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Horse Doping

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Doping in horse racing means abusing of drugs or any physiologic and non physiologic substances by horse owners or horse instructors or horse riders to increase horses efficiency in competitions, it is important to note that the term is not limited to this application and does, in fact encompass a much wider definition. Horse doping was first reported in Cambridge in 1812 by Daniel Dawson execution because of race horse poisoning with Arsenic. It should be noted at this early point that horse doping is not common place by any means .It is very rare .For example in 1999 only 0.27% of British horses tested were positive, and this is form a sample population of approximately 10 percent of all horses which ran. In this article the following topics will be explained .The history of doping in horse racing, reasons of hegat prohibition, classification of drug groups and serviceable approaches in animal sports such as horse racing. The responsible persons are obliged to pay special attention to this important problem because doping has bad effects on fair play games and deviate the result of competitions. At the end of the article following actions are suggested: 1-Establishment of an organization for making rules about doping in Iran. 2-Preparing suitable and necessary conditions and enough possibilities for clinical check up and laboratory tests. 3-Alloting special budgets for necessary research and investigations.

Keywords: Doping, Horse, Abuse, Race

Study of a new in-product labelling of tablets to combat counterfeit drugs

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Pharmaceutical products are one of the most important parts of healthcare system in veterinary. Therefore drug counterfeiting can cause a wide array of serious medical and economic damages. With increasing free policies in importation, distribution and sales of veterinary drugs, counterfeit drugs are becoming a serious problem. In the present study we are launching a new concept for the in-product labelling of tablets. We evaluate how memobeads (digitally encoded micro-particles) can be incorporated into tablets and whether the digital code withstands the compression forces applied during tabletting. We also critically discuss the toxicological aspects of orally administered memobeads. Carboxylated polystyrene beads of 39 µm were graphically encoded by 'spatial selective photobleaching' of the fluorescence. The beads were incorporated in tablets either by compression of memobead containing drug granules or by compression of a drug powder/mem obead mixture. The cytotoxicity of the memobeads was also screened on A549 and Vero-1 cell lines. We found that entrapping the memobeads in starch-based granules protects them from deformation during tabletting; even when very high compression forces were applied the code in the beads did not deform. We also found evidence that the encoded microparticles are highly unlikely toxic to humans. In conclusion, compared to other types of encoded microcarriers, memobeads have a number of assets for "in-tablet" labelling. One asset being that ingested memobeads are highly unlikely to be toxic to humans; another asset being that the number of unique memobeads is virtually unlimited, an obvious advantage considering the huge number of pharmaceuticals at risk of being counterfeited.

Keywords: counterfeiting, encoded microparticles, pharmaceuticals