Search for natural product for promoting hair growth based on Wnt signaling

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Wnt signaling maintains hair inducing activity including regeneration of hair follicle. On the basis of our screening program targeting activation of TCF/β-catenin transcriptional activity, a plant extract of Excoecaria indica was selected as a positive sample. Activityguided fractionations led to the isolation of α -sapinine (1) as active compound. Also, two flavonoid glycosides, myricetin 3-O- β -D-galactopyranoside (2) and myricetin 3-O- α -Lrhamnopyranoside (3) were isolated from Erythrophleum succirubrum as active compounds. Compound 1 led to more than 20-fold increase in TCF/β-catenin transcriptional activity at 1.4 or 2.9 µM.