Experimental and Molecular Therapeutics 3: Investigational Combinations/Modulators I

Developing PHY906 as a broad- spectrum modulator of chemotherapeutic agents in cancer therapy

Shwu-Huey Liu, Zaoli Jiang, Tah-Mun Su, Wen-Yi Gao, Chung-Hang Leung, Yashang Lee, and Yung-Chi Cheng

DOI: Published April 2004

Proc Amer Assoc Cancer Res, Volume 45, 2004

Abstract

557

PHY906 is a traditional Chinese botanical formulation consisting of 4 different herbs, and it has been used for some 1800 years to treat gastrointestinal ailments, some of which are commonly observed side effects in cancer patients undergoing chemotherapy. We have previously reported that PHY906 reduced chemotherapy-induced toxicities including body weight loss and mortality, and that it also enhanced the antitumor efficacy of a broad-spectrum of anticancer agents, such as CPT-11, 5-FU, CPT-11/5-FU/LV, VP-16, and L-OddC in *in vivo* animal models. PHY906 has been co-administrated with either the oral 5-FU prodrug capecitabine or CPT-11 in human hepatocellular xenografts mouse model, and with gemcitabine in mouse pancreatic cancer model. We have shown that PHY906 significantly enhanced the therapeutic index of chemotherapeutic agents studied in both hepatocellular and pancreatic cancer models. Co-administration of PHY906 with either capecitabine or gemcitabine in animal models did not alter the pharmacokinetic profile of capecitabine, gemcitabine, or their respective metabolites. Our biochemical studies revealed that the PHY906 formulation possesses a wide range of pharmacological activities. The potential mechanism(s) of action of PHY906 include (1) enhancement of oral uptake of pharmacologically active agents with inhibition in intestinal CYP3A4; (2) inhibition of NF-κB activity; (3)

April 2004
Volume 64,
Issue 7
Supplement
Table of Contents

inhibition of MMP activity; and (4) destruction of the integrity of sinusoids in hepatoma. These pre-clinical in vivo studies have provided rationale for developing PHY906 in the clinical setting. A phase I/IIA double-blind placebo-controlled, dose escalation study of PHY906 was initiated to evaluate the potential effect of PHY906 in modulating CPT-11-induced diarrhea associated with the bolus, weekly schedule of CPT-11/5-FU/LV in advanced colorectal cancer patients. A second phase I/II open-label dose escalation clinical trial has just been opened to patient accrual to evaluate the role of PHY906 in combination with capecitabine in the treatment of hepatocellular carcinoma.

American Association for Cancer Research

Previous

Back to top

Home
Alerts
Feedback
Privacy Policy

Articles
Online First
Current Issue
Past Issues
Meeting Abstracts

Info for
Authors
Subscribers
Advertisers
Librarians

About Cancer Research
About the Journal
Editorial Board
Permissions
Submit a Manuscript

Cancer Research Online ISSN: 1538-7445
Cancer Research Print ISSN: 0008-5472
Journal of Cancer Research ISSN: 0099-7013
American Journal of Cancer ISSN: 0099-7374