The Athlete Biological Passport: a novel tool for the fight against doping in continuous evolution

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Abstract
The concept of the Athlete Biological Passport (ABP), which was first proposed in the early 2000s, is the preservation and tracking of a longitudinal record of different endogenous variables (biomarkers) measurements to be used as a means to define a profile of an individual athlete. In 2009, WADA released the first version of the Athlete Biological Passport (ABP) Operating Guidelines, which introduced a standardized approach to the profiling of individual athlete haematological variables (the ‘Haematological Module’). Then, in 2014, the Steroidal Module was launched to complement the Haematological Module, with the aim of identifying potential athletes for further target testing and in assisting detection of anti-doping rule violations (ADRVs).
Since then, the work of the WADA accredited anti-doping laboratories as well as of the experts in the field around the world is focused on improving the biological passport. Research efforts are driven by two main goals:
- To obtain a better understanding of the physiological variations of monitored parameters, in order to easily determine if variations are linked to doping abuse or to other factors;
- To increase the sensitivity of the Passport, searching for new direct/indirect biomarkers.

Questions
1. Why was the Athlete Biological Passport introduced and what are the advantages that were brought to the fight against doping?
2. Which are the fields of application of the Athlete Biological Passport? Which doping offences and physiological effects are they targeting?
3. Which analytical techniques are currently employed to perform sample analyses for the data in the Athlete Biological Passports? Advantages and drawbacks.
4. What is meant by “confounding factor”? Which could be relevant examples linked to the Athlete Biological passport?
5. In your opinion, are there other alternatives/additional approaches to improve the capability of the Athlete Biological Passport in the future?

Prepare and present your answers in a 20-30 minutes presentation.
References


