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(71) Applicant: TOPADUR PHARMA AG [CH/CH]; Graben-  
strasse 11A, 8952 Schlieren (CH).

(72) Inventors: NAEF, Reto; Juraweg 14, 4310 Rheinfelden  
(CH). ATZEI, Paola; Parkallee 46, 8952 Schlieren (CH).  
FRANCISCO, Rita; Winterthurerstrasse 81, 8006 Zürich  
(CH).

(74) Agent: SPERRLE, Martin; Latscha Schöllhorn Partner  
AG Grellingerstrasse 60, 4052 Basel (CH).

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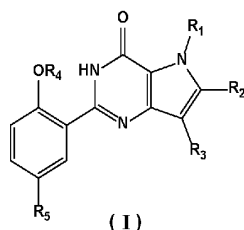
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(54) Title: TOPICAL COMPOSITIONS AND USES THEREOF



(57) Abstract: The present invention relates to a topical composition comprising a compound of formula (I) or a pharmaceutically acceptable salt thereof wherein R<sub>1</sub> is C<sub>1</sub>-C<sub>3</sub>alkyl, preferably methyl or ethyl, further preferably ethyl; R<sub>2</sub> is H, CHO or CH=N-OH, preferably H, CHO or (E)-CH=N-OH, further preferably H; R<sub>3</sub> is C<sub>1</sub>-C<sub>4</sub>alkyl, preferably ethyl or propyl, further preferably n-propyl; R<sub>4</sub> is C<sub>1</sub>-C<sub>6</sub>alkyl, preferably ethyl or propyl, further preferably n-propyl; R<sub>5</sub> is SO<sub>2</sub>NR<sub>13</sub>R<sub>14</sub>, wherein R<sub>13</sub> and R<sub>14</sub> 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 R<sub>15</sub>, and wherein said R<sub>15</sub> is independently selected from C<sub>1</sub>-C<sub>6</sub>alkyl optionally substituted with OH, ONO<sub>2</sub>, wherein at least one of said R<sub>15</sub> comprises at least one ONO<sub>2</sub> 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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