

# Transport and metabolism of adenosine in diabetic human placenta

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Pregnancy complicated by diabetes is a relatively frequent event and may result in fetal embriopathy. However, little is known regarding whether placental transport functions are altered. In this study, we have compared the activity of the nitrobenzylthioinosine (NBMPR)- sensitive adenosine transporter and adenosine metabolism in human placental brush-border- and basal-membrane vesicles from placentas of normal and diabetic pregnancies. Neither [3H]NBMPR binding, a marker of the facilitative-diffusion nucleoside transporter in the human placenta, nor adenosine metabolism exhibited a significant difference in either the brush-border- or the basal-membrane vesicles between the normal and diabetic group, except for an increased affinity in [3H]NBMPR binding at the basal side in diabetic placenta. This result contrasts with an earlier finding using the same group of patients that adenosine transport is downregulated in umbilical vein endothelial cells from diabetic pregnancies. It is concl