Abstract
There is considerable variation in individual vulnerability to addiction that may be related to personality factors. One of the most widely studied personality traits in relation to susceptibility to addiction has been novelty or sensation-seeking. In the present review we mainly analyze basic research data on the relationship between addiction and novelty-seeking. In animal models, this trait has been assessed mainly by means of motor activity in an inescapable novel environment. Thus, two typologies of rats have been established, the so-called LR (low-responders) and the HR (high-responders), which respectively show low and high levels of activity in a novel environment. HR animals are more sensitive to the motor-stimulating effects of various drugs, and show greater behavioural sensitization with repeated drug administration, than LR animals. Moreover, HR subjects initially acquire operant self-administration behaviour more easily than LR subjects. Hypothalamic-pituitary-adrenal axis reactivity in certain stressful situations is also greater in HR than in LR subjects. At the level of the central nervous system, HR subjects also show greater activity of the hypothalamic-pituitary-adrenal axis. With regard to dopaminergic systems, microdialysis studies show that cocaine has a greater neurochemical effect (more increase in dopamine levels) in HR than in LR animals. Human data are generally in agreement with those from the animal literature, though there are also contradictory results in both humans and animals, suggesting that this topic is complex and still far from being fully understood.

Keywords
Personality, individual differences, stress, vulnerability, sensation-seeking.