

Claim No:  
HP-2018-000038

IN THE HIGH COURT OF JUSTICE  
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES  
INTELLECTUAL PROPERTY LIST (ChD)  
PATENTS COURT

B E T W E E N:

(1) GLAXOSMITHKLINE UK LIMITED  
(2) GLAXOSMITHKLINE INTELLECTUAL PROPERTY (NO.2) LIMITED

Claimants in HP-2018-000038

– and –

FIBROGEN, INC.

Defendant in HP-2018-000038

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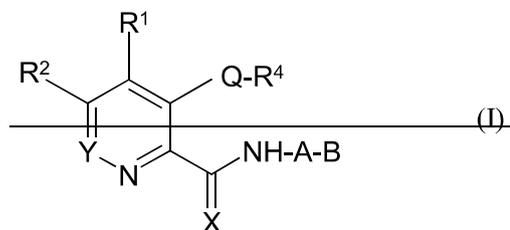
**AMENDED STATEMENT OF  
GROUNDS**

**ANNEX A**

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## Unconditional amendments to EP (UK) 2 289 531:

1. A compound for use in the treatment or prevention of anemia associated with kidney disease, wherein the compound is [(1-chloro-4-hydroxy-isoquinoline-3-carbonyl)-amino]-acetic acid, a compound of formula (I):



5

wherein

A is (C<sub>1</sub>-C<sub>4</sub>)-alkylene;

B is ~~CO<sub>2</sub>H, NH<sub>2</sub>, NHSO<sub>2</sub>CF<sub>3</sub>, tetrazolyl, imidazolyl, 3-hydroxyisoxazolyl,~~

~~CONHCOR''', CONHSOR''', CONHSO<sub>2</sub>R''', where R''' is aryl, heteroaryl, (C<sub>3</sub>-C<sub>7</sub>)-~~

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~~cycloalkyl, or (C<sub>4</sub>-C<sub>4</sub>)-alkyl, optionally monosubstituted by (C<sub>6</sub>-C<sub>12</sub>)-aryl, heteroaryl,~~

~~OH, SH, (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, (C<sub>1</sub>-C<sub>4</sub>)-thioalkyl, (C<sub>1</sub>-C<sub>4</sub>)-sulfinyl, (C<sub>1</sub>-C<sub>4</sub>)-~~

~~sulfonyl, CF<sub>3</sub>, Cl, Br, F, I, NO<sub>2</sub>, COOH, (C<sub>2</sub>-C<sub>5</sub>)-alkoxycarbonyl, NH<sub>2</sub>, mono-(C<sub>1</sub>-C<sub>4</sub>-~~

~~alkyl)-amino, di-(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, or (C<sub>1</sub>-C<sub>4</sub>)-perfluoroalkyl; or wherein B is a CO<sub>2</sub>-~~

~~G carboxyl radical, where G is a radical of an alcohol G-OH in which G is selected~~

15

~~from (C<sub>1</sub>-C<sub>20</sub>)-alkyl radical, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl radical, (C<sub>2</sub>-C<sub>20</sub>)-alkenyl radical, (C<sub>3</sub>-C<sub>8</sub>)-~~

~~cycloalkenyl radical, retinyl radical, (C<sub>2</sub>-C<sub>20</sub>)-alkynyl radical, (C<sub>4</sub>-C<sub>20</sub>)-alkenynyl~~

~~radical, where the alkenyl, cycloalkenyl, alkynyl, and alkenynyl radicals contain one~~

~~or more multiple bonds; (C<sub>6</sub>-C<sub>16</sub>)-carbocyclic aryl radical, (C<sub>7</sub>-C<sub>16</sub>)-carbocyclic aralkyl~~

~~radical, heteroaryl radical, or heteroaralkyl radical, wherein a heteroaryl radical or~~

20

~~heteroaryl moiety of a heteroaralkyl radical contains 5 or 6 ring atoms; and wherein~~

~~radicals defined for G are substituted by one or more hydroxyl, halogen, cyano,~~

~~trifluoromethyl, nitro, carboxyl, (C<sub>1</sub>-C<sub>12</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl, (C<sub>5</sub>-C<sub>8</sub>)-cycloalkenyl,~~

~~(C<sub>6</sub>-C<sub>12</sub>)-aryl, (C<sub>7</sub>-C<sub>16</sub>)-aralkyl, (C<sub>2</sub>-C<sub>12</sub>)-alkenyl, (C<sub>2</sub>-C<sub>12</sub>)-alkynyl, (C<sub>1</sub>-C<sub>12</sub>)-alkoxy, (C<sub>1</sub>-~~

~~C<sub>12</sub>)-alkoxy (C<sub>1</sub>-C<sub>12</sub>)-alkyl, (C<sub>1</sub>-C<sub>12</sub>)-alkoxy (C<sub>1</sub>-C<sub>12</sub>)-alkoxy, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy, (C<sub>7</sub>-C<sub>16</sub>)-~~

aralkyloxy, (C<sub>4</sub>-C<sub>8</sub>)-hydroxyalkyl, O-[CH<sub>2</sub>]<sub>x</sub>-CH<sub>2</sub>(2f+1-g)-F<sub>9</sub>, -OCF<sub>2</sub>Cl, -OCF<sub>2</sub>-CHFCl, (C<sub>4</sub>-  
 C<sub>12</sub>)-alkylcarbonyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylcarbonyl, (C<sub>6</sub>-C<sub>12</sub>)-arylcabonyl, (C<sub>7</sub>-C<sub>16</sub>)-  
 aralkylcarbonyl, cinnamoyl, (C<sub>2</sub>-C<sub>12</sub>)-alkenylcarbonyl, (C<sub>2</sub>-C<sub>12</sub>)-alkynylcarbonyl, (C<sub>4</sub>-  
 C<sub>12</sub>)-alkoxycarbonyl, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-(C<sub>4</sub>-C<sub>12</sub>)-alkoxycarbonyl, (C<sub>6</sub>-C<sub>12</sub>)-  
 5 aryloxy carbonyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkoxy carbonyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkoxy carbonyl, (C<sub>2</sub>-C<sub>12</sub>)-  
 alkenyloxy carbonyl, (C<sub>2</sub>-C<sub>12</sub>)-alkynyloxy carbonyl, acyloxy, (C<sub>4</sub>-C<sub>12</sub>)-  
 alkoxycarbonyloxy, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-(C<sub>4</sub>-C<sub>12</sub>)-alkoxycarbonyloxy, (C<sub>6</sub>-C<sub>12</sub>)-  
 aryloxy carbonyloxy, (C<sub>7</sub>-C<sub>16</sub>)-aralkoxy carbonyloxy, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkoxy carbonyloxy,  
 (C<sub>2</sub>-C<sub>12</sub>)-alkenyloxy carbonyloxy, (C<sub>2</sub>-C<sub>12</sub>)-alkynyloxy carbonyloxy, carbamoyl, N-(C<sub>4</sub>-  
 10 C<sub>12</sub>)-alkyl carbamoyl, N,N-di(C<sub>4</sub>-C<sub>12</sub>)-alkyl carbamoyl, N-(C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl carbamoyl,  
 N-(C<sub>6</sub>-C<sub>16</sub>)-arylcabamoyl, N-(C<sub>7</sub>-C<sub>16</sub>)-aralkyl carbamoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-(C<sub>6</sub>-C<sub>16</sub>)-  
 aryl carbamoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-(C<sub>7</sub>-C<sub>16</sub>)-aralkyl carbamoyl, N-((C<sub>4</sub>-C<sub>10</sub>)-alkoxy-(C<sub>4</sub>-  
 C<sub>10</sub>)-alkyl)-carbamoyl, N-((C<sub>6</sub>-C<sub>12</sub>)-aryloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyl, N-((C<sub>7</sub>-C<sub>16</sub>)-  
 aralkyloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>4</sub>-C<sub>10</sub>)-alkoxy-(C<sub>4</sub>-C<sub>10</sub>)-  
 15 alkyl)-carbamoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>6</sub>-C<sub>16</sub>)-aryloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyl, N-  
 (C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyl, carbamoyloxy, N-(C<sub>4</sub>-  
 C<sub>12</sub>)-alkyl carbamoyloxy, N,N-di-(C<sub>4</sub>-C<sub>12</sub>)-alkyl carbamoyloxy, N-(C<sub>3</sub>-C<sub>8</sub>)-  
 cycloalkyl carbamoyloxy, N-(C<sub>6</sub>-C<sub>12</sub>)-arylcabamoyloxy, N-(C<sub>7</sub>-C<sub>16</sub>)-  
 aralkyl carbamoyloxy, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-(C<sub>6</sub>-C<sub>12</sub>)-arylcabamoyloxy, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-  
 20 N-(C<sub>7</sub>-C<sub>16</sub>)-aralkyl carbamoyloxy, N-((C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyloxy, N-((C<sub>6</sub>-C<sub>12</sub>)-  
 aryloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyloxy, N-((C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-  
 carbamoyloxy, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>4</sub>-C<sub>10</sub>)-alkoxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyloxy, N-  
 (C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>6</sub>-C<sub>12</sub>)-aryloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyloxy, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-  
 ((C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyloxy, amino, (C<sub>4</sub>-C<sub>12</sub>)-alkylamino, di-(C<sub>4</sub>-  
 25 C<sub>12</sub>)-alkylamino, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylamino, (C<sub>2</sub>-C<sub>12</sub>)-alkenylamino, (C<sub>2</sub>-C<sub>12</sub>)-  
 alkynylamino, N-(C<sub>6</sub>-C<sub>12</sub>)-arylamino, N-(C-C<sub>14</sub>)-aralkylamino, N-alkyl-aralkylamino, N-  
 alkyl-arylamino, (C<sub>4</sub>-C<sub>12</sub>)-alkoxyamino, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino, (C<sub>4</sub>-  
 C<sub>12</sub>)-alkylcarbonylamino, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylcarbonylamino, (C<sub>6</sub>-C<sub>12</sub>)-

