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# Anatabine

National Cancer Institute

## Source

National Cancer Institute. *Anatabine*. NCI Thesaurus. Code C114277.

An alkaloid found in low concentrations in plants in the Solanaceae family, which includes tobacco and tomato plants, with potential nicotine mimetic and anti-inflammatory activities. Following oral administration, anatabine may mimic the neurological effects of nicotine exposure. This agent may not have the addictive properties of nicotine; therefore, it may be appropriate for use in treating nicotine withdrawal symptoms during smoking cessation. Anatabine may also exert its anti-inflammatory effect by the inhibition of the signal transducer and activator of transcription 3 (STAT3) which then prevents the activation of the nuclear factor kappa B (NF- $\kappa$ B), which is a key regulator of proinflammatory cytokine release. Urine concentrations of anatabine can be used to assess the extent of tobacco use.