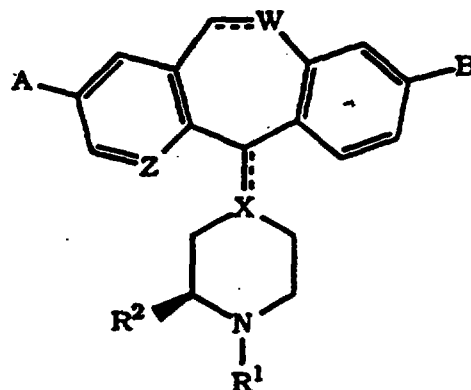


WHAT IS CLAIMED IS:

1. A compound of the formula



(1.0)

- 5 wherein:

A and B are independently selected from H, halo or C₁-C₆ alkyl;

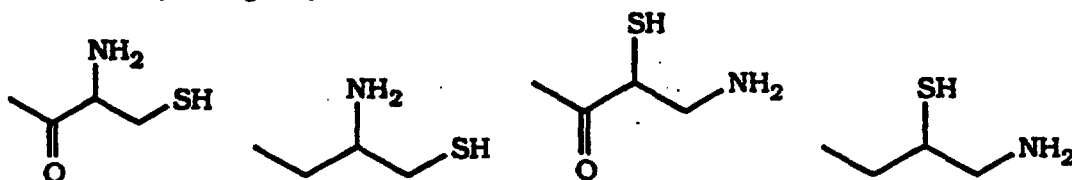
Z is N or CH;

W is CH, CH₂, O or S, wherein the dotted line to W represents a double bond which is present when W is CH;

- 10 X is C, CH or N, wherein the dotted line connecting X to the tricyclic ring system represents a double bond which is present when X is C;

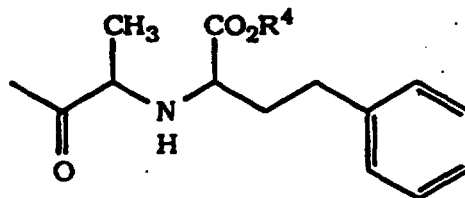
R¹ is selected from:

- 1) a group of the formula:

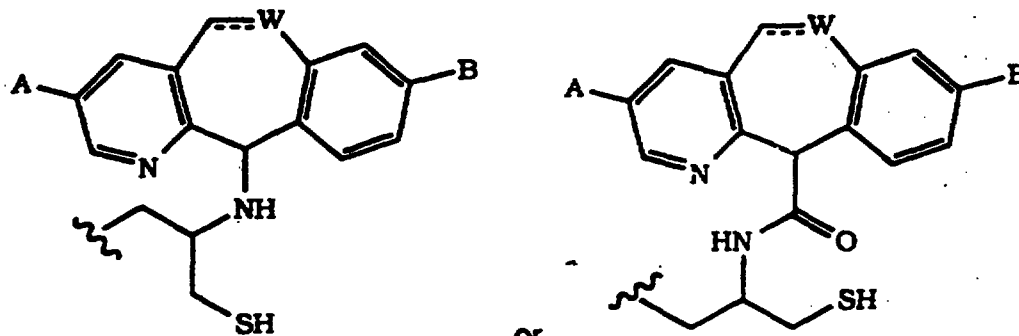


- 15 or disulfide dimers thereof;

- 2) a group of the formula:

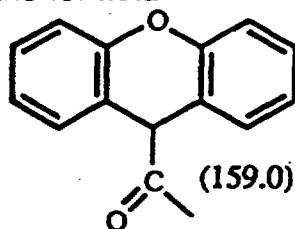


- 3) a group of the formula:



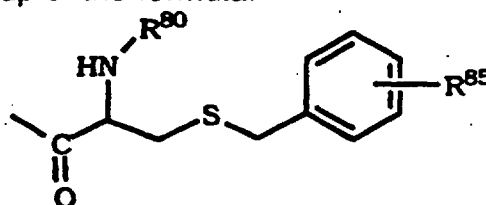
wherein W, A and B are as defined above;

4) a group of the formula:



