ware, Hertfordshire, UK.

<sup>&</sup>lt;sup>7</sup> Clinical Pharmacology and Safety Sciences, R&D, AstraZeneca, Cambridge, UK.

<sup>&</sup>lt;sup>8</sup> Pharmacokinetic, Pharmacodynamic and Drug Metabolism-Quantitative Pharmacology and Pharmacometrics (PPDM-QP2),Merck & Co, Inc., West Point, Pennsylvania, USA.

Department of Drug Metabolism and Pharmacokinetics, Genentech, South San Francisco, California, USA.

<sup>&</sup>lt;sup>10</sup> Formulation Development, Vertex Pharmaceuticals, Boston, Massachusetts, USA.

<sup>&</sup>lt;sup>11</sup> Present Address: Formulation Development, Cyclerion Therapeutics Inc., Cambridge, Massachusetts, USA.

<sup>&</sup>lt;sup>12</sup> Chemical & Pharmaceutical Profiling, Novartis Institutes for Biomedical Research, Cambridge, Massachusetts, USA.

<sup>&</sup>lt;sup>13</sup> Department of Pharmacokinetics and Drug Metabolism, AmgenInc, Cambridge, Massachusetts, USA.

<sup>&</sup>lt;sup>14</sup> Pharmaceutical Sciences, Roche Pharmaceutical Research and Early Development, Roche Innovation Center, Basel, Switzerland.

<sup>&</sup>lt;sup>15</sup> Present Address: Drug Metabolism and Pharmacokinetics, Theravance Biopharma. South San Francisco, California, USA.

<sup>&</sup>lt;sup>16</sup> New Modalities and Parenteral Development, PharmaceuticalTechnology & Development, Operations, AstraZeneca, Maccles-field, UK.

<sup>&</sup>lt;sup>17</sup> Modeling & Simulation, PK Sciences, Novartis Institutes of Biomedical Research, East Hanover, New Jersey, USA.

<sup>&</sup>lt;sup>18</sup> Computational & Modelling Sciences, Platform Technology Sciences, GlaxoSmithKline R&D, Collegeville, Pennsylvania, USA.

<sup>&</sup>lt;sup>19</sup>Pharmaceutical Sciences, Janssen Research & Development, Beerse, Belgium.

<sup>&</sup>lt;sup>20</sup> PBPK & Biopharmaceutics, Novartis Institutes of Biomedical Research, Wayne, New Jersey, USA.

<sup>&</sup>lt;sup>21</sup> Pharmaceutical Sciences, Merck & Co., Inc., Kenilworth, New Jersey, USA.

<sup>&</sup>lt;sup>22</sup> Pharmaceutical Technologies, Chemical and Pharmaceutical Development, Merck Healthcare KGaA, Darmstadt, Germany.

<sup>&</sup>lt;sup>23</sup> Pharmaceutical Sciences, Roche Pharmaceutical Research and Early Development, Roche Innovation Center, Basel, Switzerland

<sup>&</sup>lt;sup>24</sup> To whom correspondence should be addressed. (e-mail: arian.emamiriedmaier@abbvie.com)

**Table III.** Summary of the Proposed Mechanism of Food Effect and the Associated Confidence Category in the PBPK Prediction of Food Effect. Color Coding Indicates Confidence in the PBPK Food Effect Prediction; Green: High; Yellow: Moderate; Red: Low

Compound	Food Effect	BCS	Confidence in PBPK Prediction	Mechanism of Food Effect
Alectinib	Positive	II	Low	Changes in microenvironment pH and complex effect of formulation
Amiodarone	Positive	II	Low	Salt form
Aprepitant	Positive	II/IV	High (middle-out)	Bile acids and phospholipids
Cimetidine	None	III	High (middle-out)	No food effect
Clarithromycin	None	II	Moderate	No food effect
Dabrafenib	Negative	II	Low	Salt form; effect on microenvironment pH
Danazol	Positive	II	Low	Uncertainty in solubility (in vivo)
Danirixin	Negative	II	High (bottom-up)	Ion-pairing
d-Sotalol	None	III	High (middle-out)	No food effect
Etoricoxib	Negative	II	High (bottom-up)	GI motility changes in presence of food
Fluoxetine HCl	None	I	High (bottom-up)	No food effect
Furosemide	Negative	IV	High (bottom-up/middle-out)	GI motility changes in presence of food
Imatinib	None	II	High (middle-out)	No food effect
Isoniazid	Negative	I	Moderate	Drug-food interaction
Itraconazole	Positive	II	High (middle-out)	Buffer capacity alters dissolution
Ivacaftor	Positive	II/IV	High (middle-out)	Bile acids and phospholipids
Metoprolol	Positive	I	Moderate	Effect of hepatic and splanchnic blood flow
Nefazodone HCl	Negative	II	Moderate	Effect of hepatic and splanchnic blood flow
Nelfinavir Mesylate	Positive	II/IV	Moderate	Precipitation kinetics affected by food
Nifedipine	None	II	High (bottom-up)	No food effect
Oseltamivir	None	III	Moderate	No food effect
Panobinostat	None	II	High (bottom-up)	No food effect
Pazopanib	Positive	II/IV	Low	Impact of biorelevant buffer species on solubilization*; Salt form
Phenytoin	Positive	II	High (middle-out)	Bile acids and phospholipids
Telaprevir	Positive	II	Low	Impact of biorelevant buffer species on solubilization*
Tezacaftor	None	II	High (middle-out)	No food effect
Trospium IR/XR	Negative	III	Low	Changes in hydrodynamics (viscosity) in the presence of food
Venetoclax	Positive	IV	Moderate	Lymphatic uptake
Zidovudine	Negative	III	High (bottom-up)	GI motility changes in presence of food
Ziprasidone HCl	Positive	II	Moderate	Salt form

<sup>\*</sup>Specialized biorelevant media required to capture food effect

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.