

Title (en)  
REGIOISOMERIC BENZOTHIOPYRANOPYRIDINES HAVING ANTITUMOR ACTIVITY

Title (de)  
REGIOISOMERE BENZOTHIOPYRANOPYRIDINE MIT ANTITUMOR- AKTIVITÄT

Title (fr)  
BENZOTHIOPYRANOPYRIDINES REGIOISOMERES A ACTIVITE ANTITUMORALE

Publication  
**EP 0981528 A1 20000301 (EN)**

Application  
**EP 98918764 A 19980428**

Priority  

- US 9808398 W 19980428
- US 4497097 P 19970428

Abstract (en)  
[origin: WO9849172A1] This invention is directed to benzothiopyrano [2,3-b]-, [3,2-b]- and [3,2-c]-pyridines substituted in the positions 6 and 9. The compounds of the invention have general formula (I) wherein: one of X, Y or Z is nitrogen (-N=), the others being carbon (-CH=); R' is selected from the group consisting of (C1-C4)alkyl, nitro or -NH-R1, wherein R1 is selected from the group consisting of -CO-CH2-NR2R3, (C1-C10)alkyl, (C2-C10)alkyl having one or two substituents selected from the group consisting of -OR4 and -NR2R3, (C2-C10)alkyl interrupted by one or two oxygen atoms or by one -NR5- group, and said (C2-C10)alkyl being optionally substituted by one or two hydroxy or -NR2R3 groups; R is selected in the group consisting of hydrogen, (C1-C10)alkyl, (C2-C10)alkyl having one or two substituents selected from the group consisting of -OR4 and -NR2R3, (C2-C10)alkyl interrupted by one or two oxygen atoms or by one -NR5- group, and said (C2-C10)alkyl being optionally substituted by one or two hydroxy or -NR2R3 groups. These compounds have antitumor activity against human leukemias and solid tumors sensitive to treatment with mitoxantrone and antitumor antibiotics, such as doxorubicin.

IPC 1-7  
**C07D 495/04; A61K 31/435**

IPC 8 full level  
**C07D 495/04** (2006.01)

CPC (source: EP)  
**C07D 495/04** (2013.01)

Citation (search report)  
See references of WO 9849172A1

Designated contracting state (EPC)  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**WO 9849172 A1 19981105**; AU 7162898 A 19981124; CA 2288274 A1 19981105; EP 0981528 A1 20000301

DOCDB simple family (application)  
**US 9808398 W 19980428**; AU 7162898 A 19980428; CA 2288274 A 19980428; EP 98918764 A 19980428