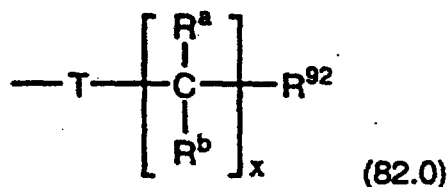
5

5) a group of the formula:



wherein R^{80} is selected from H or $-C(O)OR^{90}$ wherein R^{90} is a C_1 - C_6 alkyl group, and R^{85} is a C_1 - C_6 alkoxy group; and

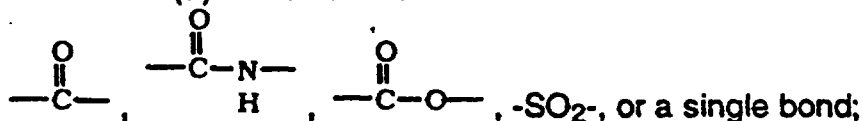
6) a group of the formula:



10

wherein:

(a) T is selected from:



(b) x is 0, 1, 2, 3, 4, 5 or 6;

15

(c) each R^a and each R^b is independently selected from H, aryl, alkyl, alkoxy, aralkyl, amino, alkylamino, heterocycloalkyl, $-COOR^{60}$, $-NH[C(O)]_zR^{60}$ (wherein z is 0 or 1), or $-(CH)_wS(O)_mR^{60}$ (wherein w is 0, 1, 2 or 3, and m is 0, 1 or 2); or R^a and R^b taken together can represent cycloalkyl, $=N-O$ -alkyl, $=O$ or heterocycloalkyl with the proviso that for the same carbon, R^a is not selected from alkoxy, amino, alkylamino or

20

$-\text{NH}\{\text{C}(\text{O})\}_z\text{R}^{60}$ when R^b is selected from alkoxy, amino, alkylamino or $-\text{NH}\{\text{C}(\text{O})\}_z\text{R}^{60}$; and with the proviso that when T is a single bond, for the first carbon containing R^a and R^b , R^a and R^b are not selected from alkoxy, alkylamino, amino or $-\text{NHR}^{60}$; and

5 (d) R^{92} can represent H, alkyl, aryl, aryloxy, arylthio, aralkoxy, aralkyl, heteroaryl or heterocycloalkyl;

R^{60} represents H, alkyl, aryl or aralkyl;

R^4 is H or $\text{C}_1\text{-C}_6$ alkyl;

R^2 is selected from: H, $-\text{C}(\text{O})\text{OR}^6$, $-\text{C}(\text{O})\text{NR}^6\text{R}^7$, $\text{C}_1\text{-C}_8$ alkyl, $\text{C}_2\text{-C}_8$ alkenyl, $\text{C}_2\text{-C}_8$ alkynyl, substituted ($\text{C}_1\text{-C}_8$)alkyl, substituted ($\text{C}_2\text{-C}_8$)alkenyl, substituted ($\text{C}_2\text{-C}_8$)alkynyl, wherein said substituted groups have one or more substituents selected from:

1) aryl, arylalkyl, heteroarylalkyl, heteroaryl, heterocycloalkyl, B-substituted aryl, B-substituted arylalkyl, B-substituted heteroarylalkyl, B-substituted heteroaryl or B-substituted heterocycloalkyl, wherein B is selected from $\text{C}_1\text{-C}_4$ alkyl, $-(\text{CH}_2)_n\text{OR}^6$, $-(\text{CH}_2)_n\text{NR}^6\text{R}^7$ and halo;

2) $\text{C}_3\text{-C}_6$ cycloalkyl;

3) $-\text{OR}^6$;

4) $-\text{SH}$ or $-\text{S}(\text{O})_t\text{R}^6$;

20 5) $-\text{NR}^6\text{R}^7$;

6) $-\text{N}(\text{R}^6)\text{-C}(\text{O})\text{R}^7$;

7) $-\text{N}(\text{R}^6)\text{-C}(\text{O})\text{NR}^7\text{R}^{12}$;

8) $-\text{O-C}(\text{O})\text{NR}^6\text{R}^7$;

9) $-\text{O-C}(\text{O})\text{OR}^6$;