arylcarbonylamino, (C<sub>7</sub>-C<sub>16</sub>)-aralkylcarbonylamino, (C<sub>4</sub>-C<sub>12</sub>)-alkylcarbonyl-N-(C<sub>4</sub>-C<sub>10</sub>)-  
 alkylamino, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylcarbonyl-N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino, (C<sub>6</sub>-C<sub>12</sub>)-arylcarbonyl-  
 N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino, (C<sub>7</sub>-C<sub>11</sub>)-aralkylcarbonyl-N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino, (C<sub>4</sub>-C<sub>12</sub>)-  
 alkylcarbonylamino-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylcarbonylamino-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>6</sub>-  
 5 C<sub>12</sub>)-arylcarbonylamino-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>7</sub>-C<sub>12</sub>)-aralkylcarbonylamino-(C<sub>4</sub>-C<sub>8</sub>)-alkyl,  
 amino-(C<sub>4</sub>-C<sub>10</sub>)-alkyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino-(C<sub>4</sub>-C<sub>10</sub>)-alkyl, N,N-di-(C<sub>4</sub>-C<sub>10</sub>)-  
 alkylamino-(C<sub>4</sub>-C<sub>10</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylamino-(C<sub>4</sub>-C<sub>10</sub>)-alkyl, (C<sub>4</sub>-C<sub>12</sub>)-  
 alkylmercapto, (C<sub>4</sub>-C<sub>12</sub>)-alkylsulfinyl, (C<sub>4</sub>-C<sub>12</sub>)-alkylsulfonyl, (C<sub>6</sub>-C<sub>16</sub>)-arylmercapto,  
 (C<sub>6</sub>-C<sub>16</sub>)-arylsulfinyl, (C<sub>6</sub>-C<sub>12</sub>)-arylsulfonyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkylmercapto, (C<sub>7</sub>-C<sub>16</sub>)-  
 10 aralkylsulfinyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkylsulfonyl, sulfamoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkylsulfamoyl, N,N-  
 di-(C<sub>4</sub>-C<sub>10</sub>)-alkylsulfamoyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylsulfamoyl, N-(C<sub>6</sub>-C<sub>12</sub>)-alkylsulfamoyl, N-  
 (C<sub>7</sub>-C<sub>16</sub>)-aralkylsulfamoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-(C<sub>6</sub>-C<sub>12</sub>)-arylsulfamoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-  
 N-(C<sub>7</sub>-C<sub>16</sub>)-aralkylsulfamoyl, (C<sub>4</sub>-C<sub>10</sub>)-alkylsulfonamido, N-((C<sub>4</sub>-C<sub>10</sub>)-alkyl)-(C<sub>4</sub>-C<sub>10</sub>)-  
 alkylsulfonamido, (C<sub>7</sub>-C<sub>16</sub>)-aralkylsulfonamido, or N-((C<sub>4</sub>-C<sub>10</sub>)-alkyl)-(C<sub>7</sub>-C<sub>16</sub>)-  
 15 aralkylsulfonamido; wherein radicals which are aryl or contain an aryl moiety, may be  
 substituted on the aryl by one to five identical or different hydroxyl, halogen, cyano,  
 trifluoromethyl, nitro, carboxyl, (C<sub>4</sub>-C<sub>12</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl, (C<sub>6</sub>-C<sub>12</sub>)-aryl, (C<sub>7</sub>-  
 C<sub>16</sub>)-aralkyl, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-(C<sub>4</sub>-C<sub>12</sub>)-alkyl, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-(C<sub>4</sub>-  
 C<sub>12</sub>)-alkoxy, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy, (C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy, (C<sub>4</sub>-C<sub>8</sub>)-hydroxyalkyl, (C<sub>4</sub>-C<sub>12</sub>)-  
 20 alkylcarbonyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl-carbonyl, (C<sub>6</sub>-C<sub>12</sub>)-arylcarbonyl, (C<sub>7</sub>-C<sub>16</sub>)-  
 aralkylcarbonyl, (C<sub>4</sub>-C<sub>12</sub>)-alkoxycarbonyl, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-(C<sub>4</sub>-C<sub>12</sub>)-alkoxycarbonyl,  
 (C<sub>6</sub>-C<sub>12</sub>)-aryloxycarbonyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkoxycarbonyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkoxycarbonyl,  
 (C<sub>2</sub>-C<sub>12</sub>)-alkenylloxycarbonyl, (C<sub>2</sub>-C<sub>12</sub>)-alkynylloxycarbonyl, (C<sub>4</sub>-C<sub>12</sub>)-alkylcarbonyloxy,  
 (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylcarbonyloxy, (C<sub>6</sub>-C<sub>12</sub>)-arylcarbonyloxy, (C<sub>7</sub>-C<sub>16</sub>)-aralkylcarbonyloxy,  
 25 cinnamoyloxy, (C<sub>2</sub>-C<sub>12</sub>)-alkenylcarbonyloxy, (C<sub>2</sub>-C<sub>12</sub>)-alkynylcarbonyloxy, (C<sub>4</sub>-C<sub>12</sub>)-  
 alkoxycarbonyloxy, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-(C<sub>4</sub>-C<sub>12</sub>)-alkoxycarbonyloxy, (C<sub>6</sub>-C<sub>12</sub>)-  
 aryloxycarbonyloxy, (C<sub>7</sub>-C<sub>16</sub>)-aralkyloxycarbonyloxy, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkoxycarbonyloxy,  
 (C<sub>2</sub>-C<sub>12</sub>)-alkenylloxycarbonyloxy, (C<sub>2</sub>-C<sub>12</sub>)-alkynylloxycarbonyloxy, carbamoyl, N-(C<sub>4</sub>-

