5-AMINOINDENO(1,2-C)PYRAZOL-4-ONES AS ANTI-CANCER AND ANTI-PROLIFERATIVE AGENTS

FIELD OF THE INVENTION

This invention relates generally to novel 5-substituted-indeno[1,2-c]pyrazol-4-ones which are useful as cyclin dependent kinase (cdk) inhibitors, pharmaceutical compositions comprising the same, methods for using the same for treating proliferative diseases, and intermediates and processes for making the same.

BACKGROUND OF THE INVENTION

One of the most important and fundamental processes in biology is the division of cells mediated by the cell cycle. This process ensures the controlled production of subsequent generations of cells with defined biological function. It is a highly regulated phenomenon and responds to a diverse set of cellular signals both within the cell and from external sources. A complex network of tumor promoting and suppressing gene products are key components of this cellular signaling process. Over expression of the tumor promoting components or the subsequent loss of the tumor suppressing products will lead to unregulated cellular proliferation and the generation of tumors (Pardee, *Science* 246:603-608, 1989).

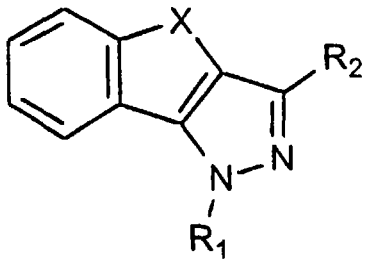
Cyclin dependent kinases (cdks) play a key role in regulating the cell cycle machinery. These complexes consist of two components: a catalytic subunit (the kinase) and a regulatory subunit (the cyclin). To date, six kinase subunits (cdk 1-7) have been identified along with several regulatory subunits (cyclins A-H). Each kinase associates with a specific regulatory partner and together make up the active catalytic moiety. Each transition of the cell cycle is regulated by a particular cdk complex: G1/S by cdk2/cyclin E, cdk4/cyclin D1 and cdk6/cyclinD2; S/G2 by cdk2/cyclin A and cdk1/cyclin A; G2/M by cdk1/B. The

coordinated activity of these kinases guides the individual cells through the replication process and ensures the vitality of each subsequent generation (Sherr, *Cell* 73:1059-1065, 1993; Draetta, *Trends Biochem. Sci.* 15:378-382, 1990)

An increasing body of evidence has shown a link between tumor development and cdk related malfunctions. Over expression of the cyclin regulatory proteins and subsequent kinase hyperactivity have been linked to several types of cancers (Jiang, *Proc. Natl. Acad. Sci. USA* 90:9026-9030, 1993; Wang, *Nature* 343:555-557, 1990). More recently, endogenous, highly specific protein inhibitors of cdks were found to have a major affect on cellular proliferation (Kamb et al, *Science* 264:436-440, 1994; Beach, *Nature* 336:701-704, 1993). These inhibitors include $p16^{INK4}$ (an inhibitor of cdk4/D1), $p21^{CIP1}$ (a general cdk inhibitor), and $p27^{KIP1}$ (a specific cdk2/E inhibitor). A recent crystal structure of p27 bound to cdk2/A revealed how these proteins effectively inhibit the kinase activity through multiple interactions with the cdk complex (Pavletich, *Nature* 382:325-331, 1996). These proteins help to regulate the cell cycle through specific interactions with their corresponding cdk complexes. Cells deficient in these inhibitors are prone to unregulated growth and tumor formation.

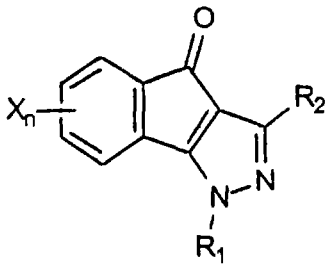
This body of evidence has led to an intense search for small molecule inhibitors of the cdk family as an approach to cancer chemotherapy. There are no known examples of molecules related to the current invention which describe 5-*substituted*-indeno[1,2-c]pyrazoles as cdk inhibitors. There is one case describing indeno[1,2-c]pyrazoles having anticancer activity. There are two other examples which describe indeno[1,2-c]pyrazoles having unrelated utilities and structures.

A series of indeno[1,2-c]pyrazoles having anticancer activity are described in JP 60130521 and JP 62099361 with the following generic structure:



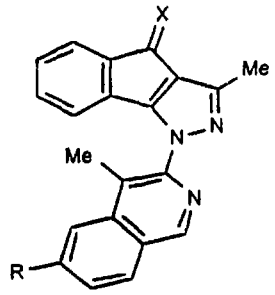
No substitution is claimed on the indenophenyl portion of the molecule and the molecules are not indicated to be cdk inhibitors. In addition, we discovered that substitution at the 5-position was critical for cdk inhibitory activity.

A series of indeno[1,2-c]pyrazoles having herbicidal activity are described in GB 2223946 with the following generic structure:



The above compounds differ from the presently claimed invention in X_n is defined as halo, alkyl, haloalkyl, and haloalkoxy; n = 0-2. In addition, R_1 is defined as acyl and R_2 is defined as alkyl or cycloalkyl.

A series of 1-(6'-substituted-4'-methylquinol-2'-yl)-3-methylindeno[1,2-c]pyrazoles having CNS activity are described by Quraishi, *Farmaco* 44:753-8, 1989 with the following generic structure:



Compounds of this series are not considered to be part of the presently claimed invention.

SUMMARY OF THE INVENTION

The present invention describes a novel class of indeno[1,2-c]pyrazol-4-ones or pharmaceutically acceptable salt forms thereof that are potent inhibitors of the class of enzymes known as cyclin dependent kinases, which relate to the catalytic subunits cdk 1-7 and their regulatory subunits know as cyclins A-H.

It is another object of this invention to provide a novel method of treating cancer or other proliferative diseases by administering a therapeutically effective amount of one of these compounds or a pharmaceutically acceptable salt form thereof.

It is another object of this invention to provide a novel method of treating cancer or other proliferative diseases, which comprises administering a therapeutically effective combination of one of the compounds of the present invention and one or more other known anti-cancer or anti-proliferative agents.

It is another object of this invention to provide a pharmaceutical composition, comprising a pharmaceutically acceptable carrier, a compound according to the invention or a pharmaceutically acceptable salt or prodrug form thereof, and a cytostatic or cytotoxic agent.

It is yet another object of the invention to provide use of a pharmaceutically effective amount of a compound of the present invention or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for treating a cell proliferative disease or cancer associated with CDK acitivity, a disease associated with apoptosis and for inhibiting tumor angiogenesis and metastasis in a patient in need thereof.

It is still another object of the invention to provide use of a CDK inhibitory effective amount of a compound of the present invention or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for modulating the level of cellular RNA and DNA synthesis, for treating viral infections and for chemopreventing cancer in a patient in need thereof.

It is yet still another object of the invention to provide a method of inhibiting CDK activity comprising combining an effective amount of a compound according to the invention, with a composition containing CDK.

It is furthermore another object of this invention to provide use of a pharmaceutically effective amount of a compound of the invention or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for treating cancer associated with CDK activity in combination with know anti-cancer treatments.

It is furthermore yet another object of this invention to provide use of a pharmaceutically effective amount of a compound of the invention or a pharmaceutically acceptable salt or prodrug form thereof in combination with known proliferating agents in the manufacture of a medicament for treating cell proliferative diseases associated with CDK activity in a patient in need thereof.

It is furthermore yet still another object of this invention to provide use of an effective CDK1 inhibitory amount of a compound according to the invention or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK1 activity in a patient in need thereof.

It is furthermore yet still another object of this invention to provide use of an effective CDK2 inhibitory amount of a compound according to the invention or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK2 activity in a patient in need thereof.

It is furthermore yet still another object of this invention to provide use of an effective CDK3 inhibitory amount of a compound according to the invention or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK3 activity in a patient in need thereof.

It is furthermore yet still another object of this invention to provide use of an effective CDK4 inhibitory amount of a compound according to the invention or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK4 activity in a patient in need thereof.

It is furthermore yet still another object of this invention to provide use of an effective CDK5 inhibitory amount of a compound according to the invention or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK5 activity in a patient in need thereof.

It is furthermore yet still another object of this invention to provide use of an effective CDK6 inhibitory amount of a compound according to the invention or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK6 activity in a patient in need thereof.

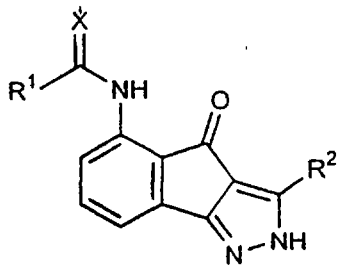
It is furthermore yet still another object of this invention to provide use of an effective CDK7 inhibitory amount of a compound according to the invention or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK7 activity in a patient in need thereof.

It is furthermore yet still another object of this invention to provide use of an effective CDK8 inhibitory amount of a compound according to the invention or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK8 activity in a patient in need thereof.

It is furthermore yet still another object of this invention to provide use of an effective CDK9 inhibitory amount of a compound according to the invention or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK9 activity in a patient in need thereof.

It is furthermore yet still another object of this invention to provide a pharmaceutical kit for treating a cell proliferative disease associated with CDK activity, said kit comprising a plurality of separate containers, wherein at least one of said containers contains a compound according to the invention, or a pharmaceutically acceptable salt or prodrug form thereof, and at least another of said containers contains one or more compounds selected from the group consisting of cytostatic or cytotoxic agents; topoisomerase II inhibitors; topoisomerase I inhibitors tubulin interacting agents; hormonal agents; thymidilate synthase inhibitors; and anti-metabolites, and said containers optionally contain a pharmaceutical carrier, which kit may be effectively utilized for carrying out combination therapies according to the invention.

These and other objectives have been achieved by the inventors' discovery that compounds of formula (I):



(I)

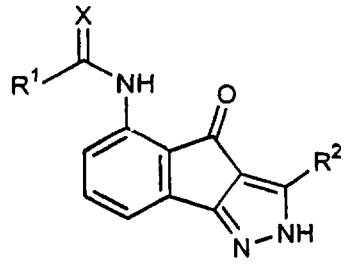
wherein R_1, R_2 and X are defined below or pharmaceutically acceptable salts thereof are cyclin dependent kinase inhibitors.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

The invention pertains to novel cyclin dependent kinase inhibitors (cdks) and specifically, but not exclusively, as inhibitors of cdk/cyclin complexes. The inhibitors of this invention are indeno[1,2-c]pyrazol-4-one analogs. Certain analogs were selective for their activity against cdks and their cyclin bound complexes and were less active against other known serine/threonine kinases such as Protein Kinase A (PKA) and Protein Kinase C (PKC). In addition, these inhibitors were less active against tyrosine kinases such as c-Abl.

As described herein, the inhibitors of this invention are capable of inhibiting the cell-cycle machinery and consequently would be useful in modulating cell-cycle progression, which would ultimately control cell growth and differentiation. Such compounds would be useful for treating subjects having disorders associated with excessive cell proliferation, such as the treatment of cancer, psoriasis, immunological disorders involving unwanted leukocyte proliferation, in the treatment of restinosis and other smooth muscle cell disorders, and the like.

The present invention, in a first embodiment, describes a novel compound of formula (I):



(I)

or a stereoisomer or pharmaceutically acceptable salt form thereof, wherein:

X is selected from the group: O, S, and NR;

R is selected from the group: H, C_{1-4} alkyl, and NR^5R^{5a};

R^1 is selected from the group: H, C_{1-10} alkyl substituted with 0-3 R^c, C_{2-10} alkenyl substituted with 0-3 R^c, C_{2-10} alkynyl substituted with 0-3 R^c, $-NHR^4$, C_{3-10} carbocycle substituted with 0-5 R^a, and 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b;

R^a is independently at each occurrence selected from the group: halo, -CN , N_3, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, =O, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S;

alternatively, when two R^a's are present on adjacent carbon atoms they combine to form $-OCH_2O-$ or $-OCH_2CH_2O-$;

R^b is independently at each occurrence selected from the group: halo, -CN, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, and SO_2R^{3b};

R^c is independently at each occurrence selected from the group: halo, -CN, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^5NR^5R^{5a}$, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, =O, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$,

$SO_2NR^3R^{3a}$, SO_2R^{3b}, C_{3-10} carbocycle substituted with 0-5 R^a, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3;

R^2 is selected from the group: H, C_{1-10} alkyl substituted with 0-3 R^c, C_{2-10} alkenyl substituted with 0-3 R^c, C_{2-10} alkynyl substituted with 0-3 R^c, $-(CF_2)_mCF_3$, C_{3-10} carbocycle substituted with 0-5 R^a, and 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b;

R^3 is selected from the group: H, halo, -CN, NO_2, C_{1-4} haloalkyl, NR^5R^{5a}, $NR^5NR^5R^{5a}$, $NR^5C(O)OR^5$, $NR^5C(O)R^5$, =O, OR^5, COR^5, CO_2R^5, $CONR^5R^{5a}$, $NHC(O)NR^5R^{5a}$, $NHC(S)NR^5R^{5a}$, $SO_2NR^5R^{5a}$, SO_2R^{5b}, C_{1-4} alkyl, phenyl, and benzyl;

R^{3a} is selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl;

alternatively, R^3 and R^{3a}, together with the nitrogen atom to which they are attached, form a heterocycle having 4-8 atoms in the ring containing an additional 0-1 N, S, or O atom and substituted with 0-3 R^{3c};

R^{3b} is selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl;

R^{3c} is independently at each occurrence selected from the group: halo, -CN , N_3, NO_2, C_{1-4} alkyl, C_{1-4}

haloalkyl, NR^3R^{3b}, =O, OR^3, COR^3, CO_2R^3, $CONR^3R^{3b}$, $NHC(O)NR^3R^{3b}$, $NHC(S)NR^3R^{3b}$, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, $SO_2NR^3R^{3b}$, SO_2R^{3b}, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S;

R^4 is independently at each occurrence selected from the group: H, -CN, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, C_{3-10} carbocycle substituted with 0-5 R^a, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3;

R^5 is independently selected from the group: H, C_{1-4} alkyl, phenyl and benzyl;

R^{5a} is independently selected from the group: H, C_{1-4} alkyl, phenyl and benzyl;

R^{5b} is independently selected from the group: H, C_{1-4} alkyl, phenyl and benzyl; and

m is selected from 0, 1, 2, and 3.

In a preferred embodiment, the present invention provides a novel compound of formula (I), wherein:

X is selected from the group: O, S, and NR;

R is selected from the group: H, C_{1-4} alkyl, and NR^5R^{5a};

R^1 is selected from the group: H, C_{1-5} alkyl substituted with 0-3 R^c, C_{2-5} alkenyl substituted with 0-3 R^c, C_{2-5} alkynyl substituted with 0-3 R^c, $-NHR^4$, C_{3-6} carbocycle substituted with 0-5 R^a, and 3-6 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b;

R^a is independently at each occurrence selected from the group: halo, -CN, N_3, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, =O, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S;

alternatively, when two R^a's are present on adjacent carbon atoms they combine to form $-OCH_2O-$ or $-OCH_2CH_2O-$;

R^b is independently at each occurrence selected from the group: halo, -CN, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, and SO_2R^{3b};

R^c is independently at each occurrence selected from the group: halo, -CN, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, $NR^5NR^5R^{5a}$, =O, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, C_{3-10} carbocycle substituted with 0-5 R^a, and 5-10 membered heterocycle containing from

1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3;

R^2 is selected from the group: H, C_{1-5} alkyl substituted with 0-3 R^c, C_{2-5} alkenyl substituted with 0-3 R^c, C_{2-5} alkynyl substituted with 0-3 R^c, $-(CF_2)_mCF_3$, C_{3-6} carbocycle substituted with 0-5 R^a, and 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b;

R^3 is selected from the group: H, halo, -CN, NO_2, C_{1-4} haloalkyl, NR^5R^{5a}, $NR^5NR^5R^{5a}$, $NR^5C(O)OR^5$, $NR^5C(O)R^5$, =O, OR^5, COR^5, CO_2R^5, $CONR^5R^{5a}$, $NHC(O)NR^5R^{5a}$, $NHC(S)NR^5R^{5a}$, $SO_2NR^5R^{5a}$, SO_2R^{5b}, C_{1-4} alkyl, phenyl, and benzyl;

R^{3a} is selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl;

alternatively, R^3 and R^{3a}, together with the nitrogen atom to which they are attached, form a heterocycle having 4-8 atoms in the ring containing an additional 0-1 N, S, or O atom and substituted with 0-3 R^{3c};

R^{3b} is selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl;

R^{3c} is independently at each occurrence selected from the group: halo, -CN , N_3, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3b}, =O, OR^3, COR^3, CO_2R^3, $CONR^3R^{3b}$,

$NHC(O)NR^3R^{3b}$, $NHC(S)NR^3R^{3b}$, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, $SO_2NR^3R^{3b}$, SO_2R^{3b}, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S;

R^4 is independently at each occurrence selected from the group: H, -CN, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, C_{3-10} carbocycle substituted with 0-5 R^a, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3;

R^5 is independently selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl;

R^{5a} is independently selected from the group: H, C_{1-4} alkyl, phenyl and benzyl;

R^{5b} is independently selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl; and

m is selected from 0, 1, 2, and 3.

In a more preferred embodiment, the present invention provides a novel compound of formula (I), wherein:

X is selected from the group: O and S;

R^1 is selected from the group: H, C_{1-5} alkyl substituted with 0-3 R^c, C_{2-5} alkenyl substituted with 0-3 R^c, $-NHR^4$, C_{3-6} carbocycle substituted with 0-5 R^a, and 3-6

membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b;

R^a is independently at each occurrence selected from the group: halo, -CN, N_3, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S;

alternatively, when two R^a's are present on adjacent carbon atoms they combine to form $-OCH_2O-$ or $-OCH_2CH_2O-$;

R^b is independently at each occurrence selected from the group: halo, -CN, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, and SO_2R^{3b};

R^c is independently at each occurrence selected from the group: halo, -CN, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^5NR^5R^{5a}$, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, =O, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, C_{3-10} carbocycle substituted with 0-5 R^a, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3;

R^2 is selected from the group: H, C_{1-5} alkyl substituted with 0-3 R^c, C_{2-5} alkenyl substituted with 0-3 R^c, $-(CF_2)_mCF_3$, C_{3-6} carbocycle substituted with 0-5 R^a, and 3-6 membered heterocycle containing from 1-4

heteroatoms selected from O, N, and S and substituted with 0-5 R^b;

R^3 is selected from the group: H, halo, -CN, NO_2, C_{1-4} haloalkyl, NR^5R^{5a}, $NR^5NR^5R^{5a}$, $NR^5C(O)OR^5$, $NR^5C(O)R^5$, =O, OR^5, COR^5, CO_2R^5, $CONR^5R^{5a}$, $NHC(O)NR^5R^{5a}$, $NHC(S)NR^5R^{5a}$, $SO_2NR^5R^{5a}$, SO_2R^{5b}, C_{1-4} alkyl, phenyl, and benzyl;

R^{3a} is selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl;

alternatively, R^3 and R^{3a}, together with the nitrogen atom to which they are attached, form a heterocycle having 5-6 atoms in the ring containing an additional 0-1 N, S, or O atom and substituted with 0-3 R^{3c};

R^{3b} is selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl;

R^{3c} is independently at each occurrence selected from the group: halo, -CN , N_3, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3b}, =O, OR^3, COR^3, CO_2R^3, $CONR^3R^{3b}$, $NHC(O)NR^3R^{3b}$, $NHC(S)NR^3R^{3b}$, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, $SO_2NR^3R^{3b}$, SO_2R^{3b}, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S;

R^4 is independently at each occurrence selected from the group: H, -CN, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$,

$NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, C_{3-10} carbocycle substituted with 0-5 R^a, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3;

R^5 is independently selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl;

R^{5a} is independently selected from the group: H, C_{1-4} alkyl, phenyl and benzyl;

R^{5b} is independently selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl; and

m is selected from 0, 1, 2, and 3.

In a even more preferred embodiment, the present invention provides a novel compound of formula (I), wherein:

X is selected from the group: O and S;

R^1 is selected from the group: H, C_{1-5} alkyl substituted with 0-2 R^c, $-NHR^4$, C_{3-6} carbocycle substituted with 0-5 R^a, and 5-6 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b;

R^a is independently at each occurrence selected from the group: halo, -CN, N_3, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, and 5-6

membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S;

alternatively, when two R^a's are present on adjacent carbon atoms they combine to form $-OCH_2O-$ or $-OCH_2CH_2O-$;

R^b is independently at each occurrence selected from the group: halo, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, and SO_2R^{3b};

R^c is independently at each occurrence selected from the group: halo, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^5NR^5R^{5a}$, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, C_{3-10} carbocycle substituted with 0-5 R^a, and 5-6 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3;

R^2 is selected from the group: C_{1-5} alkyl substituted with 0-3 R^c, $-(CF_2)_mCF_3$, C_{3-6} carbocycle substituted with 0-5 R^a, and 5-6 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-3 R^b;

R^3 is selected from the group: H, halo, -CN, NO_2, C_{1-4} haloalkyl, NR^5R^{5a}, $NR^5NR^5R^{5a}$, $NR^5C(O)OR^5$, $NR^5C(O)R^5$, =O, OR^5, COR^5, CO_2R^5, $CONR^5R^{5a}$, $NHC(O)NR^5R^{5a}$, $NHC(S)NR^5R^{5a}$, $SO_2NR^5R^{5a}$, SO_2R^{5b}, C_{1-4} alkyl, phenyl, and benzyl;

R^{3a} is selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl;

alternatively, R^3 and R^{3a}, together with the nitrogen atom to which they are attached, form a heterocycle having 5-6 atoms in the ring containing an additional 0-1 N, S, or O atom and substituted with 0-3 R^{3c};

R^{3b} is selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl;

R^{3c} is independently at each occurrence selected from the group: halo, -CN , N_3, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3b}, =O, OR^3, COR^3, CO_2R^3, $CONR^3R^{3b}$, $NHC(O)NR^3R^{3b}$, $NHC(S)NR^3R^{3b}$, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, $SO_2NR^3R^{3b}$, SO_2R^{3b}, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S;

R^4 is independently at each occurrence selected from the group: H, -CN, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, C_{3-10} carbocycle substituted with 0-5 R^a, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3;

R^5 is independently selected from the group: H and C_{1-4} alkyl;

R^{5a} is independently selected from the group: H, C_{1-4} alkyl, phenyl and benzyl;

R^{5b} is independently selected from the group: H and C_{1-4} alkyl; and

m is selected from 0, 1, 2, and 3.

In a most preferred embodiment, the compounds of formula (I) are selected from:

3-(4-methoxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(phenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methylthiophenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methylsulfonylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-N,N-dimethylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(3-pyridyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(formamido)indeno[1,2-c]pyrazol-4-one;

3-(4-hydroxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(1-piperidinyl)phenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-morpholinyl)phenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-ethoxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-butylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-ethylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-n-propylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((4-aminophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-pyridyl)-5-(formamido)indeno[1,2-c]pyrazol-4-one;

3-(4-pyridyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((4-aminophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((4-azidophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((4-methoxycarbonylaminophenyl) acetamido) indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((4-aminomethylcarbonylaminophenyl) acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((4-dimethylaminomethylcarbonyl aminophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((4-acetamidophenyl)acetamido) indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(pyrrolidinylacetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(morpholinylacetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(thiomorpholinylacetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(ethylaminoacetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(piperidinylacetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(4-aminomethylpiperidinylacetamido) indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(piperazinylacetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(4-methylpiperazinylacetamido) indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(4-(2-hydroxyethyl)piperazinylacetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(N,N-dimethylaminoacetamido) indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((2-hydroxyethyl)aminoacetamido) indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(aminoacetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((2-chlorophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((2,4-dichlorophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((3,4-dichlorophenyl)acetamido) indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((2-methoxyphenyl)acetamido) indeno[1,2-c]pyrazol-4-one;

3-(4-dimethoxyphenyl)-5-((3-thiophene)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((3,4-ethylenedioxyphenyl)acetamido) indeno[1,2-c]pyrazol-4-one;

3-(3,4-dimethoxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(2-methoxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((2,5-dimethoxyphenyl)acetamido) indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((3,4-dimethoxyphenyl)acetamido) indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((4-methoxyphenyl)acetamido) indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((3-methoxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-((4-chlorophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(butylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(4-aminobenzylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(4-pyridylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(phenylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(cyclobutylamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(cyclopentylamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(propylamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(ethylamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(benzylamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(isopropylamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(cyclopropylamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(chloroacetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-methoxyphenyl)-5-(4-pyridinylaminomethylacetamido) indeno[1,2-c]pyrazol-4-one;

3-(4-N,N-dimethylaminophenyl)-5-(morpholinylacetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-N,N-dimethylaminophenyl)-5-(dimethylaminoacetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(trifluoromethyl)phenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(dimethylamino)phenyl)-5-((4-methyl-1-piperazinyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(dimethylamino)phenyl)-5-((4-aminomethyl-1-piperidinyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(dimethylamino)phenyl)-5-((4-hydroxy-1-piperidinyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-morpholinyl)phenyl)-5-((4-morpholinyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-morpholinyl)phenyl)-5-((4-methyl-1-piperazinyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-morpholinyl)phenyl)-5-((4-hydroxy-1-piperidinyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-morpholinyl)phenyl)-5-((4-aminomethyl-1-piperidinyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(1-piperazinyl)phenyl)-5-((4-morpholinyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(1-piperazinyl)phenyl)-5-((dimethylamino)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(1-piperazinyl)phenyl)-5-((4-methyl-1-piperazinyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(1-piperazinyl)phenyl)-5-((4-aminomethyl-1-piperidinyl)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-(1-piperazinyl)phenyl)-5-((aminocarbonyl)amino)indeno[1,2-c]pyrazol-4-one;

3-(4-(1-piperazinyl)phenyl)-5-((hydrazinocarbonyl)amino)indeno[1,2-c]pyrazol-4-one;

3-(4-(1-piperazinyl)phenyl)-5-(((4-morpholinylamino)carbonyl)amino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-methyl-1-piperazinyl)phenyl)-5-(((4-morpholinylamino)carbonyl)amino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-ethyl-1-piperazinyl)phenyl)-5-(((4-morpholinylamino)carbonyl)amino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-isopropyl-1-piperazinyl)phenyl)-5-(((4-morpholinylamino)carbonyl)amino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-t-butoxycarbonyl-1-piperazinyl)phenyl)-5-(((4-morpholinylamino)carbonyl)amino)indeno[1,2-c]pyrazol-4-one;

3-(4-(dimethylamino)phenyl)-5-((((4-methyl-1-piperazinyl)amino)carbonyl)amino)indeno[1,2-c]pyrazol-4-one;

3-(i-propyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(c-propyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(t-butyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(2-thienyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(3-methyl-2-thienyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;

3-(ethyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(n-propyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(i-propyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(c-propyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(c-hexyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(2-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(3-methyl-2-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-methyl-2-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-ethylcarboxyl-2-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(3-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(1-methyl-3-pyrrolyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(2,5-dimethyl-3-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(2-furanyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(i-propyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(c-propyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(c-hexyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(2-thienyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-methoxy-2-thienyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-methyl-2-thienyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-ethylcarboxyl-2-thienyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(3-thienyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-chloro-3-thienyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(2,5-dimethyl-3-thienyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(2-furanyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(i-propyl)-5-(4-carbamoylpiperidinylacetamido)indeno[1,2-c]pyrazol-4-one;

3-(c-hexyl)-5-(4-carbamoylpiperidinylacetamido)indeno[1,2-c]pyrazol-4-one;

3-(ethyl)-5-(4-aminomethylpiperidinylacetamido)indeno[1,2-c]pyrazol-4-one;

3-(i-propyl)-5-(4-aminomethylpiperidinylacetamido) indeno[1,2-c]pyrazol-4-one;

3-(c-propyl)-5-(4-aminomethylpiperidinylacetamido) indeno[1,2-c]pyrazol-4-one;

3-(c-hexyl)-5-(4-aminomethylpiperidinylacetamido)indeno[1,2-c]pyrazol-4-one;

3-(i-propyl)-5-(4-methylpiperazinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one;

3-(5-ethylcarboxyl-2-thienyl)-5-(4-methylpiperazinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-carboxyl-2-thienyl)-5-(4-methylpiperazinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(2,5-dimethyl-3-thienyl)-5-(4-methylpiperazinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(i-propyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(N-methylcarbamoyl-4-piperidinyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-methyl-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-chloro-3-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(2,5-dimethyl-3-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-ethylcarboxyl-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-carboxyl-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-benzylcarboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-(4-methylpiperazinyl)carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-(2-(1-methylpyrrolidinyl)ethyl)carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-(N,N-dimethylamino)carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-(2-(N,N-dimethylamino)ethyl)carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-(2-(pyrrolidinyl)ethyl)carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-(2-(morpholinyl)ethyl)carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-morpholinylcarboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-(3-(pyrrolidonyl)propyl)carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-(3-(imidazolyl)propyl)carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-(2-(2-pyridyl)ethyl)carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

3-(5-((2-pyridyl)methyl)carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one; and

3-(5-(2-(piperidinyl)ethyl)carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one;

or pharmaceutically acceptable salt form thereof.

Another embodiment of the present invention is a pharmaceutical composition comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of formula (I).

Another embodiment of the present invention is a method of treating cancer and proliferative diseases comprising: administering to a host in need of such treatment a therapeutically effective amount of a compound of formula (I), or a pharmaceutically effective salt form thereof.

DEFINITIONS

As used herein, the following terms and expressions have the indicated meanings. The compounds of the present invention may contain an asymmetrically substituted carbon atom, and may be isolated in optically active or racemic forms. It is well known in the art how to prepare optically active forms, such as by resolution of racemic forms or by synthesis from optically active starting materials. All chiral, diastereomeric, racemic forms and all geometric isomeric forms of a structure are intended, unless the

specific stereochemistry or isomer form is specifically indicated.

The term "alkyl" is intended to include both branched and straight-chain saturated aliphatic hydrocarbon groups having the specified number of carbon atoms. Examples of alkyl include, but are not limited to, methyl, ethyl, n-propyl, i-propyl, n-butyl, s-butyl, t-butyl, n-pentyl, and s-pentyl. In addition, the term is intended to include both unsubstituted and substituted alkyl groups, the latter referring to alkyl moieties having one or more hydrogen substituents replaced by, but not limited to halogen, hydroxyl, carbonyl, alkoxy, ester, ether, cyano, phosphoryl, amino, imino, amido, sulfhydryl, alkythio, thioester, sulfonyl, nitro, heterocyclo, aryl or heteroaryl. It will also be understood by those skilled in the art that the substituted moieties themselves can be substituted as well when appropriate.

The terms "halo" or "halogen" as used herein refer to fluoro, chloro, bromo and iodo. The term "aryl" is intended to mean an aromatic moiety containing the specified number of carbon atoms, such as, but not limited to phenyl, indanyl or naphthyl. The terms "cycloalkyl" and "bicycloalkyl" are intended to mean any stable ring system, which may be saturated or partially unsaturated. Examples of such include, but are not limited to, cyclopropyl, cyclopentyl, cyclohexyl, norbornyl, bicyclo[2.2.2]nonane, adamantly, or tetrahydronaphthyl (tetralin).

As used herein, "carbocycle" or "carbocyclic residue" is intended to mean any stable 3- to 7-membered monocyclic or bicyclic or 7- to 13-membered bicyclic or tricyclic, any of which may be saturated, partially unsaturated, or aromatic. Examples of such carbocycles include, but are not limited to, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, adamantyl, cyclooctyl,; [3.3.0]bicyclooctane, [4.3.0]bicyclononane, [4.4.0]bicyclodecane (decalin), [2.2.2]bicyclooctane, fluorenyl, phenyl, naphthyl, indanyl, adamantyl, or tetrahydronaphthyl (tetralin).

As used herein, the term "heterocycle" or "heterocyclic system" is intended to mean a stable 5- to 7- membered monocyclic or bicyclic or 7- to 10-membered bicyclic heterocyclic ring which is saturated partially unsaturated or unsaturated (aromatic), and which consists of carbon atoms and from 1 to 4 heteroatoms independently selected from the group consisting of N, O and S and including any bicyclic group in which any of the above-defined heterocyclic rings is fused to a benzene ring. The nitrogen and sulfur heteroatoms may optionally be oxidized. The heterocyclic ring may be attached to its pendant group at any heteroatom or carbon atom which results in a stable structure. The heterocyclic rings described herein may be substituted on carbon or on a nitrogen atom if the resulting compound is stable. If specifically noted, a nitrogen in the heterocycle may optionally be quaternized. It is preferred that when the total number of S and O atoms in the heterocycle exceeds 1, then these heteroatoms are not adjacent to one another. It is preferred that the total number of S and O atoms in the heterocycle is not more than 1. As used herein, the term "aromatic heterocyclic system" is intended to mean a stable 5- to 7- membered monocyclic or bicyclic or 7- to 10-membered bicyclic heterocyclic aromatic ring which consists of carbon atoms and from 1 to 4 heterotams independently selected from the group consisting of N, O and S. It is preferred that the total number of S and O atoms in the aromatic heterocycle is not more than 1.

