In Vivo Efficacy of Dual-Action Molecule TNP-2092 in Mouse H. pylori Infection Model: Dose Relationship and Impact of Proton Pump Inhibitor

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Effect of PPI on TNP-2092 Efficacy

<table>
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<th>Treatment</th>
<th>CFU/Stomach</th>
<th>TNP-2092 Alone</th>
<th>TNP-2092 + Omeprazole</th>
<th>TNP-2092 + Metronidazole</th>
<th>TNP-2092 + Metronidazole + Omeprazole</th>
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MATERIALS & METHODS

Animals: Female C57BL/6 mice, 5-6 weeks of age and 18-22 grams in weight.

Bacterial Strains: H. pylori SS1 (Caga), V6 (ATCC 43504) (MIC reference strain).

Minimum Inhibitory Concentration: MICs were determined on Mueller-Hinton agar at 37°C with >1% of inhibition at MIC concentrations for 72 hours. All experiments were conducted in accordance with CLSI recommendations following incubation at 37°C under microaerophilic conditions for 72 hours. All isolates were tested in triplicate with >1% of inhibition at MIC concentrations for 72 hours.

Methods: TNP-2092 was effective in vivo against H. pylori SS1. TNP-2092 was administered subcutaneously (SC) or intraperitoneally (IP) at 5, 10, and 15 mg/kg daily for 7 or 14 days. The control groups were oral dosing with or without omeprazole or metronidazole. The authors would like to acknowledge the contributions of Jessica Silva, Carter and Jerry Simecka of the TenNor Therapeutics Ltd.

SUMMARY & CONCLUSIONS

- TNP-2092, a dual-action antibiotic comprised of a rifampicin and a quinolone, demonstrated 100% eradication and significantly reduced H. pylori titers when compared to untreated controls.

REFERENCES


ACKNOWLEDGMENTS

The authors would like to acknowledge the contributions of Jessica Silva, Carter and Jerry Simecka of TenNor Therapeutics Ltd.