

Candidate SNP markers of social dominance, which may affect the affinity of the TATA-binding protein for human gene promoters

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Motivation and Aim: The purpose of this work is a prognosis based on the reference human genome of candidate SNP markers of predisposition to social dominance and its absence (which determines the subordinate (subordinate) rank of the individual). To achieve it, we proposed a hypothesis about the possibility of such a prediction on the basis of taking into account physiological markers of animal aggressiveness.

Methods and Algorithms: To achieve it, we proposed a hypothesis about the possibility of such a prediction on the basis of taking into account physiological markers of animal aggressiveness. Within the framework of this hypothesis, we applied the Web service [1] to the analysis of human genes homologous to animal genes for a wide range of protein marker functions associated with aggressive behavior: hormones, biosynthetic enzymes and neurotransmitter receptors, transcriptional and neurotropic factors.

Results: As a result, we found 92 markers of predisposition to domination and submission in people, which can be actual information when planning experimental computer studies of human social behavior.

Conclusion: We uncovered a number of SNPs that can affect the affinity of the TBP to human gene promoters. These genes are homologous to the ones found in animal genes associated with dominant and subordinate behavior [2]. We propose that these candidate SNP markers may be linked to social dominance in humans. As a computational prediction, our result requires further experimental verification.

References

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