Examples of heterocycles include, but are not limited to, 1H-indazole, 2-pyrrolidonyl, 2H,6H-1,5,2-dithiazinyl, 2H-pyrrolyl, 3H-indolyl, 4-piperidonyl, 4aH-carbazole, 4H-quinolizinyl, 6H-1,2,5-thiadiazinyl, acridinyl, azocinyl, benzimidazolyl, benzofuranyl, benzothiofuranyl, benzothiophenyl, benzoxazolyl, benzthiazolyl, benztriazolyl, benztetrazolyl, benzisoxazolyl, benzisothiazolyl, benzimidazalonyl, carbazolyl, 4a*H*-carbazolyl, b-carbolinyl, chromanyl, chromenyl, cinnolinyl, decahydroquinolinyl, 2*H*,6*H*-1,5,2-dithiazinyl, dihydrofuro[2,3-*b*]tetrahydrofuran,

furanyl, furazanyl, imidazolidinyl, imidazolinyl, imidazolyl, 1*H*-indazolyl, indolenyl, indolinyl, indolizinyl, indolyl, isobenzofuranyl, isochromanyl, isoindazolyl, isoindolinyl, isoindolyl, isoquinolinyl, isothiazolyl, isoxazolyl, morpholinyl, naphthyridinyl, octahydroisoquinolinyl, oxadiazolyl, 1,2,3-oxadiazolyl, 1,2,4-oxadiazolyl, 1,2,5-oxadiazolyl, 1,3,4-oxadiazolyl, oxazolidinyl., oxazolyl, oxazolidinylperimidinyl, phenanthridinyl, phenanthrolinyl, phenarsazinyl, phenazinyl, phenothiazinyl, phenoxathiinyl, phenoxazinyl, phthalazinyl, piperazinyl, piperidinyl, pteridinyl, piperidonyl, 4-piperidonyl, pteridinyl, purinyl, pyranyl, pyrazinyl, pyrazolidinyl, pyrazolinyl, pyrazolyl, pyridazinyl, pyridooxazole, pyridoimidazole, pyridothiazole, pyridinyl, pyridyl, pyrimidinyl, pyrrolidinyl, pyrrolinyl, pyrrolyl, quinazolinyl, quinolinyl, 4*H*-quinolizinyl, quinoxalinyl, quinuclidinyl, carbolinyl, tetrahydrofuranyl, tetrahydroisoquinolinyl, tetrahydroquinolinyl, 6*H*-1,2,5-thiadiazinyl, 1,2,3-thiadiazolyl, 1,2,4-thiadiazolyl, 1,2,5-thiadiazolyl, 1,3,4-thiadiazolyl, thianthrenyl, thiazolyl, thienyl, thienothiazolyl, thienooxazolyl, thienoimidazolyl, thiophenyl, triazinyl, 1,2,3-triazolyl, 1,2,4-triazolyl, 1,2,5-triazolyl, 1,3,4-triazolyl, xanthenyl. Preferred heterocycles include, but are not limited to, pyridinyl, furanyl, thienyl, pyrrolyl, pyrazolyl, imidazolyl, indolyl, benzimidazolyl, 1*H*-indazolyl, oxazolidinyl, benzotriazolyl, benzisoxazolyl, oxindolyl, benzoxazolinyl, or isatinoyl. Also included are fused ring and spiro compounds containing, for example, the above heterocycles.

As used herein, "pharmaceutically acceptable salts" refer to derivatives of the disclosed compounds wherein the parent compound is modified by making acid or base salts thereof. Examples of pharmaceutically acceptable salts include, but are not limited to, mineral or organic acid salts of basic residues such as amines; alkali or organic salts of acidic residues such as carboxylic acids; and the like. The pharmaceutically acceptable salts include the

conventional non-toxic salts or the quaternary ammonium salts of the parent compound formed, for example, from non-toxic inorganic or organic acids. For example, such conventional non-toxic salts include those derived from inorganic acids such as hydrochloric, hydrobromic, sulfuric, sulfamic, phosphoric, nitric and the like; and the salts prepared from organic acids such as acetic, propionic, succinic, glycolic, stearic, lactic, malic, tartaric, citric, ascorbic, pamoic, maleic, hydroxymaleic, phenylacetic, glutamic, benzoic, salicylic, sulfanilic, 2-acetoxybenzoic, fumaric, toluenesulfonic, methanesulfonic, ethane disulfonic, oxalic, isethionic, and the like.

The pharmaceutically acceptable salts of the present invention can be synthesized from the parent compound which contains a basic or acidic moiety by conventional chemical methods. Generally, such salts can be prepared by reacting the free acid or base forms of these compounds with a stoichiometric amount of the appropriate base or acid in water or in an organic solvent, or in a mixture of the two; generally, nonaqueous media like ether, ethyl acetate, ethanol, isopropanol, or acetonitrile are preferred. Lists of suitable salts are found in *Remington's Pharmaceutical Sciences*, 18th ed., Mack Publishing Company, Easton, PA, 1990, p. 1445, the disclosure of which is hereby incorporated by reference.

The phrase "pharmaceutically acceptable" is employed herein to refer to those compounds, materials, compositions, and/or dosage forms which are, within the scope of sound medical judgment, suitable for use in contact with the tissues of human beings and animals without excessive toxicity, irritation, allergic response, or other problem or complication commensurate with a reasonable benefit/risk ratio.

"Prodrugs", as the term is used herein, are intended to include any covalently bonded carriers which release an active parent drug of the present invention *in vivo* when such prodrug is administered to a mammalian

vivo when such prodrug is administered to a mammalian subject. Since prodrugs are known to enhance numerous desirable qualities of pharmaceuticals (i.e., solubility, bioavailability, manufacturing, etc.) the compounds of the present invention may be delivered in prodrug form. Thus, the present invention is intended to cover prodrugs of the presently claimed compounds, methods of delivering the same, and compositions containing the same. Prodrugs of the present invention are prepared by modifying functional groups present in the compound in such a way that the modifications are cleaved, either in routine manipulation or *in vivo*, to the parent compound. Prodrugs include compounds of the present invention wherein a hydroxy, amino, or sulfhydryl group is bonded to any group that, when the prodrug of the present invention is administered to a mammalian subject, it cleaves to form a free hydroxyl, free amino, or free sulfydryl group, respectively. Examples of prodrugs include, but are not limited to, acetate, formate, and benzoate derivatives of alcohol and amine functional groups in the compounds of the present invention.

"Substituted" is intended to indicate that one or more hydrogens on the atom indicated in the expression using "substituted" is replaced with a selection from the indicated group(s), provided that the indicated atom's normal valency is not exceeded, and that the substitution results in a stable compound. When a substituent is keto (i.e., =O) group, then 2 hydrogens on the atom are replaced.

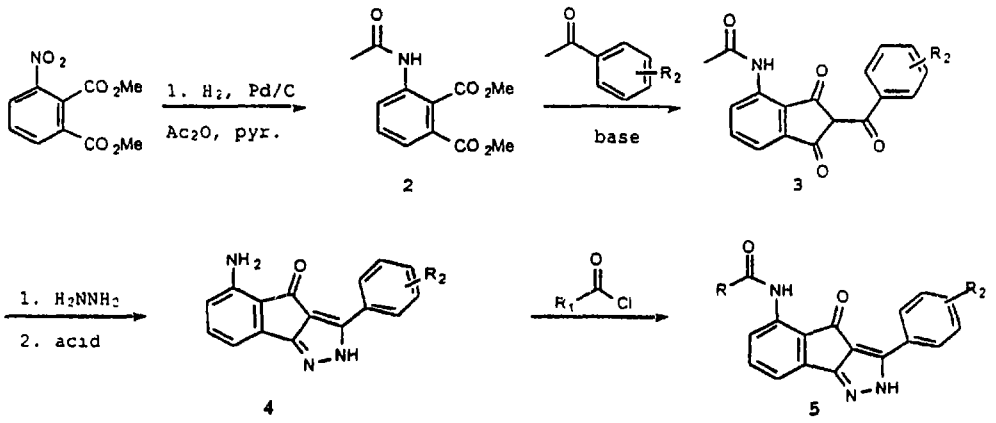
As used herein, the term "anti cancer" or "anti-proliferative" agent includes, but is not limited to, altretamine, busulfan, chlorambucil, cyclophosphamide, ifosfamide, mechlorethamine, melphalan, thiotepa, cladribine, fluorouracil, floxuridine, gemcitabine, thioguanine, pentostatin, methotrexate, 6-mercaptopurine, cytarabine, carmustine, lomustine, streptozotocin, carboplatin, cisplatin, oxaliplatin, iproplatin, tetraplatin, lobaplatin, JM216, JM335, fludarabine, aminoglutethimide, flutamide, goserelin, leuprolide,

diethylstilbestrol, prednisone, bleomycin, dactinomycin, daunorubicin, doxirubicin, idarubicin, mitoxantrone, losoxantrone, mitomycin-c, plicamycin, paclitaxel, docetaxel, topotecan, irinotecan, 9-amino camptothecan, 9-nitro camptothecan, GS-211, etoposide, teniposide, vinblastine, vincristine, vinorelbine, procarbazine, asparaginase, pegaspargase, octreotide, estramustine, hydroxyurea.

SYNTHESIS

The compounds of the present invention can be synthesized using the methods described below, together with synthetic methods known in the art of synthetic organic chemistry, or variations thereon as appreciated by those skilled in the art. Preferred methods include, but are not limited to, those methods described below. Each of the references cited below are hereby incorporated herein by reference.

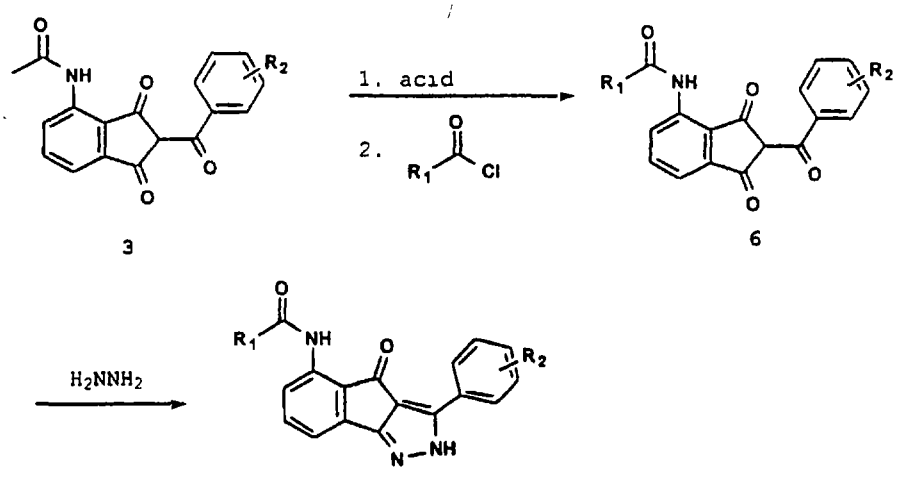
SCHEME 1



An approach to preparing indeno[1,2-c]pyrazol-4-ones is presented in Scheme 1 and can be used to prepare compounds of the present invention. The nitro group of dimethyl 3-nitrophthalate was reduced to the amine using catalytic hydrogenation. The aniline was acylated using acetic anhydride and pyridine as a base. A mixture of the resulting acetamide 2 and an acetophenone were treated with a strong

base in an appropriate solvent at elevated temperature to give the desired triketone 3. Additional means of preparing triketones are known to one skilled in the art as described in Kilgore et al, *Industrial and Engineering Chemistry* 34:494-497, 1946, the contents of which are hereby incorporated herein by reference. The triketone was treated with hydrazine at elevated temperature in an appropriate solvent to give the indeno[1,2-c]pyrazol-4-one ring system. Additional means of preparing indeno[1,2-c]pyrazol-4-ones are known to one skilled in the art as described in Lemke et al., *J. Heterocyclic Chem.* 19:1335-1340, 1982; Mosher and Soeder, *J. Heterocyclic Chem.* 8:855-59, 1971; Hrnciar and Svanygova *Collect. Czech. Chem. Commun.* 59:2734-40, 1994 the contents of which are hereby incorporated herein by reference. The amide was deacylated by heating with a strong acid in an appropriate solvent to give aniline 4. This aniline was acylated under standard conditions using an acid chloride in an appropriate solvent to give the desired product 5.

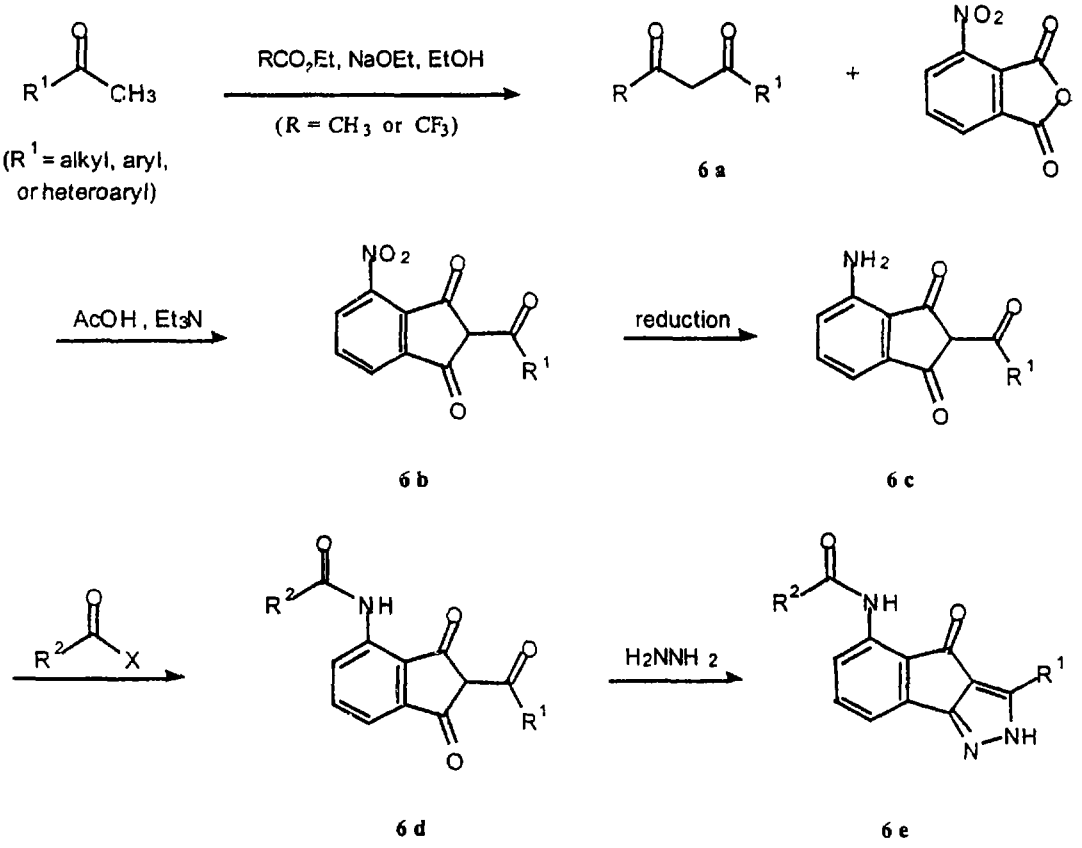
SCHEME 2



An alternative method for making compounds of the present invention is shown in Scheme 2. The intermediate triketone 3 can be deacylated with strong acid and reacylated with an appropriate acid chloride using methods

known to those skilled in the art. Subsequently, triketone 6 can the be converted to the indeno[1,2-c]pyrazol-4-one ring system using the same conditions described previously in Scheme 1.

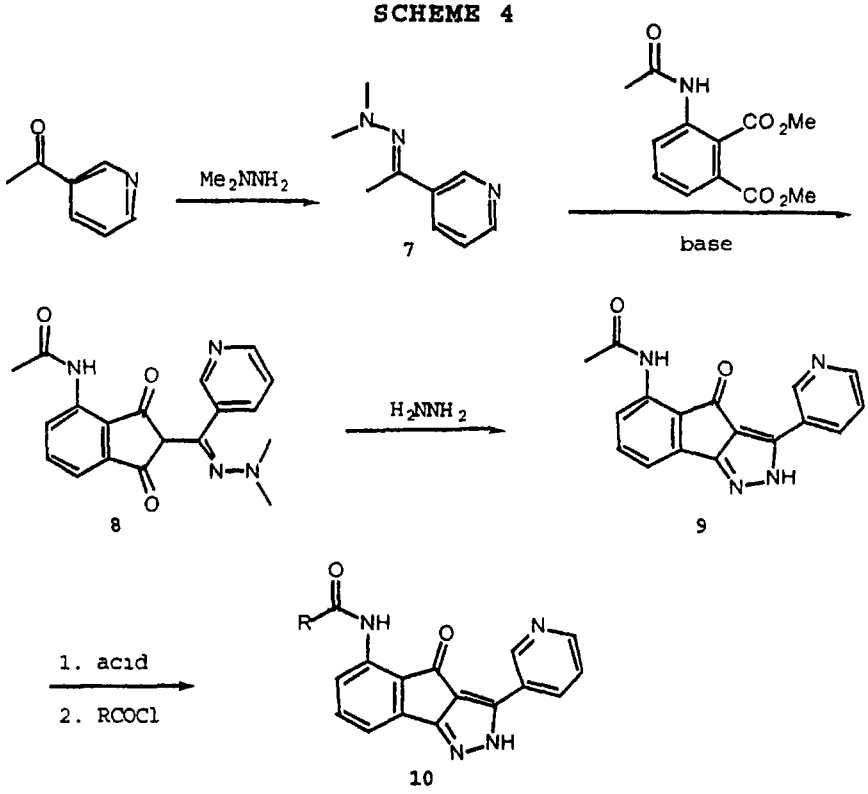
SCHEME 3



Another method for preparing the triketones 6 of Scheme 2 employs the condensation of a 1,3-diketone **6a** with 3-nitrophthalic anhydride as described in Rotberg and Oshkaya, *Zh. Organ. Khim.* 8:84-87, 1972; *Zh. Organ. Khim.* 9:2548-2550, 1973, the contents of which are hereby incorporated herein by reference. The 1,3-diketones, when not commercially available can be readily prepared by one skilled in the art by the acetylation or trifluoroacetylation of the requisite methyl ketone, R^1COCH_3.

Reduction of the nitro derivative **6b** to the aniline **6c** can be accomplished in a variety of ways including catalyic hydrogenation, treatment with zinc or iron under acidic conditions, or treatment with other reducing agents such as sodium dithionite or stannous chloride. Subsequently the aniline **6c** can be converted to the indeno[1,2-c]pyrazol-4-ones of this invention by acylation followed by treatment with hydrazine as described previously in Scheme 2.

SCHEME 4



Another method for making the indeno[1,2-c]pyrazol-4-one ring system is shown in Scheme 4. Dimethyl hydrazine was reacted with 3-acetylpyridine with no solvent to give the hydrazone 7. This was treated in a similar fashion as described in Scheme 1 to give the desired intermediate **8**. Additional means of preparing similar intermediates are known to one skilled in the art as described in Rappoport, *J. Org. Chem.* 49:2948-2953, 1984, the contents of which are hereby incorporated herein by reference. This intermediate

was carried through the sequence in a similar fashion as described in Scheme 1.

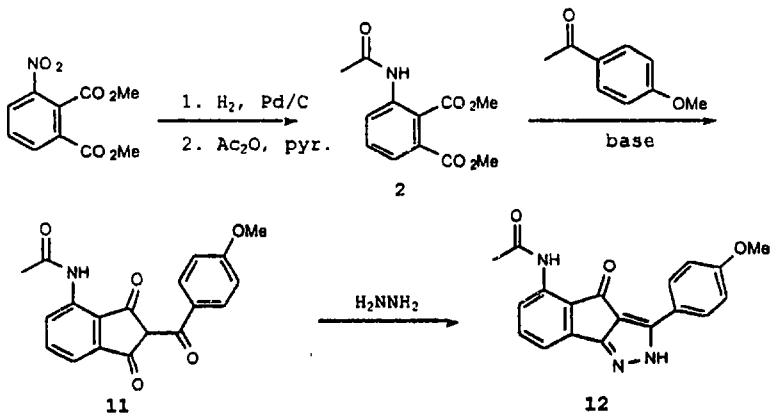
Other features of the invention will become apparent during the following descriptions of exemplary embodiments which are given for illustration of the invention and are not intended to be limiting thereof.

Examples

Abbreviations used in the Examples are defined as follows: "°C" for degrees Celsius, "CIMS" for chemical ionization mass spectroscopy, "eq" for equivalent or equivalents, "g" for gram or grams, "h" for hour or hours, "mg" for milligram or milligrams, "mL" for milliliter or milliliters, "mmol" for millimolar, "M" for molar, "min" for minute or minutes, "p-TsOH" for para-toluenesulphonic acid, "DMF" for dimethylformamide, and "TFA" for trifluoroacetic acid.

Example I

Preparation of 3-(4-methoxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one



Step 1. Synthesis of **2** from dimethyl 3-nitrophthalate.

A solution of dimethyl 3-nitrophthalate (25 g, 105 mmol) in methanol (100 mL) was treated with 5% Pd/C (2.5 g)

and hydrogenated on a Parr Shaker at 50 psi for 2 h. The solution was filtered (Celite), the filtrate collected and the solvent removed at reduced pressure. The residue was dissolved in acetic anhydride (20 mL) treated with pyridine (0.05mL) and heated to 80 °C for 1 min. The reaction was cooled and stirred at 25°C for 2 h. The solvent was removed at reduced pressure and the residue recrystallized from ethanol to give the product as a white solid (21 g, 79%). mp 104-105 °C; CIMS *m/e* calc'd for $C_{12}H_{14}NO_5$: 252.0872, found 252.0888; Analysis calc'd for $C_{12}H_{13}NO_5$: C, 57.37; H, 5.22; N, 5.58; found: C, 57.67; H, 5.29; N, 5.77.

Step 2. Synthesis of triketone **11** from **2**.

A solution of **2** (1 g, 4.0 mmol) in dry DMF (2 mL) was treated with sodium hydride (0.15 g, 60% suspension in oil, 0.4 mmol) in one portion. After 1 h, 4-methoxyacetophenone (0.6 g, 4.0 mmol) was added in one portion and the reaction heated to 90 °C. A second portion of sodium hydride (0.15 g, 60% suspension in oil, 0.4 mmol) was added and the exothermic reaction turns deep red. After 20 min, the reaction was cooled to 25 °C, diluted with water (20 mL), extracted with EtOAc (10 mL) and the aqueous phase separated. The aqueous phase was acidified with 2 N HCl to pH 2 and the crude product collected. Recrystalization with ethanol gave the desired product as a yellow solid (0.4 g, 30%). mp 174-175 °C; CIMS *m/e* calc'd for $C_{19}H_{16}NO_5$: 338.1028, found 338.1022; Analysis calc'd for $C_{19}H_{15}NO_5$: C, 67.65; H, 4.48; N, 4.15; found: C, 67.87; H, 4.29; N, 3.99.

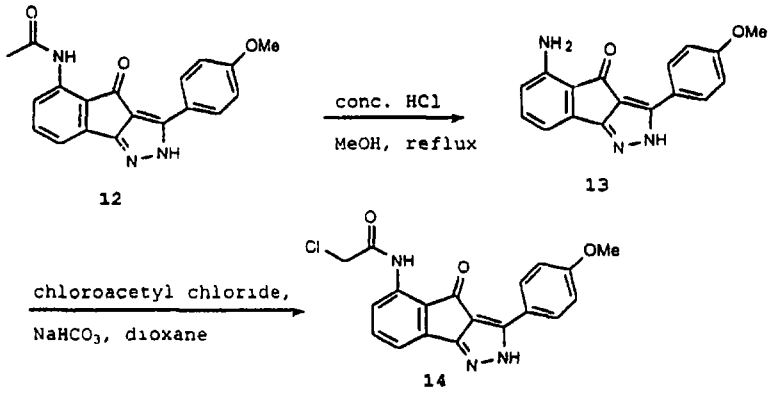
Step 3. Synthesis of **12** from **11**.

A solution of **11** (0.2 g, 0.6 mmol) in EtOH (5 mL) was treated with hydrazine hydrate (0.1 mL, 1.8 mmol) and p-TsOH (3 mg). The reaction was heated to reflux and stirred for 2 h. The reaction was cooled to 25 °C and the product

collected as a yellow solid (0.1 g, 50%). mp 268 °C; CIMS *m/e* calc'd for $C_{19}H_{16}N_3O_3$: 334.1192, found: 334.1168; Analysis calc'd for $C_{19}H_{15}N_3O_3$: C, 68.46; H, 4.54; N, 12.61; found: C, 68.81; H, 4.39; N, 12.45.

Example II

Preparation of 3-(4-methoxyphenyl)-5-(chloroacetamido)indeno[1,2-c]pyrazol-4-one



Step 1. Synthesis of **13** from **12**.

A suspension of **12** (1.0 g, 3.0 mmol) in MeOH (10 mL) was treated with conc. HCl (1 mL) and heated to reflux. After 2 h, the reaction was cooled and the product was collected as a greenish solid (0.7 g, 81%). mp 273 °C; CIMS *m/e* calc'd for $C_{17}H_{14}N_3O_2$: 292.1086, found: 292.1080; Analysis calc'd for $C_{17}H_{13}N_3O_2$: C, 69.85; H, 4.83; N, 14.37; found: C, 69.99; H, 4.59; N, 14.44.

Step 2. Synthesis of **14** from **13**.

A suspension of **13** (20 mg, 0.07 mmol) in dioxane (2 mL) was treated with aqueous sat. $NaHCO_3$ (1 mL) and chloroacetyl chloride (30 mL, 0.21 mmol). The reaction was heated to 50 °C and stirred for 2 h. The reaction was cooled, poured into

water (2 mL), extracted with EtOAc (10 mL), the organic layer separated, dried ($MgSO_4$) and the solvent removed at reduced pressure. The solid residue was recrystallized from EtOH to give the product as a yellow solid (9 mg, 35%). mp 274 °C; CIMS *m/e* calc'd for $C_{19}H_{15}N_3O_3Cl$: 368.0802, found: 368.0818.

Example III

Preparation of 3-(4-methoxyphenyl)-5-(cyclopropylamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example II using cyclopropylacetyl chloride as the starting material. mp 289 °C; CIMS *m/e* calc'd for $C_{21}H_{18}N_3O_3$: 360.1348, found: 360.1330.

Example IV

Preparation of 3-(4-methoxyphenyl)-5-(isopropylamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example II using isopropylacetyl chloride as the starting material. mp 288 °C; CIMS *m/e* calc'd for $C_{21}H_{20}N_3O_3$: 362.1505, found: 362.1535.

Example V

Preparation of 3-(4-methoxyphenyl)-5-(ethylamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example II using propionyl chloride as the starting material. mp 287 °C; CIMS *m/e* calc'd for $C_{20}H_{18}N_3O_3$: 348.1348, found: 348.1313.

Example VI

Preparation of 3-(4-methoxyphenyl)-5-(cyclopentylamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example II using cyclopentylacetyl chloride as the starting material. mp 267 °C; CIMS *m/e* calc'd for $C_{23}H_{22}N_3O_3$: 388.1661, found: 388.1626.

Example VII

Preparation of 3-(4-methoxyphenyl)-5-(cyclobutylamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example II using cyclobutylacetyl chloride as the starting material. mp 297 °C; CIMS *m/e* calc'd for $C_{22}H_{20}N_3O_3$: 374.1505, found: 374.1530.

Example VIII

Preparation of 3-(4-methoxyphenyl)-5-(phenylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example II using phenylacetyl chloride as the starting material. mp 280 °C; CIMS *m/e* calc'd for $C_{25}H_{20}N_3O_3$: 410.1505, found: 410.1533.

Example IX

Preparation of 3-(4-methoxyphenyl)-5-(butylamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example II using butyryl chloride as the starting material. mp 282 °C; CIMS *m/e* calc'd for $C_{21}H_{20}N_3O_3$: 362.1505, found: 362.1500.

Example X

Preparation of 3-(4-methoxyphenyl)-5-((4-chlorophenyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example II using 4-chlorophenylacetyl chloride as the starting material. mp 238 °C; CIMS *m/e* calc'd for $C_{25}H_{19}N_3O_3Cl$: 444.1115, found: 444.1110.

Example XI

Preparation of 3-(4-methoxyphenyl)-5-((3-methoxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example II using 3-methoxyphenylacetyl chloride as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{26}H_{22}N_3O_4$: 440.1610, found: 440.1620.

Example XII

Preparation of 3-(4-methoxyphenyl)-5-((4-methoxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example II using 4-methoxyphenylacetyl chloride as the starting material. mp 280 °C; CIMS *m/e* calc'd for $C_{26}H_{22}N_3O_4$: 440.1610, found: 440.1630.

Example XIII

Preparation of 3-(4-methoxyphenyl)-5-((3,4-dimethoxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example II using 3,4-dimethoxyphenylacetyl chloride as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{27}H_{24}N_3O_5$: 470.1716, found: 470.1731.

Example XIV

Preparation of 3-(4-methoxyphenyl)-5-((2,5-dimethoxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example II using 2,5-dimethoxyphenylacetyl chloride as the starting material. mp 226 °C; CIMS *m/e* calc'd for $C_{27}H_{24}N_3O_5$: 470.1716, found: 470.1739.

Example XV

Preparation of 3-(2-methoxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example I using 2-methoxyacetophenone as the starting material. mp 276 °C; CIMS *m/e* calc'd for $C_{19}H_{16}N_3O_3$: 334.1192, found: 334.1169.

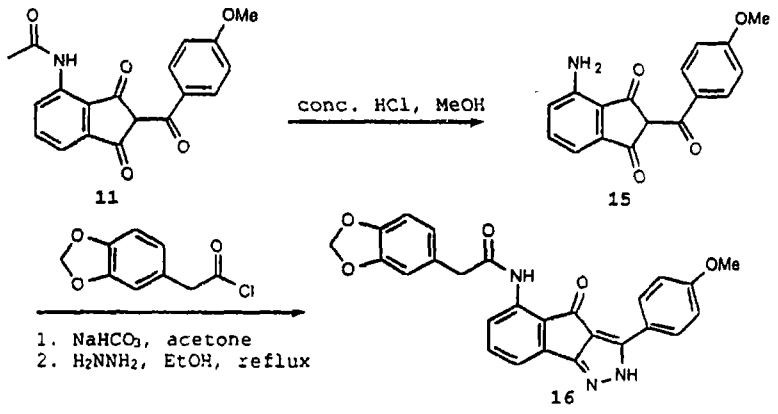
Example XVI

Preparation of 3-(3,4-dimethoxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example I using 3,4-dimethoxyacetophenone as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{20}H_{18}N_3O_4$: 364.1297, found: 364.1288.

Example XVII

Preparation of 3-(4-methoxyphenyl)-5-((3,4-ethylenedioxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one



Step 1. Synthesis of **15** from **11**.

A suspension of **11** (5 g, 14.8 mmol) in MeOH (50 mL) was treated with conc. HCl (3 mL) and heated to reflux. After stirring for 2 h, the reaction was cooled to 0 °C and the product collected as a yellow solid (4.2 g, 96%). mp 173 °C; CIMS *m/e* calc'd for $C_{17}H_{14}NO_4$: 296.0923, Found: 296.0901.

Step 2. Synthesis of **16** from **15**.

A suspension of **15** (20 mg, 0.07 mmol) in acetone (2 mL) was treated with $NaHCO_3$ (10 mg) and the acid chloride of (3,4-methylenedioxyphenyl)acetic acid (prepared by heating the acid in a benzene:thionyl chloride 4:1 mixture at 50 °C for 2 h, removing the volatile components at reduced pressure, and using the crude acid chloride without further purification). The reaction was heated to 50 °C and stirred for 2 h. The reaction was cooled, poured into water (4 mL), extracted with EtOAc (10 mL), dried ($MgSO_4$), filtered and concentrated. The crude triketone was suspended in EtOH (2 mL), treated with hydrazine hydrate (0.05 mL) and p-TsOH (1 mg) and heated to reflux for 2 h. The reaction was cooled to 0 °C and the product filtered to give a yellow solid (6.5 mg, 20%). mp 297 °C; CIMS *m/e* calc'd for $C_{26}H_{20}N_3O_5$: 454.1403, Found: 454.1398.