$C_{12}$ -alkylcarbamoyl, N,N-di- $(C_4-C_{12})$ -alkylcarbamoyl, N- $(C_3-C_8)$ -cycloalkylcarbamoyl,  
N- $(C_6-C_{12})$ -arylcaramoyl, N- $(C_7-C_{16})$ -aralkylcarbamoyl, N- $(C_4-C_{10})$ -alkyl-N- $(C_6-C_{12})$ -  
arylcaramoyl, N- $(C_4-C_{10})$ -alkyl-N- $(C_7-C_{16})$ -aralkylcarbamoyl, N- $(C_4-C_{10})$ -alkoxy- $(C_4-$   
 $C_{10})$ -alkyl)-carbamoyl, N- $(C_6-C_{12})$ -aryloxy- $(C_4-C_{10})$ -alkyl)-carbamoyl, N- $(C_7-C_{16})$ -  
5 aralkyloxy- $(C_4-C_{10})$ -alkyl)-carbamoyl, N- $(C_4-C_{10})$ -alkyl-N- $(C_4-C_{10})$ -alkoxy- $(C_4-C_{10})$ -  
alkyl)-carbamoyl, N- $(C_4-C_{10})$ -alkyl-N- $(C_6-C_{12})$ -aryloxy- $(C_4-C_{10})$ -alkyl)-carbamoyl, N-  
 $(C_4-C_{10})$ -alkyl-N- $(C_7-C_{16})$ -aralkyloxy- $(C_4-C_{10})$ -alkyl)-carbamoyl, carbamoyloxy, N- $(C_4-$   
 $C_{12})$ -alkylcarbamoyloxy, N,N-di- $(C_4-C_{12})$ -alkylcarbamoyloxy, N- $(C_3-C_8)$ -  
cycloalkylcarbamoyloxy, N- $(C_6-C_{12})$ -arylcaramoyloxy, N- $(C_7-C_{16})$ -  
10 aralkylcarbamoyloxy, N- $(C_4-C_{10})$ -alkyl-N- $(C_6-C_{12})$ -arylcaramoyloxy, N- $(C_4-C_{10})$ -alkyl-  
N- $(C_7-C_{16})$ -aralkylcarbamoyloxy, N- $(C_4-C_{10})$ -alkyl)-carbamoyloxy, N- $(C_6-C_{12})$ -  
aryloxy- $(C_4-C_{10})$ -alkyl)-carbamoyloxy, N- $(C_7-C_{16})$ -aralkyloxy- $(C_4-C_{10})$ -alkyl)-  
carbamoyloxy, N- $(C_4-C_{10})$ -alkyl-N- $(C_4-C_{10})$ -alkoxy- $(C_4-C_{10})$ -alkyl)-carbamoyloxy, N-  
 $(C_4-C_{10})$ -alkyl-N- $(C_6-C_{12})$ -aryloxy- $(C_4-C_{10})$ -alkyl)-carbamoyloxy, N- $(C_4-C_{10})$ -alkyl-N-  
15  $(C_7-C_{16})$ -aralkyloxy- $(C_4-C_{10})$ -alkyl)-carbamoyloxy, amino,  $(C_4-C_{12})$ -alkylamino, di- $(C_4-$   
 $C_{12})$ -alkylamino,  $(C_3-C_8)$ -cycloalkylamino,  $(C_3-C_{12})$ -alkenylamino,  $(C_3-C_{12})$ -  
alkynylamino, N- $(C_6-C_{12})$ -arylamino, N- $(C_7-C_{11})$ -aralkylamino, N-alkylaralkylamino, N-  
alkyl-arylamino,  $(C_4-C_{12})$ -alkoxyamino,  $(C_4-C_{12})$ -alkoxy-N- $(C_4-C_{10})$ -alkylamino,  $(C_4-$   
 $C_{12})$ -alkylcarbonylamino,  $(C_3-C_8)$ -cycloalkylcarbonylamino,  $(C_6-C_{12})$ -  
20 arylcarbonylamino,  $(C_7-C_{16})$ -alkylcarbonylamino,  $(C_4-C_{12})$ -alkylcarbonyl-N- $(C_4-C_{10})$ -  
alkylamino,  $(C_3-C_8)$ -cycloalkylcarbonyl-N- $(C_4-C_{10})$ -alkylamino,  $(C_6-C_{12})$ -arylcabonyl-  
N- $(C_4-C_{10})$ -alkylamino,  $(C_7-C_{11})$ -aralkylcarbonyl-N- $(C_4-C_{10})$ -alkylamino,  $(C_4-C_{12})$ -  
alkylcarbonylamino- $(C_4-C_8)$ -alkyl,  $(C_3-C_8)$ -cycloalkylcarbonylamino- $(C_4-C_8)$ -alkyl,  $(C_6-$   
 $C_{12})$ -arylcabonylamino- $(C_4-C_8)$ -alkyl,  $(C_7-C_{16})$ -aralkylcarbonylamino- $(C_4-C_8)$ -alkyl,  
25 amino- $(C_4-C_{10})$ -alkyl, N- $(C_4-C_{10})$ -alkylamino- $(C_4-C_{10})$ -alkyl, N,N-di- $(C_4-C_{10})$ -alkylamino-  
 $(C_4-C_{10})$ -alkyl,  $(C_3-C_8)$ -cycloalkylamino- $(C_4-C_{10})$ -alkyl,  $(C_4-C_{12})$ -alkylmercapto,  $(C_4-$   
 $C_{12})$ -alkylsulfinyl,  $(C_4-C_{12})$ -alkylsulfonyl,  $(C_6-C_{12})$ -arylmercapto,  $(C_6-C_{12})$ -arylsulfinyl,  
 $(C_6-C_{12})$ -arylsulfonyl,  $(C_7-C_{16})$ -aralkylmercapto,  $(C_7-C_{16})$ -aralkylsulfinyl, or  $(C_7-C_{16})$ -

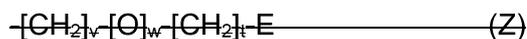
aralkylsulfonyl;

X is O or S;

Q is O, S, NR', or a bond;

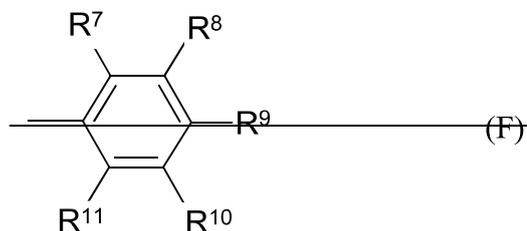
where, if Q is a bond, R<sup>4</sup> is halogen, nitrile, or trifluoromethyl;

5 or where, if Q is O, S, or NR', R<sup>4</sup> is hydrogen, (C<sub>1</sub>-C<sub>10</sub>)-alkyl radical, (C<sub>2</sub>-C<sub>10</sub>)-alkenyl radical, (C<sub>2</sub>-C<sub>10</sub>)-alkynyl radical, wherein alkenyl or alkynyl radical contains one or two C-C multiple bonds; unsubstituted fluoroalkyl radical of the formula  $-\text{[CH}_2\text{]}_x\text{-CH}_{(2f+1-g)}\text{-F}_g$ , (C<sub>1</sub>-C<sub>6</sub>)-alkoxy (C<sub>1</sub>-C<sub>6</sub>)-alkyl radical, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy (C<sub>1</sub>-C<sub>4</sub>)-alkoxy (C<sub>1</sub>-C<sub>4</sub>)-alkyl radical, aryl radical, heteroaryl radical, (C<sub>7</sub>-C<sub>11</sub>)-aralkyl radical, or a radical of the  
10 formula Z



where

E is a heteroaryl radical, a (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl radical, or a phenyl radical of the  
formula F



15 v is 0-6,  
w is 0 or 1,  
t is 0-3, and

20 R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, and R<sup>11</sup> are identical or different and are hydrogen, halogen, cyano, nitro, trifluoromethyl, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy,  $-\text{O-[CH}_2\text{]}_x\text{-CH}_{(2f+1-g)}\text{-F}_g$ ,  $-\text{OCF}_2\text{-Cl}$ ,  $-\text{O-CF}_2\text{-CHFCl}$ , (C<sub>1</sub>-C<sub>6</sub>)-alkylmercapto, (C<sub>1</sub>-C<sub>6</sub>)-hydroxyalkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy (C<sub>1</sub>-C<sub>6</sub>)-alkoxy, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkylsulfinyl, (C<sub>1</sub>-C<sub>6</sub>)-alkylsulfonyl, (C<sub>1</sub>-C<sub>6</sub>)-alkylcarbonyl, (C<sub>1</sub>-C<sub>8</sub>)-alkoxycarbonyl, carbamoyl, N-(C<sub>1</sub>-C<sub>8</sub>)-alkylcarbamoyl, N,N-di-(C<sub>1</sub>-C<sub>8</sub>)-alkylcarbamoyl, or (C<sub>7</sub>-C<sub>11</sub>)-aralkylcarbamoyl,

