Marine Natural Product Yields Cancer Therapeutic (NCE)

Tech ID: 22510 / UC Case 2010-216-0

BACKGROUND

SIO scientists have mined their rare collection of marine organisms to identify, characterize and analog a proprietary, small molecule with anti-cancer properties. SAR studies have identified regions of the molecule that have yielded analogs of greatest interest. Compositions of matter and methods of use are claimed for the treatment of cancer and hyperproliferative disorders.

TECHNOLOGY DESCRIPTION

UC inventors have used human cancer bio-assays to identify, isolate and characterize novel compositions from marine cyanobacteria. Subsequent work with parent compounds and potent analogs has yielded compositions of matter, methods for synthesis and methods of using Apratoxins F & G to treat cancer.

APPLICATIONS

While in vivo studies have not confirmed which drugs will be most useful for which cancers, studies suggest the first targets may be solid tumors, particularly colon cancer. In general, any disease or condition characterized by hyperproliferative cell growth may benefit from this therapeutic approach.

STATE OF DEVELOPMENT

Thus far, in vivo studies with Apratoxin F have corroborated the more extensive in vivo studies with the related composition, Apratoxin A (see Luesch et al., below). Complete structures and SAR have been worked out for Apratoxins F and G. Both compositions have demonstrated solid, in vitro, toxicity against two human tumor cell lines, HCT-116 and H125. Cytotoxicity was tested in NCI-H-460 human lung tumor cells and HCT-116 cells.

INTELLECTUAL PROPERTY INFO


RELATED MATERIALS


INVENTORS

- Genelev, William H.

OTHER INFORMATION

KEYWORDS

New Chemical Entity, NCE, composition, Natural Product, Cancer, oncology, tumor, colon cancer, hyperproliferative, hyperproliferation, therapy, therapeutics, analog, Apratoxin, cytotoxicity, SAR, structure activity, structure-activity

CATEGORIZED AS

- Medical
  - Disease: Cancer
  - New Chemical Entities, Drug Leads

RELATED CASES

2010-216-0

PATENT STATUS

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ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Anti-inflammatory compounds for dermatology and chronic inflammation
- Novel Compositions for Cancer Therapy (Proteasomes Inhibitors)
- Unique Compound Inhibits Angiogenesis in Cancer and Eye Diseases