

PROJECT REVIEW

"Doping tests in special situations - low dose testosterone use and in post-conceptual period"

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Our research program encompasses projects designed to investigate how low doses of topical testosterone interfere with the urinary steroid profile and Athletes Biological Passport (ABP). ABP is essential to detect doping with anabolic androgenic steroids, especially with the use of low-dose-testosterone being increasingly used by some athletes.

In addition to genetic variation, there are many other factors that may contribute to the inter- and intra-individual variability in the steroid profile, i.e. concomitant drug use, diseases, menstrual cycle, and pregnancy. The latter two conditions have a marked influence on the metabolism and endocrinology of estrogens, progestagens, and peptide hormones (LH,FSH, hCG). However, very little is known about the natural androgen disposition in these situations. In view of the increasing use of LDD it is important to know the natural profile of androgens in the early post-conceptual phase when women still may not know, or know of the pregnancy. There is a dearth of information how pregnancy influences the androgen profile, but it is likely to confound the test interpretation. We will therefore study the androgen profile in females (no dose administration!) in the post-conceptual phase and first trimester.

It is of great importance that the athletes ABP will be able to compensate for all possible variability in longitudinal steroid profiles. More knowledge is therefore needed about how drug use and pregnancy influence the ABP results and hence the outcome of doping tests.