optionally substituted by fluorine, chlorine, bromine, trifluoromethyl, (C<sub>4</sub>-C<sub>6</sub>)-alkoxy, N-(C<sub>3</sub>-C<sub>8</sub>)-cycloalkylcarbamoyl, N-(C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl-(C<sub>4</sub>-C<sub>4</sub>)-alkylcarbamoyl, (C<sub>4</sub>-C<sub>6</sub>)-alkylcarbonyloxy, phenyl, benzyl, phenoxy, benzyloxy, NR<sup>Y</sup>R<sup>Z</sup> wherein R<sup>Y</sup> and R<sup>Z</sup> are independently selected from hydrogen, (C<sub>4</sub>-C<sub>12</sub>)-alkyl, (C<sub>4</sub>-C<sub>8</sub>)-alkoxy-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>7</sub>-C<sub>12</sub>)-aralkoxy-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>3</sub>-C<sub>10</sub>)-cycloalkyl, (C<sub>3</sub>-C<sub>12</sub>)-alkenyl, (C<sub>3</sub>-C<sub>12</sub>)-alkynyl, (C<sub>6</sub>-C<sub>12</sub>)-aryl, (C<sub>7</sub>-C<sub>14</sub>)-aralkyl, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy, (C<sub>7</sub>-C<sub>12</sub>)-aralkoxy, (C<sub>4</sub>-C<sub>12</sub>)-alkylcarbonyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylcarbonyl, (C<sub>6</sub>-C<sub>12</sub>)-arylcabonyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkylcarbonyl; or further wherein R<sup>Y</sup> and R<sup>Z</sup> together are -[CH<sub>2</sub>]<sub>n</sub>, in which a CH<sub>2</sub>-group can be replaced by O, S, N-(C<sub>4</sub>-C<sub>4</sub>)-alkylcarbonylimino, or N-(C<sub>4</sub>-C<sub>4</sub>)-alkoxycarbonylimino; phenylmercapto, phenylsulfonyl, phenylsulfinyl, sulfamoyl, N-(C<sub>4</sub>-C<sub>8</sub>)-alkylsulfamoyl, or N, N-di-(C<sub>4</sub>-C<sub>8</sub>)-alkylsulfamoyl; or alternatively R<sup>7</sup> and R<sup>8</sup>, R<sup>8</sup> and R<sup>9</sup>, R<sup>9</sup> and R<sup>10</sup>, or R<sup>10</sup> and R<sup>11</sup>, together are a chain selected from -[CH<sub>2</sub>]<sub>n</sub>- or -CH=CH-CH=CH-, where a CH<sub>2</sub>-group of the chain is optionally replaced by O, S, SO, SO<sub>2</sub>, or NR<sup>Y</sup>; and n is 3, 4, or 5; and if E is a heteroaryl radical, said radical can carry 1-3 substituents selected from those defined for R<sup>7</sup>-R<sup>11</sup>, or if E is a cycloalkyl radical, the radical can carry one substituent selected from those defined for R<sup>7</sup>-R<sup>11</sup>;

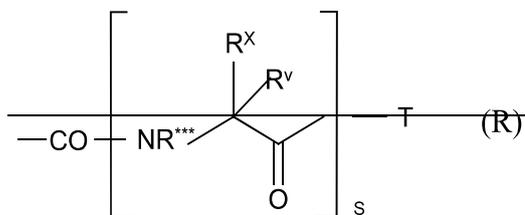
or where, if Q is NR<sup>4</sup>, R<sup>4</sup> is alternatively R<sup>"</sup>, where R<sup>'</sup> and R<sup>"</sup> are identical or different and are hydrogen, (C<sub>6</sub>-C<sub>12</sub>)-aryl, (C<sub>7</sub>-C<sub>14</sub>)-aralkyl, (C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>4</sub>-C<sub>8</sub>)-alkoxy-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>7</sub>-C<sub>12</sub>)-aralkoxy-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>4</sub>-C<sub>10</sub>)-alkylcarbonyl, optionally substituted (C<sub>7</sub>-C<sub>16</sub>)-aralkylcarbonyl, or optionally substituted (C<sub>6</sub>-C<sub>12</sub>)-arylcabonyl; or R<sup>'</sup> and R<sup>"</sup> together are -[CH<sub>2</sub>]<sub>n</sub>, in which a CH<sub>2</sub>-group can be replaced by O, S, N-acylimino, or N-(C<sub>4</sub>-C<sub>10</sub>)-alkoxycarbonylimino, and n is 3 to 7;

Y is N or CR<sup>3</sup>;

R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are identical or different and are hydrogen, hydroxyl, halogen, cyano, trifluoromethyl, nitro, carboxyl, (C<sub>4</sub>-C<sub>20</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl-(C<sub>4</sub>-C<sub>12</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkoxy, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl-(C<sub>4</sub>-C<sub>12</sub>)-alkoxy, (C<sub>3</sub>-C<sub>8</sub>)-