Example XVIII

Preparation of 3-(4-dimethoxyphenyl)-5-((3-thiophene)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XVII using the acid chloride of 3-thiopheneacetic acid as the starting material. mp 293 °C; CIMS *m/e* calc'd for $C_{23}H_{18}N_3O_3S$: 416.1069, found: 416.1088.

Example XIX

Preparation of 3-(4-methoxyphenyl)-5-((2-methoxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XVII using the acid chloride of 2-methoxyphenylacetic acid as the starting material. mp 255 °C; CIMS *m/e* calc'd for $C_{26}H_{22}N_3O_4$: 440.1610, found: 440.1622.

Example XX

Preparation of 3-(4-methoxyphenyl)-5-((3,4-dichlorophenyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XVII using the acid chloride of 3,4-dichlorophenylacetic acid as the starting material. mp 299 °C; CIMS *m/e* calc'd for $C_{25}H_{18}N_3O_3Cl_2$: 478.0725, found: 478.0744.

Example XXI

Preparation of 3-(4-methoxyphenyl)-5-((2,4-dichlorophenyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XVII using the acid chloride of 2,4-dichlorophenylacetic

acid as the starting material. mp 286 °C; CIMS *m/e* calc'd for $C_{25}H_{18}N_3O_3Cl_2$: 478.0725, found: 478.0734.

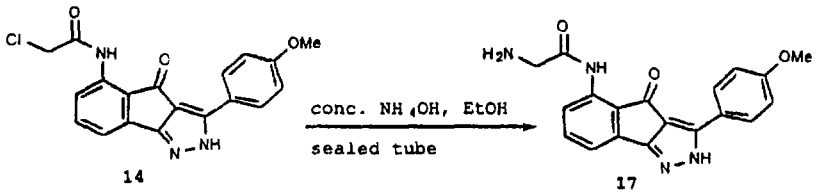
Example XXII

Preparation of 3-(4-methoxyphenyl)-5-((2-chlorophenyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XVII using the acid chloride of 2-chlorophenylacetic acid as the starting material. mp 300 °C; CIMS *m/e* calc'd for $C_{25}H_{19}N_3O_3Cl$: 444.1115, found: 444.1111.

Example XXIII

Preparation of 3-(4-methoxyphenyl)-5-(aminoacetamido)indeno[1,2-c]pyrazol-4-one



14 17

A suspension of **14** (15 mg, 0.04 mmol) in EtOH (1 mL) was treated with conc. NH_4OH (1 mL), placed in a sealed tube and heated to 80 °C for 3 h. The reaction was cooled and the solvent removed at reduced pressure. The residue was recrystallized from EtOH to give the product as a yellow solid (9 mg, 62%). mp >300 °C; CIMS *m/e* calc'd for $C_{20}H_{19}N_4O_3$: 363.1457, Found: 363.1431.

Example XXIV

Preparation of 3-(4-methoxyphenyl)-5-((2-hydroxyethyl)aminoacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using hydroxylamine as the starting material. mp 243 °C; CIMS *m/e* calc'd for $C_{21}H_{21}N_4O_4$: 393.1563, found: 393.1539.

Example XXV

Preparation of 3-(4-methoxyphenyl)-5-(N,N-dimethylaminoacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using dimethylamine as the starting material. mp 279 °C; CIMS *m/e* calc'd for $C_{21}H_{21}N_4O_3$: 377.1614, found: 377.1640.

Example XXVI

Preparation of 3-(4-methoxyphenyl)-5-(piperazinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using piperazine as the starting material. mp 277 °C; CIMS *m/e* calc'd for $C_{23}H_{24}N_5O_3$: 418.1879, found: 418.1899.

Example XXVII

Preparation of 3-(4-methoxyphenyl)-5-(4-methylpiperazinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-methylpiperizine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{24}H_{26}N_5O_3$: 432.2036, found: 432.2030.

Example XXVIII

Preparation of 3-(4-methoxyphenyl)-5-(4-(2-hydroxyethyl)piperazinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-hydroxyethylpiperizine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{25}H_{28}N_5O_4$: 462.2141, found: 462.2128.

Example XXIX

Preparation of 3-(4-methoxyphenyl)-5-(piperidinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using piperidine as the starting material. mp 291 °C; CIMS *m/e* calc'd for $C_{24}H_{25}N_4O_3$: 417.1927, found: 417.1955.

Example XXX

Preparation of 3-(4-methoxyphenyl)-5-(4-aminomethylpiperidinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-aminomethylpiperidine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{25}H_{28}N_5O_3$: 446.2192, found: 446.2166.

Example XXXI

Preparation of 3-(4-methoxyphenyl)-5-(ethylaminoacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using ethylamine as the starting material. mp 250 °C; CIMS *m/e* calc'd for $C_{21}H_{21}N_4O_3$: 377.1614, found: 377.1644.

Example XXXII

Preparation of 3-(4-methoxyphenyl)-5-(thiomorpholinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using thiomorpholine as the starting material. mp 298 °C; CIMS *m/e* calc'd for $C_{23}H_{23}N_4O_3S$: 435.1491, found: 435.1477.

Example XXXIII

Preparation of 3-(4-methoxyphenyl)-5-(morpholinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using morpholine as the starting material. mp 295 °C; CIMS *m/e* calc'd for $C_{23}H_{23}N_4O_4$: 419.1719, found: 419.1744.

Example XXXIV

Preparation of 3-(4-methoxyphenyl)-5-(pyrrolidinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using pyyrolidine as the starting material. mp 279 °C; CIMS *m/e* calc'd for $C_{23}H_{23}N_4O_3$: 403.1770, found: 403.1761.

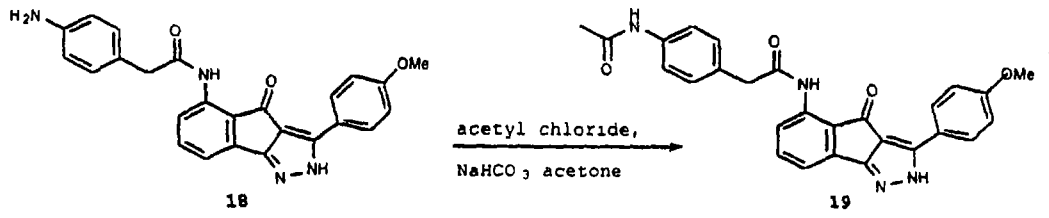
Example XXXV

Preparation of 3-(4-methoxyphenyl)-5-(4-pyridinylaminomethylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-aminomethylpyridine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{25}H_{22}N_5O_3$: 440.1723, found: 440.1762.

Example XXXVI

Preparation of 3-(4-methoxyphenyl)-5-((4-acetamidophenyl)acetamido)indeno[1,2-c]pyrazol-4-one



18 19

A suspension of **18** (10 mg, 0.02 mmol) in dioxane (1 mL) was treated with aqueous sat. $NaHCO_3$ (0.5 mL) and acetyl chloride (0.01 mL) and heated at 50 °C for 1 h. The reaction was cooled, poured into water (5 mL), extracted with EtOAc (10 mL), the organic layer separated, dried ($MgSO_4$) and the solvent removed at reduced pressure. The residue was recrystallized from EtOH to give the product as a yellow solid (5.6 mg, 61%). mp 268 °C; CIMS *m/e* calc'd for $C_{27}H_{23}N_4O_4$: 467.1719, Found: 467.1730.

Example XXXVII

Preparation of 3-(4-methoxyphenyl)-5-((4-methoxycarbonylaminophenyl)acetamido) indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXXII using methylchloroformate as the starting material. mp 257 °C; CIMS *m/e* calc'd for $C_{27}H_{23}N_4O_5$: 483.1668, found: 483.1633.

Example XXXVIII

Preparation of 3-(4-methoxyphenyl)-5-((4-aminomethylcarbonylaminophenyl)acetamido) indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII and XXXII using chloroacetyl chloride and conc. NH_4OH as the starting materias. mp 228 °C; CIMS *m/e* calc'd for $C_{27}H_{24}N_5O_4$: 482.1828, found: 482.1844.

Example XXXIX

Preparation of 3-(4-methoxyphenyl)-5-((4-N,N-dimethylaminomethylcarbonylaminophenyl)acetamido) indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII and XXXII using chloroacetyl chloride and dimethyl amine as the starting materias. mp >300 °C; CIMS *m/e* calc'd for $C_{29}H_{28}N_5O_4$: 510.2141, found: 510.2121.

Example XL

Preparation of 3-(4-methoxyphenyl)-5-((4-azidophenyl)acetamido)indeno[1,2-c]pyrazol-4-one

A solution of example XXXVI (20 mg, 0.04 mmol) in DMF (2 mL) was treated with 5% palladium on carbon (5 mg) and hydrogentaed at atmospheric pressure using a hydrogen baloon. After 2 h, the solution was filtered (Celite), and the solvent removed at reduced pressure. The residue was recrystallized from EtOH to give the product as a yellow solid (15 mg, 78%). mp >300 °C; CIMS *m/e* calc'd for $C_{25}H_{19}N_6O_3$: 451.1519, found: 451.1544.

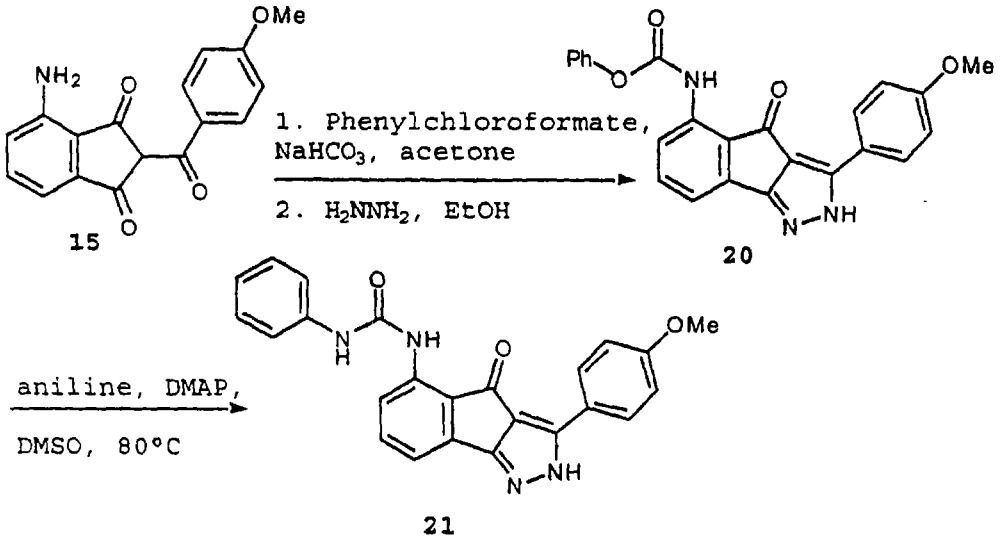
Example XLI

Preparation of 3-(4-methoxyphenyl)-5-((4-aminophenyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXVII using the acid chloride of 4-azidophenylacetic acid as the starting material. mp 283°C; CIMS *m/e* calc'd for $C_{25}H_{21}N_4O_3$: 425.1614, found: 425.1643.

Example XLII

Preparation of 3-(4-methoxyphenyl)-5-(phenylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one



Step 1. Synthesis of **20** from **15**.

A suspension of **15** (0.5 g, 1.7 mmol) in acetone (10 mL) was treated with $NaHCO_3$ (0.5 g) and phenyl chloroformate. The mixture was heated to 50 °C for 2 h. The reaction was cooled, poured into water (20 mL), extracted with EtOAc (40 mL), the organic layer separated, dried ($MgSO_4$) and the solvent removed at reduced pressure. The residue was suspended in EtOH (10 mL) and treated with hydrazine hydrate (0.16 mL, 5.1 mmol) and p-TsOH (10 mg). The mixture was heated to reflux and stirred for 3 h. The reaction was cooled to 0 °C and the product collected as a yellow solid (0.25 g, 36%). mp 195 °C; CIMS *m/e* calc'd for $C_{24}H_{18}N_3O_4$: 412.1297, Found: 412.1308.

Step 2. Synthesis of **21** from **20**.

A solution of **20** (20 mg, 0.05 mmol) in DMSO (2 mL) was treated with aniline (20 mL, mmol) and dimethylaminopyridine (1 mg). The mixture was heated to 80 °C for 2 h. The reaction was cooled, poured into water (4 mL), extracted with EtOAc (15 mL), the organic layer separated, dried ($MgSO_4$) and the solvent removed at reduced pressure. The residue was recrystallized from EtOH to give the product as a yellow solid (9 mg, 44%). mp >300 °C; CIMS *m/e* calc'd for $C_{24}H_{19}N_4O_3$: 411.1457, Found: 411.1432.

Example XLIII

Preparation of 3-(4-methoxyphenyl)-5-(butylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XLII using butyl amine as the starting material. mp 252 °C; CIMS *m/e* calc'd for $C_{21}H_{21}N_4O_3$: 377.1614, found: 377.1633.

Example XLIV

Preparation of 3-(4-methoxyphenyl)-5-(4-aminobenzylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XLII using 4-aminobenzyl amine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{25}H_{22}N_5O_3$: 440.1723, found: 440.1700.

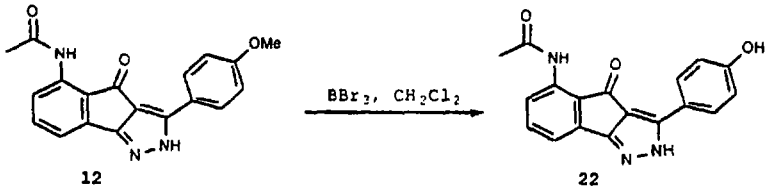
Example XLV

Preparation of 3-(4-methoxyphenyl)-5-(4-pyridylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XLII using 4-aminomethylpyridine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{24}H_{20}N_5O_3$: 426.1566, found: 426.1533.

Example XLVI

Preparation of 3-(4-hydroxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

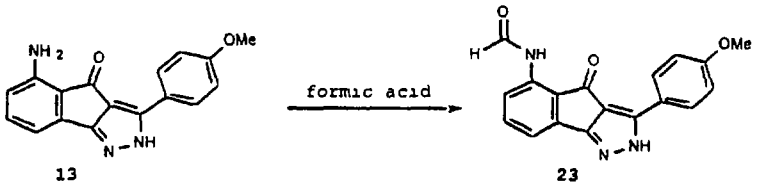


12 22

A suspension of **12** (20 mg, 0.07 mmol) in CH_2Cl_2 (2 mL) was treated with excess BBr_3 (1.0 mL, 1.0 M in CH_2Cl_2) and stirred for 20 h. The reaction was slowly poured into aqueous sat. $NaHCO_3$ (5 mL), extracted with EtOAc (10 mL), dried ($MgSO_4$) and concentrated. The residue was recrystallized from EtOH to give the desired product as a yellow solid (7.5 mg, 33%). mp >300 °C; CIMS *m/e* calc'd for $C_{18}H_{14}N_3O_3$: 320.1035, Found: 320.1050.

Example XLVII

Preparation of 3-(4-methoxyphenyl)-5-(formamido)indeno[1,2-c]pyrazol-4-one



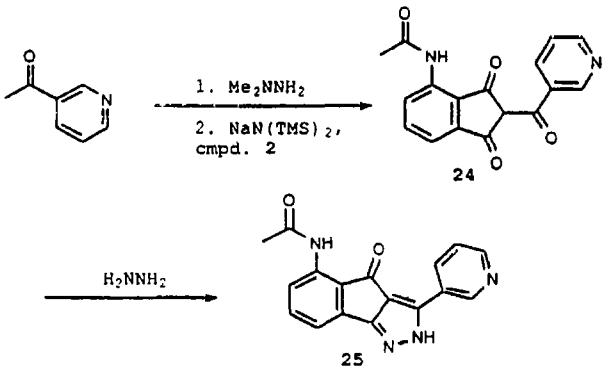
13 23

A suspension of **13** (20 mg, 0.06 mmol) in formic acid (2 mL) was heated to 100 °C for 2 h. The reaction mixture was cooled and the solvent removed at reduced pressure. The residue was recrystallized from EtOH to give the desired

product as a yellow solid (12 mg, 63%). mp 280 °C; CIMS *m/e* calc'd for $C_{18}H_{14}N_3O_3$: 320.1035, Found: 320.1040.

Example XLVIII

Preparation of 3-(3-pyridyl)-5-(acetamido)indeno [1,2-c]pyrazol-4-one



Step 1. Synthesis of **24** from 3-acetylpyridine.

A solution of 3-acetylpyridine (1.0 g, 8.3 mmol) in benzene (3 mL) was treated with 1,1-dimethylhydrazine (0.62 mL, 8.3 mmol) and p-TsOH (5 mg). The mixture was heated to 85 °C and stirred for 3 h. The reaction was cooled and the solvent removed at reduced pressure. This crude hydrazone was treated with 1.0 M $NaN(TMS)_2$ in THF (16.6 mL, 16.6 mmol) at 25 °C over 5 min. After 30 min dimethyl 3-acetamidophthalate (2.1 g, 8.3 mmol) was added in one portion and the reaction heated to reflux. Stirring was continued for 6 h. The reaction was cooled and quenched by the slow addition of TFA. The solvent was removed at reduced pressure and the residue chromatographed (silica, 2.5-5 % $MeOH/CH_2Cl_2$) to give the product as a yellow solid (0.35 g, 14%). mp 265 °C; CIMS *m/e* calc'd for $C_{17}H_{13}N_2O_4$: 309.0875, Found: 309.0888.

Step 2. Synthesis of **25** from **24**.

A suspension of **24** (30 mg, 0.09 mmol) in EtOH (2 mL) was treated with hydrazine hydrate (0.05 mL) and p-TsOH (1 mg) and heated to reflux. After stirring for 2 h. the reaction was cooled and the product filtered to give a yellow solid (12 mg, 44%). mp >300 °C; CIMS *m/e* calc'd for $C_{17}H_{13}N_4O_2$: 305.1039, Found: 305.1048.

Example XLIX

Preparation of 3-(4-pyridyl)-5-(acetamido)indeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XLVIII using 4-acetylpyridine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{17}H_{13}N_4O_2$: 305.1039, found: 305.1046.

Example L

Preparation of 3-(4-pyridyl)-5-(formamido)indeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XLVII using 4-acetylpyridine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{16}H_{11}N_4O_2$: 291.0882, found: 291.0882.

Example LI

Preparation of 3-phenyl-5-(acetamido)indeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example I using acetophenone as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{18}H_{13}N_3O_2$: 304.1065, found: 304.1086.

Example LII

Preparation of 3-(4-methylthiophenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example I using 4'-methylthioacetophenone as the starting material. mp 283 °C; CIMS *m/e* calc'd for $C_{19}H_{15}N_3O_2S$: 350.0956, found: 350.0963.

Example LIII

Preparation of 3-(4-methylsulphonylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared by oxidation of the product of example LII. mp >300 °C; CIMS *m/e* calc'd for $C_{19}H_{15}N_3O_4S$: 382.0860, found: 382.0862.

Example LIV

Preparation of 3-(4-N,N-dimethylaminophenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example I using 4'-N,N,-dimethylaminoacetophenone as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{20}H_{18}N_4O_2$: 347.1496, found: 347.1508.

Example LV

Preparation of 3-(4-N,N-dimethylaminophenyl)-5-(morpholinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for examples II and XXIII employing the product of example LIV and morpholine as the starting materials. mp >300 °C; CIMS *m/e* calc'd for $C_{24}H_{26}N_5O_3$: 432.2036, found: 432.2020.

Example LVI

Preparation of 3-(4-N,N-dimethylaminophenyl)-5-(dimethylaminoacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for examples II and XXIII employing the product of example LIV and dimethylamine as the starting materials. mp >300 °C; CIMS *m/e* calc'd for $C_{22}H_{24}N_5O_2$: 390.1930, found: 390.1948.

Example LVII

Preparation of 3-(4-(1-piperidinyl)phenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example I using 4'-(1-piperidinyl)acetophenone as the starting material. mp 291 °C; CIMS *m/e* calc'd for $C_{23}H_{22}N_4O_2$: 387.1801, found: 387.1821.

Example LVIII

Preparation of 3-(4-morpholinyl)phenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example I using 4'-morpholinylacetophenone as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{22}H_{20}N_4O_3$: 388.1528, found: 388.1535.

Example LIX

Preparation of 3-(4-ethoxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example I using 4'-et

288 °C; CIMS *m/e* calc'd for $C_{20}H_{17}N_3O_3$: 348.1325, found: 348.1348.

Example LX

Preparation of 3-(4-butylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example I using 4'-butylacetophenone as the starting material. mp 259 °C; CIMS *m/e* calc'd for $C_{22}H_{21}N_3O_2$: 360.1701, found: 360.1712.

Example LXI

Preparation of 3-(4-ethylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example I using 4'-ethylacetophenone as the starting material. mp 294 °C; CIMS *m/e* calc'd for $C_{20}H_{17}N_3O_2$: 331.1310, found: 331.1321.

Example LXII

Preparation of 3-(4-n-propylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example I using 4'-n-propylacetophenone as the starting material. mp 269 °C; CIMS *m/e* calc'd for $C_{21}H_{19}N_3O_2$: 346.1555, found: 346.1554.

Example LXIII

Preparation of 3-(4-methoxyphenyl)-5-carbamoylaminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XLII using concentrated ammonium hydroxide as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{18}H_{15}N_4O_3$: 335.1144, found: 335.1113.

Example LXIV

Preparation of 3-(4-methoxyphenyl)-5-(dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XLII using dimethylamino hydrazine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{20}H_{20}N_5O_3$: 378.1566, found: 378.1555.

Example LXV

Preparation of 3-(4-methoxyphenyl)-5-(methylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XLII using methylamine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{19}H_{17}N_4O_3$: 349.1300, found: 349.1311.

Example LXVI

Preparation of 3-(4-methoxyphenyl)-5-(morpholinocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XLII using N-aminomorpholine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{22}H_{22}N_5O_4$: 420.1671, found: 420.1655.

Example LXVII

Preparation of 3-(4-methoxyphenyl)-5-(cis-2-aminocyclohexanylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XLII using cis-1,2-diaminocyclohexane as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{24}H_{26}N_5O_3$: 432.2035, found: 432.2020.

Example LXVIII

Preparation of 3-(4-methoxyphenyl)-5-(4-methylpiperazinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XLII using (4-amino)methylpiperazine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{23}H_{25}N_6O_3$: 433.1987, found: 433.1999.

Example LXIX

Preparation of 3-(4-methoxyphenyl)-5-(4-uridomethylpiperadinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using example XXX as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{26}H_{29}N_6O_4$: 489.2250, found: 489.2209.

Example LXX

Preparation of 3-(4-methoxyphenyl)-5-(4-(2-pyridyl)piperazinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-(2-pyridyl)piperazine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{28}H_{27}N_6O_3$: 495.2144, found: 495.2111.

Example LXXI

Preparation of 3-(4-methoxyphenyl)-5-(4-(aminoethyl)piperazinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-(aminoethyl)piperazine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{25}H_{29}N_6O_3$: 461.2300, found: 461.2333.

Example LXXII

Preparation of 3-(4-methoxyphenyl)-5-(4-amidopiperadinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using isonipecotamide as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{25}H_{26}N_5O_4$: 460.1984, found: 460.1998.

Example LXXIII

Preparation of 3-(4-methoxyphenyl)-5-(4-hydroxypiperadinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-hydroxypiperadine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{24}H_{25}N_4O_4$: 433.1875, found: 433.1844.

Example LXXIV

Preparation of 3-(4-methoxyphenyl)-5-(4-hydroxmethylypiperadinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-hydroxmethylypiperadine as the starting

material. mp >300 °C; CIMS *m/e* calc'd for $C_{25}H_{27}N_4O_4$: 447.2032, found:447.2002.

Example LXXV

Preparation of 3-(4-methoxyphenyl)-5-(4-amidopiperazinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-amidopiperazine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{24}H_{25}N_6O_6$: 493.1835, found:493.1802.

Example LXXVI

Preparation of 3-(4-methoxyphenyl)-5-(4-dimethylaminopiperadinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-dimethylaminopiperadine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{26}H_{30}N_5O_5$: 492.2246, found:492.2220.

Example LXXVII

Preparation of 3-(4-methoxyphenyl)-5-(4-aminopiperadinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-aminopiperadine as the starting material. mp >300 °C; CIMS *m/e* calc'd for $C_{24}H_{26}N_5O_5$: 464.1933, found:464.1975.

Example LXXVIII

Preparation of 3-(4-(dimethylamino)phenyl)-5-((4-methyl-1-piperazinyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for examples II and XXIII employing the product of example LIV and 1-methylpiperazine as the starting materials. mp >300 °C; ESI-MS *m/e* calc'd for $C_{25}H_{29}N_6O_2$: 445.2352, found: 445.2359.

Example LXXIX

Preparation of 3-(4-(dimethylamino)phenyl)-5-((4-aminomethyl-1-piperidinyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for examples II and XXIII employing the product of example LIV and 4-(aminomethyl)piperidine as the starting materials. ESI-MS *m/e* calc'd for $C_{26}H_{31}N_6O_2$: 459.2508, found: 459.2508.

Example LXXX

Preparation of 3-(4-(dimethylamino)phenyl)-5-((4-hydroxy-1-piperidinyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for examples II and XXIII employing the product of example LIV and 4-hydroxypiperidine as the starting materials. mp 267 °C; ESI-MS *m/e* calc'd for $C_{25}H_{28}N_5O_3$: 446.2192, found: 446.2206.

Example LXXXI

Preparation of 3-(4-(4-morpholinyl)phenyl)-5-(4-morpholinyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for examples II and XXIII employing the product of example LVIII and morpholine as the starting materials. mp 258 °C; ESI-MS *m/e* calc'd for $C_{26}H_{28}N_5O_4$: 474.2141, found: 474.2151.

Example LXXXII

Preparation of 3-(4-(4-morpholinyl)phenyl)-5-((4-methyl-1-piperazinyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for examples II and XXIII employing the product of example LVIII and 1-methylpiperazine as the starting materials. mp 258 °C; ESI-MS *m/e* calc'd for $C_{27}H_{31}N_6O_3$: 487.2457, found: 487.2447.

Example LXXXIII

Preparation of 3-(4-(4-morpholinyl)phenyl)-5-((4-hydroxy-1-piperidinyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for examples II and XXIII employing the product of example LVIII and 4-hydroxypiperidine as the starting materials. mp 245 °C; ESI-MS *m/e* calc'd for $C_{27}H_{30}N_5O_4$: 488.2298, found: 488.2290.

Example LXXXIV

Preparation of 3-(4-(4-morpholinyl)phenyl)-5-((4-aminomethyl-1-piperidinyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for examples II and XXIII employing the product of example LVIII and 4-(aminomethyl)piperidine as the starting materials. mp 240 °C; ESI-MS *m/e* calc'd for $C_{28}H_{33}N_6O_3$: 501.2614, found: 501.2619.

Example LXXXV

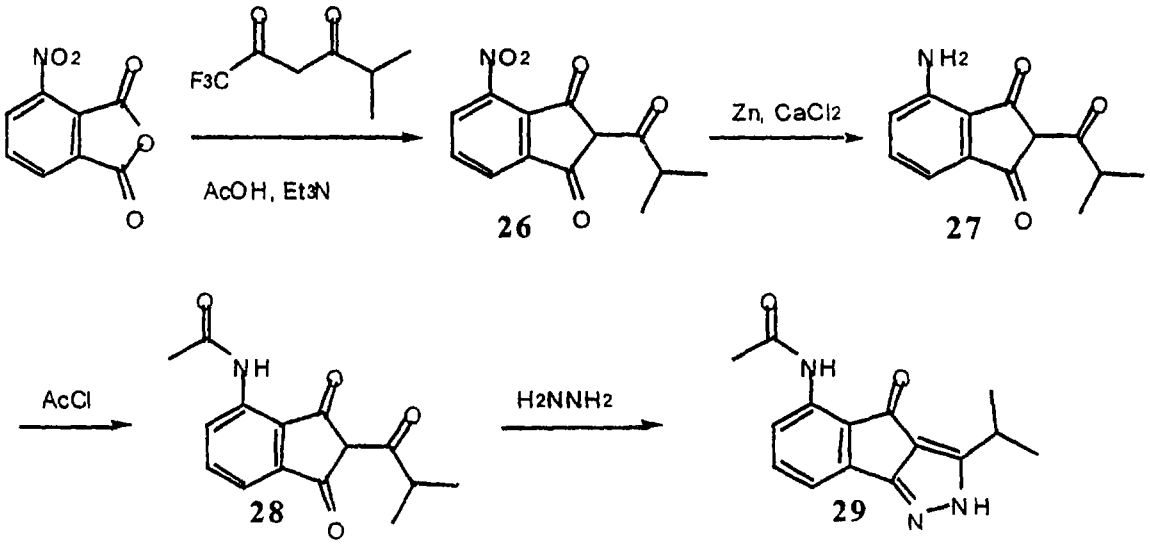
Preparation of 3-(4-(dimethylamino)phenyl)-5-((((4-methyl-1-piperazinyl)amino)carbonyl)amino)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for examples I, XXVII, and XLII employing the 4-(dimethylamino) acetophenone and 1-amino-4-methylpiperazine as the starting

materials. mp >300 °C; ESI-MS *m/e* calc'd for $C_{24}H_{28}N_7O_2$: 446.2304, found: 446.2310.

Example LXXXVI

Preparation of 3-(i-propyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one



Step 1. Synthesis of **26** from 3-nitrophthalic anhydride.

A solution of 3-nitrophthalic anhydride (9.7 g, 50 mmol) and 1,1,1-trifluoro-5-methyl-2,4-hexanedione (9.1 g, 50 mmol) in acetic anhydride (28.3 mL, 300 mmol) was treated with triethylamine (13.95 mL, 100 mmol) and stirred at 25 °C for 4 h. The solution was diluted with 1 N HCl (200 mL) and the precipate collected and washed with water (200 mL) and hexane (400 mL) to give the product as a yellow solid (11.1 g, 85%). mp 127-129 °C; CIMS (M+H) calc'd for $C_{13}H_{12}NO_5$: 262.0715, found: 262.0694.

Step 2. Synthesis of triketone **27** from **26**.

A solution of **26** (11 g, 42 mmol) in EtOH (224 mL) and water (56 mL) was treated with zinc (90 g, 1.4 mol) and calcium chloride (3 g, 27 mmol) and heated to reflux for 16 h. The reaction was filtered (Celite) and the filtrate was concentrated at reduced pressure to give an aqueous residue which was extracted with EtOAc (100 mL). The organic layer was separated and washed with sat. EDTA (100 ml) and brine (100 mL), dried (MgSO4), filtered, and concentrated at reduced pressure to give a yellow solid. Trituration with hexane gave the product as a yellow solid (7.1 g, 73%). mp 241-243 °C; CIMS (M+H) calc'd for $C_{13}H_{14}NO_3$: 232.0974, found: 232.0962.

Step 3. Synthesis of **28** from **27**.

A solution of **27** (500 mg, 2.16 mmol) in CH2Cl2 (5 mL) was treated with Et3N (0.36 mL, 2.59 mmol) and stirred at 25 °C for 15 min. The reaction mixture was treated with acetyl chloride (0.18 mL, 2.38 mmol) and stirred at 25 °C for 1 h. The reaction mixture was quenched with 1 N HCl (20 mL) and extracted with EtOAc (20 mL). The organic layer was separated, dried (MgSO4), filtered, and concentrated at reduced pressure to give a brown residue. Trituration with hexane gave the product as a tan solid (484 mg, 82%). mp 241-243 °C; CIMS (M+H) calc'd for $C_{15}H_{16}NO_4$: 274.1079, found: 274.1093.

Step 4. Synthesis of **29** from **28**.

A solution of **28** (240 mg, 0.88 mmol) in BuOH (5 mL) was treated with hydrazine hydrate (0.055 mL, 1.76 mmol) and p-TsOH (8.4 mg, 0.044 mmol). The reaction was heated to reflux and stirred for 4 h. The reaction was cooled to 25 °C and the solvent removed at reduced pressure. Recrystalization with i-propyl alcohol gave the product collected as an off-

white solid (173 mg, 73%). mp >250 °C; ESIMS (M+H) calc'd for $C_{15}H_{16}N_3O_2$: 270.1242, found: 270.1258.

