

Treatment of Leukemia

Background

Leukemia is a cancer that starts in blood-forming tissue such as the bone marrow and causes large numbers of blood cells to be produced and enter the bloodstream. Leukemia has two common processes; one is that certain cells in the body become abnormal and second is that after this development, the human body keeps producing large numbers of these abnormal cells. In most types of leukemia, the abnormal cells are white blood cells. The leukemia cells usually look different from normal blood cells, and they do not function properly. Since this cancer is complex in nature and not susceptible to any specific therapy, there are a number of treatments employed including chemotherapy, use of interferon, radiation, and bone marrow transplants. Each year, nearly 27,000 adults and more than 2,000 children in the United States are diagnosed with leukemia, for which there is no cure, only palliative treatment. The current invention encompasses a class of heterocyclic oxo-butenoic (crotonic) compounds having activity against leukemia. These compounds have high activity against human leukemia and low toxicity in animals. The compounds can be used as therapeutic agents for the treatment of leukemia.

Invention

This invention relates to novel heterocyclic oxo-butenoic (crotonic) compounds; OF-13 and 3F-19 and to the use of these compounds in humans as therapeutic means for the treatment of human leukemia (see U.S. patent # 7,049,461).

Application

The novel compounds can be used in humans as therapeutic means for the eradication and/or treatment of leukemia.

Advantages

- These compounds possess lower or equal acute toxicity as compared to the current leukemia treatment drugs
- Possibly reduced side effects as compared to current leukemia treatment drugs

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