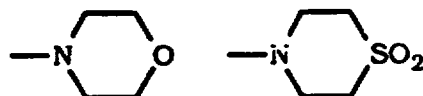
25 10) $-\text{SO}_2\text{NR}^6\text{R}^7$;

11) $-\text{N}(\text{R}^6)\text{-SO}_2\text{-R}^7$;

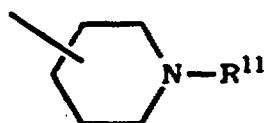
12) $-\text{C}(\text{O})\text{NR}^6\text{R}^7$;

13) $-\text{C}(\text{O})\text{OR}^6$; and

provided where R^1 is D, R^2 is not H, and where R^1 is D and R^2 is $\text{C}_1\text{-C}_8$ alkyl, the substituents on said alkyl group are not substituents 3), 4), 5), 9), or 13); D is $-\text{C}(\text{O})\text{-CH}_2\text{-R}^5$, $-\text{C}(\text{O})\text{-O-R}^5$ or $-\text{C}(\text{O})\text{-NH-R}^5$, wherein R^5 is pyridyl, pyridyl N-oxide,



or a piperidiny group of the formula



wherein R¹¹ represents H, C₁-C₆ alkyl, haloalkyl or -C(O)-R⁹ wherein R⁹ is C₁-C₆ alkyl, C₁-C₆ alkoxy or -NH(R¹⁰) wherein R¹⁰ is H or alkyl, or the group -C(O)-R⁹ represents an acyl radical of a naturally occurring amino acid;

R⁶, R⁷ and R¹² are independently selected from H, C₁-C₄ alkyl, (C₃-C₆) cycloalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl, heterocycloalkyl, substituted (C₁-C₄)alkyl, substituted (C₃-C₆)cycloalkyl, substituted aryl, substituted arylalkyl, substituted heteroaryl, substituted heteroarylalkyl or substituted heterocycloalkyl, wherein said substituted groups have one or more substituents selected from: C₁-C₄ alkoxy, aralkyl, heteroarylalkyl, -NO₂, C₃-C₁₀-alkoxyalkoxy, C₃-C₆ cycloalkyl, aryl, -CN, nitrophenyl, methylenedioxy-phenyl, heteroaryl, heterocycloalkyl, halo, -OH, -C(O)R¹⁴, -C(O)NR⁶R⁷, -N(R⁶)C(O)R¹⁴, -S(O)_tR¹⁴ or -NR⁹⁵R¹⁵; provided that R⁶, R⁷ and R¹² are not -CH₂OH or -CH₂NR⁹⁵R¹⁵ when said R⁶, R⁷ or R¹² is directly bonded to a heteroatom, and further provided that R⁶ is not H for groups 4) and 9), and R⁷ is not H for group 6);

optionally, when R⁶ and R⁷ are bound to the same nitrogen, R⁶ and R⁷ together with the nitrogen to which they are bound, form a 5 to 7 membered heterocycloalkyl ring which optionally contains O, NR⁶, or S(O)_t wherein t is 0, 1 or 2;

optionally, when R⁷ and R¹² are bound to the same nitrogen, R⁷ and R¹² together with the nitrogen to which they are bound, form a 5 to 7 membered heterocycloalkyl ring which optionally contains O, NR⁶, or S(O)_t wherein t is 0, 1 or 2;

R⁹⁵ and R¹⁵ are independently H, C₁-C₄ alkyl or arylalkyl;

R¹⁴ is C₁-C₄ alkyl, aryl or arylalkyl;

n = 0, 1, 2, 3 or 4; and

t = 0, 1 or 2;

or pharmaceutically acceptable salts thereof.

