

GENETICS

WHY WE SHOULD BELIEVE PROFESSIONAL CYCLISTS

13.11.2006

I remember a nice meeting in South Sardinia in 2002 (see my figure below) where a lot of famous people gathered for interesting talks in a wonderful surrounding.

A spin off from this [Ogliastra Genetics Park](#) - as the authors called it - is now a paper in [PLOS Genetics](#) that examines the heritability of 98 quantitative cardiovascular traits in 6,148 Sardinians.

Although the authors did not measure hematocrit, RBC related counts had an extremely high heritability (MCV 0.76, MCH 0.78). Hemoglobin was somewhat lower (0.47) which might in part be attributable due to some local selection factors. This result comes largely unexpected, as the high heritability of the MCV was not known so far.

In the absence of any assay for exogenous EPO, hematocrit is used as an indirect parameter for testing athletes. I already wondered why cyclists are having such high values (if we exclude illegal drug use). This seems to be a genetically trait by self-selection - an anemic cyclist will not participate in the Tour de France. Yea, yea.



Addendum

Here is an answer to the question [what makes a champion](#) ;-)

CC-BY-NC Science Surf accessed 11.01.2026 ↗