Example LXXXVII

Preparation of 3-(c-propyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using the c-propyl analog of **26** as the starting material. mp 220-221 °C; CIMS (M+H) calc'd for $C_{15}H_{14}N_3O_2$: 268.1086, found: 268.1078.

Example LXXXVIII

Preparation of 3-(t-butyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using the t-butyl analog of **26** as the starting material. mp >250 °C; CIMS (M+H) calc'd for $C_{16}H_{18}N_3O_2$: 284.1399, found: 284.1395.

Example LXXXIX

Preparation of 3-(2-thienyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using the 2-thienyl analog of **26** as the starting material. mp 269 °C; CIMS (M+H) calc'd for $C_{16}H_{12}N_3O_2S$: 310.0650, found: 310.0635.

Example XC

Preparation of 3-(3-methyl-2-thienyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using the 3-methyl-2-thienyl analog of **26** as the starting material. mp 275 °C; ESIMS (M+H) calc'd for $C_{17}H_{14}N_3O_2S$: 324.0811, found: 324.0807.

Example XCI

Preparation of 3-(ethyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the ethyl analog of **15** as the starting materials. mp >250 °C; CIMS (M+H) calc'd for $C_{13}H_{13}N_4O_2$: 257.1039, found: 257.1033.

Example XCII

Preparation of 3-(n-propyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the n-propyl analog of **15** as the starting materials. mp 187-189 °C; CIMS (M+H) calc'd for $C_{14}H_{15}N_4O_2$: 271.1195, found: 271.1187.

Example XCIII

Preparation of 3-(i-propyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the i-propyl analog of **15** as the starting materials. mp >250 °C; CIMS (M+H) calc'd for $C_{14}H_{15}N_4O_2$: 271.1195, found: 271.1196.

Example XCIV

Preparation of 3-(c-propyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the c-propyl analog of **15** as the starting materials. mp 252-253 °C; ESIMS (M-H) calc'd for $C_{14}H_{11}N_4O_2$: 267.0881, found: 267.0884.

Example XCV

Preparation of 3-(c-hexyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the c-hexyl analog of **15** as the starting materials. mp 178-179 °C; ESIMS (M+H) calc'd for $C_{17}H_{19}N_4O_2$: 311.1507, found: 311.1500.

Example XCVI

Preparation of 3-(2-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the 2-thienyl analog of **15** as the starting materials. mp 214 °C; CIMS *m+* calc'd for $C_{15}H_{10}N_4O_2S$: 310.0517, found: 310.0524.

Example XCVII

Preparation of 3-(3-methyl-2-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the 3-methyl-2-thienyl analog of **15**

as the starting materials. mp 270 °C; ESIMS (M+H) calc'd for $C_{16}H_{13}N_4O_2S$: 325.0759, found: 325.0744.

Example XCVIII

Preparation of 3-(5-methyl-2-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the 5-methyl-2-thienyl analog of **15** as the starting materials. mp >280 °C; ESIMS (M+H) calc'd for $C_{16}H_{13}N_4O_2S$: 325.0759, found: 325.0761.

Example XCIX

Preparation of 3-(5-ethylcarboxyl-2-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the 5-ethylcarboxyl-2-thienyl analog of **15** as the starting materials. mp >280 °C; ESIMS (M+H) calc'd for $C_{18}H_{15}N_4O_4S$: 383.0813, found: 383.0788.

Example C

Preparation of 3-(3-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the 3-thienyl analog of **15** as the starting materials. mp >280 °C; ESIMS (M+H) calc'd for $C_{15}H_{11}N_4O_2S$: 311.0603, found: 311.0594.

Example CI

Preparation of 3-(5-chloro-3-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the 5-chloro-3-thienyl analog of **15** as the starting materials. mp >300 °C; ESIMS (M+H) calc'd for $C_{15}H_{10}N_4O_2SCl$: 345.0209, found: 345.0213.

Example CII

Preparation of 3-(2,5-dimethyl-3-thienyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the 2,5-dimethyl-3-thienyl analog of **15** as the starting materials. mp >280 °C; ESIMS (M+H) calc'd for $C_{17}H_{15}N_4O_2S$: 339.0916, found: 339.0905.

Example CIII

Preparation of 3-(2-furanyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the 2-furanyl analog of **15** as the starting materials. mp 278 °C; ESIMS (M+H) calc'd for $C_{15}H_{11}N_4O_3$: 295.0831, found: 295.0838.

Example CIV

Preparation of 3-(i-propyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1,1-dimethylhydrazine and the i-propyl analog of **15** as the starting materials. mp 231-233 °C; ESIMS (M+H) calc'd for $C_{16}H_{20}N_5O_2$: 314.1616, found: 314.1599.

Example CV

Preparation of 3-(c-propyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1,1-dimethylhydrazine and the c-propyl analog of **15** as the starting materials. mp XXX °C; ESIMS (M+H) calc'd for $C_{16}H_{18}N_5O_2$: 312.1460, found: 312.1487.

Example CVI

Preparation of 3-(c-hexyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1,1-dimethylhydrazine and the c-hexyl analog of **15** as the starting materials. mp 229-231 °C; ESIMS (M+H) calc'd for $C_{19}H_{24}N_5O_2$: 354.1929, found: 354.1932.

Example CVII

Preparation of 3-(2-thienyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1,1-dimethylhydrazine and the 2-thienyl analog of **15** as the starting materials. mp 279 °C; ESIMS (M+H) calc'd for $C_{17}H_{16}N_5O_2S$: 354.1024, found: 354.1025.

Example CVIII

Preparation of 3-(5-methoxy-2-thienyl)-5-

(N,N-dimethylaminocarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1,1-dimethylhydrazine and the 5-methoxy-2-thienyl analog of **15** as the starting materials. mp 280 °C; ESIMS (M+H) calc'd for $C_{18}H_{18}N_5O_3S$: 384.1130, found: 384.1119.

Example CIX

Preparation of 3-(5-methyl-2-thienyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1,1-dimethylhydrazine and the 5-methyl-2-thienyl analog of **15** as the starting materials. mp >280 °C; ESIMS (M+H) calc'd for $C_{18}H_{18}N_5O_2S$: 368.1181, found: 368.1171.

Example CX

Preparation of 3-(5-ethylcarboxyl-2-thienyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1,1-dimethylhydrazine and the 5-ethylcarboxyl-2-thienyl analog of **15** as the starting materials. mp 252 °C; ESIMS (M+H) calc'd for $C_{20}H_{20}N_5O_4S$: 426.1236, found: 426.1251.

Example CXI

Preparation of 3-(3-thienyl)-5-

(N,N-dimethylaminocarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1,1-dimethylhydrazine and the 3-thienyl analog of **15** as the starting materials. mp 202 °C; ESIMS (M+H) calc'd for $C_{17}H_{16}N_5O_2S$: 354.1025, found: 354.1031.

Example CXII

Preparation of 3-(1-methyl-3-pyrrolyl)-5-(carbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using ammonia and the 1-methyl-3-pyrrolyl analog of **15** as the starting materials. mp >300 °C; ESIMS (M+H) calc'd for $C_{16}H_{14}N_5O_2$: 308.1147, found: 308.1166.

Example CXIII

Preparation of 3-(2,5-dimethyl-3-thienyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1,1-dimethylhydrazine and the 2,5-dimethyl-3-thienyl analog of **15** as the starting materials. mp 252 °C; ESIMS (M+H) calc'd for $C_{19}H_{20}N_5O_2S$: 382.1338, found: 382.1357.

Example CXIV

Preparation of 3-(2-furanyl)-5-(N,N-dimethylaminocarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1,1-dimethylhydrazine and the 2-furanyl analog of **15** as the starting materials. mp 202 °C; ESIMS (M+H) calc'd for $C_{17}H_{16}N_5O_3$: 338.1253, found: 338.1248.

Example CXV

Preparation of 3-(i-propyl)-5-(4-carbamoylpiperidinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using isonipecotamide and the i-propyl analog of **14** as the starting materials. mp 224-225 °C; ESIMS (M+H) calc'd for $C_{21}H_{26}N_5O_3$: 396.2035, found: 396.2036.

Example CXVI

Preparation of 3-(c-hexyl)-5-(4-carbamoylpiperidinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using isonipecotamide and the c-hexyl analog of **14** as the starting materials. mp 228-229 °C; ESIMS (M+H) calc'd for $C_{24}H_{30}N_5O_3$: 436.2348, found: 436.2345.

Example CXVII

Preparation of 3-(ethyl)-5-(4-aminomethylpiperidinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-(aminomethyl)piperidine and the ethyl analog of **14** as the starting materials. mp 174-176 °C; ESIMS (M+H) calc'd for $C_{20}H_{26}N_5O_2$: 368.2086, found: 368.2078.

Example CXVIII

Preparation of 3-(i-propyl)-5-(4-aminomethylpiperidinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-(aminomethyl)piperidine and the i-propyl analog of **14** as the starting materials. mp 218-220 °C; ESIMS (M+H) calc'd for $C_{21}H_{28}N_5O_2$: 382.2242, found: 382.2227.

Example CXIX

Preparation of 3-(c-propyl)-5-(4-aminomethylpiperidinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-(aminomethyl)piperidine and the c-propyl analog of **14** as the starting materials. mp 138-140 °C; ESIMS (M+H) calc'd for $C_{21}H_{26}N_5O_2$: 380.2086, found: 380.2079.

Example CXX

Preparation of 3-(c-hexyl)-5-(4-aminomethylpiperidinylacetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example XXIII using 4-(aminomethyl)piperidine and the c-hexyl analog of **14** as the starting materials. mp 196-198 °C; ESIMS (M+H) calc'd for $C_{24}H_{32}N_5O_2$: 422.2555, found: 422.2540.

Example CXXI

Preparation of 3-(i-propyl)-5-(4-methylpiperazinylcarbamoyl)aminoindeno

[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1-amino-4-methylpiperazine and the i-propyl analog of **15** as the starting materials. mp 231-233 °C; ESIMS (M+H) calc'd for $C_{19}H_{25}N_6O_2$: 369.2038, found: 369.2039.

Example CXXII

Preparation of 3-(5-ethylcarboxyl-2-thienyl)-5-(4-methylpiperazinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1-amino-4-methylpiperazine and the 5-ethylcarboxyl-2-thienyl analog of **15** as the starting materials. mp 249 °C; ESIMS (M+H) calc'd for $C_{23}H_{25}N_6O_4S$: 481.1657, found: 481.1642.

Example CXXIII

Preparation of 3-(5-carboxyl-2-thienyl)-5-(4-methylpiperazinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

A solution of CXXII (30 mg, 0.05 mmol) in 3:1 THF/water (2 mL) was treated with LiOH (23 mg, 0.5 mmol) and the reaction was stirred at 25 °C for 12 h and then heated to reflux for 1 h. The organic solvent was removed at reduced pressure and the residue was partioned between EtOAc (5 mL) and water (5 mL). The organic layer was separated and the aqueous phase was adjusted to pH = 2 with 1 M HCl and re-extracted with EtOAc (5 mL). The combined organic layers were dried (Na2SO4), filtered and concentrated at reduced pressure to give a crude residue. Purification by reverse phase HPLC gave the product as a yellow solid (10.4 mg,

46%). mp 270 °C; ESIMS (M+H) calc'd for $C_{21}H_{21}N_6O_4S$: 453.1344, found: 453.1353.

Example CXXIV

Preparation of 3-(2,5-dimethyl-3-thienyl)-5-(4-methylpiperazinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 1-amino-4-methylpiperazine and the 2,5-dimethyl-3-thienyl analog of **15** as the starting materials. mp 250 °C; ESIMS (M+H) calc'd for $C_{22}H_{25}N_6O_2S$: 437.1760, found: 437.1771.

Example CXXV

Preparation of 3-(i-propyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 4-aminomorpholine and the i-propyl analog of **15** as the starting materials. mp 256-258 °C; ESIMS (M-H) calc'd for $C_{18}H_{20}N_5O_3$: 354.1566, found: 354.1543.

Example CXXVI

Preparation of 3-(N-methylcarbamoyl-4-piperidinyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 4-aminomorpholine and the N-methylcarbamoyl-4-piperidinyl analog of **15** as the starting materials. mp 216-218 °C; ESIMS (M+H) calc'd for $C_{22}H_{27}N_6O_5$: 455.2042, found: 455.2036.

Example CXXVII

Preparation of 3-(5-methyl-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 4-aminomorpholine and the 5-methyl-2-thienyl analog of **15** as the starting materials. mp 261 °C; ESIMS (M+H) calc'd for $C_{20}H_{20}N_5O_3S$: 410.1287, found: 410.1308.

Example CXXVIII

Preparation of 3-(5-chloro-3-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 4-aminomorpholine and the 5-chloro-3-thienyl analog of **15** as the starting materials. mp 259 °C; ESIMS (M+H) calc'd for $C_{19}H_{17}N_5O_3SCl$: 430.0741, found: 430.0757.

Example CXXIX

Preparation of 3-(2,5-dimethyl-3-thienyl)-5-(morpholinylcarbamoyl)aminoindeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 4-aminomorpholine and the 2,5-dimethyl-3-thienyl analog of **15** as the starting materials. mp >280 °C; ESIMS (M+H) calc'd for $C_{21}H_{22}N_5O_3S$: 424.1443, found: 424.1431.

Example CXXX

Preparation of 3-(5-ethylcarboxyl-2-thienyl)-5-

(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI using 4-aminomorpholine and the 5-ethylcarboxyl-2-thienyl analog of **15** as the starting materials. mp 258 °C; ESIMS (M+H) calc'd for $C_{22}H_{22}N_5O_5S$: 468.1341, found: 468.1331.

Example CXXXI

Preparation of 3-(5-carboxyl-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI (HYDROLYSIS OF PREVIOUS ESTER). mp 273 °C; ESIMS (M+H) calc'd for $C_{20}H_{18}N_5O_5S$: 440.1028, found: 440.1026.

Example CXXXII

Preparation of 3-(5-benzylcarboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

A solution of benzylamine (0.01 mL, 0.09 mmol) in DMF (1 mL) was treated with acid CXXXI (40 mg, 0.09 mmol) and stirred at 25 °C. The reaction was treated with TBTU (29 mg, 0.09 mmol) and stirred at 25 °C for 30 min. Triethylamine (0.01 mL, 0.09 mmol) was added and the reaction stirred at 25 °C for 12 h. After adding more TBTU (15 mg, 0.045 mmol) and triethylamine (0.01 mL, 0.09 mmol) the reaction was stirred at 25 °C for an additional 4 h. The reaction was diluted with EtOAc (10 mL) and water (10 mL) and the aqueous layer was extracted with EtOAc (5 x 10 mL). The combined organic layers were dried (Na2SO4), filtered, and the solvent removed at reduced pressure. Purification of the

residue using reverse phase HPLC gave the product as a yellow solid (21 mg, 42%). mp 275 °C; ESIMS (M+H) calc'd for $C_{27}H_{25}N_5O_4S$: 529.1659, found: 529.1682.

Example CXXXIII

Preparation of 3-(5-(4-methylpiperazinyl) carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using 1-amino-4-methylpiperazine as the starting material. mp 190 °C; ESIMS (M+H) calc'd for $C_{25}H_{29}N_8O_4S$: 537.2032, found: 537.2055.

Example CXXXIV

Preparation of 3-(5-(2-(1-methylpyrrolidinyl)ethyl) carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using 2-(2-aminoethyl)-1-methylpyrrolidine as the starting material. mp 235 °C; ESIMS (M+H) calc'd for $C_{27}H_{32}N_7O_4S$: 550.2236, found: 550.2229.

Example CXXXV

Preparation of 3-(5-(N,N-dimethylamino) carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using 1,1-dimethylhydrazine as the starting material.

mp 201 °C; ESIMS (M+H) calc'd for $C_{22}H_{24}N_7O_4S$: 482.1610, found: 482.1588.

Example CXXXVI

Preparation of 3-(5-(2-(N,N-dimethylamino)ethyl) carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using N,N-dimethylethylenediamine as the starting material. mp 190 °C; ESIMS (M+H) calc'd for $C_{24}H_{28}N_7O_4S$: 510.1923, found: 510.1922.

Example CXXXVII

Preparation of 3-(5-(2-(pyrrolidinyl)ethyl) carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using 1-(2-aminoethyl)pyrrolidine as the starting material. mp 224 °C; ESIMS (M+H) calc'd for $C_{26}H_{30}N_7O_4S$: 536.2080, found: 536.2091.

Example CXXXVIII

Preparation of 3-(5-(2-(morpholinyl)ethyl) carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using 4-(2-aminoethyl)morpholine as the starting

material. mp 241 °C; ESIMS (M+H) calc'd for $C_{26}H_{30}N_7O_5S$: 552.2029, found: 552.2043.

Example CXXXIX

Preparation of 3-(5-morpholinylcarboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using 4-aminomorpholine as the starting material. mp 271 °C; ESIMS (M+H) calc'd for $C_{24}H_{26}N_7O_5S$: 524.1716, found: 524.1719.

Example CXL

Preparation of 3-(5-(3-(pyrrolidonyl)propyl) carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using 1-(3-aminopropyl)-2-pyrrolidinone as the starting material. mp 260 °C; ESIMS (M+H) calc'd for $C_{27}H_{30}N_7O_5S$: 564.2029, found: 564.2031.

Example CXLI

Preparation of 3-(5-(2-(3-pyridyl)ethyl) carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using 3-(2-aminoethyl)pyridine as the starting material. mp 203 °C; ESIMS (M+H) calc'd for $C_{27}H_{26}N_7O_4S$: 544.1766, found: 544.1760.

Example CXLII

Preparation of 3-(5-(3-(imidazolyl)propyl)

carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using 1-(3-aminopropyl)imidazole as the starting material. mp 263 °C; ESIMS (M+H) calc'd for $C_{26}H_{27}N_8O_4S$: 547.1875, found: 547.1872.

Example CXLIII

Preparation of 3-(5-(2-(2-pyridyl)ethyl) carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using 2-(2-aminoethyl)pyridine as the starting material. mp >280 °C; ESIMS (M+H) calc'd for $C_{27}H_{26}N_7O_4S$: 544.1767, found: 544.1778.

Example CXLIV

Preparation of 3-(5-((2-pyridyl)methyl) carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using 2-(aminomethyl)pyridine as the starting material. mp 239 °C; ESIMS (M+H) calc'd for $C_{26}H_{24}N_7O_4S$: 530.1610, found: 530.1603.

Example CXLV

Preparation of 3-(5-(2-(piperidinyl)ethyl) carboxamido-2-thienyl)-5-(morpholinylcarbamoyl)aminoindeno [1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CXXXII using 1-(2-aminoethyl)piperidine as the starting material. mp 228 °C; ESIMS (M+H) calc'd for $C_{27}H_{32}N_7O_4S$: 550.2236, found: 550.2236.

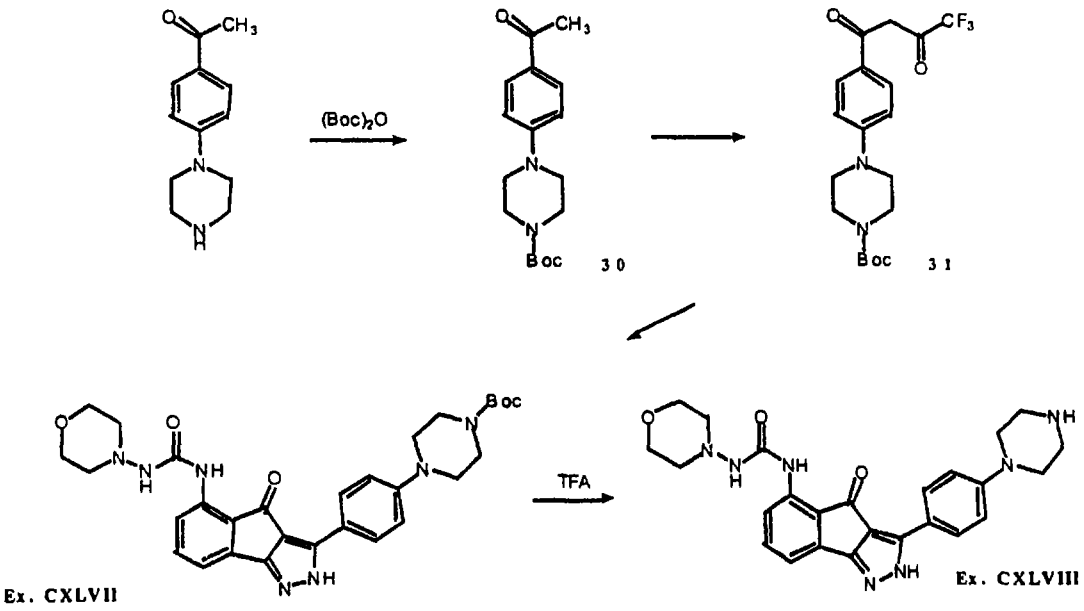
Example CXLVI

Preparation of 3-(4-(trifluoromethyl)phenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example LXXXVI employing 1-(4-(trifluoromethyl)phenyl)-4,4,4-trifluoro-1,3-butanedione as the starting material. mp >300 °C; ESI^--MS *m/e* calc'd for $C_{19}H_{11}N_3O_2$: 370.0804, found: 370.0809.

Example CXLVII

Preparation of 3-(4-(4-t-butoxycarbonyl-1-piperazinyl)phenyl)-5-(((4-morpholinylamino)carbonyl)amino)indeno[1,2-c]pyrazol-4-one



Step 1. Synthesis of **30**.

A solution of 4-piperazinoacetophenone (24.8 g, 121 mmol) and di-*tert*-butyl dicarbonate (27.8 g, 128 mmol) in 480 mL of tetrahydrofuran was refluxed for 16 h. After cooling to room temperature the solution was concentrated under vacuum. The resulting solids were washed with hexane and dried under vacuum to afford 29.4 g (80%) of the product as an off-white solid. NMR ($CDCl_3$) δ 7.89 (d, 2 H, J = 9 Hz), 6.87 (d, 2 H, J = 9 Hz), 3.59 (m, 4 H), 3.33 (m, 4 H), 2.53 (s, 3 H), 1.49 (s, 9 H).

Step 2. Synthesis of **31** from **30**.

To a solution of **30** (11.35 g, 37 mmol) and ethyl trifluoroacetate (5.40 mL, 45 mmol) in 50 mL of tetrahydrofuran at 25 °C was added dropwise over 15 min. 21% sodium ethoxide in ethanol (16.8 mL, 45 mmol), and the resulting solution then was stirred at 25 °C for 14 h. The reaction mixyure was diluted with water, adjusted to pH 5 with conc. hydrochloric acid, and extracted with ethyl acetate. The combined extracts was washed with water and brine, dried over anhydrous sodium sulfate, filtered, and concentrated under vacuum. The resulting solid was washed with diethyl ether and dried to furnish 12.1 g (81%) of the product as an orange solid. NMR ($CDCl_3$) δ 7.87 (d, 2 H, J = 9 Hz), 6.87 (d, 2 H, J = 9 Hz), 6.45 (s, 1 H), 3.60 (m, 4 H), 3.41 (m, 4 H), 1.48 (s, 9 H).

Step 3. Synthesis of **CXLVII** from **31**.

Prepared in a similar fashion as described for examples LXXVI and XLII employing **31** and 4-aminomorpholine as starting materials. mp 242 °C; ESI-MS *m/e* calc'd for $C_{30}H_{36}N_7O_5$ 574.2778, found: 574.2762.

Example CXLVIII

Preparation of 3-(4-(1-piperazinyl)phenyl)-5-(((4-morpholinylamino)carbonyl)amino)indeno[1,2-c]pyrazol-4-one

A solution of CXLVII (0.58 g, 1.0 mmol) in 20 mL of trifluoroacetic acid was stirred at 25 °C for 2 h. The reaction mixture was concentrated under vacuum, and the residue was recrystallized from ethanol to provide 0.53 g (89%) of the yellow product as its TFA-salt. mp 263 °C; ESI-MS *m/e* calc'd for $C_{25}H_{28}N_7O_3$: 474.2254, found: 474.2280.

Example CXLIX

Preparation of 3-(4-(1-piperazinyl)phenyl)-5-((aminocarbonyl)amino)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for examples XLII and CXLVIII employing 2-(4-(4-*t*-butoxycarbonyl-1-piperazinyl)benzoyl)-4-amino-1,3-indanedione obtained in example CXLVII and ammonia as the starting materials. mp 257 °C; ESI-MS *m/e* calc'd for $C_{21}H_{21}N_6O_2$: 389.1726, found: 389.1724.

Example CL

Preparation of 3-(4-(1-piperazinyl)phenyl)-5-((hydrazinocarbonyl)amino)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for examples XLII and CXLVIII employing 2-(4-(4-*t*-butoxycarbonyl-1-piperazinyl)benzoyl)-4-amino-1,3-indanedione obtained in example CXLVII and hydrazine as the starting materials. mp 257 °C; ESI-MS *m/e* calc'd for $C_{21}H_{22}N_7O_2$: 404.1835, found: 404.1834.

Example CLI

Preparation of 3-(4-(1-piperazinyl)phenyl)-5-((dimethylamino)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared employing 2-(4-(4-*t*-butoxycarbonyl-1-piperazinyl)benzoyl)-4-amino-1,3-indanedione obtained in example CXLVII as the starting material. Chloroacetylation and treatment with dimethylamine in a similar fashion as described for examples II and XXIII, followed by treatment with hydrazine and removal of the t-butoxycarbonyl group in a similar fashion as described for examples I and CXLVIII, afforded the example compound. mp 243 °C; ESI-MS *m/e* calc'd for $C_{24}H_{27}N_6O_2$: 431.2196, found: 431.2198.

Example CLII

Preparation of 3-(4-(1-piperazinyl)phenyl)-5-((4-morpholinyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared employing 2-(4-(4-*t*-butoxycarbonyl-1-piperazinyl)benzoyl)-4-amino-1,3-indanedione obtained in example CXLVII as the starting material. Chloroacetylation and treatment with morpholine in a similar fashion as described for examples II and XXIII, followed by treatment with hydrazine and removal of the t-butoxycarbonyl group in a similar fashion as described for examples I and CXLVIII, afforded the example compound. mp 259 °C; ESI-MS *m/e* calc'd for $C_{26}H_{29}N_6O_3$: 473.2301, found: 473.2302.

Example CLIII

Preparation of 3-(4-(1-piperazinyl)phenyl)-5-((4-methyl-1-piperazinyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared employing 2-(4-(4-*t*-butoxycarbonyl-1-piperazinyl)benzoyl)-4-amino-1,3-indanedione obtained in example CXLVII as the starting material. Chloroacetylation

and treatment with 1-methylpiperazine in a similar fashion as described for examples II and XXIII, followed by treatment with hydrazine and removal of the t-butoxycarbonyl group in a similar fashion as described for examples I and CXLVIII, afforded the example compound. ESI-MS *m/e* calc'd for $C_{27}H_{32}N_7O_2$: 486.2618, found: 486.2608.

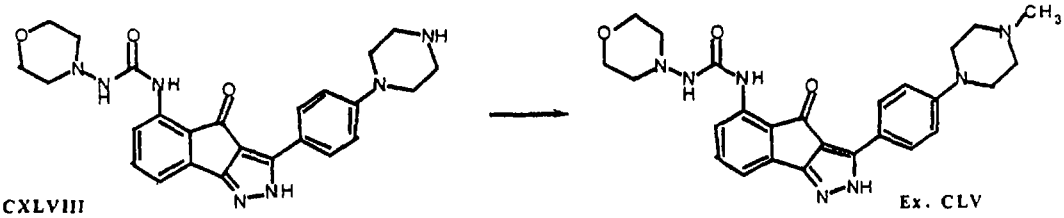
Example CLIV

Preparation of 3-(4-(1-piperazinyl)phenyl)-5-((4-aminomethyl-1-piperidinyl)acetamido)indeno[1,2-c]pyrazol-4-one

Prepared employing 2-(4-(4-*t*-butoxycarbonyl-1-piperazinyl)benzoyl)-4-amino-1,3-indanedione obtained in example CXLVII as the starting material. Chloroacetylation and treatment with 4-(aminomethyl)piperidine in a similar fashion as described for examples II and XXIII, followed by treatment with hydrazine and removal of the t-butoxycarbonyl group in a similar fashion as described for examples I and CXLVIII, afforded the example compound. mp 239 °C; ESI-MS *m/e* calc'd for $C_{28}H_{34}N_7O_2$: 500.2774, found: 500.2772.

Example CLV

Preparation of 3-(4-(4-methyl-1-piperazinyl)phenyl)-5-(((4-morpholinylamino)carbonyl)amino)indeno[1,2-c]pyrazol-4-one



Ex. CXLVIII Ex. CLV

To a solution of CXLVIII (0.17 g, 0.29 mmol) in 10 mL of methanol and 2 mL of water at 25 °C was added sequentially 37% aqueous formaldehyde (0.45 g, 5.8 mmol),

sodium cyanoborohydride (0.18 g, 2.9 mmol), and 4 drops of acetic acid. The resulting solution was stirred at 25 °C for 16 h. The mixture was diluted with water. It then was made acidic (~pH 1) with conc. hydrochloric acid and stirred for 10 min. The solution next was made basic (~pH 13) with 50% aqueous sodium hydroxide and finally adjusted to pH 10 with 1 N hydrochloric acid. The mixture was extracted with 4:1 chloroform/isopropanol. The combined extracts were washed with water and brine, dried over anhydrous sodium sulfate, and filtered. To the filtrate was added excess trifluoroacetic acid, and the solution was concentrated under vacuum. The residue was recrystallized from isopropanol to furnish 0.16 g (92%) of the yellow product as its TFA-salt. mp 245 °C; ESI-MS *m/e* calc'd for $C_{26}H_{30}N_7O_3$: 488.2410, found: 488.2420.

Example CLVI

Preparation of 3-(4-(4-ethyl-1-piperazinyl)phenyl)-5-(((4-morpholinylamino)carbonyl)amino)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CLV employing CXLVIII and acetaldehyde as the starting materials. mp 245 °C; ESI-MS *m/e* calc'd for $C_{27}H_{32}N_7O_3$: 502.2567, found: 502.2555.

Example CLVII

Preparation of 3-(4-(4-isopropyl-1-piperazinyl)phenyl)-5-(((4-morpholinylamino)carbonyl)amino)indeno[1,2-c]pyrazol-4-one

Prepared in a similar fashion as described for example CLV employing CXLVIII and acetone as the starting materials. mp 253 °C; ESI-MS *m/e* calc'd for $C_{28}H_{34}N_7O_3$: 516.2723, found: 516.2726.

UTILITY

Inhibition of Kinase/Cyclin Complex Enzymatic Activity

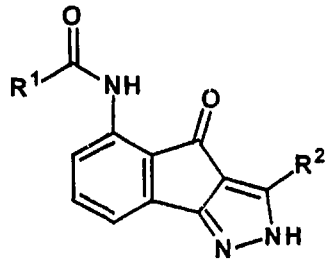
Several of the compounds disclosed in this invention were assayed for their inhibitory activity against cdk4/D1 and cdk2/E kinase complexes. Briefly, the *in vitro* assays employ cell lysates from insect cells expressing either of the kinases and subsequently their corresponding regulatory units. The cdk2/cyclinE is purified from insect cells expressing His-tagged cdk2 and cyclin E. The cdk/cyclin lysate is combined in a microtitre-type plate along with a kinase compatible buffer, ^{32}P-labeled ATP at a concentration of 50 mM, a GST-Rb fusion protein and the test compound at varying concentrations. The kinase reaction is allowed to proceeded with the radiolabled ATP, then effectively stopped by the addition of a large excess of EDTA and unlabeled ATP. The GST-Rb labeled protein is sequestered on a GSH-Sepharose bead suspension, washed, resuspended in scintillant, and the ^{32}P activity detected in a scintillation counter. The compound concentration which inhibits 50% of the kinase activity was calculated for each compound. A compound was considered active if its IC_{50} was found to be less than 1 μM.

