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INDIVIDUAL DIFFERENCES IN SOCIAL AFFILIATION: THE ROLE OF THE A118G POLYMORPHISM OF THE MU-OPIOID RECEPTOR GENE (OPRM1)

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Introduction: Most of us find social encounters rewarding, especially when we encounter those with whom we are familiar and have built up a relationship. From an evolutionary point of view, this is not surprising considering that human beings are fundamentally social organisms. Considering that endogenous opioids mediate hedonic responses to a variety of natural rewards, the common A118G polymorphism in the mu-opioid receptor gene (OPRM1) might also modulate individual differences in the capacity to experience social reward.

Aims: In the present study, we hypothesized that, compared to individuals with the A118A genotype, individuals expressing the minor 118G allele had an increased need for affiliation and an increased capacity to experience social reward.

Methods: In a mixed sample (N = 214) of adult healthy volunteers and psychiatric patients, we analyzed the association between the A118G polymorphism of the OPRM1 and two different psychological constructs reflecting individual differences in the capacity to experience social reward.

Results: Compared to individuals expressing only the major allele (A) of the A118G polymorphism, subjects expressing the minor allele (G) had an increased tendency to become engaged in affectionate relationships, as indicated by lower scores on a self-report measure of avoidant attachment, and experienced more pleasure in social situations, as indicated by lower scores on a self-report measure of social anhedonia.

Conclusions: The results reported here are in agreement with the brain opioid hypothesis of social attachment and raise several questions about the maintenance of the A118G polymorphism in the evolution of human social behavior.

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