

PROJECT REVIEW

"Identification and detection of LH in urine"

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Luteinizing hormone (LH) is a naturally occurring hormone which is secreted by the pituitary gland. In males LH stimulates testosterone production by the testes. Recent research has proven that the monitoring of LH is a valuable tool for both the detection of anabolic steroid abuse; where suppression of LH is observed, and gonadotrophin releasing hormone abuse, where elevation of LH levels is observed. The ability to use LH as a marker for the detection of the abuse of other doping substances is limited by the currently available testing techniques. There are numerous commercially available immunoassays but these are only marketed for the testing of serum samples. The use of the available immunoassays for monitoring of LH in urine needs to be carefully cross validated for comparison to ensure suitability of the results for anti doping.

Furthermore to better understand why there are such differences in the concentrations detected by different immunoassays it is proposed to purify and sequence from urine both naturally present LH as well as from recombinant LH excretion studies. The proposed research will harmonize the measurement of LH in urine for anti doping as well as gain a better understanding of the measurand which will lead to better detection methodologies.