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## **The transport of glutamine and alanine into rat colonocytes.**

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### **Abstract**

The transport of glutamine and alanine into isolated rat colonocytes was studied. The transport of both amino acids appears to be dependent on a Na<sup>+</sup> gradient. The apparent K<sub>m</sub> values for the transport of glutamine and alanine were 2.56 ± 0.84 and 5.35 ± 1.20 mM respectively, but with similar V<sub>max</sub> values. Glutamine and alanine transport were mutually competitive, and the transport of both amino acids was competitively inhibited by 2-methylaminoisobutyrate. In contrast, histidine inhibited the transport of both glutamine and alanine non-competitively. It is concluded that glutamine and alanine are transported into rat colonocytes by a common carrier system similar to System A of other cells. It is suggested that the metabolic function of this transport system in rat colonocytes might be the partial exchange of extracellular glutamine for intracellular alanine