~~cycloalkyloxy (C<sub>4</sub>-C<sub>12</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>) cycloalkyloxy (C<sub>4</sub>-C<sub>12</sub>)-alkoxy, (C<sub>3</sub>-C<sub>8</sub>) cycloalkyl-~~  
~~(C<sub>4</sub>-C<sub>8</sub>)-alkyl (C<sub>4</sub>-C<sub>6</sub>)-alkoxy, (C<sub>3</sub>-C<sub>8</sub>) cycloalkyl (C<sub>4</sub>-C<sub>8</sub>)-alkoxy (C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-~~  
~~cycloalkyloxy (C<sub>4</sub>-C<sub>8</sub>)-alkoxy (C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>) cycloalkoxy (C<sub>4</sub>-C<sub>8</sub>)-alkoxy (C<sub>4</sub>-~~  
~~C<sub>8</sub>)-alkoxy, (C<sub>6</sub>-C<sub>12</sub>)-aryl, (C<sub>7</sub>-C<sub>16</sub>)-aralkyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkenyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkynyl, (C<sub>2</sub>-~~  
5 ~~C<sub>20</sub>)-alkenyl, (C<sub>2</sub>-C<sub>20</sub>)-alkynyl, (C<sub>4</sub>-C<sub>20</sub>)-alkoxy, (C<sub>2</sub>-C<sub>20</sub>)-alkenyloxy, (C<sub>2</sub>-C<sub>20</sub>)-~~  
~~alkynyloxy, retinyloxy, (C<sub>4</sub>-C<sub>20</sub>)-alkoxy (C<sub>4</sub>-C<sub>12</sub>)-alkyl, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy (C<sub>4</sub>-C<sub>12</sub>)-alkoxy,~~  
~~(C<sub>4</sub>-C<sub>12</sub>)-alkoxy (C<sub>4</sub>-C<sub>8</sub>)-alkoxy (C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy, (C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy,~~  
~~(C<sub>6</sub>-C<sub>12</sub>)-aryloxy (C<sub>4</sub>-C<sub>6</sub>)-alkoxy, (C<sub>7</sub>-C<sub>16</sub>)-aralkoxy (C<sub>4</sub>-C<sub>6</sub>)-alkoxy, (C<sub>4</sub>-C<sub>16</sub>)-~~  
~~hydroxyalkyl, (C<sub>6</sub>-C<sub>16</sub>)-aryloxy (C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkoxy (C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-~~  
10 ~~aryloxy (C<sub>4</sub>-C<sub>8</sub>)-alkoxy (C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>7</sub>-C<sub>12</sub>)-aralkyloxy (C<sub>4</sub>-C<sub>8</sub>)-alkoxy (C<sub>4</sub>-C<sub>6</sub>)-alkyl,~~  
~~(C<sub>2</sub>-C<sub>20</sub>)-alkenyloxy (C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>2</sub>-C<sub>20</sub>)-alkynyloxy (C<sub>4</sub>-C<sub>6</sub>)-alkyl, retinyloxy (C<sub>4</sub>-C<sub>6</sub>)-~~  
~~alkyl, -O-[CH<sub>2</sub>]<sub>x</sub>CfH<sub>(2f+4-g)</sub>F<sub>g</sub>, -OCF<sub>2</sub>Cl, -OCF<sub>2</sub>-CHFCl, (C<sub>4</sub>-C<sub>20</sub>)-alkylcarbonyl, (C<sub>3</sub>-C<sub>8</sub>)-~~  
~~cycloalkylcarbonyl, (C<sub>6</sub>-C<sub>12</sub>)-arylcabonyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkylcarbonyl, cinnamoyl, (C<sub>2</sub>-~~  
~~C<sub>20</sub>)-alkenylcarbonyl, (C<sub>2</sub>-C<sub>20</sub>)-alkynylcarbonyl, (C<sub>4</sub>-C<sub>20</sub>)-alkoxycarbonyl, (C<sub>4</sub>-C<sub>12</sub>)-~~  
15 ~~alkoxy (C<sub>4</sub>-C<sub>12</sub>)-alkoxycarbonyl, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy carbonyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkoxy carbonyl,~~  
~~(C<sub>3</sub>-C<sub>8</sub>) cycloalkoxycarbonyl, (C<sub>2</sub>-C<sub>20</sub>)-alkenyloxy carbonyl, retinyloxy carbonyl, (C<sub>2</sub>-~~  
~~C<sub>20</sub>)-alkynyloxy carbonyl, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy (C<sub>4</sub>-C<sub>6</sub>)-alkoxycarbonyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkoxy-~~  
~~(C<sub>4</sub>-C<sub>6</sub>)-alkoxycarbonyl, (C<sub>3</sub>-C<sub>8</sub>) cycloalkyl (C<sub>4</sub>-C<sub>6</sub>)-alkoxycarbonyl, (C<sub>3</sub>-C<sub>8</sub>)-~~  
~~cycloalkoxy (C<sub>4</sub>-C<sub>6</sub>)-alkoxycarbonyl, (C<sub>4</sub>-C<sub>12</sub>)-alkylcarbonyloxy, (C<sub>3</sub>-C<sub>8</sub>)-~~  
20 ~~cycloalkylcarbonyloxy, (C<sub>6</sub>-C<sub>12</sub>)-arylcabonyloxy, (C<sub>7</sub>-C<sub>16</sub>)-aralkylcarbonyloxy,~~  
~~cinnamoyloxy, (C<sub>2</sub>-C<sub>12</sub>)-alkenylcarbonyloxy, (C<sub>2</sub>-C<sub>12</sub>)-alkynylcarbonyloxy, (C<sub>4</sub>-C<sub>12</sub>)-~~  
~~alkoxycarbonyloxy, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy (C<sub>4</sub>-C<sub>12</sub>)-alkoxycarbonyloxy, (C<sub>6</sub>-C<sub>12</sub>)-~~  
~~aryloxy carbonyloxy, (C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy carbonyloxy, (C<sub>3</sub>-C<sub>8</sub>) cycloalkoxycarbonyloxy,~~  
~~(C<sub>2</sub>-C<sub>12</sub>)-alkenyloxy carbonyloxy, (C<sub>2</sub>-C<sub>12</sub>)-alkynyloxy carbonyloxy, carbamoyl, N-(C<sub>4</sub>-~~  
25 ~~C<sub>12</sub>)-alkyl carbamoyl, N,N-di-(C<sub>4</sub>-C<sub>12</sub>)-alkyl carbamoyl, N-(C<sub>3</sub>-C<sub>8</sub>) cycloalkyl carbamoyl,~~  
~~N,N-dicyclo-(C<sub>3</sub>-C<sub>8</sub>)-alkyl carbamoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-(C<sub>3</sub>-C<sub>8</sub>) cycloalkyl carbamoyl,~~  
~~N-((C<sub>3</sub>-C<sub>8</sub>) cycloalkyl (C<sub>4</sub>-C<sub>6</sub>)-alkyl)-carbamoyl, N-(C<sub>4</sub>-C<sub>6</sub>)-alkyl-N-((C<sub>3</sub>-C<sub>8</sub>) cycloalkyl-~~  
~~(C<sub>4</sub>-C<sub>6</sub>)-alkyl)-carbamoyl, N-(+)-dehydroabietyl carbamoyl, N-(C<sub>4</sub>-C<sub>6</sub>)-alkyl-N-(+)-~~

dehydroabietylcarbameoyl, N-(C<sub>6</sub>-C<sub>12</sub>)-arylcabameoyl, N-(C<sub>7</sub>-C<sub>16</sub>)-aralkylcarbameoyl, N-  
 (C<sub>4</sub>-C<sub>10</sub>)-alkyl N-(C<sub>6</sub>-C<sub>16</sub>)-arylcabameoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl N-(C<sub>7</sub>-C<sub>16</sub>)-aralkylcarbameoyl,  
 N-((C<sub>4</sub>-C<sub>18</sub>)-alkoxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbameoyl, N-((C<sub>6</sub>-C<sub>16</sub>)-aryloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-  
 carbameoyl, N-((C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbameoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>4</sub>-  
 5 C<sub>10</sub>)-alkoxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbameoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>6</sub>-C<sub>12</sub>)-aryloxy-(C<sub>4</sub>-C<sub>10</sub>)-  
 alkyl)-carbameoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbameoyl;  
 CON(CH<sub>2</sub>)<sub>h</sub>, in which a CH<sub>2</sub> group can be replaced by O, S, N-(C<sub>4</sub>-C<sub>8</sub>)-alkylimino, N-  
 (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylimino, N-(C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl-(C<sub>4</sub>-C<sub>4</sub>)-alkylimino, N-(C<sub>6</sub>-C<sub>12</sub>)-arylimino,  
 N-(C<sub>7</sub>-C<sub>16</sub>)-aralkylimino, N-(C<sub>4</sub>-C<sub>4</sub>)-alkoxy-(C<sub>4</sub>-C<sub>6</sub>)-alkylimino, and h is from 3 to 7; a  
 10 carbameoyl radical of the formula R



in which

R<sup>x</sup> and R<sup>v</sup> are each independently selected from hydrogen, (C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>7</sub>)-  
 cycloalkyl, or aryl,

15 s is 1-5,

T is OH, or NR<sup>\*</sup>R<sup>\*\*</sup>, and R<sup>\*</sup>, R<sup>\*\*</sup> and R<sup>\*\*\*</sup> are identical or different and are selected  
 from hydrogen, (C<sub>6</sub>-C<sub>12</sub>)-aryl, (C<sub>7</sub>-C<sub>11</sub>)-aralkyl, (C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl, (+)-  
 dehydroabietyl, (C<sub>4</sub>-C<sub>8</sub>)-alkoxy-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>7</sub>-C<sub>12</sub>)-aralkoxy-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-  
 aryloxy-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>4</sub>-C<sub>10</sub>)-alkanoyl, optionally substituted (C<sub>7</sub>-C<sub>16</sub>)-aralkanoyl,  
 20 optionally substituted (C<sub>6</sub>-C<sub>12</sub>)-aroyl; or R<sup>\*</sup> and R<sup>\*\*</sup> together are [CH<sub>2</sub>]<sub>h</sub>, in which a  
 CH<sub>2</sub> group can be replaced by O, S, SO, SO<sub>2</sub>, N-acylamino, N-(C<sub>4</sub>-C<sub>10</sub>)-  
 alkoxy-carbonylimino, N-(C<sub>4</sub>-C<sub>8</sub>)-alkylimino, N-(C<sub>3</sub>-C<sub>8</sub>)-cycloalkylimino, N-(C<sub>3</sub>-C<sub>8</sub>)-  
 cycloalkyl-(C<sub>4</sub>-C<sub>4</sub>)-alkylimino, N-(C<sub>6</sub>-C<sub>12</sub>)-arylimino, N-(C<sub>7</sub>-C<sub>16</sub>)-aralkylimino, N-(C<sub>4</sub>-  
 C<sub>4</sub>)-alkoxy-(C<sub>4</sub>-C<sub>6</sub>)-alkylimino, and h is from 3 to 7;

25 carbameoyloxy, N-(C<sub>4</sub>-C<sub>12</sub>)-alkylcarbameoyloxy, N,N-di-(C<sub>4</sub>-C<sub>12</sub>)-alkylcarbameoyloxy, N-

