
Subject: erste nanofrage: effekte von adenosin
Posted by [kkoo](#) on Wed, 13 Sep 2006 09:31:02 GMT
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jaja, bezieht sich auch auf nanoadeno II, aber ich wollte nur mal genauer wissen, ob das adenosin so (u. nur so) funktionieren sollte, nämlich ähnlich wie minox? wie verhält es sich dann mit nebenwirkungen von adenosin: sind die u.u. minoxähnlich?

Minoxidil-induced hair growth is mediated by adenosine in cultured dermal papilla cells: possible involvement of sulfonylurea receptor 2B as a target of minoxidil.

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The mechanism by which minoxidil, an adenosine-triphosphate-sensitive potassium channel opener, induces hypertrichosis remains to be elucidated. Minoxidil has been reported to stimulate the production of vascular endothelial growth factor, a possible promoter of hair growth, in cultured dermal papilla cells. The mechanism of production of vascular endothelial growth factor remains unclear, however. We hypothesize that adenosine serves as a mediator of vascular endothelial growth factor production. Minoxidil-induced increases in levels of intracellular Ca(2+) and vascular endothelial growth factor production in cultured dermal papilla cells were found to be inhibited by 8-sulfophenyl theophylline, a specific antagonist for adenosine receptors, suggesting that dermal papilla cells possess adenosine receptors and sulfonylurea receptors, the latter of which is a well-known target receptor for adenosine-triphosphate-sensitive potassium channel openers. The expression of sulfonylurea receptor 2B and of the adenosine A1, A2A, and A2B receptors was detected in dermal papilla cells by means of reverse transcription polymerase chain reaction analysis. In order to determine which of the adenosine receptor subtypes contribute to minoxidil-induced hair growth, the effects of subtype-specific antagonists for adenosine receptors were investigated. Significant inhibition in increase in intracellular calcium level by minoxidil or adenosine was observed as the result of pretreatment with 8-cyclopentyl-1,3-dipropylxanthine, an antagonist for adenosine A1 receptor, but not by 3,7-dimethyl-1-propargyl-xanthine, an antagonist for adenosine A2 receptor, whereas vascular endothelial growth factor production was blocked by both adenosine A1 and A2 receptor antagonists. These results indicate that the effect of minoxidil is mediated by adenosine, which triggers intracellular signal transduction via both adenosine A1 and A2 receptors, and that the expression of sulfonylurea receptor 2B in dermal papilla cells might play a role in the production of adenosine.