Inarigivir (SB 9200) is an oral dinucleotide produg in global Phase Ib clinical development for CHB.

SB 9000 interacts directly with RIG-I.

SB 9000 and SB 9200 show RIG-I and NOD2-dependent IFN response.

RESULTS

INTRODUCTION

Inarigivir is a novel RIG-I agonist – MOA Studies

Kim Lam Chiok1, Niraj K. Shil1, Sreerupa Challa2, Leena Suppiiah2, Geeta Meher2, Seetharamayer Padmanabhan2, Lakshmi Bhagat4, Diane Schmidt3, Kyle Korolowicz3

1Department of Veterinary Microbiology & Pathology, College of Veterinary Medicine, Washington State University, Pullman, WA 99164; 2Spring Bank Pharmaceuticals, Inc., Hopkinton, MA 01748; 3Department of Microbiology & Immunology, Georgetown University Medical Center, Washington, DC, 20057.

It is converted to the active dinucleotide metabolite, SB 9000, and has both direct-acting and immune-mediated antiviral responses characterized by reductions in HBV DNA, RNA, HBcAg and HBcAg as revealed in the recently completed Phase IIa Achieve® trials.

The dinucleotide activates Retinoic Acid-Inducible Gene (RIG-I), for the induction of innate and adaptive immunity and has shown pan-viral activity against HSV, influenza A virus, human parainfluenza virus, Norovirus, HCV, and HBV.

The present studies were undertaken to further elucidate its mechanism of action (MOA).

CONCLUSION

Inarigivir/SB 9000 activates RIG-I intracellularly to produce Type I IFNs and cytokines for antiviral defense in vivo and in vitro. These preclinical results correlate with the observed antiviral activity of Inarigivir in HCV and HBV patients.