Inhibition of HCT 116 Cancer Cell Proliferation

To test the cellular activity of several compounds disclosed in this invention, we examined the effect of these compounds on cultured HCT116 cells and determined their effect on cell-cycle progression by the colorimetric cytotoxcity test using sulforhodamine B (Skehan et al. *J. Natl. Cancer Inst.* 82:1107-12, 1990). Briefly, HCT116 cells are cultured in the presence of test compounds at increasing concentrations. At selected time points, groups of cells are fixed with trichloroacetic acid and stained with sulforhodamine B (SRB). Unbound dye was removed by washing and protein-bound dye was extracted for determination of optical density. A compound was considered active if its IC_{50} was found to be less than 10 μM.

5

Table 1



Example #	R^1	R^2	mass (M^+H)	mp (°C)
I	Methyl	4-$MeOC_6H_4$	334	268
II	$ClCH_2$	4-$MeOC_6H_4$	382	274
III	cyclopropyl	4-$MeOC_6H_4$	360	289
IV	isopropyl	4-$MeOC_6H_4$	362	288
V	ethyl	4-$MeOC_6H_4$	348	287
VI	cyclopentyl	4-$MeOC_6H_4$	388	267
VII	cyclobutyl	4-$MeOC_6H_4$	374	297
VIII	benzyl	4-$MeOC_6H_4$	410	280
IX	n-propyl	4-$MeOC_6H_4$	362	282
X	4-$ClC_6H_4CH_2$	4-$MeOC_6H_4$	444	238
XI	3-$MeOC_6H_4CH_2$	4-$MeOC_6H_4$	440	>300
XII	4-$MeOC_6H_4CH_2$	4-$MeOC_6H_4$	440	280
XIII	3,4-di$MeOC_6H_4CH_2$	4-$MeOC_6H_4$	470	>300
XIV	2,5-di$MeOC_6H_4CH_2$	4-$MeOC_6H_4$	470	226
XV	Methyl	2-$MeOC_6H_4$	334	276
XVI	Methyl	3,4-di$MeOC_6H_4$	364	>300
XVII	3,4-$(OCH_2O)C_6H_4CH_2$	4-$MeOC_6H_4$	454	297
XVIII	3-thiophenylCH_2	4-$MeOC_6H_4$	416	293
XIX	2-$MeOC_6H_4CH_2$	4-$MeOC_6H_4$	440	255
XX	3,4-di$ClOC_6H_4CH_2$	4-$MeOC_6H_4$	479	299
XXI	2,4-di$ClOC_6H_4CH_2$	4-$MeOC_6H_4$	479	286
XXII	2-$ClC_6H_4CH_2$	4-$MeOC_6H_4$	444	300

XXIII	H_2NCH_2	4-$MeOC_6H_4$	349	>300
XXIV	$HOCH_2CH_2NHCH_2$	4-$MeOC_6H_4$	393	243
XXV	Me_2NCH_2	4-$MeOC_6H_4$	377	279
XXVI	piperazinylCH_2	4-$MeOC_6H_4$	418	277
XXVII	4-Me-piperazinylCH_2	4-$MeOC_6H_4$	432	>300
XXVIII	4-$HOCH_2CH_2$-piperazinylCH_2	4-$MeOC_6H_4$	462	>300
XXIX	piperidinylCH_2	4-$MeOC_6H_4$	417	291
XXX	4-NH_2CH_2-piperidinylCH_2	4-$MeOC_6H_4$	446	>300
XXXI	$CH_3CH_2NHCH_2$	4-$MeOC_6H_4$	377	250
XXXII	thiomorpholinylCH_2	4-$MeOC_6H_4$	435	298
XXXIII	morpholinylCH_2	4-$MeOC_6H_4$	419	295
XXXIV	pyrrolidinylCH_2	4-$MeOC_6H_4$	403	279
XXXV	4-pyridylCH_2NHCH_2	4-$MeOC_6H_4$	440	>300
XXXVI	4-$CH_3CONHC_6H_4CH_2$	4-$MeOC_6H_4$	467	268
XXXVII	4-$CH_3OCONHC_6H_4CH_2$	4-$MeOC_6H_4$	483	257
XXXVIII	4-$NH_2CH_2CONHC_6H_4CH_2$	4-$MeOC_6H_4$	482	228
XXXIX	4-$Me_2NCH_2CONHC_6H_4CH_2$	4-$MeOC_6H_4$	510	>300
XL	4-$N_3C_6H_4CH_2$	4-$MeOC_6H_4$	451	>300
XLI	4-$NH_2C_6H_4CH_2$	4-$MeOC_6H_4$	425	283
XLII	C_6H_5NH	4-$MeOC_6H_4$	411	>300
XLIII	$CH_3CH_2CH_2NH$	4-$MeOC_6H_4$	377	252
XLIV	4-$NH_2C_6H_4CH_2NH$	4-$MeOC_6H_4$	440	>300
XLV	4-pyridylCH_2NH	4-$MeOC_6H_4$	426	>300
XLVI	Methyl	4-HOC_6H_4	320	>300
XLVII	H	4-$MeOC_6H_4$	320	280
XLVIII	Methyl	3-pyridyl	305	>300
XLIX	Methyl	4-pyridyl	305	>300
L	H	4-pyridyl	291	>300
LI	Methyl	C_6H_5	305	>300

LII	Methyl	4-$MeSC_6H_4$	351	283
LIII	Methyl	4-$MeSO_2C_6H_4$	383	>300
LVI	Methyl	4-$Me_2NC_6H_4$	348	>300
LV	morpholinylCH_2	4-$Me_2NC_6H_4$	432	>300
LVI	Me_2NCH_2	4-$Me_2NC_6H_4$	390	>300
LVII	Methyl	4-(piperdinyl)C_6H_4	388	291
LVIII	Methyl	4-(morpholinyl)C_6H_4	389	>300
LIX	Methyl	4-$CH_3CH_2OC_6H_4$	349	288
LX	Methyl	4-$CH_3CH_2CH_2CH_2C_6H_4$	361	259
LXI	Methyl	4-$CH_3CH_2C_6H_4$	332	294
LXII	Methyl	4-$CH_3CH_2CH_2C_6H_4$	347	269
LXIII	NH_2	4-$MeOC_6H_4$	335	>300
LXIV	Me2NNH	4-$MeOC_6H_4$	378	>300
LXV	MeNH	4-$MeOC_6H_4$	349	>300
LXVI	morpholinylNH	4-$MeOC_6H_4$	420	>300
LXVII	cis-1,2-diaminocyclohexanyl	4-$MeOC_6H_4$	432	>300
LXVIII	4-methylpiperazinylNH	4-$MeOC_6H_4$	433	>300
LXVIX	4-uridomethylpiperadinylCH_2	4-$MeOC_6H_4$	489	>300
LXX	4-(2-pyridyl)piperazinyl CH_2	4-$MeOC_6H_4$	495	>300
LXXI	4-(aminoethyl)piperazinyl CH_2	4-$MeOC_6H_4$	461	>300
LXXII	4-amidopiperidinylCH_2	4-$MeOC_6H_4$	460	>300
LXXIII	4-hydroxypiperidinylCH_2	4-$MeOC_6H_4$	433	>300

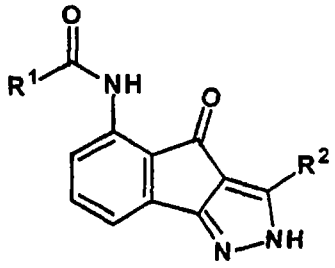
LXXIV	4-hydroxymethylpiperidinylCH_2	4-$MeOC_6H_4$	447	>300
LXXV	4-amidopiperazinylCH_2	4-$MeOC_6H_4$	493	>300
LXXVI	4-dimethylaminopiperadinylCH_2	4-$MeOC_6H_4$	492	>300
LXXVII	4-aminopiperadinylCH_2	4-$MeOC_6H_4$	464	>300
LXXVIII	4-Me-piperazinylCH_2	4-$Me_2NC_6H_4$	445	>300
LXXIX	4-NH_2CH_2-piperidinylCH_2	4-$Me_2NC_6H_4$	459	NA
LXXX	4-OH-piperidinylCH_2	4-$Me_2NC_6H_4$	446	267
LXXXI	morpholinylCH_2	4-(morpholinyl)C_6H_4	474	258
LXXXII	4-Me-piperazinylCH_2	4-(morpholinyl)C_6H_4	487	258
LXXXIII	4-OH-piperidinylCH_2	4-(morpholinyl)C_6H_4	488	245
LXXXIV	4-NH_2CH_2-piperidinylCH_2	4-(morpholinyl)C_6H_4	501	240
LXXXV	4-Me-piperazinylNH	4-$Me_2NC_6H_4$	446	>300
LXXXVI	Methyl	i-propyl	270	>250
LXXXVII	Methyl	c-propyl	268	220
LXXXVIII	Methyl	t-butyl	284	>250
LXXXIX	Methyl	2-thienyl	310	269
XC	Methyl	3-Me-2-thienyl	324	275
XCI	NH_2	Ethyl	257	>250
XCII	NH_2	n-propyl	271	187
XCIII	NH_2	i-propyl	271	>250
XCIV	NH_2	c-propyl	267 (M-H)	252
XCV	NH_2	c-hexyl	311	178
XCVI	NH_2	2-thienyl	310 (M+)	214

XCVII	NH_2	3-Me-2-thienyl	325	270
XCVIII	NH_2	5-Me-2-thienyl	325	>280
XCIX	NH_2	5-CO_2Et-2-thienyl	383	>280
C	NH_2	3-thienyl	311	>280
CI	NH_2	5-Cl-3-thienyl	345	>300
CII	NH_2	2,5-diMe-3-thienyl	339	>280
CIII	NH_2	2-furanyl	295	278
CIV	Me_2NNH	i-propyl	314	231
CV	Me_2NNH	c-propyl	312	
CVI	Me_2NNH	c-hexyl	354	229
CVII	Me_2NNH	2-thienyl	354	279
CVIII	Me_2NNH	5-MeO-2-thienyl	384	280
CIX	Me_2NNH	5-Me-2-thienyl	368	>280
CX	Me_2NNH	5-CO_2Et-2-thienyl	426	252
CXI	Me_2NNH	3-thienyl	354	202
CXII	NH_2	1-methyl-3-pyrrolyl	308	>300
CXIII	Me_2NNH	2,5-diMe-3-thienyl	382	252
CXIV	Me_2NNH	2-furanyl	338	202
CXV	4-NH_2CO-piperidinylCH_2	i-propyl	396	224
CXVI	4-NH_2CO-piperidinylCH_2	c-hexyl	436	228
CXVII	4-NH_2CH_2-piperidinylCH_2	ethyl	368	174
CXVIII	4-NH_2CH_2-piperidinylCH_2	i-propyl	382	218
CXVIX	4-NH_2CH_2-piperidinylCH_2	c-propyl	380	138
CXX	4-NH_2CH_2-piperidinylCH_2	c-hexyl	422	196
CXXI	4-CH_3-piperazinylNH	i-propyl	369	231
CXXII	4-CH_3-piperazinylNH	5-CO_2Et-2-thienyl	481	249
CXXIII	4-CH_3-piperazinylNH	5-CO_2H-2-thienyl	453	270

CXXIV	4-CH_3-piperazinylNH	2,5-diMe-3-thienyl	437	250
CXXV	morpholinylNH	i-propyl	354 (M-H)	256
CXXVI	morpholinylNH	4-CO_2Me-piperidinyl	455	216
CXXVII	morpholinylNH	5-Me-2-thienyl	410	261
CXXVIII	morpholinylNH	5-Cl-3-thienyl	430	259
CXXIX	morpholinylNH	2,5-diMe-3-thienyl	424	>280
CXXX	morpholinylNH	5-CO_2Et-2-thienyl	468	258
CXXXI	morpholinylNH	5-CO_2H-2-thienyl	440	273
CXXXII	morpholinylNH	5-CONHBn-2-thienyl	529	275
CXXXIII	morpholinylNH	5-CONH(4-Me-piperazinyl)-2-thienyl	537	190
CXXXIV	morpholinylNH	5-CONHCH$_2$CH$_2$(1-Me-2-pyrrolidinyl)-2-thienyl	550	235
CXXXV	morpholinylNH	5-CONHNMe$_2$-2-thienyl	482	201
CXXXVI	morpholinylNH	5-CONHCH$_2$CH$_2$NMe$_2$-2-thienyl	510	190
CXXXVII	morpholinylNH	5-CONHCH$_2$CH$_2$(1-pyrrolidinyl)-2-thienyl	536	224
CXXXVIII	morpholinylNH	5-CONHCH$_2$CH$_2$(1-morpholinyl)-2-thienyl	552	241
CXXXIX	morpholinylNH	5-CONHmorpholinyl-2-thienyl	524	271
CXL	morpholinylNH	5-CONHCH$_2$CH$_2$CH$_2$(1-pyrrolidonyl)-2-thienyl	564	260
CXLI	morpholinylNH	5-CONHCH$_2$CH$_2$(3-pyridyl)-2-thienyl	544	203

CXLII	morpholinylNH	5-$CONHCH_2CH_2CH_2$(1-imidazolyl)-2-thienyl	547	263
CXLIII	morpholinylNH	5-$CONHCH_2CH_2$(2-pyridyl)-2-thienyl	544	>280
CXLIV	morpholinylNH	5-$CONHCH_2$(3-pyridyl)-2-thienyl	530	239
CXLV	morpholinylNH	5-$CONHCH_2CH_2$(1-piperidinyl)-2-thienyl	550	228
CXLVI	Methyl	4-$CF_3C_6H_4$	370 $(M-H)^-$	>300
CXLVII	morpholinylNH	4-(4-Boc-piperazinyl)C_6H_4	574	242
CXLVIII	morpholinylNH	4-(piperazinyl)C_6H_4	474	263
CXLIX	NH_2	4-(piperazinyl)C_6H_4	389	257
CL	NH_2NH	4-(piperazinyl)C_6H_4	404	257
CLI	Me_2NCH_2	4-(piperazinyl)C_6H_4	431	243
CLII	morpholinylCH_2	4-(piperazinyl)C_6H_4	473	259
CLIII	4-Me-piperazinylCH_2	4-(piperazinyl)C_6H_4	486	NA
CLIV	4-NH_2CH_2-piperidinylCH_2	4-(piperazinyl)C_6H_4	500	239
CLV	morpholinylNH	4-(4-Me-piperazinyl)C_6H_4	488	245
CLVI	morpholinylNH	4-(4-Et-piperazinyl)C_6H_4	502	245
CLVII	morpholinylNH	4-(4-*i*-Pr-piperazinyl)C_6H_4	516	253

Table 2



Example Number	R^1	R^2
100	2-pyridylmethyl	4-$MeOC_6H_4$
101	2-pyridylmethyl	3-$MeOC_6H_4$
102	2-pyridylmethyl	4-$NH_2C_6H_4$
103	2-pyridylmethyl	3-$NH_2C_6H_4$
104	2-pyridylmethyl	2-$NH_2C_6H_4$
105	2-pyridylmethyl	4-$Me_2NC_6H_4$
106	2-pyridylmethyl	3-$Me_2NC_6H_4$
107	2-pyridylmethyl	2-$Me_2NC_6H_4$
108	2-pyridylmethyl	4-pyridyl
109	2-pyridylmethyl	3-pyridyl
110	2-pyridylmethyl	2-pyridyl
111	2-pyridylmethyl	2-thiazolyl
112	2-pyridylmethyl	2-pyrazolyl
113	2-pyridylmethyl	5-isoquinolyl
114	2-pyridylmethyl	3,4-methylenedioxyC_6H_3
115	2-pyridylmethyl	3,4-ethylenedioxyC_6H_3
116	2-pyridylmethyl	2-imidazolyl
117	2-pyridylmethyl	2-oxazolyl
118	2-pyridylmethyl	4-isoxazolyl
119	2-pyridylmethyl	4-HOC_6H_4
120	2-pyridylmethyl	3-HOC_6H_4
121	2-pyridylmethyl	3,4-diHOC_6H_4

122	2-pyridylmethyl	4-$NH_2CH_2C_6H_4$
123	2-pyridylmethyl	3-$NH_2CH_2C_6H_4$
124	3-pyridylmethyl	4-$MeOC_6H_4$
125	3-pyridylmethyl	3-$MeOC_6H_4$
126	3-pyridylmethyl	4-$NH_2C_6H_4$
127	3-pyridylmethyl	3-$NH_2C_6H_4$
128	3-pyridylmethyl	2-$NH_2C_6H_4$
129	3-pyridylmethyl	4-$Me_2NC_6H_4$
130	3-pyridylmethyl	3-$Me_2NC_6H_4$
131	3-pyridylmethyl	2-$Me_2NC_6H_4$
132	3-pyridylmethyl	4-pyridyl
133	3-pyridylmethyl	3-pyridyl
134	3-pyridylmethyl	2-pyridyl
135	3-pyridylmethyl	2-thiazolyl
136	3-pyridylmethyl	2-pyrazolyl
137	3-pyridylmethyl	5-isoquinolyl
138	3-pyridylmethyl	3,4-methylenedioxyC_6H_3
139	3-pyridylmethyl	3,4-ethylenedioxyC_6H_3
140	3-pyridylmethyl	2-imidazolyl
141	3-pyridylmethyl	2-oxazolyl
142	3-pyridylmethyl	4-isoxazolyl
143	3-pyridylmethyl	4-HOC_6H_4
144	3-pyridylmethyl	3-HOC_6H_4
145	3-pyridylmethyl	3,4-diHOC_6H_4
146	3-pyridylmethyl	4-$NH_2CH_2C_6H_4$
147	3-pyridylmethyl	3-$NH_2CH_2C_6H_4$
148	4-pyridylmethyl	4-$MeOC_6H_4$
149	4-pyridylmethyl	3-$MeOC_6H_4$
150	4-pyridylmethyl	4-$NH_2C_6H_4$
151	4-pyridylmethyl	3-$NH_2C_6H_4$
152	4-pyridylmethyl	2-$NH_2C_6H_4$
153	4-pyridylmethyl	4-$Me_2NC_6H_4$
154	4-pyridylmethyl	3-$Me_2NC_6H_4$

	155	4-pyridylmethyl	2-$Me_2NC_6H_4$
	156	4-pyridylmethyl	4-pyridyl
	157	4-pyridylmethyl	3-pyridyl
	158	4-pyridylmethyl	2-pyridyl
	159	4-pyridylmethyl	2-thiazolyl
	160	4-pyridylmethyl	2-pyrazolyl
	161	4-pyridylmethyl	5-isoquinolyl
	162	4-pyridylmethyl	3,4-methylenedioxyC_6H_3
	163	4-pyridylmethyl	3,4-ethylenedioxyC_6H_3
	164	4-pyridylmethyl	2-imidazolyl
	165	4-pyridylmethyl	2-oxazolyl
	166	4-pyridylmethyl	4-isoxazolyl
	167	4-pyridylmethyl	4-HOC_6H_4
	168	4-pyridylmethyl	3-HOC_6H_4
	169	4-pyridylmethyl	3,4-diHOC_6H_4
	170	4-pyridylmethyl	4-$NH_2CH_2C_6H_4$
	171	4-pyridylmethyl	3-$NH_2CH_2C_6H_4$
	172	2-$NH_2C_6H_4CH_2$	4-$MeOC_6H_4$
	173	2-$NH_2C_6H_4CH_2$	3-$MeOC_6H_4$
	174	2-$NH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
	175	2-$NH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
	176	2-$NH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
	177	2-$NH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
	178	2-$NH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
	179	2-$NH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
	180	2-$NH_2C_6H_4CH_2$	4-pyridyl
	181	2-$NH_2C_6H_4CH_2$	3-pyridyl
	182	2-$NH_2C_6H_4CH_2$	2-pyridyl
	183	2-$NH_2C_6H_4CH_2$	2-thiazolyl
	184	2-$NH_2C_6H_4CH_2$	2-pyrazolyl
	185	2-$NH_2C_6H_4CH_2$	5-isoquinolyl
	186	2-$NH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3

	187	2-$NH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	188	2-$NH_2C_6H_4CH_2$	2-imidazolyl
	189	2-$NH_2C_6H_4CH_2$	2-oxazolyl
	190	2-$NH_2C_6H_4CH_2$	4-isoxazolyl
	191	2-$NH_2C_6H_4CH_2$	4-HOC_6H_4
	192	2-$NH_2C_6H_4CH_2$	3-HOC_6H_4
	193	2-$NH_2C_6H_4CH_2$	3,4-diHOC_6H_4
	194	2-$NH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	195	2-$NH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	196	3-$NH_2C_6H_4CH_2$	3-$MeOC_6H_4$
	197	3-$NH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
	198	3-$NH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
	199	3-$NH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
	200	3-$NH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
	201	3-$NH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
	202	3-$NH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
	203	3-$NH_2C_6H_4CH_2$	4-pyridyl
	204	3-$NH_2C_6H_4CH_2$	3-pyridyl
	205	3-$NH_2C_6H_4CH_2$	2-pyridyl
	206	3-$NH_2C_6H_4CH_2$	2-thiazolyl
	207	3-$NH_2C_6H_4CH_2$	2-pyrazolyl
	208	3-$NH_2C_6H_4CH_2$	5-isoquinolyl
	209	3-$NH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	210	3-$NH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	211	3-$NH_2C_6H_4CH_2$	2-imidazolyl
	212	3-$NH_2C_6H_4CH_2$	2-oxazolyl
	213	3-$NH_2C_6H_4CH_2$	4-isoxazolyl
	214	3-$NH_2C_6H_4CH_2$	4-HOC_6H_4
	215	3-$NH_2C_6H_4CH_2$	3-HOC_6H_4
	216	3-$NH_2C_6H_4CH_2$	3,4-diHOC_6H_4
	217	3-$NH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$

	218	3-$NH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	219	4-$NH_2C_6H_4CH_2$	3-$MeOC_6H_4$
	220	4-$NH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
	221	4-$NH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
	222	4-$NH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
	223	4-$NH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
	224	4-$NH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
	225	4-$NH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
	226	4-$NH_2C_6H_4CH_2$	4-pyridyl
	227	4-$NH_2C_6H_4CH_2$	3-pyridyl
	228	4-$NH_2C_6H_4CH_2$	2-pyridyl
	229	4-$NH_2C_6H_4CH_2$	2-thiazolyl
	230	4-$NH_2C_6H_4CH_2$	2-pyrazolyl
	231	4-$NH_2C_6H_4CH_2$	5-isoquinolyl
	232	4-$NH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	233	4-$NH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	234	4-$NH_2C_6H_4CH_2$	2-imidazolyl
	235	4-$NH_2C_6H_4CH_2$	2-oxazolyl
	236	4-$NH_2C_6H_4CH_2$	4-isoxazolyl
	237	4-$NH_2C_6H_4CH_2$	4-HOC_6H_4
	238	4-$NH_2C_6H_4CH_2$	3-HOC_6H_4
	239	4-$NH_2C_6H_4CH_2$	3,4-diHOC_6H_4
	240	4-$NH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	241	4-$NH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	242	2-$MeOC_6H_4CH_2$	3-$MeOC_6H_4$
	243	2-$MeOC_6H_4CH_2$	4-$NH_2C_6H_4$
	244	2-$MeOC_6H_4CH_2$	3-$NH_2C_6H_4$
	245	2-$MeOC_6H_4CH_2$	2-$NH_2C_6H_4$
	246	2-$MeOC_6H_4CH_2$	4-$Me_2NC_6H_4$
	247	2-$MeOC_6H_4CH_2$	3-$Me_2NC_6H_4$
	248	2-$MeOC_6H_4CH_2$	2-$Me_2NC_6H_4$
	249	2-$MeOC_6H_4CH_2$	4-pyridyl

	250	2-$MeOC_6H_4CH_2$	3-pyridyl
	251	2-$MeOC_6H_4CH_2$	2-pyridyl
	252	2-$MeOC_6H_4CH_2$	2-thiazolyl
	253	2-$MeOC_6H_4CH_2$	2-pyrazolyl
	254	2-$MeOC_6H_4CH_2$	5-isoquinolyl
	255	2-$MeOC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	256	2-$MeOC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	257	2-$MeOC_6H_4CH_2$	2-imidazolyl
	258	2-$MeOC_6H_4CH_2$	2-oxazolyl
	259	2-$MeOC_6H_4CH_2$	4-isoxazolyl
	260	2-$MeOC_6H_4CH_2$	4-HOC_6H_4
	261	2-$MeOC_6H_4CH_2$	3-HOC_6H_4
	262	2-$MeOC_6H_4CH_2$	3,4-diHOC_6H_4
	263	2-$MeOC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	264	2-$MeOC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	265	3-$MeOC_6H_4CH_2$	3-$MeOC_6H_4$
	266	3-$MeOC_6H_4CH_2$	4-$NH_2C_6H_4$
	267	3-$MeOC_6H_4CH_2$	3-$NH_2C_6H_4$
	268	3-$MeOC_6H_4CH_2$	2-$NH_2C_6H_4$
	269	3-$MeOC_6H_4CH_2$	4-$Me_2NC_6H_4$
	270	3-$MeOC_6H_4CH_2$	3-$Me_2NC_6H_4$
	271	3-$MeOC_6H_4CH_2$	2-$Me_2NC_6H_4$
	272	3-$MeOC_6H_4CH_2$	4-pyridyl
	273	3-$MeOC_6H_4CH_2$	3-pyridyl
	274	3-$MeOC_6H_4CH_2$	2-pyridyl
	275	3-$MeOC_6H_4CH_2$	2-thiazolyl
	276	3-$MeOC_6H_4CH_2$	2-pyrazolyl
	277	3-$MeOC_6H_4CH_2$	5-isoquinolyl
	278	3-$MeOC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	279	3-$MeOC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3

280	3-$MeOC_6H_4CH_2$	2-imidazolyl
281	3-$MeOC_6H_4CH_2$	2-oxazolyl
282	3-$MeOC_6H_4CH_2$	4-isoxazolyl
283	3-$MeOC_6H_4CH_2$	4-HOC_6H_4
284	3-$MeOC_6H_4CH_2$	3-HOC_6H_4
285	3-$MeOC_6H_4CH_2$	3,4-diHOC_6H_4
286	3-$MeOC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
287	3-$MeOC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
288	4-$MeOC_6H_4CH_2$	3-$MeOC_6H_4$
289	4-$MeOC_6H_4CH_2$	4-$NH_2C_6H_4$
290	4-$MeOC_6H_4CH_2$	3-$NH_2C_6H_4$
291	4-$MeOC_6H_4CH_2$	2-$NH_2C_6H_4$
292	4-$MeOC_6H_4CH_2$	4-$Me_2NC_6H_4$
293	4-$MeOC_6H_4CH_2$	3-$Me_2NC_6H_4$
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295	4-$MeOC_6H_4CH_2$	4-pyridyl
296	4-$MeOC_6H_4CH_2$	3-pyridyl
297	4-$MeOC_6H_4CH_2$	2-pyridyl
298	4-$MeOC_6H_4CH_2$	2-thiazolyl
299	4-$MeOC_6H_4CH_2$	2-pyrazolyl
300	4-$MeOC_6H_4CH_2$	5-isoquinolyl
301	4-$MeOC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
302	4-$MeOC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
303	4-$MeOC_6H_4CH_2$	2-imidazolyl
304	4-$MeOC_6H_4CH_2$	2-oxazolyl
305	4-$MeOC_6H_4CH_2$	4-isoxazolyl
306	4-$MeOC_6H_4CH_2$	4-HOC_6H_4
307	4-$MeOC_6H_4CH_2$	3-HOC_6H_4
308	4-$MeOC_6H_4CH_2$	3,4-diHOC_6H_4
309	4-$MeOC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
310	4-$MeOC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
311	2-$HOC_6H_4CH_2$	4-$MeOC_6H_4$

312	2-$HOC_6H_4CH_2$	3-$MeOC_6H_4$
313	2-$HOC_6H_4CH_2$	4-$NH_2C_6H_4$
314	2-$HOC_6H_4CH_2$	3-$NH_2C_6H_4$
315	2-$HOC_6H_4CH_2$	2-$NH_2C_6H_4$
316	2-$HOC_6H_4CH_2$	4-$Me_2NC_6H_4$
317	2-$HOC_6H_4CH_2$	3-$Me_2NC_6H_4$
318	2-$HOC_6H_4CH_2$	2-$Me_2NC_6H_4$
319	2-$HOC_6H_4CH_2$	4-pyridyl
320	2-$HOC_6H_4CH_2$	3-pyridyl
321	2-$HOC_6H_4CH_2$	2-pyridyl
322	2-$HOC_6H_4CH_2$	2-thiazolyl
323	2-$HOC_6H_4CH_2$	2-pyrazolyl
324	2-$HOC_6H_4CH_2$	5-isoquinolyl
325	2-$HOC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
326	2-$HOC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
327	2-$HOC_6H_4CH_2$	2-imidazolyl
328	2-$HOC_6H_4CH_2$	2-oxazolyl
329	2-$HOC_6H_4CH_2$	4-isoxazolyl
330	2-$HOC_6H_4CH_2$	4-HOC_6H_4
331	2-$HOC_6H_4CH_2$	3-HOC_6H_4
332	2-$HOC_6H_4CH_2$	3,4-diHOC_6H_4
333	2-$HOC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
334	2-$HOC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
335	3-$HOC_6H_4CH_2$	4-$MeOC_6H_4$
336	3-$HOC_6H_4CH_2$	3-$MeOC_6H_4$
337	3-$HOC_6H_4CH_2$	4-$NH_2C_6H_4$
338	3-$HOC_6H_4CH_2$	3-$NH_2C_6H_4$
339	3-$HOC_6H_4CH_2$	2-$NH_2C_6H_4$
340	3-$HOC_6H_4CH_2$	4-$Me_2NC_6H_4$
341	3-$HOC_6H_4CH_2$	3-$Me_2NC_6H_4$
342	3-$HOC_6H_4CH_2$	2-$Me_2NC_6H_4$
343	3-$HOC_6H_4CH_2$	4-pyridyl

	344	3-$HOC_6H_4CH_2$	3-pyridyl
	345	3-$HOC_6H_4CH_2$	2-pyridyl
	346	3-$HOC_6H_4CH_2$	2-thiazolyl
	347	3-$HOC_6H_4CH_2$	2-pyrazolyl
	348	3-$HOC_6H_4CH_2$	5-isoquinolyl
	349	3-$HOC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	350	3-$HOC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	351	3-$HOC_6H_4CH_2$	2-imidazolyl
	352	3-$HOC_6H_4CH_2$	2-oxazolyl
	353	3-$HOC_6H_4CH_2$	4-isoxazolyl
	354	3-$HOC_6H_4CH_2$	4-HOC_6H_4
	355	3-$HOC_6H_4CH_2$	3-HOC_6H_4
	356	3-$HOC_6H_4CH_2$	3,4-diHOC_6H_4
	357	3-$HOC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	358	3-$HOC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	359	4-$HOC_6H_4CH_2$	4-$MeOC_6H_4$
	360	4-$HOC_6H_4CH_2$	3-$MeOC_6H_4$
	361	4-$HOC_6H_4CH_2$	4-$NH_2C_6H_4$
	362	4-$HOC_6H_4CH_2$	3-$NH_2C_6H_4$
	363	4-$HOC_6H_4CH_2$	2-$NH_2C_6H_4$
	364	4-$HOC_6H_4CH_2$	4-$Me_2NC_6H_4$
	365	4-$HOC_6H_4CH_2$	3-$Me_2NC_6H_4$
	366	4-$HOC_6H_4CH_2$	2-$Me_2NC_6H_4$
	367	4-$HOC_6H_4CH_2$	4-pyridyl
	368	4-$HOC_6H_4CH_2$	3-pyridyl
	369	4-$HOC_6H_4CH_2$	2-pyridyl
	370	4-$HOC_6H_4CH_2$	2-thiazolyl
	371	4-$HOC_6H_4CH_2$	2-pyrazolyl
	372	4-$HOC_6H_4CH_2$	5-isoquinolyl
	373	4-$HOC_6H_4CH_2$	3,4-methylenedioxyC_6H_3

