

PROJECT REVIEW

“Administration study of black market Follistatins (FS-344, FS-315)”

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Class S4 of WADA’s Prohibited List 2019 (“Hormone and Metabolic Modulators”) lists follistatin under sub-class 4 (“Agents preventing activin receptor IIB activation, Myostatin inhibitors”) as prohibited substances.

So far, no approved follistatin pharmaceuticals are available. On the other hand, there are two groups of follistatins sold on the black market (FST-344 and FST-315). But the administration of black market follistatins to human test persons will be ethically not justifiable. For that reason, we plan a study with rats. The test animals will receive black market FST-344 (group 1) and FST-315 (group 2) at a dosage, which can be clearly detected after 48 hours in serum (1 mg/rat, weight-adjusted). Subsequently, serum and urine will be collected and tested for follistatin with electrophoresis and Western blotting.

The study will help to clarify (1) if both FSTs (FST-344, FST-315) are still observable after 48 hours of circulation in blood, and (2) if these FSTs can also be detected in urine. We have already shown that black market FSTs can be clearly differentiated from endogenous FSTs by electrophoresis (SDS-PAGE) and Western blotting.