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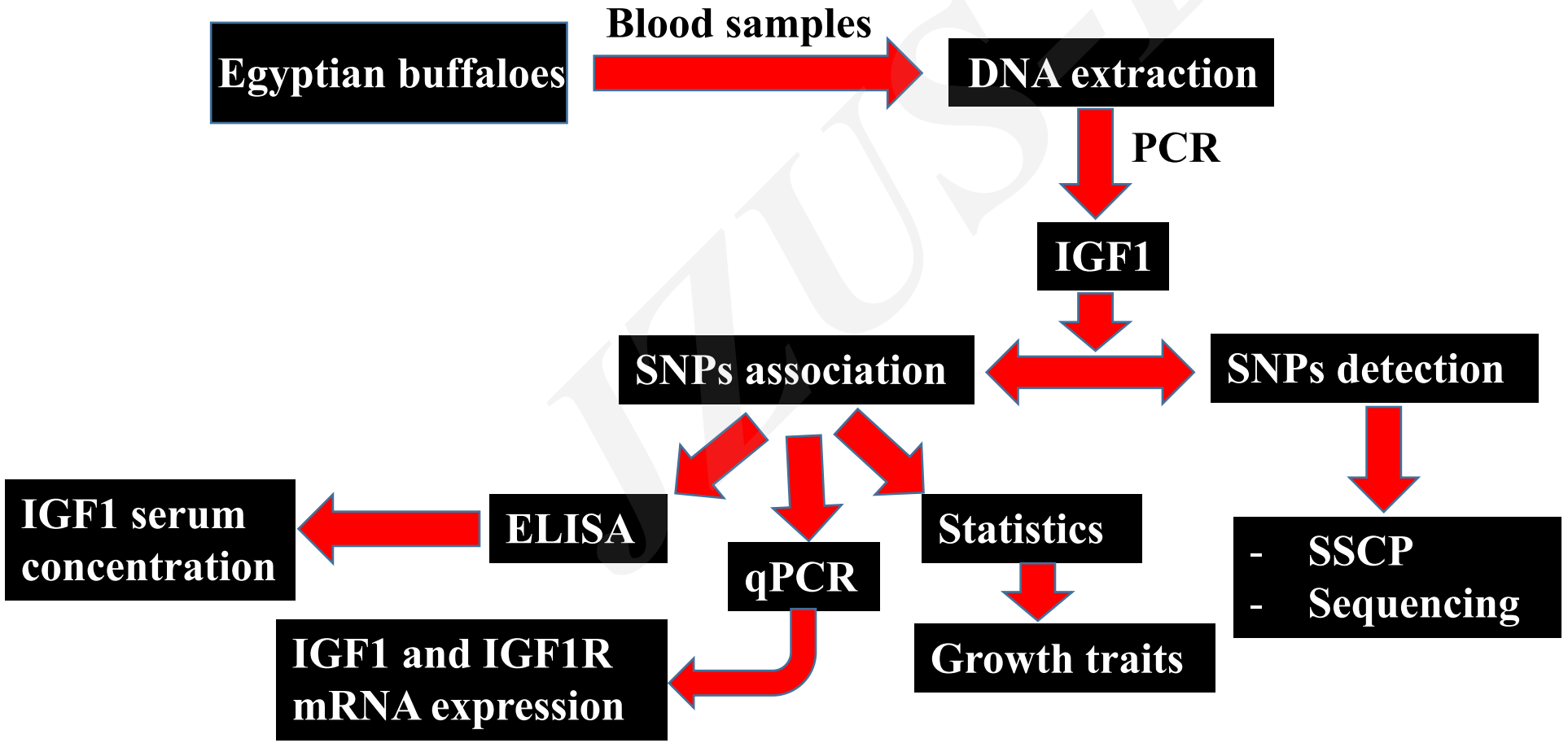
Polymorphisms of the *IGF1* gene and their association with growth traits, serum concentration and expression rate of *IGF1* and *IGF1R* in buffalo

Key words: Insulin-like growth factor 1 (*IGF1*), *IGF1R*, Single nucleotide polymorphism (SNP), Growth traits, Buffalo

Research Summary

The aim of this study was to look for *IGF1* polymorphisms and to determine their associations with growth traits, relative gene expression of *IGF1* and *IGF1R* in skeletal muscle as well as the serum concentration of IGF1 in Egyptian buffalo.



Result and conclusion

- The main finding of this study was that G64A and G280A SNPs of *IGF1* were significantly associated with BW, ADG, expression level of *IGF1* and *IGF1R* mRNA, as well as serum concentration of IGF1 in buffaloes at ages from 3 to 12 mo with superior G allele, GG genotype, and GG/GG haplotype.
- These SNPs could be valuable genetic markers for selection of Egyptian buffaloes for better performance in the population.