	374	4-$HOC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	375	4-$HOC_6H_4CH_2$	2-imidazolyl
	376	4-$HOC_6H_4CH_2$	2-oxazolyl
	377	4-$HOC_6H_4CH_2$	4-isoxazolyl
	378	4-$HOC_6H_4CH_2$	4-HOC_6H_4
	379	4-$HOC_6H_4CH_2$	3-HOC_6H_4
	380	4-$HOC_6H_4CH_2$	3,4-diHOC_6H_4
	381	4-$HOC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	382	4-$HOC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	383	4-$ClC_6H_4CH_2$	3-$MeOC_6H_4$
	384	4-$ClC_6H_4CH_2$	4-$NH_2C_6H_4$
	385	4-$ClC_6H_4CH_2$	3-$NH_2C_6H_4$
	386	4-$ClC_6H_4CH_2$	2-$NH_2C_6H_4$
	387	4-$ClC_6H_4CH_2$	4-$Me_2NC_6H_4$
	388	4-$ClC_6H_4CH_2$	3-$Me_2NC_6H_4$
	389	4-$ClC_6H_4CH_2$	2-$Me_2NC_6H_4$
	390	4-$ClC_6H_4CH_2$	4-pyridyl
	391	4-$ClC_6H_4CH_2$	3-pyridyl
	392	4-$ClC_6H_4CH_2$	2-pyridyl
	393	4-$ClC_6H_4CH_2$	2-thiazolyl
	394	4-$ClC_6H_4CH_2$	2-pyrazolyl
	395	4-$ClC_6H_4CH_2$	5-isoquinolyl
	396	4-$ClC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	397	4-$ClC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	398	4-$ClC_6H_4CH_2$	2-imidazolyl
	399	4-$ClC_6H_4CH_2$	2-oxazolyl
	400	4-$ClC_6H_4CH_2$	4-isoxazolyl
	401	4-$ClC_6H_4CH_2$	4-HOC_6H_4
	402	4-$ClC_6H_4CH_2$	3-HOC_6H_4
	403	4-$ClC_6H_4CH_2$	3,4-diHOC_6H_4
	404	4-$ClC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$

405	4-$ClC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
406	2-$NH_2CH_2C_6H_4CH_2$	4-$MeOC_6H_4$
407	2-$NH_2CH_2C_6H_4CH_2$	3-$MeOC_6H_4$
408	2-$NH_2CH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
409	2-$NH_2CH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
410	2-$NH_2CH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
411	2-$NH_2CH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
412	2-$NH_2CH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
413	2-$NH_2CH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
414	2-$NH_2CH_2C_6H_4CH_2$	4-pyridyl
415	2-$NH_2CH_2C_6H_4CH_2$	3-pyridyl
416	2-$NH_2CH_2C_6H_4CH_2$	2-pyridyl
417	2-$NH_2CH_2C_6H_4CH_2$	2-thiazolyl
418	2-$NH_2CH_2C_6H_4CH_2$	2-pyrazolyl
419	2-$NH_2CH_2C_6H_4CH_2$	5-isoquinolyl
420	2-$NH_2CH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
421	2-$NH_2CH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
422	2-$NH_2CH_2C_6H_4CH_2$	2-imidazolyl
423	2-$NH_2CH_2C_6H_4CH_2$	2-oxazolyl
424	2-$NH_2CH_2C_6H_4CH_2$	4-isoxazolyl
425	2-$NH_2CH_2C_6H_4CH_2$	4-HOC_6H_4
426	2-$NH_2CH_2C_6H_4CH_2$	3-HOC_6H_4
427	2-$NH_2CH_2C_6H_4CH_2$	3,4-diHOC_6H_4
428	2-$NH_2CH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
429	2-$NH_2CH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
430	3-$NH_2CH_2C_6H_4CH_2$	4-$MeOC_6H_4$
431	3-$NH_2CH_2C_6H_4CH_2$	3-$MeOC_6H_4$
432	3-$NH_2CH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
433	3-$NH_2CH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
434	3-$NH_2CH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
435	3-$NH_2CH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
436	3-$NH_2CH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$

437	3-$NH_2CH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
438	3-$NH_2CH_2C_6H_4CH_2$	4-pyridyl
439	3-$NH_2CH_2C_6H_4CH_2$	3-pyridyl
440	3-$NH_2CH_2C_6H_4CH_2$	2-pyridyl
441	3-$NH_2CH_2C_6H_4CH_2$	2-thiazolyl
442	3-$NH_2CH_2C_6H_4CH_2$	2-pyrazolyl
443	3-$NH_2CH_2C_6H_4CH_2$	5-isoquinolyl
444	3-$NH_2CH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
445	3-$NH_2CH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
446	3-$NH_2CH_2C_6H_4CH_2$	2-imidazolyl
447	3-$NH_2CH_2C_6H_4CH_2$	2-oxazolyl
448	3-$NH_2CH_2C_6H_4CH_2$	4-isoxazolyl
449	3-$NH_2CH_2C_6H_4CH_2$	4-HOC_6H_4
450	3-$NH_2CH_2C_6H_4CH_2$	3-HOC_6H_4
451	3-$NH_2CH_2C_6H_4CH_2$	3,4-diHOC_6H_4
452	3-$NH_2CH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
453	3-$NH_2CH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
454	4-$NH_2CH_2C_6H_4CH_2$	4-$MeOC_6H_4$
455	4-$NH_2CH_2C_6H_4CH_2$	3-$MeOC_6H_4$
456	4-$NH_2CH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
457	4-$NH_2CH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
458	4-$NH_2CH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
459	4-$NH_2CH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
460	4-$NH_2CH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
461	4-$NH_2CH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
462	4-$NH_2CH_2C_6H_4CH_2$	4-pyridyl
463	4-$NH_2CH_2C_6H_4CH_2$	3-pyridyl
464	4-$NH_2CH_2C_6H_4CH_2$	2-pyridyl
465	4-$NH_2CH_2C_6H_4CH_2$	2-thiazolyl
466	4-$NH_2CH_2C_6H_4CH_2$	2-pyrazolyl
467	4-$NH_2CH_2C_6H_4CH_2$	5-isoquinolyl

468	4-$NH_2CH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
469	4-$NH_2CH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
470	4-$NH_2CH_2C_6H_4CH_2$	2-imidazolyl
471	4-$NH_2CH_2C_6H_4CH_2$	2-oxazolyl
472	4-$NH_2CH_2C_6H_4CH_2$	4-isoxazolyl
473	4-$NH_2CH_2C_6H_4CH_2$	4-HOC_6H_4
474	4-$NH_2CH_2C_6H_4CH_2$	3-HOC_6H_4
475	4-$NH_2CH_2C_6H_4CH_2$	3,4-diHOC_6H_4
476	4-$NH_2CH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
477	4-$NH_2CH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
478	2-$Me_2NCH_2C_6H_4CH_2$	4-$MeOC_6H_4$
479	2-$Me_2NCH_2C_6H_4CH_2$	3-$MeOC_6H_4$
480	2-$Me_2NCH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
481	2-$Me_2NCH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
482	2-$Me_2NCH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
483	2-$Me_2NCH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
484	2-$Me_2NCH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
485	2-$Me_2NCH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
486	2-$Me_2NCH_2C_6H_4CH_2$	4-pyridyl
487	2-$Me_2NCH_2C_6H_4CH_2$	3-pyridyl
488	2-$Me_2NCH_2C_6H_4CH_2$	2-pyridyl
489	2-$Me_2NCH_2C_6H_4CH_2$	2-thiazolyl
490	2-$Me_2NCH_2C_6H_4CH_2$	2-pyrazolyl
491	2-$Me_2NCH_2C_6H_4CH_2$	5-isoquinolyl
492	2-$Me_2NCH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
493	2-$Me_2NCH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
494	2-$Me_2NCH_2C_6H_4CH_2$	2-imidazolyl
495	2-$Me_2NCH_2C_6H_4CH_2$	2-oxazolyl
496	2-$Me_2NCH_2C_6H_4CH_2$	4-isoxazolyl
497	2-$Me_2NCH_2C_6H_4CH_2$	4-HOC_6H_4

498	2-$Me_2NCH_2C_6H_4CH_2$	3-HOC_6H_4
499	2-$Me_2NCH_2C_6H_4CH_2$	3,4-diHOC_6H_4
500	2-$Me_2NCH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
501	2-$Me_2NCH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
502	3-$Me_2NCH_2C_6H_4CH_2$	4-$MeOC_6H_4$
503	3-$Me_2NCH_2C_6H_4CH_2$	3-$MeOC_6H_4$
504	3-$Me_2NCH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
505	3-$Me_2NCH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
506	3-$Me_2NCH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
507	3-$Me_2NCH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
508	3-$Me_2NCH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
509	3-$Me_2NCH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
510	3-$Me_2NCH_2C_6H_4CH_2$	4-pyridyl
511	3-$Me_2NCH_2C_6H_4CH_2$	3-pyridyl
512	3-$Me_2NCH_2C_6H_4CH_2$	2-pyridyl
513	3-$Me_2NCH_2C_6H_4CH_2$	2-thiazolyl
514	3-$Me_2NCH_2C_6H_4CH_2$	2-pyrazolyl
515	3-$Me_2NCH_2C_6H_4CH_2$	5-isoquinolyl
516	3-$Me_2NCH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
517	3-$Me_2NCH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
518	3-$Me_2NCH_2C_6H_4CH_2$	2-imidazolyl
519	3-$Me_2NCH_2C_6H_4CH_2$	2-oxazolyl
520	3-$Me_2NCH_2C_6H_4CH_2$	4-isoxazolyl
521	3-$Me_2NCH_2C_6H_4CH_2$	4-HOC_6H_4
522	3-$Me_2NCH_2C_6H_4CH_2$	3-HOC_6H_4
523	3-$Me_2NCH_2C_6H_4CH_2$	3,4-diHOC_6H_4
524	3-$Me_2NCH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
525	3-$Me_2NCH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
526	4-$Me_2NCH_2C_6H_4CH_2$	4-$MeOC_6H_4$
527	4-$Me_2NCH_2C_6H_4CH_2$	3-$MeOC_6H_4$
528	4-$Me_2NCH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
529	4-$Me_2NCH_2C_6H_4CH_2$	3-$NH_2C_6H_4$

530	4-$Me_2NCH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
531	4-$Me_2NCH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
532	4-$Me_2NCH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
533	4-$Me_2NCH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
534	4-$Me_2NCH_2C_6H_4CH_2$	4-pyridyl
535	4-$Me_2NCH_2C_6H_4CH_2$	3-pyridyl
536	4-$Me_2NCH_2C_6H_4CH_2$	2-pyridyl
537	4-$Me_2NCH_2C_6H_4CH_2$	2-thiazolyl
538	4-$Me_2NCH_2C_6H_4CH_2$	2-pyrazolyl
539	4-$Me_2NCH_2C_6H_4CH_2$	5-isoquinolyl
540	4-$Me_2NCH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
541	4-$Me_2NCH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
542	4-$Me_2NCH_2C_6H_4CH_2$	2-imidazolyl
543	4-$Me_2NCH_2C_6H_4CH_2$	2-oxazolyl
545	4-$Me_2NCH_2C_6H_4CH_2$	4-isoxazolyl
546	4-$Me_2NCH_2C_6H_4CH_2$	4-HOC_6H_4
547	4-$Me_2NCH_2C_6H_4CH_2$	3-HOC_6H_4
548	4-$Me_2NCH_2C_6H_4CH_2$	3,4-diHOC_6H_4
549	4-$Me_2NCH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
550	4-$Me_2NCH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
551	H	3-$MeOC_6H_4$
552	H	4-$NH_2C_6H_4$
553	H	3-$NH_2C_6H_4$
554	H	2-$NH_2C_6H_4$
555	H	4-$Me_2NC_6H_4$
556	H	3-$Me_2NC_6H_4$
557	H	2-$Me_2NC_6H_4$
558	H	3-pyridyl
559	H	2-pyridyl
560	H	2-thiazolyl
561	H	2-pyrazolyl
562	H	5-isoquinolyl

563	H	3,4-methylenedioxyC$_6$H$_3$
564	H	3,4-ethylenedioxyC$_6$H$_3$
565	H	2-imidazolyl
566	H	2-oxazolyl
567	H	4-isoxazolyl
568	H	4-HOC$_6$H$_4$
569	H	3-HOC$_6$H$_4$
570	H	3,4-diHOC$_6$H$_4$
571	H	4-NH$_2$CH$_2$C$_6$H$_4$
572	H	3-NH$_2$CH$_2$C$_6$H$_4$
573	Me	3-MeOC$_6$H$_4$
574	Me	4-NH$_2$C$_6$H$_4$
575	Me	3-NH$_2$C$_6$H$_4$
576	Me	2-NH$_2$C$_6$H$_4$
577	Me	4-Me$_2$NC$_6$H$_4$
578	Me	3-Me$_2$NC$_6$H$_4$
579	Me	2-Me$_2$NC$_6$H$_4$
580	Me	3-pyridyl
581	Me	2-pyridyl
582	Me	2-thiazolyl
583	Me	2-pyrazolyl
584	Me	5-isoquinolyl
585	Me	3,4-ethylenedioxyC$_6$H$_3$
586	Me	2-imidazolyl
587	Me	2-oxazolyl
588	Me	4-isoxazolyl
589	Me	3-HOC$_6$H$_4$
590	Me	3,4-diHOC$_6$H$_4$
591	Me	4-NH$_2$CH$_2$C$_6$H$_4$
592	Me	3-NH$_2$CH$_2$C$_6$H$_4$
593	Et	3-MeOC$_6$H$_4$
594	Et	4-NH$_2$C$_6$H$_4$

595	Et	3-$NH_2C_6H_4$
596	Et	2-$NH_2C_6H_4$
597	Et	4-$Me_2NC_6H_4$
598	Et	3-$Me_2NC_6H_4$
599	Et	2-$Me_2NC_6H_4$
600	Et	4-pyridyl
601	Et	3-pyridyl
601	Et	2-pyridyl
603	Et	2-thiazolyl
604	Et	2-pyrazolyl
605	Et	5-isoquinolyl
606	Et	3,4-methylenedioxyC_6H_3
607	Et	3,4-ethylenedioxyC_6H_3
608	Et	2-imidazolyl
609	Et	2-oxazolyl
610	Et	4-isoxazolyl
611	Et	4-HOC_6H_4
612	Et	3-HOC_6H_4
613	Et	3,4-diHOC_6H_4
614	Et	4-$NH_2CH_2C_6H_4$
615	Et	3-$NH_2CH_2C_6H_4$
616	Me_2NCH_2	3-$MeOC_6H_4$
617	Me_2NCH_2	4-$NH_2C_6H_4$
618	Me_2NCH_2	3-$NH_2C_6H_4$
619	Me_2NCH_2	2-$NH_2C_6H_4$
620	Me_2NCH_2	4-$Me_2NC_6H_4$
621	Me_2NCH_2	3-$Me_2NC_6H_4$
622	Me_2NCH_2	2-$Me_2NC_6H_4$
623	Me_2NCH_2	4-pyridyl
624	Me_2NCH_2	3-pyridyl
625	Me_2NCH_2	2-pyridyl
626	Me_2NCH_2	2-thiazolyl
627	Me_2NCH_2	2-pyrazolyl

628	Me_2NCH_2	5-isoquinolyl
629	Me_2NCH_2	3,4-methylenedioxyC_6H_3
630	Me_2NCH_2	3,4-ethylenedioxyC_6H_3
631	Me_2NCH_2	2-imidazolyl
632	Me_2NCH_2	2-oxazolyl
633	Me_2NCH_2	4-isoxazolyl
634	Me_2NCH_2	4-HOC_6H_4
635	Me_2NCH_2	3-HOC_6H_4
636	Me_2NCH_2	3,4-diHOC_6H_4
637	Me_2NCH_2	4-$NH_2CH_2C_6H_4$
638	Me_2NCH_2	3-$NH_2CH_2C_6H_4$
639	$EtNHCH_2$	3-$MeOC_6H_4$
640	$EtNHCH_2$	4-$NH_2C_6H_4$
641	$EtNHCH_2$	3-$NH_2C_6H_4$
642	$EtNHCH_2$	2-$NH_2C_6H_4$
643	$EtNHCH_2$	4-$Me_2NC_6H_4$
644	$EtNHCH_2$	3-$Me_2NC_6H_4$
645	$EtNHCH_2$	2-$Me_2NC_6H_4$
646	$EtNHCH_2$	4-pyridyl
647	$EtNHCH_2$	3-pyridyl
648	$EtNHCH_2$	2-pyridyl
649	$EtNHCH_2$	2-thiazolyl
650	$EtNHCH_2$	2-pyrazolyl
651	$EtNHCH_2$	5-isoquinolyl
652	$EtNHCH_2$	3,4-methylenedioxyC_6H_3
653	$EtNHCH_2$	3,4-ethylenedioxyC_6H_3
654	$EtNHCH_2$	2-imidazolyl
655	$EtNHCH_2$	2-oxazolyl
656	$EtNHCH_2$	4-isoxazolyl
657	$EtNHCH_2$	4-HOC_6H_4

658	$EtNHCH_2$	$3\text{-}HOC_6H_4$
659	$EtNHCH_2$	$3,4\text{-}diHOC_6H_4$
660	$EtNHCH_2$	$4\text{-}NH_2CH_2C_6H_4$
661	$EtNHCH_2$	$3\text{-}NH_2CH_2C_6H_4$
662	$HOCH_2CH_2NHCH_2$	$3\text{-}MeOC_6H_4$
663	$HOCH_2CH_2NHCH_2$	$4\text{-}NH_2C_6H_4$
664	$HOCH_2CH_2NHCH_2$	$3\text{-}NH_2C_6H_4$
665	$HOCH_2CH_2NHCH_2$	$2\text{-}NH_2C_6H_4$
666	$HOCH_2CH_2NHCH_2$	$4\text{-}Me_2NC_6H_4$
667	$HOCH_2CH_2NHCH_2$	$3\text{-}Me_2NC_6H_4$
668	$HOCH_2CH_2NHCH_2$	$2\text{-}Me_2NC_6H_4$
669	$HOCH_2CH_2NHCH_2$	4-pyridyl
670	$HOCH_2CH_2NHCH_2$	3-pyridyl
671	$HOCH_2CH_2NHCH_2$	2-pyridyl
672	$HOCH_2CH_2NHCH_2$	2-thiazolyl
673	$HOCH_2CH_2NHCH_2$	2-pyrazolyl
674	$HOCH_2CH_2NHCH_2$	5-isoquinolyl
675	$HOCH_2CH_2NHCH_2$	3,4-methylenedioxyC_6H_3
676	$HOCH_2CH_2NHCH_2$	3,4-ethylenedioxyC_6H_3
677	$HOCH_2CH_2NHCH_2$	2-imidazolyl
678	$HOCH_2CH_2NHCH_2$	2-oxazolyl
679	$HOCH_2CH_2NHCH_2$	4-isoxazolyl
680	$HOCH_2CH_2NHCH_2$	$4\text{-}HOC_6H_4$
681	$HOCH_2CH_2NHCH_2$	$3\text{-}HOC_6H_4$
682	$HOCH_2CH_2NHCH_2$	$3,4\text{-}diHOC_6H_4$
683	$HOCH_2CH_2NHCH_2$	$4\text{-}NH_2CH_2C_6H_4$
684	$HOCH_2CH_2NHCH_2$	$3\text{-}NH_2CH_2C_6H_4$
685	$H_2NCH_2CH_2NHCH_2$	$4\text{-}MeOC_6H_4$
686	$H_2NCH_2CH_2NHCH_2$	$3\text{-}MeOC_6H_4$
687	$H_2NCH_2CH_2NHCH_2$	$4\text{-}NH_2C_6H_4$
688	$H_2NCH_2CH_2NHCH_2$	$3\text{-}NH_2C_6H_4$
689	$H_2NCH_2CH_2NHCH_2$	$2\text{-}NH_2C_6H_4$

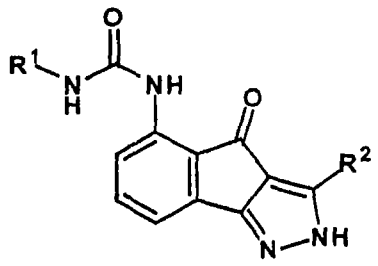
690	$H_2NCH_2CH_2NHCH_2$	4-$Me_2NC_6H_4$
691	$H_2NCH_2CH_2NHCH_2$	3-$Me_2NC_6H_4$
692	$H_2NCH_2CH_2NHCH_2$	2-$Me_2NC_6H_4$
693	$H_2NCH_2CH_2NHCH_2$	4-pyridyl
694	$H_2NCH_2CH_2NHCH_2$	3-pyridyl
695	$H_2NCH_2CH_2NHCH_2$	2-pyridyl
696	$H_2NCH_2CH_2NHCH_2$	2-thiazolyl
697	$H_2NCH_2CH_2NHCH_2$	2-pyrazolyl
698	$H_2NCH_2CH_2NHCH_2$	5-isoquinolyl
699	$H_2NCH_2CH_2NHCH_2$	3,4-methylenedioxyC_6H_3
700	$H_2NCH_2CH_2NHCH_2$	3,4-ethylenedioxyC_6H_3
701	$H_2NCH_2CH_2NHCH_2$	2-imidazolyl
702	$H_2NCH_2CH_2NHCH_2$	2-oxazolyl
703	$H_2NCH_2CH_2NHCH_2$	4-isoxazolyl
704	$H_2NCH_2CH_2NHCH_2$	4-HOC_6H_4
705	$H_2NCH_2CH_2NHCH_2$	3-HOC_6H_4
706	$H_2NCH_2CH_2NHCH_2$	3,4-diHOC_6H_4
707	$H_2NCH_2CH_2NHCH_2$	4-$NH_2CH_2C_6H_4$
708	$H_2NCH_2CH_2NHCH_2$	3-$NH_2CH_2C_6H_4$
709	$Me_2NCH_2CH_2NHCH_2$	4-$MeOC_6H_4$
710	$Me_2NCH_2CH_2NHCH_2$	3-$MeOC_6H_4$
711	$Me_2NCH_2CH_2NHCH_2$	4-$NH_2C_6H_4$
712	$Me_2NCH_2CH_2NHCH_2$	3-$NH_2C_6H_4$
713	$Me_2NCH_2CH_2NHCH_2$	2-$NH_2C_6H_4$
714	$Me_2NCH_2CH_2NHCH_2$	4-$Me_2NC_6H_4$
715	$Me_2NCH_2CH_2NHCH_2$	3-$Me_2NC_6H_4$
716	$Me_2NCH_2CH_2NHCH_2$	2-$Me_2NC_6H_4$
717	$Me_2NCH_2CH_2NHCH_2$	4-pyridyl
718	$Me_2NCH_2CH_2NHCH_2$	3-pyridyl
719	$Me_2NCH_2CH_2NHCH_2$	2-pyridyl
720	$Me_2NCH_2CH_2NHCH_2$	2-thiazolyl
721	$Me_2NCH_2CH_2NHCH_2$	2-pyrazolyl

	722	$Me_2NCH_2CH_2NHCH_2$	5-isoquinolyl
	723	$Me_2NCH_2CH_2NHCH_2$	3,4-methylenedioxyC_6H_3
	724	$Me_2NCH_2CH_2NHCH_2$	3,4-ethylenedioxyC_6H_3
	725	$Me_2NCH_2CH_2NHCH_2$	2-imidazolyl
	726	$Me_2NCH_2CH_2NHCH_2$	2-oxazolyl
	727	$Me_2NCH_2CH_2NHCH_2$	4-isoxazolyl
	728	$Me_2NCH_2CH_2NHCH_2$	4-HOC_6H_4
	729	$Me_2NCH_2CH_2NHCH_2$	3-HOC_6H_4
	730	$Me_2NCH_2CH_2NHCH_2$	3,4-diHOC_6H_4
	731	$Me_2NCH_2CH_2NHCH_2$	4-$NH_2CH_2C_6H_4$
	732	$Me_2NCH_2CH_2NHCH_2$	3-$NH_2CH_2C_6H_4$
	733	1-morpholinylmethyl	3-$MeOC_6H_4$
	734	1-morpholinylmethyl	4-$NH_2C_6H_4$
	735	1-morpholinylmethyl	3-$NH_2C_6H_4$
	736	1-morpholinylmethyl	2-$NH_2C_6H_4$
	737	1-morpholinylmethyl	4-$Me_2NC_6H_4$
	738	1-morpholinylmethyl	3-$Me_2NC_6H_4$
	739	1-morpholinylmethyl	2-$Me_2NC_6H_4$
	740	1-morpholinylmethyl	4-pyridyl
	741	1-morpholinylmethyl	3-pyridyl
	742	1-morpholinylmethyl	2-pyridyl
	743	1-morpholinylmethyl	2-thiazolyl
	744	1-morpholinylmethyl	2-pyrazolyl
	745	1-morpholinylmethyl	5-isoquinolyl
	746	1-morpholinylmethyl	3,4-methylenedioxyC_6H_3
	747	1-morpholinylmethyl	3,4-ethylenedioxyC_6H_3
	748	1-morpholinylmethyl	2-imidazolyl
	749	1-morpholinylmethyl	2-oxazolyl
	750	1-morpholinylmethyl	4-isoxazolyl
	751	1-morpholinylmethyl	4-HOC_6H_4
	752	1-morpholinylmethyl	3-HOC_6H_4

	753	1-morpholinylmethyl	3,4-diHOC_6H_4
	754	1-morpholinylmethyl	4-$NH_2CH_2C_6H_4$
	755	1-morpholinylmethyl	3-$NH_2CH_2C_6H_4$
	756	1-thiomorpholinylmethyl	3-$MeOC_6H_4$
	757	1-thiomorpholinylmethyl	4-$NH_2C_6H_4$
	758	1-thiomorpholinylmethyl	3-$NH_2C_6H_4$
	759	1-thiomorpholinylmethyl	2-$NH_2C_6H_4$
	760	1-thiomorpholinylmethyl	4-$Me_2NC_6H_4$
	761	1-thiomorpholinylmethyl	3-$Me_2NC_6H_4$
	762	1-thiomorpholinylmethyl	2-$Me_2NC_6H_4$
	763	1-thiomorpholinylmethyl	4-pyridyl
	764	1-thiomorpholinylmethyl	3-pyridyl
	765	1-thiomorpholinylmethyl	2-pyridyl
	766	1-thiomorpholinylmethyl	2-thiazolyl
	767	1-thiomorpholinylmethyl	2-pyrazolyl
	768	1-thiomorpholinylmethyl	5-isoquinolyl
	769	1-thiomorpholinylmethyl	3,4-methylenedioxyC_6H_3
	770	1-thiomorpholinylmethyl	3,4-ethylenedioxyC_6H_3
	771	1-thiomorpholinylmethyl	2-imidazolyl
	772	1-thiomorpholinylmethyl	2-oxazolyl
	773	1-thiomorpholinylmethyl	4-isoxazolyl
	774	1-thiomorpholinylmethyl	4-HOC_6H_4
	775	1-thiomorpholinylmethyl	3-HOC_6H_4
	776	1-thiomorpholinylmethyl	3,4-diHOC_6H_4
	777	1-thiomorpholinylmethyl	4-$NH_2CH_2C_6H_4$
	778	1-thiomorpholinylmethyl	3-$NH_2CH_2C_6H_4$
	779	1-piperazinylmethyl	3-$MeOC_6H_4$
	780	1-piperazinylmethyl	4-$NH_2C_6H_4$
	781	1-piperazinylmethyl	3-$NH_2C_6H_4$
	782	1-piperazinylmethyl	2-$NH_2C_6H_4$
	783	1-piperazinylmethyl	4-$Me_2NC_6H_4$
	784	1-piperazinylmethyl	3-$Me_2NC_6H_4$
	785	1-piperazinylmethyl	2-$Me_2NC_6H_4$

	786	1-piperazinylmethyl	4-pyridyl
	787	1-piperazinylmethyl	3-pyridyl
	788	1-piperazinylmethyl	2-pyridyl
	789	1-piperazinylmethyl	2-thiazolyl
	790	1-piperazinylmethyl	2-pyrazolyl
	791	1-piperazinylmethyl	5-isoquinolyl
	792	1-piperazinylmethyl	3,4-methylenedioxyC_6H_3
	793	1-piperazinylmethyl	3,4-ethylenedioxyC_6H_3
	794	1-piperazinylmethyl	2-imidazolyl
	795	1-piperazinylmethyl	2-oxazolyl
	796	1-piperazinylmethyl	4-isoxazolyl
	797	1-piperazinylmethyl	4-HOC_6H_4
	798	1-piperazinylmethyl	3-HOC_6H_4
	799	1-piperazinylmethyl	3,4-diHOC_6H_4
	800	1-piperazinylmethyl	4-$NH_2CH_2C_6H_4$
	801	1-piperazinylmethyl	3-$NH_2CH_2C_6H_4$

Table 3



Example Number	R^1	R^2
802	2-pyridylmethyl	4-$MeOC_6H_4$
803	2-pyridylmethyl	3-$MeOC_6H_4$
804	2-pyridylmethyl	4-$NH_2C_6H_4$
805	2-pyridylmethyl	3-$NH_2C_6H_4$
806	2-pyridylmethyl	2-$NH_2C_6H_4$

	807	2-pyridylmethyl	4-$Me_2NC_6H_4$
	808	2-pyridylmethyl	3-$Me_2NC_6H_4$
	809	2-pyridylmethyl	2-$Me_2NC_6H_4$
	810	2-pyridylmethyl	4-pyridyl
	811	2-pyridylmethyl	3-pyridyl
	812	2-pyridylmethyl	2-pyridyl
	813	2-pyridylmethyl	2-thiazolyl
	814	2-pyridylmethyl	2-pyrazolyl
	815	2-pyridylmethyl	5-isoquinolyl
	816	2-pyridylmethyl	3,4-methylenedioxyC_6H_3
	817	2-pyridylmethyl	3,4-ethylenedioxyC_6H_3
	818	2-pyridylmethyl	2-imidazolyl
	819	2-pyridylmethyl	2-oxazolyl
	820	2-pyridylmethyl	4-isoxazolyl
	821	2-pyridylmethyl	4-HOC_6H_4
	822	2-pyridylmethyl	3-HOC_6H_4
	823	2-pyridylmethyl	3,4-diHOC_6H_4
	824	2-pyridylmethyl	4-$NH_2CH_2C_6H_4$
	825	2-pyridylmethyl	3-$NH_2CH_2C_6H_4$
	826	3-pyridylmethyl	4-$MeOC_6H_4$
	827	3-pyridylmethyl	3-$MeOC_6H_4$
	828	3-pyridylmethyl	4-$NH_2C_6H_4$
	829	3-pyridylmethyl	3-$NH_2C_6H_4$
	830	3-pyridylmethyl	2-$NH_2C_6H_4$
	831	3-pyridylmethyl	4-$Me_2NC_6H_4$
	832	3-pyridylmethyl	3-$Me_2NC_6H_4$
	833	3-pyridylmethyl	2-$Me_2NC_6H_4$
	834	3-pyridylmethyl	4-pyridyl
	835	3-pyridylmethyl	3-pyridyl
	836	3-pyridylmethyl	2-pyridyl
	837	3-pyridylmethyl	2-thiazolyl
	838	3-pyridylmethyl	2-pyrazolyl
	839	3-pyridylmethyl	5-isoquinolyl

840	3-pyridylmethyl	3,4-methylenedioxyC_6H_3
841	3-pyridylmethyl	3,4-ethylenedioxyC_6H_3
842	3-pyridylmethyl	2-imidazolyl
843	3-pyridylmethyl	2-oxazolyl
844	3-pyridylmethyl	4-isoxazolyl
845	3-pyridylmethyl	4-HOC_6H_4
846	3-pyridylmethyl	3-HOC_6H_4
847	3-pyridylmethyl	3,4-diHOC_6H_4
848	3-pyridylmethyl	4-$NH_2CH_2C_6H_4$
849	3-pyridylmethyl	3-$NH_2CH_2C_6H_4$
850	4-pyridylmethyl	4-$MeOC_6H_4$
851	4-pyridylmethyl	3-$MeOC_6H_4$
852	4-pyridylmethyl	4-$NH_2C_6H_4$
853	4-pyridylmethyl	3-$NH_2C_6H_4$
854	4-pyridylmethyl	2-$NH_2C_6H_4$
855	4-pyridylmethyl	4-$Me_2NC_6H_4$
856	4-pyridylmethyl	3-$Me_2NC_6H_4$
857	4-pyridylmethyl	2-$Me_2NC_6H_4$
858	4-pyridylmethyl	4-pyridyl
859	4-pyridylmethyl	3-pyridyl
860	4-pyridylmethyl	2-pyridyl
861	4-pyridylmethyl	2-thiazolyl
862	4-pyridylmethyl	2-pyrazolyl
863	4-pyridylmethyl	5-isoquinolyl
864	4-pyridylmethyl	3,4-methylenedioxyC_6H_3
865	4-pyridylmethyl	3,4-ethylenedioxyC_6H_3
866	4-pyridylmethyl	2-imidazolyl
867	4-pyridylmethyl	2-oxazolyl
868	4-pyridylmethyl	4-isoxazolyl
869	4-pyridylmethyl	4-HOC_6H_4
870	4-pyridylmethyl	3-HOC_6H_4
871	4-pyridylmethyl	3,4-diHOC_6H_4

