TEM1657 is a new small molecule for the topical and oral treatment of psoriasis

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Management of psoriasis comprises a variety of treatment options such as topical treatments (e.g. local applications of corticosteroid, tazarotene or vitamin D analogues), UV therapies, oral treatments (e.g. methotrexate, acitretin, cyclosporine, or apremilast), and intravenous biological treatments (anti-TNFα and anti-IL-12/23 antibodies). Most of these treatments can cause severe side effects, therefore safer treatment modalities would be valuable in the management of psoriasis. Topical and oral treatments, as well as UV therapies generally constitute a first line of treatments. When combinations of these treatments fail or when side-effects overcome beneficial effects, patients are usually prescribed intravenous biologics that show very high efficacy in the reduction of symptoms. Although the advent of biologics brought substantial improvement for the efficacious treatment of severe psoriatic cases, they do not come without potential side effects (e.g. severe infections with candida or tuberculosis, adverse cardiovascular events, depression, suicide ideation). Furthermore, biologics are associated with much higher medication costs, and psoriatic symptoms tend to relapse after several years of treatment.

TEM1657 is a brand new small molecule developed as a topical and oral treatment by Temisis that shows a remarkable efficacy profile. In imiquimod mouse model, topical applications of TEM1657 results in similar efficacy as market reference corticosteroids for improving psoriasis symptoms, and systemic administration of TEM1657 results in better efficacy than Apremilast (reformulated in the same vehicle). No side effects were observed, even at very high doses, and unlike corticosteroids, no skin thinning, nor spleen atrophy occurred during treatment. Low dose TEM1657 maintains healthy skin and therefore constitutes a promising option to relapsing psoriasis, before switching to biologics, or in combination with biologics when psoriasis relapses.