ADDENDUM

Addendum to: A comment on some new definitions of fractional derivative

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Abstract This is a brief Addendum to Giusti (Nonlinear Dyn 1–7, 2018. <https://doi.org/10.1007/s11071-018-4289-8>), whose aim is to properly acknowledge a result that had been obtained in a previous paper, of which the author was unfortunately not aware of until very recently.

Keywords Prabhakar function · Mittag–Leffler function · Caputo–Fabrizio derivative · Atangana–Baleanu derivative

Following a recent correspondence with some colleagues, I became aware of the paper [1] by Baleanu and Fernandez.

In [2], I have provided a proof of a general result for Prabhakar integrals [see Theorem 1, Eq. (2.4)] by means of a well-established technique of term-by-term integration of series. From this result, I have then recovered the expansion in Theorem 5 [Eq. (3.6)], as an immediate consequence of the general property in Theorem 1. However, until recently I was not aware that

the result that I presented in Theorem 5 had actually been obtained before by Baleanu and Fernandez in [1] [Theorem 2.2, Eq. (16)] by means of the same technique that I employed for the proof of Theorem 1 in [2].

Therefore, considering that Theorem 2.2 in [1] and its derivation, focused solely on the ABC operator, represent the key point of [1], I firmly believe that this prior work deserves to be properly acknowledged with this Addendum to my original manuscript.

References

1. Baleanu, D., Fernandez, A.: On some new properties of fractional derivatives with Mittag-Leffler kernel. *Commun. Nonlinear Sci. Numer. Simul.* **59**, 444–462 (2018)
2. Giusti, A.: A comment on some new definitions of fractional derivative. *Nonlinear Dyn.* 1–7 (2018). <https://doi.org/10.1007/s11071-018-4289-8>. (first online 20 April 2018)

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