872	4-pyridylmethyl	4-$NH_2CH_2C_6H_4$
873	4-pyridylmethyl	3-$NH_2CH_2C_6H_4$
874	2-$NH_2C_6H_4$	4-$MeOC_6H_4$
875	2-$NH_2C_6H_4$	3-$MeOC_6H_4$
876	2-$NH_2C_6H_4$	4-$NH_2C_6H_4$
877	2-$NH_2C_6H_4$	3-$NH_2C_6H_4$
878	2-$NH_2C_6H_4$	2-$NH_2C_6H_4$
879	2-$NH_2C_6H_4$	4-$Me_2NC_6H_4$
880	2-$NH_2C_6H_4$	3-$Me_2NC_6H_4$
881	2-$NH_2C_6H_4$	2-$Me_2NC_6H_4$
882	2-$NH_2C_6H_4$	4-pyridyl
883	2-$NH_2C_6H_4$	3-pyridyl
884	2-$NH_2C_6H_4$	2-pyridyl
885	2-$NH_2C_6H_4$	2-thiazolyl
886	2-$NH_2C_6H_4$	2-pyrazolyl
887	2-$NH_2C_6H_4$	5-isoquinolyl
888	2-$NH_2C_6H_4$	3,4-methylenedioxyC_6H_3
889	2-$NH_2C_6H_4$	3,4-ethylenedioxyC_6H_3
890	2-$NH_2C_6H_4$	2-imidazolyl
891	2-$NH_2C_6H_4$	2-oxazolyl
892	2-$NH_2C_6H_4$	4-isoxazolyl
893	2-$NH_2C_6H_4$	4-HOC_6H_4
894	2-$NH_2C_6H_4$	3-HOC_6H_4
895	2-$NH_2C_6H_4$	3,4-diHOC_6H_4
896	2-$NH_2C_6H_4$	4-$NH_2CH_2C_6H_4$
897	2-$NH_2C_6H_4$	3-$NH_2CH_2C_6H_4$
898	3-$NH_2C_6H_4$	4-$MeOC_6H_4$
899	3-$NH_2C_6H_4$	3-$MeOC_6H_4$
900	3-$NH_2C_6H_4$	4-$NH_2C_6H_4$
901	3-$NH_2C_6H_4$	3-$NH_2C_6H_4$
902	3-$NH_2C_6H_4$	2-$NH_2C_6H_4$
903	3-$NH_2C_6H_4$	4-$Me_2NC_6H_4$

904	3-$NH_2C_6H_4$	3-$Me_2NC_6H_4$
905	3-$NH_2C_6H_4$	2-$Me_2NC_6H_4$
906	3-$NH_2C_6H_4$	4-pyridyl
907	3-$NH_2C_6H_4$	3-pyridyl
908	3-$NH_2C_6H_4$	2-pyridyl
909	3-$NH_2C_6H_4$	2-thiazolyl
910	3-$NH_2C_6H_4$	2-pyrazolyl
911	3-$NH_2C_6H_4$	5-isoquinolyl
912	3-$NH_2C_6H_4$	3,4-methylenedioxyC_6H_3
913	3-$NH_2C_6H_4$	3,4-ethylenedioxyC_6H_3
914	3-$NH_2C_6H_4$	2-imidazolyl
915	3-$NH_2C_6H_4$	2-oxazolyl
916	3-$NH_2C_6H_4$	4-isoxazolyl
917	3-$NH_2C_6H_4$	4-HOC_6H_4
918	3-$NH_2C_6H_4$	3-HOC_6H_4
919	3-$NH_2C_6H_4$	3,4-diHOC_6H_4
920	3-$NH_2C_6H_4$	4-$NH_2CH_2C_6H_4$
921	3-$NH_2C_6H_4$	3-$NH_2CH_2C_6H_4$
922	4-$NH_2C_6H_4$	4-$MeOC_6H_4$
923	4-$NH_2C_6H_4$	3-$MeOC_6H_4$
924	4-$NH_2C_6H_4$	4-$NH_2C_6H_4$
925	4-$NH_2C_6H_4$	3-$NH_2C_6H_4$
926	4-$NH_2C_6H_4$	2-$NH_2C_6H_4$
927	4-$NH_2C_6H_4$	4-$Me_2NC_6H_4$
928	4-$NH_2C_6H_4$	3-$Me_2NC_6H_4$
930	4-$NH_2C_6H_4$	2-$Me_2NC_6H_4$
931	4-$NH_2C_6H_4$	4-pyridyl
932	4-$NH_2C_6H_4$	3-pyridyl
933	4-$NH_2C_6H_4$	2-pyridyl
934	4-$NH_2C_6H_4$	2-thiazolyl
935	4-$NH_2C_6H_4$	2-pyrazolyl
936	4-$NH_2C_6H_4$	5-isoquinolyl

	937	4-$NH_2C_6H_4$	3,4-methylenedioxyC_6H_3
	938	4-$NH_2C_6H_4$	3,4-ethylenedioxyC_6H_3
	939	4-$NH_2C_6H_4$	2-imidazolyl
	940	4-$NH_2C_6H_4$	2-oxazolyl
	941	4-$NH_2C_6H_4$	4-isoxazolyl
	942	4-$NH_2C_6H_4$	4-HOC_6H_4
	943	4-$NH_2C_6H_4$	3-HOC_6H_4
	944	4-$NH_2C_6H_4$	3,4-diHOC_6H_4
	945	4-$NH_2C_6H_4$	4-$NH_2CH_2C_6H_4$
	946	4-$NH_2C_6H_4$	3-$NH_2CH_2C_6H_4$
	947	2-$MeOC_6H_4$	4-$MeOC_6H_4$
	948	2-$MeOC_6H_4$	3-$MeOC_6H_4$
	949	2-$MeOC_6H_4$	4-$NH_2C_6H_4$
	950	2-$MeOC_6H_4$	3-$NH_2C_6H_4$
	951	2-$MeOC_6H_4$	2-$NH_2C_6H_4$
	952	2-$MeOC_6H_4$	4-$Me_2NC_6H_4$
	953	2-$MeOC_6H_4$	3-$Me_2NC_6H_4$
	954	2-$MeOC_6H_4$	2-$Me_2NC_6H_4$
	955	2-$MeOC_6H_4$	4-pyridyl
	956	2-$MeOC_6H_4$	3-pyridyl
	957	2-$MeOC_6H_4$	2-pyridyl
	958	2-$MeOC_6H_4$	2-thiazolyl
	959	2-$MeOC_6H_4$	2-pyrazolyl
	960	2-$MeOC_6H_4$	5-isoquinolyl
	961	2-$MeOC_6H_4$	3,4-methylenedioxyC_6H_3
	962	2-$MeOC_6H_4$	3,4-ethylenedioxyC_6H_3
	963	2-$MeOC_6H_4$	2-imidazolyl
	964	2-$MeOC_6H_4$	2-oxazolyl
	965	2-$MeOC_6H_4$	4-isoxazolyl
	966	2-$MeOC_6H_4$	4-HOC_6H_4

967	2-$MeOC_6H_4$	3-HOC_6H_4
968	2-$MeOC_6H_4$	3,4-diHOC_6H_4
969	2-$MeOC_6H_4$	4-$NH_2CH_2C_6H_4$
970	2-$MeOC_6H_4$	3-$NH_2CH_2C_6H_4$
971	3-$MeOC_6H_4$	4-$MeOC_6H_4$
972	3-$MeOC_6H_4$	3-$MeOC_6H_4$
973	3-$MeOC_6H_4$	4-$NH_2C_6H_4$
974	3-$MeOC_6H_4$	3-$NH_2C_6H_4$
975	3-$MeOC_6H_4$	2-$NH_2C_6H_4$
976	3-$MeOC_6H_4$	4-$Me_2NC_6H_4$
977	3-$MeOC_6H_4$	3-$Me_2NC_6H_4$
978	3-$MeOC_6H_4$	2-$Me_2NC_6H_4$
979	3-$MeOC_6H_4$	4-pyridyl
980	3-$MeOC_6H_4$	3-pyridyl
981	3-$MeOC_6H_4$	2-pyridyl
982	3-$MeOC_6H_4$	2-thiazolyl
983	3-$MeOC_6H_4$	2-pyrazolyl
984	3-$MeOC_6H_4$	5-isoquinolyl
985	3-$MeOC_6H_4$	3,4-methylenedioxyC_6H_3
986	3-$MeOC_6H_4$	3,4-ethylenedioxyC_6H_3
987	3-$MeOC_6H_4$	2-imidazolyl
988	3-$MeOC_6H_4$	2-oxazolyl
989	3-$MeOC_6H_4$	4-isoxazolyl
990	3-$MeOC_6H_4$	4-HOC_6H_4
991	3-$MeOC_6H_4$	3-HOC_6H_4
992	3-$MeOC_6H_4$	3,4-diHOC_6H_4
993	3-$MeOC_6H_4$	4-$NH_2CH_2C_6H_4$
994	3-$MeOC_6H_4$	3-$NH_2CH_2C_6H_4$
995	4-$MeOC_6H_4$	4-$MeOC_6H_4$
996	4-$MeOC_6H_4$	3-$MeOC_6H_4$
997	4-$MeOC_6H_4$	4-$NH_2C_6H_4$
998	4-$MeOC_6H_4$	3-$NH_2C_6H_4$

999	4-$MeOC_6H_4$	2-$NH_2C_6H_4$
1000	4-$MeOC_6H_4$	4-$Me_2NC_6H_4$
1001	4-$MeOC_6H_4$	3-$Me_2NC_6H_4$
1002	4-$MeOC_6H_4$	2-$Me_2NC_6H_4$
1003	4-$MeOC_6H_4$	4-pyridyl
1004	4-$MeOC_6H_4$	3-pyridyl
1005	4-$MeOC_6H_4$	2-pyridyl
1006	4-$MeOC_6H_4$	2-thiazolyl
1007	4-$MeOC_6H_4$	2-pyrazolyl
1008	4-$MeOC_6H_4$	5-isoquinolyl
1009	4-$MeOC_6H_4$	3,4-methylenedioxyC_6H_3
1010	4-$MeOC_6H_4$	3,4-ethylenedioxyC_6H_3
1011	4-$MeOC_6H_4$	2-imidazolyl
1012	4-$MeOC_6H_4$	2-oxazolyl
1013	4-$MeOC_6H_4$	4-isoxazolyl
1014	4-$MeOC_6H_4$	4-HOC_6H_4
1015	4-$MeOC_6H_4$	3-HOC_6H_4
1016	4-$MeOC_6H_4$	3,4-diHOC_6H_4
1017	4-$MeOC_6H_4$	4-$NH_2CH_2C_6H_4$
1018	4-$MeOC_6H_4$	3-$NH_2CH_2C_6H_4$
1019	2-HOC_6H_4	4-$MeOC_6H_4$
1020	2-HOC_6H_4	3-$MeOC_6H_4$
1021	2-HOC_6H_4	4-$NH_2C_6H_4$
1022	2-HOC_6H_4	3-$NH_2C_6H_4$
1023	2-HOC_6H_4	2-$NH_2C_6H_4$
1024	2-HOC_6H_4	4-$Me_2NC_6H_4$
1025	2-HOC_6H_4	3-$Me_2NC_6H_4$
1026	2-HOC_6H_4	2-$Me_2NC_6H_4$
1027	2-HOC_6H_4	4-pyridyl
1028	2-HOC_6H_4	3-pyridyl
1029	2-HOC_6H_4	2-pyridyl
1030	2-HOC_6H_4	2-thiazolyl

1031	2-HOC_6H_4	2-pyrazolyl
1032	2-HOC_6H_4	5-isoquinolyl
1033	2-HOC_6H_4	3,4-methylenedioxyC_6H_3
1034	2-HOC_6H_4	3,4-ethylenedioxyC_6H_3
1035	2-HOC_6H_4	2-imidazolyl
1036	2-HOC_6H_4	2-oxazolyl
1037	2-HOC_6H_4	4-isoxazolyl
1038	2-HOC_6H_4	4-HOC_6H_4
1039	2-HOC_6H_4	3-HOC_6H_4
1040	2-HOC_6H_4	3,4-diHOC_6H_4
1041	2-HOC_6H_4	4-$NH_2CH_2C_6H_4$
1042	2-HOC_6H_4	3-$NH_2CH_2C_6H_4$
1043	3-HOC_6H_4	4-$MeOC_6H_4$
1044	3-HOC_6H_4	3-$MeOC_6H_4$
1045	3-HOC_6H_4	4-$NH_2C_6H_4$
1046	3-HOC_6H_4	3-$NH_2C_6H_4$
1047	3-HOC_6H_4	2-$NH_2C_6H_4$
1048	3-HOC_6H_4	4-$Me_2NC_6H_4$
1049	3-HOC_6H_4	3-$Me_2NC_6H_4$
1050	3-HOC_6H_4	2-$Me_2NC_6H_4$
1051	3-HOC_6H_4	4-pyridyl
1052	3-HOC_6H_4	3-pyridyl
1053	3-HOC_6H_4	2-pyridyl
1054	3-HOC_6H_4	2-thiazolyl
1055	3-HOC_6H_4	2-pyrazolyl
1056	3-HOC_6H_4	5-isoquinolyl
1057	3-HOC_6H_4	3,4-methylenedioxyC_6H_3
1058	3-HOC_6H_4	3,4-ethylenedioxyC_6H_3
1059	3-HOC_6H_4	2-imidazolyl
1060	3-HOC_6H_4	2-oxazolyl

1061	3-HOC_6H_4	4-isoxazolyl
1062	3-HOC_6H_4	4-HOC_6H_4
1063	3-HOC_6H_4	3-HOC_6H_4
1064	3-HOC_6H_4	3,4-diHOC_6H_4
1065	3-HOC_6H_4	4-$NH_2CH_2C_6H_4$
1066	3-HOC_6H_4	3-$NH_2CH_2C_6H_4$
1067	4-HOC_6H_4	4-$MeOC_6H_4$
1068	4-HOC_6H_4	3-$MeOC_6H_4$
1069	4-HOC_6H_4	4-$NH_2C_6H_4$
1070	4-HOC_6H_4	3-$NH_2C_6H_4$
1071	4-HOC_6H_4	2-$NH_2C_6H_4$
1072	4-HOC_6H_4	4-$Me_2NC_6H_4$
1073	4-HOC_6H_4	3-$Me_2NC_6H_4$
1074	4-HOC_6H_4	2-$Me_2NC_6H_4$
1075	4-HOC_6H_4	4-pyridyl
1076	4-HOC_6H_4	3-pyridyl
1077	4-HOC_6H_4	2-pyridyl
1078	4-HOC_6H_4	2-thiazolyl
1079	4-HOC_6H_4	2-pyrazolyl
1080	4-HOC_6H_4	5-isoquinolyl
1081	4-HOC_6H_4	3,4-methylenedioxyC_6H_3
1082	4-HOC_6H_4	3,4-ethylenedioxyC_6H_3
1083	4-HOC_6H_4	2-imidazolyl
1084	4-HOC_6H_4	2-oxazolyl
1085	4-HOC_6H_4	4-isoxazolyl
1086	4-HOC_6H_4	4-HOC_6H_4
1087	4-HOC_6H_4	3-HOC_6H_4
1088	4-HOC_6H_4	3,4-diHOC_6H_4
1089	4-HOC_6H_4	4-$NH_2CH_2C_6H_4$
1090	4-HOC_6H_4	3-$NH_2CH_2C_6H_4$
1091	4-ClC_6H_4	4-$MeOC_6H_4$
1092	4-ClC_6H_4	3-$MeOC_6H_4$

1093	4-ClC_6H_4	4-$NH_2C_6H_4$
1094	4-ClC_6H_4	3-$NH_2C_6H_4$
1095	4-ClC_6H_4	2-$NH_2C_6H_4$
1096	4-ClC_6H_4	4-$Me_2NC_6H_4$
1097	4-ClC_6H_4	3-$Me_2NC_6H_4$
1098	4-ClC_6H_4	2-$Me_2NC_6H_4$
1099	4-ClC_6H_4	4-pyridyl
1100	4-ClC_6H_4	3-pyridyl
1101	4-ClC_6H_4	2-pyridyl
1102	4-ClC_6H_4	2-thiazolyl
1103	4-ClC_6H_4	2-pyrazolyl
1104	4-ClC_6H_4	5-isoquinolyl
1105	4-ClC_6H_4	3,4-methylenedioxyC_6H_3
1106	4-ClC_6H_4	3,4-ethylenedioxyC_6H_3
1107	4-ClC_6H_4	2-imidazolyl
1108	4-ClC_6H_4	2-oxazolyl
1109	4-ClC_6H_4	4-isoxazolyl
1110	4-ClC_6H_4	4-HOC_6H_4
1111	4-ClC_6H_4	3-HOC_6H_4
1112	4-ClC_6H_4	3,4-diHOC_6H_4
1113	4-ClC_6H_4	4-$NH_2CH_2C_6H_4$
1114	4-ClC_6H_4	3-$NH_2CH_2C_6H_4$
1115	2-$NH_2CH_2C_6H_4$	4-$MeOC_6H_4$
1116	2-$NH_2CH_2C_6H_4$	3-$MeOC_6H_4$
1117	2-$NH_2CH_2C_6H_4$	4-$NH_2C_6H_4$
1118	2-$NH_2CH_2C_6H_4$	3-$NH_2C_6H_4$
1119	2-$NH_2CH_2C_6H_4$	2-$NH_2C_6H_4$
1120	2-$NH_2CH_2C_6H_4$	4-$Me_2NC_6H_4$
1121	2-$NH_2CH_2C_6H_4$	3-$Me_2NC_6H_4$
1122	2-$NH_2CH_2C_6H_4$	2-$Me_2NC_6H_4$
1123	2-$NH_2CH_2C_6H_4$	4-pyridyl
1124	2-$NH_2CH_2C_6H_4$	3-pyridyl

1125	2-$NH_2CH_2C_6H_4$	2-pyridyl
1126	2-$NH_2CH_2C_6H_4$	2-thiazolyl
1127	2-$NH_2CH_2C_6H_4$	2-pyrazolyl
1128	2-$NH_2CH_2C_6H_4$	5-isoquinolyl
1129	2-$NH_2CH_2C_6H_4$	3,4-methylenedioxyC_6H_3
1130	2-$NH_2CH_2C_6H_4$	3,4-ethylenedioxyC_6H_3
1131	2-$NH_2CH_2C_6H_4$	2-imidazolyl
1132	2-$NH_2CH_2C_6H_4$	2-oxazolyl
1133	2-$NH_2CH_2C_6H_4$	4-isoxazolyl
1134	2-$NH_2CH_2C_6H_4$	4-HOC_6H_4
1135	2-$NH_2CH_2C_6H_4$	3-HOC_6H_4
1136	2-$NH_2CH_2C_6H_4$	3,4-diHOC_6H_4
1137	2-$NH_2CH_2C_6H_4$	4-$NH_2CH_2C_6H_4$
1138	2-$NH_2CH_2C_6H_4$	3-$NH_2CH_2C_6H_4$
1139	3-$NH_2CH_2C_6H_4$	4-$MeOC_6H_4$
1140	3-$NH_2CH_2C_6H_4$	3-$MeOC_6H_4$
1141	3-$NH_2CH_2C_6H_4$	4-$NH_2C_6H_4$
1142	3-$NH_2CH_2C_6H_4$	3-$NH_2C_6H_4$
1143	3-$NH_2CH_2C_6H_4$	2-$NH_2C_6H_4$
1144	3-$NH_2CH_2C_6H_4$	4-$Me_2NC_6H_4$
1145	3-$NH_2CH_2C_6H_4$	3-$Me_2NC_6H_4$
1146	3-$NH_2CH_2C_6H_4$	2-$Me_2NC_6H_4$
1147	3-$NH_2CH_2C_6H_4$	4-pyridyl
1148	3-$NH_2CH_2C_6H_4$	3-pyridyl
1149	3-$NH_2CH_2C_6H_4$	2-pyridyl
1150	3-$NH_2CH_2C_6H_4$	2-thiazolyl
1151	3-$NH_2CH_2C_6H_4$	2-pyrazolyl
1152	3-$NH_2CH_2C_6H_4$	5-isoquinolyl
1153	3-$NH_2CH_2C_6H_4$	3,4-methylenedioxyC_6H_3
1154	3-$NH_2CH_2C_6H_4$	3,4-ethylenedioxyC_6H_3

	1155	3-$NH_2CH_2C_6H_4$	2-imidazolyl
	1156	3-$NH_2CH_2C_6H_4$	2-oxazolyl
	1157	3-$NH_2CH_2C_6H_4$	4-isoxazolyl
	1158	3-$NH_2CH_2C_6H_4$	4-HOC_6H_4
	1159	3-$NH_2CH_2C_6H_4$	3-HOC_6H_4
	1160	3-$NH_2CH_2C_6H_4$	3,4-diHOC_6H_4
	1161	3-$NH_2CH_2C_6H_4$	4-$NH_2CH_2C_6H_4$
	1162	3-$NH_2CH_2C_6H_4$	3-$NH_2CH_2C_6H_4$
	1163	4-$NH_2CH_2C_6H_4$	4-$MeOC_6H_4$
	1164	4-$NH_2CH_2C_6H_4$	3-$MeOC_6H_4$
	1165	4-$NH_2CH_2C_6H_4$	4-$NH_2C_6H_4$
	1166	4-$NH_2CH_2C_6H_4$	3-$NH_2C_6H_4$
	1167	4-$NH_2CH_2C_6H_4$	2-$NH_2C_6H_4$
	1168	4-$NH_2CH_2C_6H_4$	4-$Me_2NC_6H_4$
	1169	4-$NH_2CH_2C_6H_4$	3-$Me_2NC_6H_4$
	1170	4-$NH_2CH_2C_6H_4$	2-$Me_2NC_6H_4$
	1171	4-$NH_2CH_2C_6H_4$	4-pyridyl
	1172	4-$NH_2CH_2C_6H_4$	3-pyridyl
	1173	4-$NH_2CH_2C_6H_4$	2-pyridyl
	1174	4-$NH_2CH_2C_6H_4$	2-thiazolyl
	1175	4-$NH_2CH_2C_6H_4$	2-pyrazolyl
	1176	4-$NH_2CH_2C_6H_4$	5-isoquinolyl
	1177	4-$NH_2CH_2C_6H_4$	3,4-methylenedioxyC_6H_3
	1178	4-$NH_2CH_2C_6H_4$	3,4-ethylenedioxyC_6H_3
	1179	4-$NH_2CH_2C_6H_4$	2-imidazolyl
	1180	4-$NH_2CH_2C_6H_4$	2-oxazolyl
	1181	4-$NH_2CH_2C_6H_4$	4-isoxazolyl
	1182	4-$NH_2CH_2C_6H_4$	4-HOC_6H_4
	1183	4-$NH_2CH_2C_6H_4$	3-HOC_6H_4
	1184	4-$NH_2CH_2C_6H_4$	3,4-diHOC_6H_4
	1185	4-$NH_2CH_2C_6H_4$	4-$NH_2CH_2C_6H_4$
	1186	4-$NH_2CH_2C_6H_4$	3-$NH_2CH_2C_6H_4$

1187	2-$Me_2NCH_2C_6H_4$	4-$MeOC_6H_4$
1188	2-$Me_2NCH_2C_6H_4$	3-$MeOC_6H_4$
1189	2-$Me_2NCH_2C_6H_4$	4-$NH_2C_6H_4$
1190	2-$Me_2NCH_2C_6H_4$	3-$NH_2C_6H_4$
1191	2-$Me_2NCH_2C_6H_4$	2-$NH_2C_6H_4$
1192	2-$Me_2NCH_2C_6H_4$	4-$Me_2NC_6H_4$
1193	2-$Me_2NCH_2C_6H_4$	3-$Me_2NC_6H_4$
1194	2-$Me_2NCH_2C_6H_4$	2-$Me_2NC_6H_4$
1195	2-$Me_2NCH_2C_6H_4$	4-pyridyl
1196	2-$Me_2NCH_2C_6H_4$	3-pyridyl
1197	2-$Me_2NCH_2C_6H_4$	2-pyridyl
1198	2-$Me_2NCH_2C_6H_4$	2-thiazolyl
1199	2-$Me_2NCH_2C_6H_4$	2-pyrazolyl
1200	2-$Me_2NCH_2C_6H_4$	5-isoquinolyl
1201	2-$Me_2NCH_2C_6H_4$	3,4-methylenedioxyC_6H_3
1202	2-$Me_2NCH_2C_6H_4$	3,4-ethylenedioxyC_6H_3
1203	2-$Me_2NCH_2C_6H_4$	2-imidazolyl
1204	2-$Me_2NCH_2C_6H_4$	2-oxazolyl
1205	2-$Me_2NCH_2C_6H_4$	4-isoxazolyl
1206	2-$Me_2NCH_2C_6H_4$	4-HOC_6H_4
1207	2-$Me_2NCH_2C_6H_4$	3-HOC_6H_4
1208	2-$Me_2NCH_2C_6H_4$	3,4-diHOC_6H_4
1209	2-$Me_2NCH_2C_6H_4$	4-$NH_2CH_2C_6H_4$
1210	2-$Me_2NCH_2C_6H_4$	3-$NH_2CH_2C_6H_4$
1211	3-$Me_2NCH_2C_6H_4$	4-$MeOC_6H_4$
1212	3-$Me_2NCH_2C_6H_4$	3-$MeOC_6H_4$
1213	3-$Me_2NCH_2C_6H_4$	4-$NH_2C_6H_4$
1214	3-$Me_2NCH_2C_6H_4$	3-$NH_2C_6H_4$
1215	3-$Me_2NCH_2C_6H_4$	2-$NH_2C_6H_4$
1216	3-$Me_2NCH_2C_6H_4$	4-$Me_2NC_6H_4$
1217	3-$Me_2NCH_2C_6H_4$	3-$Me_2NC_6H_4$
1218	3-$Me_2NCH_2C_6H_4$	2-$Me_2NC_6H_4$

	1219	3-$Me_2NCH_2C_6H_4$	4-pyridyl
	1220	3-$Me_2NCH_2C_6H_4$	3-pyridyl
	1221	3-$Me_2NCH_2C_6H_4$	2-pyridyl
	1222	3-$Me_2NCH_2C_6H_4$	2-thiazolyl
	1223	3-$Me_2NCH_2C_6H_4$	2-pyrazolyl
	1224	3-$Me_2NCH_2C_6H_4$	5-isoquinolyl
	1225	3-$Me_2NCH_2C_6H_4$	3,4-methylenedioxyC_6H_3
	1226	3-$Me_2NCH_2C_6H_4$	3,4-ethylenedioxyC_6H_3
	1227	3-$Me_2NCH_2C_6H_4$	2-imidazolyl
	1228	3-$Me_2NCH_2C_6H_4$	2-oxazolyl
	1229	3-$Me_2NCH_2C_6H_4$	4-isoxazolyl
	1230	3-$Me_2NCH_2C_6H_4$	4-HOC_6H_4
	1231	3-$Me_2NCH_2C_6H_4$	3-HOC_6H_4
	1232	3-$Me_2NCH_2C_6H_4$	3,4-diHOC_6H_4
	1233	3-$Me_2NCH_2C_6H_4$	4-$NH_2CH_2C_6H_4$
	1234	3-$Me_2NCH_2C_6H_4$	3-$NH_2CH_2C_6H_4$
	1235	4-$Me_2NCH_2C_6H_4$	4-$MeOC_6H_4$
	1236	4-$Me_2NCH_2C_6H_4$	3-$MeOC_6H_4$
	1237	4-$Me_2NCH_2C_6H_4$	4-$NH_2C_6H_4$
	1238	4-$Me_2NCH_2C_6H_4$	3-$NH_2C_6H_4$
	1239	4-$Me_2NCH_2C_6H_4$	2-$NH_2C_6H_4$
	1240	4-$Me_2NCH_2C_6H_4$	4-$Me_2NC_6H_4$
	1241	4-$Me_2NCH_2C_6H_4$	3-$Me_2NC_6H_4$
	1242	4-$Me_2NCH_2C_6H_4$	2-$Me_2NC_6H_4$
	1243	4-$Me_2NCH_2C_6H_4$	4-pyridyl
	1244	4-$Me_2NCH_2C_6H_4$	3-pyridyl
	1245	4-$Me_2NCH_2C_6H_4$	2-pyridyl
	1246	4-$Me_2NCH_2C_6H_4$	2-thiazolyl
	1247	4-$Me_2NCH_2C_6H_4$	2-pyrazolyl
	1248	4-$Me_2NCH_2C_6H_4$	5-isoquinolyl
	1249	4-$Me_2NCH_2C_6H_4$	3,4-methylenedioxyC_6H_3

	1250	4-$Me_2NCH_2C_6H_4$	3,4-ethylenedioxyC_6H_3
	1251	4-$Me_2NCH_2C_6H_4$	2-imidazolyl
	1252	4-$Me_2NCH_2C_6H_4$	2-oxazolyl
	1253	4-$Me_2NCH_2C_6H_4$	4-isoxazolyl
	1254	4-$Me_2NCH_2C_6H_4$	4-HOC_6H_4
	1255	4-$Me_2NCH_2C_6H_4$	3-HOC_6H_4
	1256	4-$Me_2NCH_2C_6H_4$	3,4-diHOC_6H_4
	1257	4-$Me_2NCH_2C_6H_4$	4-$NH_2CH_2C_6H_4$
	1258	4-$Me_2NCH_2C_6H_4$	3-$NH_2CH_2C_6H_4$
	1259	H	4-$MeOC_6H_4$
	1260	H	3-$MeOC_6H_4$
	1261	H	4-$NH_2C_6H_4$
	1262	H	3-$NH_2C_6H_4$
	1263	H	2-$NH_2C_6H_4$
	1264	H	4-$Me_2NC_6H_4$
	1265	H	3-$Me_2NC_6H_4$
	1266	H	2-$Me_2NC_6H_4$
	1267	H	4-pyridyl
	1268	H	3-pyridyl
	1269	H	2-pyridyl
	1270	H	2-thiazolyl
	1271	H	2-pyrazolyl
	1272	H	5-isoquinolyl
	1273	H	3,4-methylenedioxyC_6H_3
	1274	H	3,4-ethylenedioxyC_6H_3
	1275	H	2-imidazolyl
	1276	H	2-oxazolyl
	1277	H	4-isoxazolyl
	1278	H	4-HOC_6H_4
	1279	H	3-HOC_6H_4
	1280	H	3,4-diHOC_6H_4
	1281	H	4-$NH_2CH_2C_6H_4$

1282	H	3-$NH_2CH_2C_6H_4$
1283	Me	4-$MeOC_6H_4$
1284	Me	3-$MeOC_6H_4$
1285	Me	4-$NH_2C_6H_4$
1286	Me	3-$NH_2C_6H_4$
1287	Me	2-$NH_2C_6H_4$
1288	Me	4-$Me_2NC_6H_4$
1289	Me	3-$Me_2NC_6H_4$
1290	Me	2-$Me_2NC_6H_4$
1291	Me	4-pyridyl
1292	Me	3-pyridyl
1293	Me	2-pyridyl
1294	Me	2-thiazolyl
1295	Me	2-pyrazolyl
1296	Me	5-isoquinolyl
1297	Me	3,4-methylenedioxyC_6H_3
1298	Me	3,4-ethylenedioxyC_6H_3
1299	Me	2-imidazolyl
1300	Me	2-oxazolyl
1301	Me	4-isoxazolyl
1302	Me	4-HOC_6H_4
1303	Me	3-HOC_6H_4
1304	Me	3,4-diHOC_6H_4
1305	Me	4-$NH_2CH_2C_6H_4$
1306	Me	3-$NH_2CH_2C_6H_4$
1307	Et	4-$MeOC_6H_4$
1308	Et	3-$MeOC_6H_4$
1309	Et	4-$NH_2C_6H_4$
1310	Et	3-$NH_2C_6H_4$
1311	Et	2-$NH_2C_6H_4$
1312	Et	4-$Me_2NC_6H_4$
1313	Et	3-$Me_2NC_6H_4$
1314	Et	2-$Me_2NC_6H_4$