~~(C<sub>3</sub>-C<sub>8</sub>)-cycloalkylcarbamoyloxy, N-(C<sub>6</sub>-C<sub>12</sub>)-arylcabamoyloxy, N-(C<sub>7</sub>-C<sub>16</sub>)-~~  
~~aralkylcarbamoyloxy, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-(C<sub>6</sub>-C<sub>12</sub>)-arylcabamoyloxy, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-~~  
~~N-(C<sub>7</sub>-C<sub>16</sub>)-aralkylcarbamoyloxy, N-((C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyloxy, N-((C<sub>6</sub>-C<sub>12</sub>)-~~  
~~aryloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyloxy, N-((C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-~~  
5 ~~carbamoyloxy, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>4</sub>-C<sub>10</sub>)-alkoxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyloxy, N-~~  
~~(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>6</sub>-C<sub>12</sub>)-aryloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyloxy, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-~~  
~~((C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyloxyamino, (C<sub>4</sub>-C<sub>12</sub>)-alkylamino, di-(C<sub>4</sub>-~~  
~~C<sub>12</sub>)-alkylamino, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylamino, (C<sub>3</sub>-C<sub>12</sub>)-alkenylamino, (C<sub>3</sub>-C<sub>12</sub>)-~~  
~~alkynylamino, N-(C<sub>6</sub>-C<sub>12</sub>)-arylamino, N-(C<sub>7</sub>-C<sub>14</sub>)-aralkylamino, N-alkyl-aralkylamino,~~  
10 ~~N-alkyl-arylamino, (C<sub>4</sub>-C<sub>12</sub>)-alkoxyamino, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino, (C<sub>4</sub>-~~  
~~C<sub>12</sub>)-alkanoylamino, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkanoylamino, (C<sub>6</sub>-C<sub>12</sub>)-aroylamino, (C<sub>7</sub>-C<sub>16</sub>)-~~  
~~aralkanoylamino, (C<sub>4</sub>-C<sub>12</sub>)-alkanoyl-N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkanoyl-N-~~  
~~(C<sub>4</sub>-C<sub>10</sub>)-alkylamino, (C<sub>6</sub>-C<sub>12</sub>)-aroyl-N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino, (C<sub>7</sub>-C<sub>14</sub>)-aralkanoyl-N-(C<sub>4</sub>-~~  
~~C<sub>10</sub>)-alkylamino, (C<sub>4</sub>-C<sub>12</sub>)-alkanoylamino-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkanoylamino-~~  
15 ~~(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-aroylamino-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkanoylamino-(C<sub>4</sub>-C<sub>8</sub>)-~~  
~~alkyl, amino-(C<sub>4</sub>-C<sub>10</sub>)-alkyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino-(C<sub>4</sub>-C<sub>10</sub>)-alkyl, N,N-di-(C<sub>4</sub>-C<sub>10</sub>)-~~  
~~alkylamino-(C<sub>4</sub>-C<sub>10</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylamino-(C<sub>4</sub>-C<sub>10</sub>)-alkyl, (C<sub>4</sub>-C<sub>20</sub>)-~~  
~~alkylmercapto, (C<sub>4</sub>-C<sub>20</sub>)-alkylsulfinyl, (C<sub>4</sub>-C<sub>20</sub>)-alkylsulfonyl, (C<sub>6</sub>-C<sub>12</sub>)-arylmercapto,~~  
~~(C<sub>6</sub>-C<sub>12</sub>)-arylsulfinyl, (C<sub>6</sub>-C<sub>12</sub>)-arylsulfonyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkylmercapto, (C<sub>7</sub>-C<sub>16</sub>)-~~  
20 ~~aralkylsulfinyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkylsulfonyl, (C<sub>4</sub>-C<sub>12</sub>)-alkylmercapto-(C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>4</sub>-C<sub>12</sub>)-~~  
~~alkylsulfinyl-(C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>4</sub>-C<sub>12</sub>)-alkylsulfonyl-(C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-arylmercapto-~~  
~~(C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-arylsulfinyl-(C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-arylsulfonyl-(C<sub>4</sub>-C<sub>6</sub>)-alkyl,~~  
~~(C<sub>7</sub>-C<sub>16</sub>)-aralkylmercapto-(C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkylsulfinyl-(C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>7</sub>-C<sub>16</sub>)-~~  
~~aralkylsulfonyl-(C<sub>4</sub>-C<sub>6</sub>)-alkyl, sulfamoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkylsulfamoyl, N,N-di-(C<sub>4</sub>-C<sub>10</sub>)-~~  
25 ~~alkylsulfamoyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylsulfamoyl, N-(C<sub>6</sub>-C<sub>12</sub>)-arylsulfamoyl, N-(C<sub>7</sub>-C<sub>16</sub>)-~~  
~~aralkylsulfamoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-(C<sub>6</sub>-C<sub>12</sub>)-arylsulfamoyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-(C<sub>7</sub>-~~  
~~C<sub>16</sub>)-aralkylsulfamoyl, (C<sub>4</sub>-C<sub>10</sub>)-alkylsulfonamido, N-((C<sub>4</sub>-C<sub>10</sub>)-alkyl)-(C<sub>4</sub>-C<sub>10</sub>)-~~  
~~alkylsulfonamido, (C<sub>7</sub>-C<sub>16</sub>)-aralkylsulfonamido, and N-((C<sub>4</sub>-C<sub>10</sub>)-alkyl)-(C<sub>7</sub>-C<sub>16</sub>)-~~

aralkylsulfonamido; where an aryl radical may be substituted by 1 to 5 substituents  
 selected from hydroxyl, halogen, cyano, trifluoromethyl, nitro, carboxyl, (C<sub>2</sub>-C<sub>16</sub>)-alkyl,  
 (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl-(C<sub>4</sub>-C<sub>12</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkoxy, (C<sub>3</sub>-C<sub>8</sub>)-  
 cycloalkyl-(C<sub>4</sub>-C<sub>12</sub>)-alkoxy, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyloxy-(C<sub>4</sub>-C<sub>12</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyloxy-  
 5 (C<sub>4</sub>-C<sub>12</sub>)-alkoxy, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl-(C<sub>4</sub>-C<sub>8</sub>)-alkyl-(C<sub>4</sub>-C<sub>6</sub>)-alkoxy, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl-(C<sub>4</sub>-  
 C<sub>8</sub>)-alkoxy-(C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyloxy-(C<sub>4</sub>-C<sub>6</sub>)-alkoxy-(C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-  
 cycloalkoxy-(C<sub>4</sub>-C<sub>8</sub>)-alkoxy-(C<sub>4</sub>-C<sub>8</sub>)-alkoxy, (C<sub>6</sub>-C<sub>12</sub>)-aryl, (C<sub>7</sub>-C<sub>16</sub>)-aralkyl, (C<sub>2</sub>-C<sub>16</sub>)-  
 alkenyl, (C<sub>2</sub>-C<sub>12</sub>)-alkynyl, (C<sub>4</sub>-C<sub>16</sub>)-alkoxy, (C<sub>4</sub>-C<sub>16</sub>)-alkenyloxy, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-(C<sub>4</sub>-  
 C<sub>12</sub>)-alkyl, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-(C<sub>4</sub>-C<sub>12</sub>)-alkoxy, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-(C<sub>4</sub>-C<sub>8</sub>)-alkoxy-(C<sub>4</sub>-C<sub>8</sub>)-  
 10 alkyl, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy, (C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy-(C<sub>4</sub>-C<sub>6</sub>)-alkoxy, (C<sub>7</sub>-C<sub>16</sub>)-  
 aralkoxy-(C<sub>4</sub>-C<sub>6</sub>)-alkoxy, (C<sub>4</sub>-C<sub>8</sub>)-hydroxyalkyl, (C<sub>6</sub>-C<sub>16</sub>)-aryloxy-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>7</sub>-C<sub>16</sub>)-  
 aralkoxy-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy-(C<sub>4</sub>-C<sub>8</sub>)-alkoxy-(C<sub>4</sub>-C<sub>6</sub>)-alkyl, (C<sub>7</sub>-C<sub>12</sub>)-  
 aralkyloxy-(C<sub>4</sub>-C<sub>8</sub>)-alkoxy-(C<sub>4</sub>-C<sub>6</sub>)-alkyl, O-[CH<sub>2</sub>]<sub>x</sub>CH<sub>2</sub>(2f+1-g)F<sub>g</sub>, -OCF<sub>2</sub>Cl, -OCF<sub>2</sub>-CHFCl,  
 (C<sub>4</sub>-C<sub>12</sub>)-alkylcarbonyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylcarbonyl, (C<sub>6</sub>-C<sub>12</sub>)-arylcabonyl, (C<sub>7</sub>-C<sub>16</sub>)-  
 15 aralkylcarbonyl, (C<sub>4</sub>-C<sub>12</sub>)-alkoxycarbonyl, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-(C<sub>4</sub>-C<sub>12</sub>)-alkoxycarbonyl,  
 (C<sub>6</sub>-C<sub>12</sub>)-aryloxy carbonyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkoxycarbonyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkoxycarbonyl,  
 (C<sub>2</sub>-C<sub>12</sub>)-alkenyloxy carbonyl, (C<sub>2</sub>-C<sub>12</sub>)-alkynyloxy carbonyl, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy-(C<sub>4</sub>-C<sub>6</sub>)-  
 alkoxycarbonyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkoxy-(C<sub>4</sub>-C<sub>6</sub>)-alkoxycarbonyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl-(C<sub>4</sub>-C<sub>6</sub>)-  
 alkoxycarbonyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkoxy-(C<sub>4</sub>-C<sub>6</sub>)-alkoxycarbonyl, (C<sub>4</sub>-C<sub>12</sub>)-  
 20 alkylcarbonyloxy, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylcarbonyloxy, (C<sub>6</sub>-C<sub>12</sub>)-arylcabonyloxy, (C<sub>7</sub>-C<sub>16</sub>)-  
 aralkylcarbonyloxy, cinnamoyloxy, (C<sub>2</sub>-C<sub>12</sub>)-alkenylcarbonyloxy, (C<sub>2</sub>-C<sub>12</sub>)-  
 alkynylcarbonyloxy, (C<sub>4</sub>-C<sub>12</sub>)-alkoxycarbonyloxy, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-(C<sub>4</sub>-C<sub>12</sub>)-  
 alkoxycarbonyloxy, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy carbonyloxy, (C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy carbonyloxy, (C<sub>3</sub>-  
 C<sub>8</sub>)-cycloalkoxycarbonyloxy, (C<sub>2</sub>-C<sub>12</sub>)-alkenyloxy carbonyloxy, (C<sub>2</sub>-C<sub>12</sub>)-  
 25 alkynyloxy carbonyloxy, carbamoyl, N-(C<sub>4</sub>-C<sub>12</sub>)-alkylcarbamoyl, N,N-di(C<sub>4</sub>-C<sub>12</sub>)-  
 alkylcarbamoyl, N-(C<sub>3</sub>-C<sub>8</sub>)-cycloalkylcarbamoyl, N,N-dicyclo-(C<sub>3</sub>-C<sub>8</sub>)-alkylcarbamoyl,  
 N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-(C<sub>3</sub>-C<sub>8</sub>)-cycloalkylcarbamoyl, N-((C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl-(C<sub>4</sub>-C<sub>6</sub>)-  
 alkyl)carbamoyl, N-(C<sub>4</sub>-C<sub>6</sub>)-alkyl-N-((C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl-(C<sub>4</sub>-C<sub>6</sub>)-alkyl)carbamoyl, N-(+)-

