Efficacy of PMX30063 in Experimental Staphylococcal Skin and Skin Structure Infection Models

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Abstract

Background: PMX30063 (PMX) is a synthetic small molecule mimetic of host defense peptides and is currently in clinical development. PMX possesses a novel mechanism of action, directly targeting bacterial cell membrane, resulting in the destruction of the bacterial cell wall, and consequently, rapid killing of bacterial cells.

Methods and Materials

Female, 5-6 week old CD-1 mice were used in abscess studies and were inoculated subcutaneously on the flank with 0.01 mL of a 5 x 10⁷ CFU/mL suspension of ATCC13709. 2009. 49th ICAAC, Poster F1-2014

Results:

In the MSCA model, PMX demonstrated log CFU reductions of 1.3 – 2.3 for IV dosing regimens (both qd and bid) between 10 – 20 mg/kg as compared to the vehicle control. Treatment with PMX 150 mg/kg i.v. (q.d. for 3 days) reduced log CFU by as much as 3.2 – 4.7 at 15 mins post-dose compared to the corresponding control.

PMX30063 (4 – 20 mg/kg) increased from 7.05 log CFU/mL compared, respectively. PMX30063 at 4 – 20 mg/kg reduced Log CFU by as much as 2.2 – 4.9 at 6 hrs post-dose when compared to the corresponding control.

Summary and Conclusions

• PMX30063 at 150 mg/kg i.v. (q.d. for 3 days) reduced log CFU by as much as 3.2 – 4.7 at 15 mins post-dose compared to the corresponding control.

References


Acknowledgments

The study was funded and supported by Polymedix Inc., Radnor, PA. The authors wish to acknowledge Dr. Robert Scott of Polymedix Inc. for the synthesis of PMX30063 and Dr. J. Ford of Fordham University for the studies in this manuscript.