

# Supplementary Materials: Postbiotics and Kidney Disease

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## Search strategy and results

Different search strategies to identify original manuscripts exploring the role of postbiotics in preclinical or clinical studies of kidney disease or conditions related to kidney disease (e.g. hypertension) were performed in May 2022:

The first strategy searching for “postbiotic” AND “kidney”, yielded a total of 13 manuscripts: in 8 the concept of postbiotic was considered only broadly [1–8] and were thus excluded. The remaining 5 were included and discussed in this present manuscript [9–13]. Among the included studies, one manuscript incorrectly used the term postbiotic by referring to a purified microbial metabolite, i.e. N-[2-(2-Butyrylamino-ethoxy)-ethyl]-butyramide (BA-NH-NH-BA) [13].

A search for “Hypertension” AND “Postbiotic” found 11 results: most of which were reviews [1,4,7,14–18]. Two of them were designs of clinical trials, one did not use a postbiotic intervention and the other considered SCFAs as postbiotics in the introduction section, although the intervention was a prebiotic [19,20]. A further clinical trial, which was unrelated to hypertension, also considered butyrate as a postbiotic [21]. Thus, no hits from this search could be used in the present review.

Finally, a PubMed search using (“kidney” OR “hypertension”) and the individual postbiotics cited by Salminen et al (“deodan” OR “lyophilized heat-killed bacteria” OR “lyophilized bacterial fragments” OR “lantigen b” OR “bacterial lysate” OR “heat-killed *L. paracasei*” OR “lantigen” [22] yielded 11 hits of which 10 were excluded: one targeted respiratory infections [23]; two were not related to kidney disease or hypertension [24,25]; and the others were *in vitro* experiments or studies in which the “bacterial lysate” was only cited for other purposes [26–31]. Only one study used a bacterial lysate in cultured kidney cells and is discussed in the present review [32].

**Citation:** Favero, C.; Giordano, L.; Mihaila, SM.; Masereeuw, R.; Ortiz, A.; Sanchez-Niño, M.D. Postbiotics and Kidney Diseases. *Toxins* **2022**, *14*, 623. <https://doi.org/10.3390/toxins14090623>

Received: 27 July 2022

Accepted: 1 September 2022

Published: 6 September 2022

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