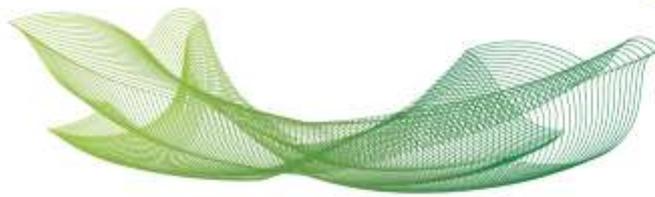


Tipo	Periódico
Título	Single low dose of cocaine - structural brain injury without metabolic and behavioral changes
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Resumo	Chronic cocaine use has been shown to lead to neurotoxicity in rodents and humans, being associated with high morbidity and mortality rates. However, recreational use, which may lead to addictive behavior, is often neglected. This occurs, in part, due to the belief that exposure to low doses of cocaine comes with no brain damage risk. Cocaine addicts have shown glucose metabolism changes related to dopamine brain activity and reduced volume of striatal gray matter. This work aims to evaluate the morphological brain changes underlying metabolic and locomotor behavioral outcome, in response to a single low dose of cocaine in a pre-clinical study. In this context, a Balb-c mouse model has been chosen, and animals were injected with a single dose of cocaine (0.5 mg/kg). Control animals were injected with saline. A behavioral test, positron emission tomography (PET) imaging, and anatomopathological studies were conducted with this low dose of cocaine, to study functional, metabolic, and morphological brain changes, respectively. Animals exposed to this cocaine dose showed similar open field activity and brain metabolic activity as compared with controls. However, histological analysis showed alterations in the prefrontal cortex and hippocampus of mice exposed to cocaine. For the first time, it has been demonstrated that a single low dose of cocaine, which can cause no locomotor behavioral and brain metabolic changes, can induce structural damage. These



	brain changes must always be considered regardless of the dosage used. It is essential to alert the population even against the consumption of low doses of cocaine.
Fomento	