Statistics for studies when $N = 1$

Peter D. Wagner
University of California, San Diego, La Jolla, California

WE HAVE ALL GROWN UP RESPECTING the traditional scientific method, a cornerstone of which is making measurements not just in one cell, animal, or person but in $N$ such individuals, where $N$ is a magic number calculated to provide the power necessary to answer the question posed. Occasionally, however, we are faced with making statistical sense of data when $N = 1$. This month, by chance, we have the coming together of a review of statistical approaches to individual subject data (1) and a completely independent paper describing key muscle properties of a single elite (world champion) athlete (5). This is a golden opportunity to explore the $N = 1$ state a little more closely, and to that end we have commissioned three invited editorials on these two articles. One is by Hecksteden et al. (2) and one is by Hopkins (3), each discussing the data from the world champion athlete in their own terms. The third invited editorial is a discussion of Dr. Hecksteden’s review by Dr. Hopkins (4), pointing out there is more than one way to think about the problem. Enjoy.

REFERENCES