2. The compound of Claim 1 wherein for R¹:

(a) T is selected from -C(O)-, -SO₂, or -C(O)-C(O)-;

(b) x is 0, 1, or 2;

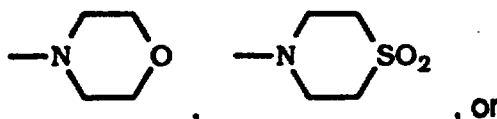
wherein, unless otherwise indicated, alkyl represents C₁ to C₂₀ alkyl, aryl represents C₆ to C₁₅ aryl, aralkyl represents (C₆-C₁₅) or (C₁-C₂₀) alkyl, cycloalkyl represents C₃ to C₈ cycloalkyl, heterocycloalkyl represents C₃ to C₁₅ heterocycloalkyl, and heteroaryl represents C₂ to C₁₄ heteroaryl;

(c) R^a and R^b are independently selected from: (1) H; (2) $NH\{C(O)\}_zR^{60}$ wherein z is 0 or 1, and R^{60} is alkyl; (3) $-(CH)_wS(O)_mR^{60}$ wherein w is 0, 1, 2 or 3, m is 0, 1 or 2, and R^{60} is alkyl; (4) alkyl; or (5) C_1 - C_6 alkoxy; or (6) R^a and R^b taken together represent cycloalkyl; and

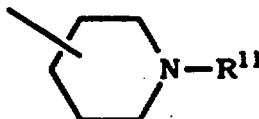
5 (d) R^{92} is selected from (1) H; (2) aryl; (3) substituted aryl; (4) aralkyl; (5) aryloxy; (6) arylthio; (7) alkyl; (8) heteroaryl; (9) substituted heteroaryl; (10) substituted heterocycloalkyl; or (11) substituted alkyl; and wherein R^2 is selected from: (1) $-C(O)NR^6R^7$, and (2) substituted alkyl wherein the substituent is $-C(O)NR^6R^7$; and

10 wherein for said R^2 groups R^6 and R^7 are selected from: (1) H; (2) substituted alkyl; (3) alkyl; (4) cycloalkyl; (5) heteroarylalkyl; and (6) aralkyl wherein said aryl group is substituted.

3. The compound of Claim 1 wherein R^1 is a group D, wherein D is $-C(O)-CH_2-R^5$, $-C(O)-O-R^5$ or $-C(O)-NH-R^5$, wherein R^5 is pyridyl, pyridyl N-oxide,



a piperidinyll group of the formula

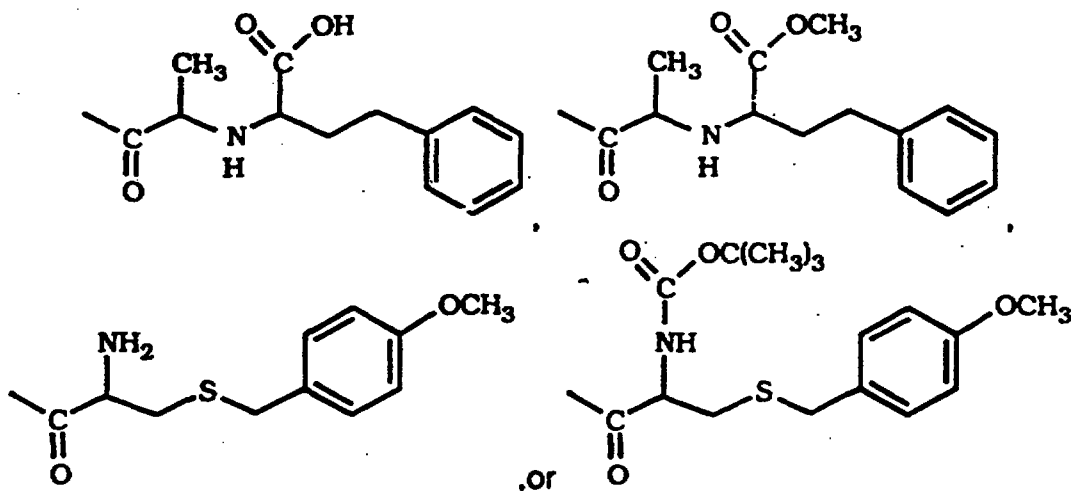


20 wherein R^{11} represents H, C_1 - C_6 alkyl, haloalkyl or $-C(O)-R^9$ wherein R^9 is C_1 - C_6 alkyl, C_1 - C_6 alkoxy or $-NH(R^{10})$ wherein R^{10} is H or alkyl, or the group $-C(O)-R^9$ represents an acyl radical of a naturally occurring amino acid.