~~dehydroabietylcarbamoyle, N-(C<sub>4</sub>-C<sub>6</sub>)-alkyl-N-(+)-dehydroabietylcarbamoyle, N-(C<sub>6</sub>-C<sub>12</sub>)-~~  
~~arylcarbamoyle, N-(C<sub>7</sub>-C<sub>16</sub>)-aralkylcarbamoyle, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-(C<sub>6</sub>-C<sub>16</sub>)-~~  
~~arylcarbamoyle, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-(C<sub>7</sub>-C<sub>16</sub>)-aralkylcarbamoyle, N-((C<sub>4</sub>-C<sub>16</sub>)-alkoxy-(C<sub>4</sub>-~~  
~~C<sub>10</sub>)-alkyl)carbamoyle, N-((C<sub>6</sub>-C<sub>16</sub>)-aryloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)carbamoyle, N-((C<sub>7</sub>-C<sub>16</sub>)-~~  
5 ~~aralkyloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)carbamoyle, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>4</sub>-C<sub>10</sub>)-alkoxy-(C<sub>4</sub>-C<sub>10</sub>-~~  
~~alkyl)carbamoyle, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>6</sub>-C<sub>12</sub>)-aryloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)carbamoyle, N-(C<sub>4</sub>-~~  
~~C<sub>10</sub>)-alkyl-N-((C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)-carbamoyle, CON(CH<sub>2</sub>)<sub>h</sub>, in which a~~  
~~CH<sub>2</sub> group can be replaced by, O, S, N-(C<sub>4</sub>-C<sub>8</sub>)-alkylimino, N-(C<sub>3</sub>-C<sub>8</sub>)-cycloalkylimino,~~  
~~N-(C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl-(C<sub>4</sub>-C<sub>4</sub>)-alkylimino, N-(C<sub>6</sub>-C<sub>12</sub>)-arylimino, N-(C<sub>7</sub>-C<sub>16</sub>)-aralkylimino,~~  
10 ~~N-(C<sub>4</sub>-C<sub>4</sub>)-alkoxy-(C<sub>4</sub>-C<sub>6</sub>)-alkylimino, and h is from 3 to 7; carbamoyleoxy, N-(C<sub>4</sub>-C<sub>12</sub>)-~~  
~~alkylcarbamoyleoxy, N,N-di-(C<sub>4</sub>-C<sub>12</sub>)-alkylcarbamoyleoxy, N-(C<sub>3</sub>-C<sub>8</sub>)-~~  
~~cycloalkylcarbamoyleoxy, N-(C<sub>6</sub>-C<sub>16</sub>)-arylcarmoyleoxy, N-(C<sub>7</sub>-C<sub>16</sub>)-~~  
~~aralkylcarbamoyleoxy, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-(C<sub>6</sub>-C<sub>12</sub>)-arylcarmoyleoxy, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-~~  
~~N-(C<sub>7</sub>-C<sub>16</sub>)-aralkylcarbamoyleoxy, N-((C<sub>4</sub>-C<sub>10</sub>)-alkyl)carbamoyleoxy, N-((C<sub>6</sub>-C<sub>12</sub>)-aryloxy-~~  
15 ~~(C<sub>4</sub>-C<sub>10</sub>)-alkyl)carbamoyleoxy, N-((C<sub>7</sub>-C<sub>16</sub>)-aralkyloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)carbamoyleoxy, N-~~  
~~(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>4</sub>-C<sub>10</sub>)-alkoxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)carbamoyleoxy, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-~~  
~~((C<sub>6</sub>-C<sub>12</sub>)-aryloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)carbamoyleoxy, N-(C<sub>4</sub>-C<sub>10</sub>)-alkyl-N-((C<sub>7</sub>-C<sub>16</sub>)-~~  
~~aralkyloxy-(C<sub>4</sub>-C<sub>10</sub>)-alkyl)carbamoyleoxy, amino, (C<sub>4</sub>-C<sub>12</sub>)-alkylamino, di-(C<sub>4</sub>-C<sub>12</sub>)-~~  
~~alkylamino, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylamino, (C<sub>3</sub>-C<sub>12</sub>)-alkenylamino, (C<sub>3</sub>-C<sub>12</sub>)-alkynylamino,~~  
20 ~~N-(C<sub>6</sub>-C<sub>12</sub>)-arylamino, N-(C<sub>7</sub>-C<sub>14</sub>)-aralkylamino, N-alkyl-aralkylamino, N-alkyl-~~  
~~arylamino, (C<sub>4</sub>-C<sub>12</sub>)-alkoxyamino, (C<sub>4</sub>-C<sub>12</sub>)-alkoxy-N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino, (C<sub>4</sub>-C<sub>12</sub>)-~~  
~~alkanoylamino, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkanoylamino, (C<sub>6</sub>-C<sub>12</sub>)-aroylamino, (C<sub>7</sub>-C<sub>16</sub>)-~~  
~~aralkanoylamino, (C<sub>4</sub>-C<sub>12</sub>)-alkanoyl-N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkanoyl-N-~~  
~~(C<sub>4</sub>-C<sub>10</sub>)-alkylamino, (C<sub>6</sub>-C<sub>12</sub>)-aroyl-N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino, (C<sub>7</sub>-C<sub>14</sub>)-aralkanoyl-N-(C<sub>4</sub>-~~  
25 ~~C<sub>10</sub>)-alkylamino, (C<sub>4</sub>-C<sub>12</sub>)-alkanoylamino-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkanoylamino-~~  
~~(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-aroylamino-(C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkanoylamino-(C<sub>4</sub>-C<sub>8</sub>)-~~  
~~alkyl, amino-(C<sub>4</sub>-C<sub>10</sub>)-alkyl, N-(C<sub>4</sub>-C<sub>10</sub>)-alkylamino-(C<sub>4</sub>-C<sub>10</sub>)-alkyl, N,N-di-(C<sub>4</sub>-C<sub>10</sub>)-~~  
~~alkylamino-(C<sub>4</sub>-C<sub>10</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkylamino-(C<sub>4</sub>-C<sub>10</sub>)-alkyl, (C<sub>4</sub>-C<sub>12</sub>)-~~

