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Effect of Ashwagandha and *Aloe vera* Pretreatment on Intestinal Transport of Buspirone across Rat Intestine

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SUMMARY. The transport of buspirone across rat intestine (duodenum, jejunum, ileum and colon) was studied by using the non-everted sac method. Rats were pretreated with ashwagandha *(Withania somnifera)* and *Aloe vera* juice for 7 days. The rats were sacrificed by using anesthetic ether, the intestinal segments were isolated and used for the studies. The probe drug (buspirone) solution was placed in the isolated intestinal sac. Samples were collected at preset time points and replaced with fresh buffer. The drug content in the samples was estimated using high performance liquid chromatography method. Control experiments were also performed. The results reveal that there was a significant ($p < 0.05$) difference compared to control, in the transport of buspirone from the intestinal sacs which were pretreated with ashwagandha and *Aloe vera* juice. It suggests that both ashwagandha and *Aloe vera* might be acting by inhibiting the transporters and enzymes which are responsible for transport/metabolism of buspirone.

KEY WORDS: Aloe vera, Ashwagandha, Buspirone, CYP3A, Noneverted sac, P-glycoprotein, *Withania somnifera*.

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