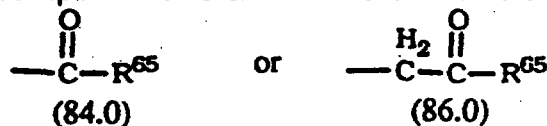
25 4. The compound of Claim 1 wherein R^1 is a group selected from: ~~a group of the formula: 101.0, 102.0, 103.0, 104.0, 105.0, 106.0, 107.0, 108.0, 109.0, 110.0, 112.0, 113.0, 115.0, 117.0, 118.0, 119.0, 120.0, 121.0, 122.0, 123.0, 124.0, 125.0, 127.0, 128.0, 129.0, 131.0, 132.0, 135.0, 136.0, 137.0, 138.0, 139.0, 140.0, 141.0, 142.0, 143.0, 145.0, 146.0, 147.0, 148.0, 149.0, 150.0, 151.0, 152.0, 153.0, 154.0, 155.0, 156.0, 157.0, 158.0, 159.0, 160.0, or 161.0.~~

insert in
structures of
the formulae,
excluding
structure 159.0

5. The compound of Claim 1 wherein R^1 is a group selected from:



6. The compound of Claim 1 wherein R² is a group of formula



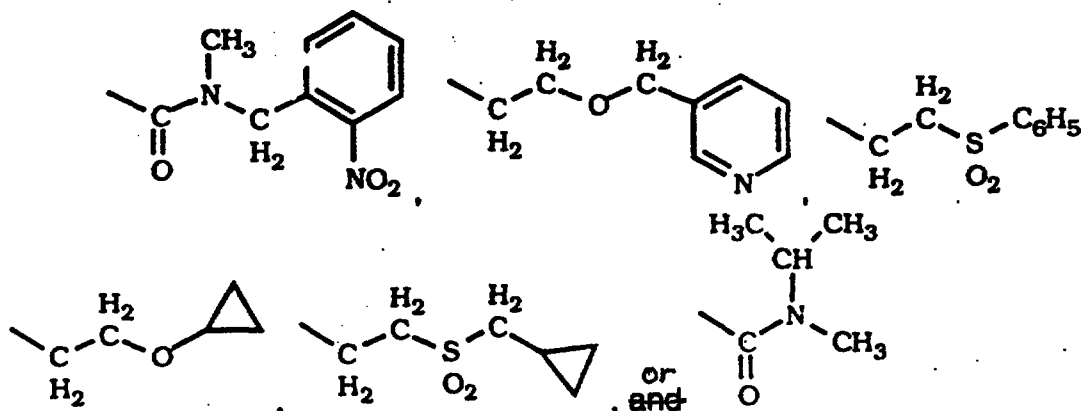
5

insert →
in structures of
formulae, excluding
structure 218.0

wherein R⁶⁵ is selected from a group of the formula: ~~201.0, 202.0, 203.0, 204.0, 205.0, 206.0, 207.0, 208.0, 209.0, 210.0, 211.0, 212.0, 213.0, 214.0, 215.0, 216.0, 217.0, 218.0, 219.0, 220.0, 221.0, 222.0, 223.0, 224.0, 225.0, 226.0, 227.0, 228.0, 229.0, 230.0, or 231.0; or~~

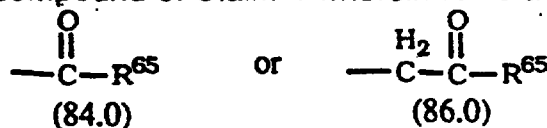
10

R² is selected from a group of the formula: CH₃(CH₂)₃-, C₆H₅CH₂-, CH₃O(CH₂)₂-, CH₃S(CH₂)₂-, CH₃O(CH₂)₃-, n-C₃H₇O(CH₂)₂-, CH₃CONH(CH₂)₄-, -CH₂OH, -C(O)OC₂H₅.



