**ABSTRACT**

Background: The in vivo efficacies of FSI-1686 and reference compounds were examined in murine septicemia, pulmonary infection and urinary tract infection in mouse models caused by Carbapenem-Resistant Gram-Negative bacteria.

METHODS: In vivo efficacy was evaluated in a murine septicemia model caused by Carbapenem-Resistant Gram-Negative bacteria (Pseudomonas aeruginosa, Acinetobacter baumannii, Klebsiella pneumoniae). The in vivo efficacies of FSI-1686 and reference compounds were examined in murine septicemia, pulmonary infection and urinary tract infection in mouse models caused by Carbapenem-Resistant Gram-Negative bacteria.

RESULTS: The in vivo efficacies of FSI-1686 and reference compounds were examined in murine septicemia, pulmonary infection and urinary tract infection in mouse models caused by Carbapenem-Resistant Gram-Negative bacteria.

CONCLUSIONS:

- The FSI-1686 has low protein binding rates in animal serums and the rates are compatible to those of other carbapenems.
- FSI-1686 has excellent pharmacokinetics profiles in rat model. The half-life of FSI-1686 was 4.8 times longer than Meropenem and 1.7 times longer than Doripenem.
- FSI-1686 has excellent potency against CR-P. aeruginosa, K. pneumoniae, A. baumannii, and M. luteus.
- FSI-1686 is a potential carperpenem which is used for treatment of bacterial infection with multi-drug resistant gram-negative pathogens.

**REFERENCES**