
 COMMENTS AND
 RESPONSES

**Response to
 Comment on:
 Richter et al. Serum
 Levels of the
 Adipokine
 Progranulin Depend
 on Renal Function.
 Diabetes Care
 2013;36:410-414**

We thank Dr. Triebel (1) for his comments regarding our recent findings on circulating progranulin in relation to renal function.

Concerning our data on progranulin in spot urine, the adipokine was quantified in samples of 29 sex-matched patients of each chronic kidney disease stage ($N = 145$), which were randomly assigned using SPSS software version 18.0 (IBM, Armonk, NY). In these experiments, median urinary progranulin was only significantly lower in chronic kidney disease stage 4 as compared with stage 2 patients when analyzed by Kruskal-Wallis test with post hoc analysis. Unfortunately, we are unable to test a possible correlation between urinary progranulin levels and total proteinuria since the latter was not assessed in our study.

To further elucidate the role of renal disease in progranulin physiology, we have recently started to establish a cohort of patients in whom blood is drawn before as well as within 24 h after

elective partial or total nephrectomy. Published studies demonstrate convincingly that these patients can serve as a model for acute renal insufficiency (2,3). Progranulin serum levels have now been quantified in the first 15 consecutively recruited patients with the same ELISA (R&D Systems, Minneapolis, MN) used for the published cohort. In these patients, median (interquartile range) estimated glomerular filtration rate significantly decreased from 83.3 mL/min (26.8) before surgery to 60.4 mL/min (32.4) after surgery as assessed by Wilcoxon signed-rank test ($P = 0.002$). Interestingly, median (interquartile range) serum progranulin significantly increased from 57.2 $\mu\text{g/L}$ (16.9) before nephrectomy to 70.3 $\mu\text{g/L}$ (39.6) after surgery ($P = 0.013$). These results further support our hypothesis that renal degradation is an important route of progranulin elimination. However, we are well aware of the fact that potential confounders, e.g., increased inflammation after surgery, might also contribute to increased progranulin serum levels after nephrectomy.

We agree with Dr. Triebel that further studies in human subjects and animal models are necessary to confirm the hypothesis that renal filtration/degradation is an important route of progranulin elimination.

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DOI: 10.2337/dc12-2705

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Acknowledgments—This study was supported by grants to M.F. from the Deutsche Forschungsgemeinschaft (DFG, KFO 152 “Atherobesity”, FA476/4-1); the Federal Ministry of Education and Research (BMBF), Germany, FKZ 01EO1001 (IFB Adiposity Diseases, projects K7-3, K7-9, and K7-31); and the Deutsche Hochdruckliga e.V. Furthermore, T.E. was supported by a junior research grant from the Medical Faculty, University of Leipzig, and BMBF, Germany, FKZ 01EO1001 (IFB AdiposityDiseases, MetaRot program).

No potential conflicts of interest relevant to this article were reported.

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