Reviewer's report

Title: Population pharmacokinetic and pharmacodynamic modeling of transformed binary effect data of triflusal in healthy Korean male volunteers

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Reviewer: Thorsten Lehr

Reviewer's report:

The manuscript by Park et al describes the pharmacokinetics and pharmacodynamics of triflusal in healthy Korean male using the population modeling approach.

Major Compulsory Revisions

* Thanks for providing the updated CWRES figure. The plot indicates a trend over time. This is usually caused by a model misspecification. Also the fact that the x-axis is shown in a logarithmic is hiding this trend. Could the authors please comment on this trend? Did this trend disappear if a different distribution model (e.g. 2-compartment) was used? Did the authors test a target mediated drug disposition model? If the drug binds strongly to the target, this may be a valuable model.

* Thanks for adding the CrCl of the population. If I calculate the effect of CrCl on the clearance, the effect seems to be strong. The authors argued, that the population investigated was healthy. However, for a subject with the minimum CrCl of 90 mL/min of their population the clearance is approximately reduced by 39% compared to a subject with 160 mL/min (maximum value). This results in an increased AUC by 63%. In my opinion the authors should discuss the effect of renal function more.

* How much of the variability in Clearance was explained by including CrCl on clearance (i.e. IIV Cl without CRCl compared to IIV with CRCL)?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests'