

## NEUROSCIENCE

### Premium Edit

All drugs of abuse, including nicotine, activate the mesocorticolimbic system, which plays critical roles in nicotine reward and reinforcement development and triggers glutamatergic synaptic plasticity in the dopamine (DA)-secreting neurons in the ventral tegmental area (VTA). The Addictive behavior of addiction and the firing pattern of firing of the VTA-DA-secreting neurons in the VTA are thought to be control-controlled by glutamatergic synaptic input from the prefrontal cortex (PFC). Disturbed Interruption of functional input from the PFC to the VTA was has been shown as to decrease the addictive effects of the drugs on the addiction process. All abusive drugs, including nicotine, activate mesocorticolimbic system that plays critic roles in nicotine reward and reinforcement development plus engendering glutamatergic synaptic plasticity on the DA secretion neurons in VTA. The mechanism of Nicotine addiction treatment is thought to involve could enhance an increase in the  $\alpha$ -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA)/N-methyl-D-aspartate (NMDA) ratio in VTA-DA-secreting neurons in the VTA, which is thought as a common addiction mechanism. Therefore, in this paperstudy, we investigated whether or not the lack of glutamate transmission from the PFC to the VTA could make any change in can modulate the effects of nicotine.

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**Comment [A1]:** This sentence sets the context for the topic of your paragraph better, since it talks about the mechanism of action of drugs of abuse in general.

**Comment [A2]:** The definite article "the" should be used before the names of organs and body parts, regardless of whether they are being mentioned in a generic sense (e.g., The brain requires a continuous supply of oxygen) or a specific sense (e.g., MRI of the brain revealed hypointense lesions).

**Comment [A3]:** The words "paper" and "study" cannot be used interchangeably. The investigation was performed in the study, and you're reporting the investigation in this paper.