TO THE EDITOR: The author team of our recently published manuscript (1) on improved single muscle fiber quality in the oldest-old thank Dr. Venturelli and colleagues (5) for their thoughtful appraisal of our work. Furthermore, this group is to be commended for their efforts examining force-generating capacity in the oldest-old, both in vitro and in vivo, as a means of providing additional insights into age-related skeletal muscle dysfunction (4). These recent findings bridge back to our work in 2003 that showed maintenance of single muscle fiber contractile function with age (3). Since then, there have been several scientific papers (n = 13 that we have identified) involving multiple laboratories that have come to similar conclusions. Importantly, the single muscle fiber measurements have been conducted in at least five independent laboratories (Ball State University, Harvard Medical School, The University of Michigan, and The University of Padova). Collectively, the data support that myocellular quality is maintained or gradually improved with age (5). With this idea more widely accepted, we agree with Venturelli and colleagues that new approaches to better understand these various skeletal muscle systems are undoubtedly necessary given the complexity of factors influencing overall skeletal muscle health with age. Application of emerging technologies will help to further understand how the performance of the remaining skeletal muscle fibers and their complex interactions with other biological systems contribute to whole muscle function, mobility, and well-being. Experts from these various research areas can work together to better understand the contribution of these parts to the greater whole.

AUTHOR CONTRIBUTIONS


DISCLOSURES

No conflicts of interest, financial or otherwise, are declared by the author(s).

REFERENCES


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