PPC-06 (Tepilamide Fumarate), a novel fumaric acid ester, is efficacious in treating plaque psoriasis: Results from a phase 2b randomized controlled trial

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Introduction

- Dimethyl fumarate (DMF) is approved in Europe for the treatment of moderate to severe plaque psoriasis. Monomethyl fumarate (MMF) is the active moiety.
- PPC-06 is a novel extended release MMF donor being developed for treatment of moderate to severe plaque psoriasis.

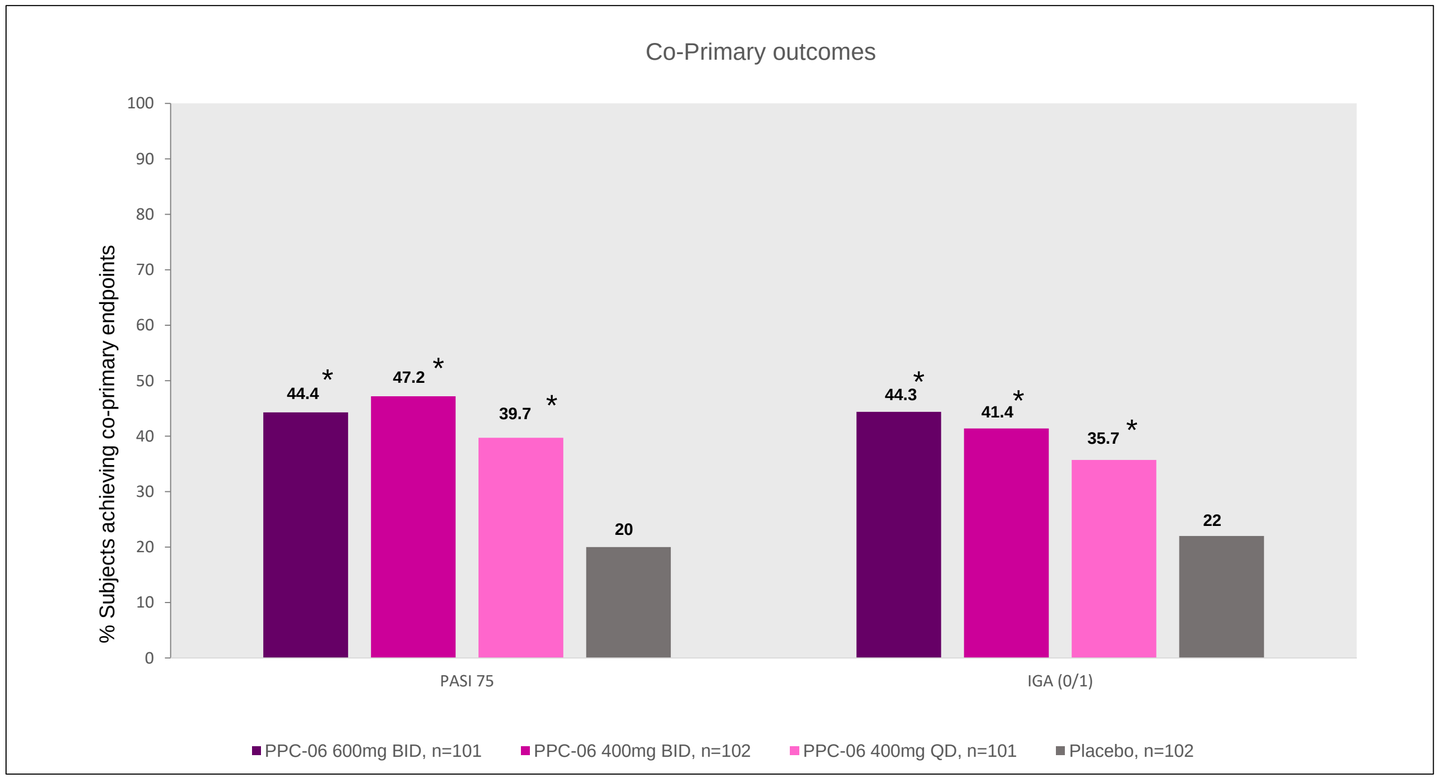
Methods

- This phase 2b randomized, double blind, placebo-controlled, dose, regimen finding efficacy and safety study was conducted at 76 US sites.
- Enrolled patients had chronic plaque psoriasis, PASI (Psoriasis Area and Severity Index) ≥12, IGA score (Investigator's Global Assessment) ≥3, and BSA (Body Surface Area) ≥10%. 426 subjects were randomized in a 1:1:1:1 ratio into 4 dose arms: 400 mg QD, 400 mg BID, 600 mg BID, and placebo.
- The co-primary end points at week 24 were PASI-75 (≥75% reduction from baseline PASI) and an IGA score of 'clear'/'almost clear' (i.e., 0/1).

Conclusions

- PPC-06 may have potential to serve as an important therapeutic option for psoriasis patients in US as there are few oral treatments currently available.

Figure 1. *Co-Primary outcomes at week 24*



*Statistical significance reported with placebo

Results

- FAS population included 406 subjects: 400 mg QD (n=101), 400 mg BID (n=102), 600 mg BID (n=101) and placebo (n=102). At week 24 , PASI-75 was achieved by 44.3%, 47.2% and 39.7% patients in PPC-06 600 mg BID, 400 mg BID and 400 mg QD groups, respectively, compared to 20% in the placebo group (p=0.004, 0.002 and 0.004 for the PPC-06 600 mg BID, 400 mg BID and 400 mg QD groups, respectively) (Fig.1).
- Additionally, 44.4%, 41.4% and 35.7% of patients in the PPC-06 600 mg BID and 400 mg BID and 400 mg QD groups, respectively, achieved an IGA score of 0/1 at week 24, compared to 22% of patients in the placebo group (p=0.010, 0.021 and 0.044 for the PPC-06 600 mg BID, 400 mg BID and 400 mg QD groups, respectively (Fig.1).
- Multiple Imputation was done for the missing efficacy data. Diarrhea was the most common TEAE, reported in 7%, 18%, 23% and 5% of patients in the PPC-06 400 mg QD, 400 mg BID, 600 mg BID, and placebo groups, respectively. Most cases being mild to moderate in severity. Nausea, abdominal pain were reported in < 10% and flushing in 1-2% of PPC-06 population.
- Two subjects developed CTCAE grade 3 lymphopenia with PPC-06, but recovered uneventfully on discontinuation of study drug. No new/unexpected adverse events were reported compared to what is known for DMF drugs. PPC-06 demonstrated significant efficacy compared to placebo over 24 weeks of treatment for three dose strengths.

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