

Natureza do trabalho: Resumo

TÍTULO

THE ROLE OF DOPAMINERGIC DYSFUNCTION AS AN ETIOLOGICAL FACTOR IN HIV-ASSOCIATED COGNITIVE DEFICITS AND HOW IT CAN BE TESTED IN ANIMAL MODELS.

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RESUMO

Introduction: A major consequence of HIV infection is the development of cognitive deficits due to the infection effects on the CNS. Although HAART treatment has significantly improved the quality of life as well as the patient's life expectancy, HIV-associated cognitive deficits remain a challenging issue.

Literature Review: In this paper, we will discuss the role of Dopaminergic dysfunction as an etiological factor of neurocognitive impairment in HIV patients, and we will propose an animal model by which this contribution of dopaminergic dysfunction to HANDs could be tested. It is well established that HIV primarily affects the basal ganglia, which are responsible for dopamine production. Since dopamine is known to play a major role in the regulation of cognitive processes, it seems a valid assumption to infer that the disruption of its normal functioning is a contributing factor to the development of HANDs. Since the pathological mechanisms underlying HANDs are not completely understood, Jaeger & Nath advocate the necessity of developing animal models to further study these disorders and test new therapeutic approaches. Moran et al. have already tested alterations in the dopaminergic system due to the effects of HIV infection in the CNS in rats. **Conclusion:** To sum up, we could say that, as we have shown, there exists a fair amount of scientific literature regarding the effects on cognitive processes of alterations in the dopaminergic system due to HIV infection. Also we have identified in scientific literature some features that animals models should have to adequately study HIV, so we expect to be able to design animal models to study specific types of HANDs related to DA dysfunction, such as impairment of executive function.