15

7. The compound of Claim 4 wherein R² is a group of formula



wherein R⁶⁵ is selected from a group of the formula: ~~201.0, 202.0, 203.0,~~

insert →
in structures of
formulae, excluding
structure 218.0

~~204.0, 205.0, 206.0, 207.0, 208.0, 209.0, 210.0, 211.0, 212.0, 213.0,~~

~~214.0, 215.0, 216.0, 217.0, 218.0, 219.0, 220.0, 221.0, 222.0, 223.0,
224.0, 225.0, 226.0, 227.0, 228.0, 229.0, 230.0, or 231.0.~~

8. The compound of any of Claims 1-7 wherein A is selected
5 from H or halo, B is halo, and Z is N.

9. The compound of Claim 8 wherein A is H and B is Cl, or A is
Br and B is Cl.

10. The compound of Claim 9 wherein W is -CH₂.

11. A compound selected from ~~a compound of example: 20 Step~~
~~B, 21 Step B, 30, 31, 32, 32-A, 32-B, 32-C, 33, 34, 36, 37, 38, 39 Step B,~~
~~39 Step C, 41, 43, 44, 46, 47, 50, 51, 54, 55, or 56 Step B.~~

Insert in →
structures of
examples, excluding
56 Step B.

15 Step 56 is
inserted in instead.

12. ~~A method for inhibiting the abnormal growth of cells~~
~~comprising administering an effective amount of a compound of claim 1_x in a preparation~~
~~of a medicament for inhibiting the abnormal growth of cells.~~

13. ~~The method of Claim 12 wherein the cells inhibited are tumor~~
~~cells expressing an activated ras oncogene.~~

14. ~~The method of Claim 12 wherein the cells inhibited are~~
~~pancreatic tumor cells, lung cancer cells, myeloid leukemia tumor cells,~~
~~thyroid follicular tumor cells, myelodysplastic tumor cells, epidermal~~
~~carcinoma tumor cells, bladder carcinoma tumor cells or colon tumors~~
~~cells.~~

15. ~~The method of Claim 12 wherein the inhibition of the~~
~~abnormal growth of cells occurs by the inhibition of farnesyl protein~~
~~transferase.~~

16. ~~The method of Claim 12 wherein the inhibition is of tumor~~
~~cells wherein the Ras protein is activated as a result of oncogenic~~
~~mutation in genes other than the Ras gene.~~

17. A pharmaceutical composition for inhibiting the abnormal
growth of cells comprising an effective amount of compound of Claim 1 in
combination with a pharmaceutically acceptable carrier.

18. ~~The use of a compound of Claim 1 for inhibiting the~~
~~abnormal growth of cells.~~

19. ~~The use of a compound of Claim 1 for the manufacture of a~~
~~medicament for the inhibition of the abnormal growth of cells.~~

18. The compound of Claim 1 wherein R² is selected from: -C(O)NR⁶R⁷ or substituted
(C₁-C₈), wherein said substituted group has one or more substituents selected from C(O)NR⁶R⁷.

19. The compound of Claim 1 wherein:

R² is selected from: -C(O)OR⁶, -C(O)NR⁶R⁷, C₂-C₈ alkenyl, C₂-C₈ alkynyl, substituted (C₁-C₈)
alkyl, substituted (C₂-C₈) alkenyl, substituted (C₂-C₈) alkynyl, wherein said substituted groups have

{ Claim 19 (Cont'd) }

or more substituents selected from :

1) aryl, arylalkyl, heteroarylalkyl, heteroaryl, heterocycloalkyl, B-substituted aryl, B-substituted arylalkyl, B-substituted heteroarylalkyl, B-substituted heteroaryl or B-substituted heterocycloalkyl, wherein B is selected from C₁-C₄ alkyl, $-(CH_2)_n OR^6$, $-(CH_2)_n NR^6 R^7$ and halo;

- 2) C₃-C₆ cycloalkyl;
- 3) $-N(R^6)-C(O)R^7$;
- 4) $-N(R^6)-C(O)NR^7 R^{12}$;
- 5) $-O-C(O)NR^6 R^7$;
- 6) $-SO_2 NR^6 R^7$;
- 7) $-N(R^6)-SO_2-R^7$; or
- 8) $-C(O)NR^6 R^7$.