Synthetic Anticancer Polyketide Compounds

Tech ID: 23152 / UC Case 2012-262-0

BACKGROUND

Chronic lymphocytic leukemia (CLL), one of the most common types of leukemia, characterized by an abnormal population of B lymphocytes in the blood that display a unique but characteristic pattern of cell surface markers such as the atypical co-production of CD5 and CD23. Despite the recent advance of combination treatments such as FCR (fludarabine, cyclophosphamide and rituximab) that confers a survival advantage, there is still no cure for CLL. Additionally, high-risk CLL groups such as patients with 17p deletion have a worse diagnosis and often fail to respond to therapy. Given these complications, there is an immediate need for agents that act on CLL through novel pathways.

TECHNOLOGY DESCRIPTION

Researchers at UC San Diego discovered a consensus motif derived through a combination of chemical and biological studies on FD-895 and related pladienolide polyetides. These studies not only demonstrate a pharmacologically-advanced analog but also provide one of the most potent splicing inhibitors discovered to date, with a favorable therapeutic index and pharmacological properties.

The patent-pending technology provides synthetic analogues of a class of macrolides. The analogues may be used in the treatment of cancer. A method of detecting spliceosome inhibition using a test compound is also provided. US patent rights are available for commercial development.

STATE OF DEVELOPMENT

The researchers validated the anti-tumor activity of these novel analogs using a combination of in vitro assays, cell assays as well as animal models in collaborati0on with research teams at at UC San Diego's Moores Cancer Center. Investigation as a therapeutic for the treatment of cancer in particular preclinical studies are now underway for translation into the clinic for use against metastatic bone cancer and leukemia. Detailed chemical and biological methods provide a strong foundation for rapid interrogation for further clinical advance.

RELATED MATERIALS

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PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,604,973	03/28/2017	2012-262

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OTHER INFORMATION

KEYWORDS

Anticancer compounds, cancer, polyketide, synthetic

CATEGORIZED AS

- **Medical**
  - Disease: Cancer

RELATED CASES

2012-262-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- (SD2008-188) Anticancer Agents - Novel Spirohexenolides
- Reversible Chemoenzymatic Protein Labeling

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