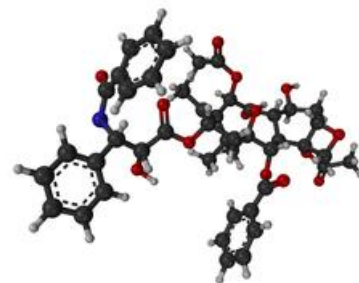


Next-Generation Taxoids

Novel Fluorine-Containing Taxoids with High Potency against Drug-Resistant Cancer

Background

Paclitaxel and docetaxel have been extensively used in clinic for treatment of various cancers. However, their lack of tumor-specificity frequently results in an assortment of undesired side effects and exhibit little efficacy in treating melanoma, pancreatic, gastric, brain and renal cancers. These limitations are, at least in part, due to multi-drug resistance (MDR) caused by overexpression of ABC cassette efflux pumps and the beta-III tubulin isoform.



Paclitaxel

Technology

Dr. Ojima, Distinguished Professor of Chemistry and Director of the Institute for Chemical Biology and Drug Discovery (ICB &DD) at Stony Brook University has developed fluorine-containing next-generation taxoid anticancer agents with superior pharmacological properties and improved potency against various classes of tumors, in particular drug-resistant cancers and cancer stem cells. The potency of these next-generation taxoids was evaluated against various drug-sensitive and drug-resistant cancer cell lines and patient-derived cancer stem cells. Highly potent taxoids are also very important as the warheads of tumor-targeting drug conjugates.

Patent number/Publication:

Provisional filed covering composition of matter and methods of use.

Advantages

- Novel next-generation taxoids
- Superior potency
- Block known metabolic pathways of taxoids
- Enhanced drug transportation and membrane permeability

Applications

- Oncology

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