Comment on Ellegård et al Clinical Nutrition 2019
"Distinguishing vegan-, vegetarian-, and omnivorous diets by hair isotopic analysis"

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In their paper published in Clinical Nutrition, Ellegård and colleagues report that they can distinguish between individuals on different habitual diets (vegan, vegetarian, omnivore) based on the carbon and nitrogen isotopic ratios of their hair (1). The finding is not new, and has been previously reported in the literature over the last 22 years (2-4). The authors do not properly acknowledge that previous work has shown similar or identical findings framed around the same hypothesis, despite such work being described and discussed in multiple works that they do cite (5-7). I would argue that such findings now come under the heading of common knowledge in many fields, even to the extent of being used as a student practical exercise in many university degrees across the world including in my own teaching – I have a database of hundreds of hair samples with associated dietary records.

My own paper (2), which is the first formal report of the observable isotopic differences between omnivores, ovo-lacto-vegetarians and vegans to my knowledge, builds on earlier findings documenting the link between dietary intake and body tissue isotopic signals in humans and other species from the 1960s onwards (see references cited in 2). Controlled dietary studies have done much to elucidate the mechanisms underlying such observed patterns.

This comment is not because my work has been overlooked, but instead a plea for everyone to do their homework better, particularly when they are using a methodology or approach that may be new to them. This is as true for senior researchers, as in this case, as it is for those earlier in their careers. The use of isotopic analyses as dietary biomarkers may be relatively new in nutrition, but is long established in other fields such as archaeology, anthropology, ecology, geochemistry, forensic and agricultural science (8-11). Ellegård et al.'s suggestion that "hair can possibly be used for longer-term dietary intake analysis" and their conclusions that "isotope ratio mass spectrometry seems to be a promising, non-invasive and objective way to distinguish groups of subjects on different habitual diets" might have been appropriate for something published 20 years ago, but are laggardly now. The late adoption of isotopic methodology in nutrition has been discussed in reviews and commentaries in nutrition journals over recent years, papers which highlight the maturity of the technique in other disciplines (5, 12-14).

What is notable in Ellegård et al.'s paper is the paucity of demonstrated awareness of such work both within and beyond the field of nutrition. I appreciate that there is a reference limit in the Short Communication format. However, there is a non-trivial body of exceptional isotopic work being done in nutritional and epidemiological research, including on nutritional biomarkers (15-26), and I ask the authors why they overlooked the body of research represented in these works – an omission that was furthermore not identified during the editorial process.

An inability to draw on relevant literature from across disparate research fields weakens all of our work, and such an oversight betrays a lack of appreciation of the history and development of the technique, as well as a poor understanding of the state of the research field in the round. I encourage all researchers to reflect on whether they are sufficiently aware of relevant literature when they write or review work for publication, particularly regarding methodologies that may be novel for them. At the most basic level this includes

proper reading and scrutiny of the discussions and bibliographies of all cited works, as well as searches using appropriate key words in online databases and repositories.

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