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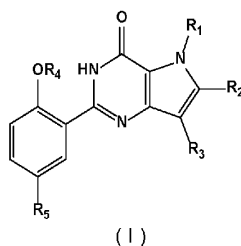
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23 May 2024 (23.05.2024)

(54) Title: TOPICAL COMPOSITIONS AND USES THEREOF



(57) Abstract: The present invention relates to a topical composition comprising a compound of formula (I) or a pharmaceutically acceptable salt thereof wherein R₁ is C₁-C₃alkyl, preferably methyl or ethyl, further preferably ethyl; R₂ is H, CHO or CH=N-OH, preferably H, CHO or (E)-CH=N-OH, further preferably H; R₃ is C₁-C₄alkyl, preferably ethyl or propyl, further preferably n-propyl; R₄ is C₁-C₆alkyl, preferably ethyl or propyl, further preferably n-propyl; R₅ is SO₂NR₁₃R₁₄, wherein R₁₃ and R₁₄ are together with the nitrogen atom to which they are attached form a heterocyclic ring, wherein said heterocyclic ring is selected from piperidine and piperazine, wherein said heterocyclic ring is substituted with at least one R₁₅, and wherein said R₁₅ is independently selected from C₁-C₆alkyl optionally substituted with OH, ONO₂, wherein at least one of said R₁₅ comprises at least one ONO₂ moiety; wherein said topical composition comprises said compound of formula (I), preferably said Compound 1, from about 0.0001% (w/v) to about 0.05% (w/v); as well as to the uses of said topical compositions for the treatment of diseases or disorders mediated by PDE5 activity and/or NO related endothelial dysfunction, preferably of a disease or disorder of the skin mediated by PDE5 activity and/or NO related endothelial dysfunction, in a subject, preferably in a human, and particularly, for topically treating a skin disease, preferably skin aging or steroid-induced skin atrophy, erectile dysfunction, preventing or treating hair loss, or promoting hair growth.

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