Subject: TGF-beta1
Posted by kkoo on Fri, 28 Aug 2009 12:45:09 GMT
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Arch Dermatol Res. 2009 Jun;301(5):381-5. Epub 2009 Mar 11.
Links
A cell-based system for screening hair growth-promoting agents.
Huh S, Lee J, Jung E, Kim SC, Kang JI, Lee J, Kim YW, Sung YK, Kang HK, Park D.

Biospectrum Life Science Institute, 101-701 SK Ventium, 522 Dangjung Dong, Gunpo City, 435-833 Gyeonggi-do, Republic of Korea.

Androgen-inducible transforming growth factor beta (TGF-beta1) derived from dermal papilla cells (DPCs) is a catagen inducer that mediates hair growth suppression in androgenetic alopecia (AGA). In this study, a cell-based assay system was developed to monitor TGF-beta1 promoter activity and then used to evaluate the effects of activated TGF-beta1 promoter in human epidermal keratinocytes (HaCaT). To accomplish this, a pMetLuc-TGF-beta1 promoter plasmid that expresses the luciferase reporter gene in response to TGF-beta1 promoter activity was constructed. Treatment of HaCaT with dihydrotestosterone, which is known to be a primary factor of AGA, resulted in a concentration-dependent increase in TGF-beta1 promoter activity. However, treatment of HaCaT with the TGF-beta1 inhibitor, curcumin, resulted in a concentration-dependant decrease in TGF-beta1 expression. Subsequent use of this assay system to screen TGF-beta1 revealed that HaCaT that were treated with apigenin showed decreased levels of TGF-beta1 expression. In addition, treatment with apigenin also significantly increased the proliferation of both SV40T-DPCs (human DPCs) and HaCaT cells. Furthermore, apigenin stimulated the elongation of hair follicles in a rat vibrissa hair follicle organ culture. Taken together, these findings suggest that apigenin, which is known to have antioxidant, anti-inflammatory, and anti-tumor properties, stimulates hair growth through downregulation of the TGF-beta1 gene. In addition, these results suggest that this assay system could be used to quantitatively measure TGF-beta1 promoter activity in HaCaT, thereby facilitating the screening of agents promoting hair growth.

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Subject: Re: TGF-beta1
Posted by pilos on Fri, 28 Aug 2009 14:34:25 GMT
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das problem..beide wirkstoffe färben höllisch

müsste man in einer farblosen verbindung überführen.

sollte bei beide möglich sein.

ist nur die frage welche derivate wären farblos

Subject: Re: TGF-beta1
Posted by kkoo on Fri, 28 Aug 2009 15:57:51 GMT
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pilos schrieb am Fre, 28 August 2009 16:34
das problem..beide wirkstoffe färben höllisch

müsste man in einer farblosen verbindung überführen.

sollte bei beide möglich sein.

ist nur die frage welche derivate wären farblos

über die farbe keine info , aber 'least toxic' (naja, wieder ein kandidat mehr aus der theorie..., dabei muss mal die praxis voranschreiten)

Eur J Pharmacol. 2009 Aug 15. [Epub ahead of print]
Links
Anti-inflammatory and vascularprotective properties of 8-prenylapigenin.
Paoletti T, Fallarini S, Gugliesi F, Minassi A, Appendino G, Lombardi G.

DISCAFF Department, University of "Piemonte Orientale Amedeo Avogadro", Novara, Italy.

Flavonoids display several biological activities, but exhibit poor oral absorption and rapid metabolism. To improve their pharmacological profile four C8-prenyl flavonoids, structurally related to the anti-inflammatory lead apigenin, were synthesized, and the two least cytotoxic (IC(50)>30muM) compounds [8-prenylnaringenin (8-PN) and 8-prenylapigenin (8-PA)] in RAW 264.7 murine macrophages were assayed against a panel of biological targets. The anti-inflammatory properties of these compounds were evaluated in an in vitro model of inflammation [cells exposed to 0.1mug/ml lipopolysaccharide (LPS) for 24h]. Both 8-PN and 8-PA were equally effective and potent in inhibiting the LPS-induced gene expression [tumor necrosis factor (TNF)-alpha, inducible nitric oxide synthase (iNOS), cyclooxygenase (COX)-2] (RT-PCR) and release (ELISA) of pro-inflammatory mediators [TNF-alpha, NO, prostaglandin (PG)E(2)], through mechanisms involving the inhibition of nuclear factor-kappaB (NF-kappaB) activation (EMSA) and reactive oxygen species accumulation [2',7'-dichlorodihydrofluorescein diacetate (DCFH-DA) determination]. One-digit nM concentrations of 8-PN or 8-PA induced a significant increase in the basal production of the atheroprotective prostacyclin (PGI(2)) by human umbilical vein endothelial cells (HUVEC), with maximal effects at 10nM. Both NS-398, a specific COX-2 inhibitor, and ICI 182 780, a non-selective estrogen receptor antagonist, abolished the activity of these compounds, suggesting a COX- and estrogen receptor-dependent mechanism of activity.

8-PA, a weaker estrogenic compound than 8-PN, resulted only 2-fold less potent than 8-PN in potentiating PGI(2) production by HUVEC, qualifying this C8-prenyl flavonoid as a lead for the rational design of new anti-inflammatory and vascularprotective compounds.

PMID: 19686724 [PubMed - as supplied by publisher]

Subject: Re: TGF-beta1
Posted by el huevo on Fri, 28 Aug 2009 16:56:04 GMT
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villain hat mir mal einen Link für farbloses Curcumin geschickt, aber der link funzt nicht mehr...

jedenfalls gibts curcumin auch farblos...

egg

Subject: Re: TGF-beta1
Posted by kkoo on Fri, 28 Aug 2009 17:42:03 GMT
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eigentl. gibt es massenhaft pflanzliche tgf1-beta-hemmer, aber bei den potenzvergleichen mindestens bei humanen DPCs hapert es (geschweige denn in vivo)

Subject: Re: TGF-beta1
Posted by pilos on Fri, 28 Aug 2009 18:12:53 GMT
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kkoo schrieb am Fre, 28 August 2009 19:42eigentl. gibt es massenhaft pflanzliche tgf1-beta-hemmer, aber bei den potenzvergleichen mindestens bei humanen DPCs hapert es (geschweige denn in vivo)

so ist es....