alkylmercapto, (C<sub>4</sub>-C<sub>12</sub>)-alkylsulfinyl, (C<sub>4</sub>-C<sub>12</sub>)-alkylsulfonyl, (C<sub>6</sub>-C<sub>16</sub>)-arylmercapto, (C<sub>6</sub>-C<sub>16</sub>)-arylsulfinyl, (C<sub>6</sub>-C<sub>16</sub>)-arylsulfonyl, (C<sub>7</sub>-C<sub>16</sub>)-aralkylmercapto, (C<sub>7</sub>-C<sub>16</sub>)-aralkylsulfinyl, or (C<sub>7</sub>-C<sub>16</sub>)-aralkylsulfonyl;

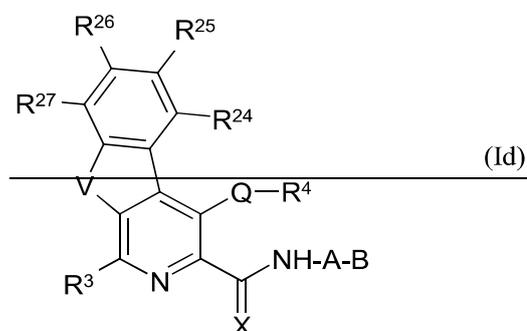
5 or wherein R<sup>1</sup> and R<sup>2</sup>, or R<sup>2</sup> and R<sup>3</sup> form a chain [CH<sub>2</sub>]<sub>o</sub>, which is saturated or unsaturated by a C=C double bond, in which 1 or 2 CH<sub>2</sub> groups are optionally replaced by O, S, SO, SO<sub>2</sub>, or NR', and R' is hydrogen, (C<sub>6</sub>-C<sub>12</sub>)-aryl, (C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>4</sub>-C<sub>8</sub>)-alkoxy (C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>7</sub>-C<sub>12</sub>)-aralkoxy (C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-aryloxy (C<sub>4</sub>-C<sub>8</sub>)-alkyl, (C<sub>4</sub>-C<sub>10</sub>)-alkanoyl, optionally substituted (C<sub>7</sub>-C<sub>16</sub>)-aralkanoyl, or optionally substituted (C<sub>6</sub>-C<sub>12</sub>)-aroyl; and o is 3, 4 or 5;

10 or wherein the radicals R<sup>1</sup> and R<sup>2</sup>, or R<sup>2</sup> and R<sup>3</sup>, together with the pyridine or pyridazine carrying them, form a 5,6,7,8-tetrahydroisoquinoline ring, a 5,6,7,8-tetrahydroquinoline ring, or a 5,6,7,8-tetrahydrocinnoline ring;

or wherein R<sup>1</sup> and R<sup>2</sup>, or R<sup>2</sup> and R<sup>3</sup> form a carbocyclic or heterocyclic 5- or 6-membered aromatic ring;

15 or where R<sup>1</sup> and R<sup>2</sup>, or R<sup>2</sup> and R<sup>3</sup>, together with the pyridine or pyridazine carrying them, form an optionally substituted heterocyclic ring systems selected from thienopyridines, furanopyridines, pyridopyridines, pyrimidinopyridines, imidazopyridines, thiazolopyridines, oxazolopyridines, quinoline, isoquinoline, and cinnoline;

20 or wherein the radicals R<sup>1</sup> and R<sup>2</sup>, together with the pyridine carrying them, form a compound of Formula Id:



where V is S, O, or NR<sup>k</sup>, and R<sup>k</sup> is selected from hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, aryl, or

~~benzyl; where an aryl radical may be optionally substituted by 1 to 5 substituents as defined above; and~~

~~R<sup>24</sup>, R<sup>25</sup>, R<sup>26</sup>, and R<sup>27</sup> in each case independently of each other have the meaning of R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup>;~~

5 ~~f is 1 to 8;~~

~~g is 0 or 1 to (2f+1);~~

~~x is 0 to 3; and~~

~~h is 3 to 7;~~

~~including physiologically active salts thereof.~~

10 ~~2. The compound of claim 1 for the use of that claim, wherein the anemia is associated with abnormal hemoglobin or abnormal erythrocytes.~~

~~3. The compound of claim 1 for the use of that claim, wherein the anemia is associated with a condition selected from the group consisting of diabetes, cancer, ulcers, immunosuppressive disease, infection, and inflammation.~~

15 ~~4. The compound of claim 1 for the use of that claim, wherein the anemia is associated with diabetes, cancer, ulcers, or AIDS.~~

~~5. The compound of claim 2 for the use of that claim, wherein the anemia is selected from the group consisting of microcytic anemia, hypochromic anemia, and aplastic anemia.~~

20 ~~6. The compound of claim 1 for the use of that claim, wherein the anemia is associated with radiation therapy, chemotherapy, or surgery.~~

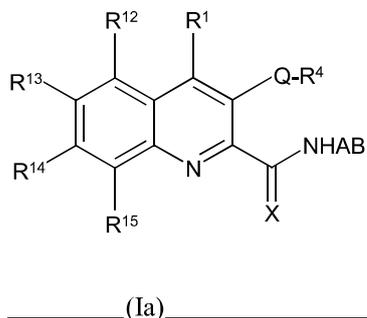
~~7. The compound of claim 1 for the use of that claim, wherein the anemia is associated with blood loss.~~

25 ~~8. The compound of claim 1 for the use of that claim, wherein the anemia is associated with defects in iron transport, processing, or utilization.~~

~~9. The compound of any preceding claim for the use of that claim, wherein the compound is for oral administration.~~

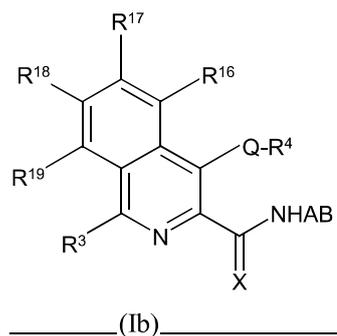
~~10. The compound according to any preceding claim for the use of that claim,~~

wherein R<sup>2</sup> and R<sup>3</sup>, together with the pyridine carrying them, form an optionally substituted quinoline of formula (Ia):



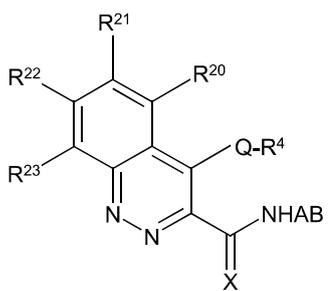
5 and the substituents R<sup>12</sup> to R<sup>15</sup> in each case independently of each other have the meaning of R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup>.

11. The compound according to any one of claims 1-9 for the use of that claim, wherein R<sup>1</sup> and R<sup>2</sup>, together with the pyridine carrying them, form an optionally substituted isoquinoline of formula (Ib):



10 and the substituents R<sup>16</sup> to R<sup>19</sup> in each case independently of each other have the meaning of R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup>.

12. The compound according to any one of claims 1-9 for the use of that claim, wherein R<sup>1</sup> and R<sup>2</sup>, together with the pyridazine carrying them, form an optionally substituted cinnoline of formula (Ic):



\_\_\_\_\_ (Ic) \_\_\_\_\_

and the substituents  $R^{20}$  to  $R^{23}$  in each case independently of each other have the meaning of  $R^1$ ,  $R^2$  and  $R^3$ .