1315	Et	4-pyridyl
1316	Et	3-pyridyl
1317	Et	2-pyridyl
1318	Et	2-thiazolyl
1319	Et	2-pyrazolyl
1320	Et	5-isoquinolyl
1321	Et	3,4-methylenedioxyC_6H_3
1322	Et	3,4-ethylenedioxyC_6H_3
1323	Et	2-imidazolyl
1324	Et	2-oxazolyl
1325	Et	4-isoxazolyl
1326	Et	4-HOC_6H_4
1327	Et	3-HOC_6H_4
1328	Et	3,4-diHOC_6H_4
1329	Et	4-$NH_2CH_2C_6H_4$
1330	Et	3-$NH_2CH_2C_6H_4$
1331	2-$NH_2C_6H_4CH_2$	4-$MeOC_6H_4$
1332	2-$NH_2C_6H_4CH_2$	3-$MeOC_6H_4$
1333	2-$NH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
1334	2-$NH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
1335	2-$NH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
1336	2-$NH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
1337	2-$NH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
1338	2-$NH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
1339	2-$NH_2C_6H_4CH_2$	4-pyridyl
1340	2-$NH_2C_6H_4CH_2$	3-pyridyl
1341	2-$NH_2C_6H_4CH_2$	2-pyridyl
1342	2-$NH_2C_6H_4CH_2$	2-thiazolyl
1343	2-$NH_2C_6H_4CH_2$	2-pyrazolyl
1344	2-$NH_2C_6H_4CH_2$	5-isoquinolyl
1345	2-$NH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3

1346	2-$NH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
1347	2-$NH_2C_6H_4CH_2$	2-imidazolyl
1348	2-$NH_2C_6H_4CH_2$	2-oxazolyl
1349	2-$NH_2C_6H_4CH_2$	4-isoxazolyl
1350	2-$NH_2C_6H_4CH_2$	4-HOC_6H_4
1351	2-$NH_2C_6H_4CH_2$	3-HOC_6H_4
1352	2-$NH_2C_6H_4CH_2$	3,4-diHOC_6H_4
1353	2-$NH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
1354	2-$NH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
1355	3-$NH_2C_6H_4CH_2$	4-$MeOC_6H_4$
1356	3-$NH_2C_6H_4CH_2$	3-$MeOC_6H_4$
1357	3-$NH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
1358	3-$NH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
1359	3-$NH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
1360	3-$NH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
1361	3-$NH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
1362	3-$NH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
1363	3-$NH_2C_6H_4CH_2$	4-pyridyl
1364	3-$NH_2C_6H_4CH_2$	3-pyridyl
1365	3-$NH_2C_6H_4CH_2$	2-pyridyl
1366	3-$NH_2C_6H_4CH_2$	2-thiazolyl
1367	3-$NH_2C_6H_4CH_2$	2-pyrazolyl
1367	3-$NH_2C_6H_4CH_2$	5-isoquinolyl
1369	3-$NH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
1370	3-$NH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
1371	3-$NH_2C_6H_4CH_2$	2-imidazolyl
1372	3-$NH_2C_6H_4CH_2$	2-oxazolyl
1373	3-$NH_2C_6H_4CH_2$	4-isoxazolyl
1374	3-$NH_2C_6H_4CH_2$	4-HOC_6H_4
1375	3-$NH_2C_6H_4CH_2$	3-HOC_6H_4
1376	3-$NH_2C_6H_4CH_2$	3,4-diHOC_6H_4

	1377	3-$NH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	1378	3-$NH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	1379	4-$NH_2C_6H_4CH_2$	4-$MeOC_6H_4$
	1380	4-$NH_2C_6H_4CH_2$	3-$MeOC_6H_4$
	1381	4-$NH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
	1382	4-$NH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
	1383	4-$NH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
	1384	4-$NH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
	1385	4-$NH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
	1386	4-$NH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
	1387	4-$NH_2C_6H_4CH_2$	4-pyridyl
	1388	4-$NH_2C_6H_4CH_2$	3-pyridyl
	1389	4-$NH_2C_6H_4CH_2$	2-pyridyl
	1390	4-$NH_2C_6H_4CH_2$	2-thiazolyl
	1391	4-$NH_2C_6H_4CH_2$	2-pyrazolyl
	1392	4-$NH_2C_6H_4CH_2$	5-isoquinolyl
	1393	4-$NH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	1394	4-$NH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	1395	4-$NH_2C_6H_4CH_2$	2-imidazolyl
	1396	4-$NH_2C_6H_4CH_2$	2-oxazolyl
	1397	4-$NH_2C_6H_4CH_2$	4-isoxazolyl
	1398	4-$NH_2C_6H_4CH_2$	4-HOC_6H_4
	1399	4-$NH_2C_6H_4CH_2$	3-HOC_6H_4
	1400	4-$NH_2C_6H_4CH_2$	3,4-diHOC_6H_4
	1401	4-$NH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	1402	4-$NH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	1403	2-$MeOC_6H_4CH_2$	4-$MeOC_6H_4$
	1404	2-$MeOC_6H_4CH_2$	3-$MeOC_6H_4$
	1405	2-$MeOC_6H_4CH_2$	4-$NH_2C_6H_4$
	1406	2-$MeOC_6H_4CH_2$	3-$NH_2C_6H_4$
	1407	2-$MeOC_6H_4CH_2$	2-$NH_2C_6H_4$
	1408	2-$MeOC_6H_4CH_2$	4-$Me_2NC_6H_4$

1409	2-$MeOC_6H_4CH_2$	3-$Me_2NC_6H_4$
1410	2-$MeOC_6H_4CH_2$	2-$Me_2NC_6H_4$
1411	2-$MeOC_6H_4CH_2$	4-pyridyl
1412	2-$MeOC_6H_4CH_2$	3-pyridyl
1413	2-$MeOC_6H_4CH_2$	2-pyridyl
1414	2-$MeOC_6H_4CH_2$	2-thiazolyl
1415	2-$MeOC_6H_4CH_2$	2-pyrazolyl
1416	2-$MeOC_6H_4CH_2$	5-isoquinolyl
1417	2-$MeOC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
1418	2-$MeOC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
1419	2-$MeOC_6H_4CH_2$	2-imidazolyl
1420	2-$MeOC_6H_4CH_2$	2-oxazolyl
1421	2-$MeOC_6H_4CH_2$	4-isoxazolyl
1422	2-$MeOC_6H_4CH_2$	4-HOC_6H_4
1423	2-$MeOC_6H_4CH_2$	3-HOC_6H_4
1424	2-$MeOC_6H_4CH_2$	3,4-diHOC_6H_4
1425	2-$MeOC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
1426	2-$MeOC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
1427	3-$MeOC_6H_4CH_2$	4-$MeOC_6H_4$
1428	3-$MeOC_6H_4CH_2$	3-$MeOC_6H_4$
1429	3-$MeOC_6H_4CH_2$	4-$NH_2C_6H_4$
1430	3-$MeOC_6H_4CH_2$	3-$NH_2C_6H_4$
1431	3-$MeOC_6H_4CH_2$	2-$NH_2C_6H_4$
1432	3-$MeOC_6H_4CH_2$	4-$Me_2NC_6H_4$
1433	3-$MeOC_6H_4CH_2$	3-$Me_2NC_6H_4$
1434	3-$MeOC_6H_4CH_2$	2-$Me_2NC_6H_4$
1435	3-$MeOC_6H_4CH_2$	4-pyridyl
1436	3-$MeOC_6H_4CH_2$	3-pyridyl
1437	3-$MeOC_6H_4CH_2$	2-pyridyl
1438	3-$MeOC_6H_4CH_2$	2-thiazolyl
1439	3-$MeOC_6H_4CH_2$	2-pyrazolyl
1440	3-$MeOC_6H_4CH_2$	5-isoquinolyl

	1441	3-$MeOC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	1442	3-$MeOC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	1443	3-$MeOC_6H_4CH_2$	2-imidazolyl
	1444	3-$MeOC_6H_4CH_2$	2-oxazolyl
	1445	3-$MeOC_6H_4CH_2$	4-isoxazolyl
	1446	3-$MeOC_6H_4CH_2$	4-HOC_6H_4
	1447	3-$MeOC_6H_4CH_2$	3-HOC_6H_4
	1448	3-$MeOC_6H_4CH_2$	3,4-diHOC_6H_4
	1449	3-$MeOC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	1450	3-$MeOC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	1451	4-$MeOC_6H_4CH_2$	4-$MeOC_6H_4$
	1452	4-$MeOC_6H_4CH_2$	3-$MeOC_6H_4$
	1453	4-$MeOC_6H_4CH_2$	4-$NH_2C_6H_4$
	1454	4-$MeOC_6H_4CH_2$	3-$NH_2C_6H_4$
	1455	4-$MeOC_6H_4CH_2$	2-$NH_2C_6H_4$
	1456	4-$MeOC_6H_4CH_2$	4-$Me_2NC_6H_4$
	1457	4-$MeOC_6H_4CH_2$	3-$Me_2NC_6H_4$
	1458	4-$MeOC_6H_4CH_2$	2-$Me_2NC_6H_4$
	1459	4-$MeOC_6H_4CH_2$	4-pyridyl
	1460	4-$MeOC_6H_4CH_2$	3-pyridyl
	1461	4-$MeOC_6H_4CH_2$	2-pyridyl
	1462	4-$MeOC_6H_4CH_2$	2-thiazolyl
	1463	4-$MeOC_6H_4CH_2$	2-pyrazolyl
	1464	4-$MeOC_6H_4CH_2$	5-isoquinolyl
	1465	4-$MeOC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	1466	4-$MeOC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	1467	4-$MeOC_6H_4CH_2$	2-imidazolyl
	1468	4-$MeOC_6H_4CH_2$	2-oxazolyl
	1469	4-$MeOC_6H_4CH_2$	4-isoxazolyl
	1470	4-$MeOC_6H_4CH_2$	4-HOC_6H_4

1471	4-$MeOC_6H_4CH_2$	3-HOC_6H_4
1472	4-$MeOC_6H_4CH_2$	3,4-diHOC_6H_4
1473	4-$MeOC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
1474	4-$MeOC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
1475	2-$HOC_6H_4CH_2$	4-$MeOC_6H_4$
1476	2-$HOC_6H_4CH_2$	3-$MeOC_6H_4$
1477	2-$HOC_6H_4CH_2$	4-$NH_2C_6H_4$
1478	2-$HOC_6H_4CH_2$	3-$NH_2C_6H_4$
1479	2-$HOC_6H_4CH_2$	2-$NH_2C_6H_4$
1480	2-$HOC_6H_4CH_2$	4-$Me_2NC_6H_4$
1481	2-$HOC_6H_4CH_2$	3-$Me_2NC_6H_4$
1482	2-$HOC_6H_4CH_2$	2-$Me_2NC_6H_4$
1483	2-$HOC_6H_4CH_2$	4-pyridyl
1484	2-$HOC_6H_4CH_2$	3-pyridyl
1485	2-$HOC_6H_4CH_2$	2-pyridyl
1486	2-$HOC_6H_4CH_2$	2-thiazolyl
1487	2-$HOC_6H_4CH_2$	2-pyrazolyl
1488	2-$HOC_6H_4CH_2$	5-isoquinolyl
1489	2-$HOC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
1490	2-$HOC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
1491	2-$HOC_6H_4CH_2$	2-imidazolyl
1492	2-$HOC_6H_4CH_2$	2-oxazolyl
1493	2-$HOC_6H_4CH_2$	4-isoxazolyl
1494	2-$HOC_6H_4CH_2$	4-HOC_6H_4
1495	2-$HOC_6H_4CH_2$	3-HOC_6H_4
1496	2-$HOC_6H_4CH_2$	3,4-diHOC_6H_4
1497	2-$HOC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
1498	2-$HOC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
1499	3-$HOC_6H_4CH_2$	4-$MeOC_6H_4$
1500	3-$HOC_6H_4CH_2$	3-$MeOC_6H_4$
1501	3-$HOC_6H_4CH_2$	4-$NH_2C_6H_4$
1502	3-$HOC_6H_4CH_2$	3-$NH_2C_6H_4$

	1503	3-$HOC_6H_4CH_2$	2-$NH_2C_6H_4$
	1504	3-$HOC_6H_4CH_2$	4-$Me_2NC_6H_4$
	1505	3-$HOC_6H_4CH_2$	3-$Me_2NC_6H_4$
	1506	3-$HOC_6H_4CH_2$	2-$Me_2NC_6H_4$
	1507	3-$HOC_6H_4CH_2$	4-pyridyl
	1508	3-$HOC_6H_4CH_2$	3-pyridyl
	1509	3-$HOC_6H_4CH_2$	2-pyridyl
	1510	3-$HOC_6H_4CH_2$	2-thiazolyl
	1511	3-$HOC_6H_4CH_2$	2-pyrazolyl
	1512	3-$HOC_6H_4CH_2$	5-isoquinolyl
	1513	3-$HOC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	1514	3-$HOC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	1514	3-$HOC_6H_4CH_2$	2-imidazolyl
	1516	3-$HOC_6H_4CH_2$	2-oxazolyl
	1517	3-$HOC_6H_4CH_2$	4-isoxazolyl
	1518	3-$HOC_6H_4CH_2$	4-HOC_6H_4
	1519	3-$HOC_6H_4CH_2$	3-HOC_6H_4
	1520	3-$HOC_6H_4CH_2$	3,4-diHOC_6H_4
	1521	3-$HOC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	1522	3-$HOC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	1523	4-$HOC_6H_4CH_2$	4-$MeOC_6H_4$
	1524	4-$HOC_6H_4CH_2$	3-$MeOC_6H_4$
	1525	4-$HOC_6H_4CH_2$	4-$NH_2C_6H_4$
	1526	4-$HOC_6H_4CH_2$	3-$NH_2C_6H_4$
	1527	4-$HOC_6H_4CH_2$	2-$NH_2C_6H_4$
	1528	4-$HOC_6H_4CH_2$	4-$Me_2NC_6H_4$
	1529	4-$HOC_6H_4CH_2$	3-$Me_2NC_6H_4$
	1530	4-$HOC_6H_4CH_2$	2-$Me_2NC_6H_4$
	1531	4-$HOC_6H_4CH_2$	4-pyridyl
	1532	4-$HOC_6H_4CH_2$	3-pyridyl
	1533	4-$HOC_6H_4CH_2$	2-pyridyl
	1534	4-$HOC_6H_4CH_2$	2-thiazolyl

	1535	4-$HOC_6H_4CH_2$	2-pyrazolyl
	1536	4-$HOC_6H_4CH_2$	5-isoquinolyl
	1537	4-$HOC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	1538	4-$HOC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	1539	4-$HOC_6H_4CH_2$	2-imidazolyl
	1540	4-$HOC_6H_4CH_2$	2-oxazolyl
	1541	4-$HOC_6H_4CH_2$	4-isoxazolyl
	1542	4-$HOC_6H_4CH_2$	4-HOC_6H_4
	1543	4-$HOC_6H_4CH_2$	3-HOC_6H_4
	1544	4-$HOC_6H_4CH_2$	3,4-diHOC_6H_4
	1545	4-$HOC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	1546	4-$HOC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	1547	4-$ClC_6H_4CH_2$	4-$MeOC_6H_4$
	1548	4-$ClC_6H_4CH_2$	3-$MeOC_6H_4$
	1549	4-$ClC_6H_4CH_2$	4-$NH_2C_6H_4$
	1550	4-$ClC_6H_4CH_2$	3-$NH_2C_6H_4$
	1551	4-$ClC_6H_4CH_2$	2-$NH_2C_6H_4$
	1552	4-$ClC_6H_4CH_2$	4-$Me_2NC_6H_4$
	1553	4-$ClC_6H_4CH_2$	3-$Me_2NC_6H_4$
	1554	4-$ClC_6H_4CH_2$	2-$Me_2NC_6H_4$
	1555	4-$ClC_6H_4CH_2$	4-pyridyl
	1556	4-$ClC_6H_4CH_2$	3-pyridyl
	1557	4-$ClC_6H_4CH_2$	2-pyridyl
	1558	4-$ClC_6H_4CH_2$	2-thiazolyl
	1559	4-$ClC_6H_4CH_2$	2-pyrazolyl
	1560	4-$ClC_6H_4CH_2$	5-isoquinolyl
	1561	4-$ClC_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	1562	4-$ClC_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	1563	4-$ClC_6H_4CH_2$	2-imidazolyl
	1564	4-$ClC_6H_4CH_2$	2-oxazolyl

	1565	4-$ClC_6H_4CH_2$	4-isoxazolyl
	1566	4-$ClC_6H_4CH_2$	4-HOC_6H_4
	1567	4-$ClC_6H_4CH_2$	3-HOC_6H_4
	1568	4-$ClC_6H_4CH_2$	3,4-diHOC_6H_4
	1569	4-$ClC_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	1570	4-$ClC_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	1571	2-$NH_2CH_2C_6H_4CH_2$	4-$MeOC_6H_4$
	1572	2-$NH_2CH_2C_6H_4CH_2$	3-$MeOC_6H_4$
	1573	2-$NH_2CH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
	1574	2-$NH_2CH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
	1575	2-$NH_2CH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
	1576	2-$NH_2CH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
	1577	2-$NH_2CH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
	1578	2-$NH_2CH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
	1579	2-$NH_2CH_2C_6H_4CH_2$	4-pyridyl
	1580	2-$NH_2CH_2C_6H_4CH_2$	3-pyridyl
	1581	2-$NH_2CH_2C_6H_4CH_2$	2-pyridyl
	1582	2-$NH_2CH_2C_6H_4CH_2$	2-thiazolyl
	1583	2-$NH_2CH_2C_6H_4CH_2$	2-pyrazolyl
	1584	2-$NH_2CH_2C_6H_4CH_2$	5-isoquinolyl
	1585	2-$NH_2CH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	1586	2-$NH_2CH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	1587	2-$NH_2CH_2C_6H_4CH_2$	2-imidazolyl
	1588	2-$NH_2CH_2C_6H_4CH_2$	2-oxazolyl
	1589	2-$NH_2CH_2C_6H_4CH_2$	4-isoxazolyl
	1590	2-$NH_2CH_2C_6H_4CH_2$	4-HOC_6H_4
	1591	2-$NH_2CH_2C_6H_4CH_2$	3-HOC_6H_4
	1592	2-$NH_2CH_2C_6H_4CH_2$	3,4-diHOC_6H_4
	1593	2-$NH_2CH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	1594	2-$NH_2CH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	1595	3-$NH_2CH_2C_6H_4CH_2$	4-$MeOC_6H_4$
	1596	3-$NH_2CH_2C_6H_4CH_2$	3-$MeOC_6H_4$

1597	3-$NH_2CH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
1598	3-$NH_2CH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
1599	3-$NH_2CH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
1600	3-$NH_2CH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
1601	3-$NH_2CH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
1602	3-$NH_2CH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
1603	3-$NH_2CH_2C_6H_4CH_2$	4-pyridyl
1604	3-$NH_2CH_2C_6H_4CH_2$	3-pyridyl
1605	3-$NH_2CH_2C_6H_4CH_2$	2-pyridyl
1606	3-$NH_2CH_2C_6H_4CH_2$	2-thiazolyl
1607	3-$NH_2CH_2C_6H_4CH_2$	2-pyrazolyl
1608	3-$NH_2CH_2C_6H_4CH_2$	5-isoquinolyl
1609	3-$NH_2CH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
1610	3-$NH_2CH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
1611	3-$NH_2CH_2C_6H_4CH_2$	2-imidazolyl
1612	3-$NH_2CH_2C_6H_4CH_2$	2-oxazolyl
1613	3-$NH_2CH_2C_6H_4CH_2$	4-isoxazolyl
1614	3-$NH_2CH_2C_6H_4CH_2$	4-HOC_6H_4
1615	3-$NH_2CH_2C_6H_4CH_2$	3-HOC_6H_4
1616	3-$NH_2CH_2C_6H_4CH_2$	3,4-diHOC_6H_4
1617	3-$NH_2CH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
1618	3-$NH_2CH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
1619	4-$NH_2CH_2C_6H_4CH_2$	4-$MeOC_6H_4$
1620	4-$NH_2CH_2C_6H_4CH_2$	3-$MeOC_6H_4$
1621	4-$NH_2CH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
1622	4-$NH_2CH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
1623	4-$NH_2CH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
1624	4-$NH_2CH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
1625	4-$NH_2CH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
1626	4-$NH_2CH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
1627	4-$NH_2CH_2C_6H_4CH_2$	4-pyridyl
1628	4-$NH_2CH_2C_6H_4CH_2$	3-pyridyl

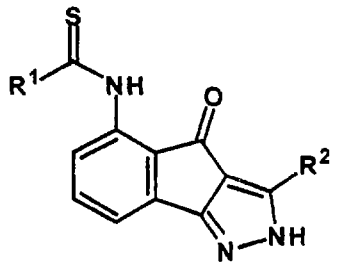
	1629	4-$NH_2CH_2C_6H_4CH_2$	2-pyridyl
	1630	4-$NH_2CH_2C_6H_4CH_2$	2-thiazolyl
	1631	4-$NH_2CH_2C_6H_4CH_2$	2-pyrazolyl
	1632	4-$NH_2CH_2C_6H_4CH_2$	5-isoquinolyl
	1633	4-$NH_2CH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	1634	4-$NH_2CH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	1635	4-$NH_2CH_2C_6H_4CH_2$	2-imidazolyl
	1636	4-$NH_2CH_2C_6H_4CH_2$	2-oxazolyl
	1637	4-$NH_2CH_2C_6H_4CH_2$	4-isoxazolyl
	1638	4-$NH_2CH_2C_6H_4CH_2$	4-HOC_6H_4
	1639	4-$NH_2CH_2C_6H_4CH_2$	3-HOC_6H_4
	1640	4-$NH_2CH_2C_6H_4CH_2$	3,4-diHOC_6H_4
	1641	4-$NH_2CH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	1642	4-$NH_2CH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	1643	2-$Me_2NCH_2C_6H_4CH_2$	4-$MeOC_6H_4$
	1644	2-$Me_2NCH_2C_6H_4CH_2$	3-$MeOC_6H_4$
	1645	2-$Me_2NCH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
	1646	2-$Me_2NCH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
	1647	2-$Me_2NCH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
	1648	2-$Me_2NCH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
	1649	2-$Me_2NCH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
	1650	2-$Me_2NCH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
	1651	2-$Me_2NCH_2C_6H_4CH_2$	4-pyridyl
	1652	2-$Me_2NCH_2C_6H_4CH_2$	3-pyridyl
	1653	2-$Me_2NCH_2C_6H_4CH_2$	2-pyridyl
	1654	2-$Me_2NCH_2C_6H_4CH_2$	2-thiazolyl
	1655	2-$Me_2NCH_2C_6H_4CH_2$	2-pyrazolyl
	1656	2-$Me_2NCH_2C_6H_4CH_2$	5-isoquinolyl
	1657	2-$Me_2NCH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	1658	2-$Me_2NCH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3

	1659	2-$Me_2NCH_2C_6H_4CH_2$	2-imidazolyl
	1660	2-$Me_2NCH_2C_6H_4CH_2$	2-oxazolyl
	1661	2-$Me_2NCH_2C_6H_4CH_2$	4-isoxazolyl
	1662	2-$Me_2NCH_2C_6H_4CH_2$	4-HOC_6H_4
	1663	2-$Me_2NCH_2C_6H_4CH_2$	3-HOC_6H_4
	1664	2-$Me_2NCH_2C_6H_4CH_2$	3,4-diHOC_6H_4
	1665	2-$Me_2NCH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	1666	2-$Me_2NCH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$
	1667	3-$Me_2NCH_2C_6H_4CH_2$	4-$MeOC_6H_4$
	1668	3-$Me_2NCH_2C_6H_4CH_2$	3-$MeOC_6H_4$
	1669	3-$Me_2NCH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
	1670	3-$Me_2NCH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
	1671	3-$Me_2NCH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
	1672	3-$Me_2NCH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
	1673	3-$Me_2NCH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
	1674	3-$Me_2NCH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
	1675	3-$Me_2NCH_2C_6H_4CH_2$	4-pyridyl
	1676	3-$Me_2NCH_2C_6H_4CH_2$	3-pyridyl
	1677	3-$Me_2NCH_2C_6H_4CH_2$	2-pyridyl
	1678	3-$Me_2NCH_2C_6H_4CH_2$	2-thiazolyl
	1679	3-$Me_2NCH_2C_6H_4CH_2$	2-pyrazolyl
	1680	3-$Me_2NCH_2C_6H_4CH_2$	5-isoquinolyl
	1681	3-$Me_2NCH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
	1682	3-$Me_2NCH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
	1683	3-$Me_2NCH_2C_6H_4CH_2$	2-imidazolyl
	1684	3-$Me_2NCH_2C_6H_4CH_2$	2-oxazolyl
	1685	3-$Me_2NCH_2C_6H_4CH_2$	4-isoxazolyl
	1686	3-$Me_2NCH_2C_6H_4CH_2$	4-HOC_6H_4
	1687	3-$Me_2NCH_2C_6H_4CH_2$	3-HOC_6H_4
	1688	3-$Me_2NCH_2C_6H_4CH_2$	3,4-diHOC_6H_4
	1689	3-$Me_2NCH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
	1690	3-$Me_2NCH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$

1691	4-$Me_2NCH_2C_6H_4CH_2$	4-$MeOC_6H_4$
1692	4-$Me_2NCH_2C_6H_4CH_2$	3-$MeOC_6H_4$
1693	4-$Me_2NCH_2C_6H_4CH_2$	4-$NH_2C_6H_4$
1694	4-$Me_2NCH_2C_6H_4CH_2$	3-$NH_2C_6H_4$
1695	4-$Me_2NCH_2C_6H_4CH_2$	2-$NH_2C_6H_4$
1696	4-$Me_2NCH_2C_6H_4CH_2$	4-$Me_2NC_6H_4$
1697	4-$Me_2NCH_2C_6H_4CH_2$	3-$Me_2NC_6H_4$
1698	4-$Me_2NCH_2C_6H_4CH_2$	2-$Me_2NC_6H_4$
1699	4-$Me_2NCH_2C_6H_4CH_2$	4-pyridyl
1700	4-$Me_2NCH_2C_6H_4CH_2$	3-pyridyl
1701	4-$Me_2NCH_2C_6H_4CH_2$	2-pyridyl
1702	4-$Me_2NCH_2C_6H_4CH_2$	2-thiazolyl
1703	4-$Me_2NCH_2C_6H_4CH_2$	2-pyrazolyl
1704	4-$Me_2NCH_2C_6H_4CH_2$	5-isoquinolyl
1705	4-$Me_2NCH_2C_6H_4CH_2$	3,4-methylenedioxyC_6H_3
1706	4-$Me_2NCH_2C_6H_4CH_2$	3,4-ethylenedioxyC_6H_3
1707	4-$Me_2NCH_2C_6H_4CH_2$	2-imidazolyl
1708	4-$Me_2NCH_2C_6H_4CH_2$	2-oxazolyl
1709	4-$Me_2NCH_2C_6H_4CH_2$	4-isoxazolyl
1710	4-$Me_2NCH_2C_6H_4CH_2$	4-HOC_6H_4
1711	4-$Me_2NCH_2C_6H_4CH_2$	3-HOC_6H_4
1712	4-$Me_2NCH_2C_6H_4CH_2$	3,4-diHOC_6H_4
1713	4-$Me_2NCH_2C_6H_4CH_2$	4-$NH_2CH_2C_6H_4$
1714	4-$Me_2NCH_2C_6H_4CH_2$	3-$NH_2CH_2C_6H_4$

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Table 4



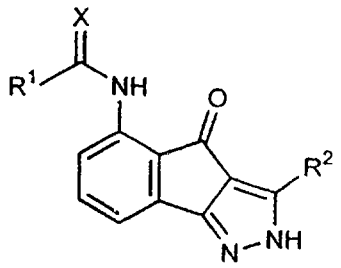
Example Number	R^1	R^2
1715	Methyl	4-$MeOC_6H_4$
1716	$ClCH_2$	4-$MeOC_6H_4$
1717	cyclopropyl	4-$MeOC_6H_4$
1718	isopropyl	4-$MeOC_6H_4$
1719	ethyl	4-$MeOC_6H_4$
1720	cyclopentyl	4-$MeOC_6H_4$
1721	cyclobutyl	4-$MeOC_6H_4$
1722	benzyl	4-$MeOC_6H_4$
1723	n-propyl	4-$MeOC_6H_4$
1724	4-$ClC_6H_4CH_2$	4-$MeOC_6H_4$
1725	3-$MeOC_6H_4CH_2$	4-$MeOC_6H_4$
1726	4-$MeOC_6H_4CH_2$	4-$MeOC_6H_4$
1727	3,4-di$MeOC_6H_4CH_2$	4-$MeOC_6H_4$
1728	2,5-di$MeOC_6H_4CH_2$	4-$MeOC_6H_4$
1729	Methyl	2-$MeOC_6H_4$
1730	Methyl	3,4-di$MeOC_6H_4$
1731	3,4-$(OCH_2O)C_6H_4CH_2$	4-$MeOC_6H_4$
1732	3-thiophenylCH_2	4-$MeOC_6H_4$
1733	2-$MeOC_6H_4CH_2$	4-$MeOC_6H_4$
1734	3,4-di$ClOC_6H_4CH_2$	4-$MeOC_6H_4$
1735	2,4-di$ClOC_6H_4CH_2$	4-$MeOC_6H_4$
1736	2-$ClC_6H_4CH_2$	4-$MeOC_6H_4$

1737	H_2NCH_2	4-$MeOC_6H_4$
1738	$HOCH_2NHCH_2CH_2$	4-$MeOC_6H_4$
1739	Me_2NCH_2	4-$MeOC_6H_4$
1740	piperazinylCH_2	4-$MeOC_6H_4$
1741	4-Me-piperazinylCH_2	4-$MeOC_6H_4$
1742	4-$HOCH_2CH_2$-piperazinylCH_2	4-$MeOC_6H_4$
1743	piperidinylCH_2	4-$MeOC_6H_4$
1744	4-NH_2CH_2-piperidinylCH_2	4-$MeOC_6H_4$
1745	$CH_3CH_2NHCH_2$	4-$MeOC_6H_4$
1746	thiomorpholinylCH_2	4-$MeOC_6H_4$
1747	morpholinylCH_2	4-$MeOC_6H_4$
1748	pyyrolidinylCH_2	4-$MeOC_6H_4$
1749	4-pyridylCH_2NHCH_2	4-$MeOC_6H_4$
1750	4-$CH_3CONHC_6H_4CH_2$	4-$MeOC_6H_4$
1751	4-$CH_3OCONHC_6H_4CH_2$	4-$MeOC_6H_4$
1752	4-$NH_2CH_2CONHC_6H_4CH_2$	4-$MeOC_6H_4$
1753	4-$Me_2NCH_2CONHC_6H_4CH_2$	4-$MeOC_6H_4$
1754	4-$N_3C_6H_4CH_2$	4-$MeOC_6H_4$
1755	4-$NH_2C_6H_4CH_2$	4-$MeOC_6H_4$
1756	C_6H_5NH	4-$MeOC_6H_4$
1757	$CH_3CH_2CH_2NH$	4-$MeOC_6H_4$
1758	4-$NH_2C_6H_4CH_2NH$	4-$MeOC_6H_4$
1759	4-pyridyCH_2NH	4-$MeOC_6H_4$
1760	Methyl	4-HOC_6H_4
1761	H	4-$MeOC_6H_4$
1762	Methyl	3-pyridyl
1763	Methyl	4-pyridyl
1764	H	4-pyridyl
1765	Methyl	C_6H_5

1766	Methyl	4-$MeSC_6H_4$
1767	Methyl	4-$MeSO_2C_6H_4$
1768	Methyl	4-$Me_2NC_6H_4$
1769	morpholinylCH_2	4-$Me_2NC_6H_4$
1770	Me_2NCH_2	4-$Me_2NC_6H_4$
1771	Me_2NCH_2	4-(piperdinyl)C_6H_4
1772	Me_2NCH_2	4-(morpholinyl)C_6H_4
1773	Me_2NCH_2	4-$CH_3CH_2OC_6H_4$
1774	Me_2NCH_2	4-$CH_3CH_2CH_2CH_2C_6H_4$
1775	Me_2NCH_2	4-$CH_3CH_2C_6H_4$
1776	Me_2NCH_2	4-$CH_3CH_2CH_2C_6H_4$

Claims:

1. A compound according to formula (I):



(I)

or stereoisomers, pharmaceutically acceptable salts, and prodrugs thereof, wherein:

X is selected from the groups: O, S, and NR;

R is selected from the groups: H, C_{1-4} alkyl, and NR^5R^{5a};

R^1 is selected from the groups: H, C_{1-10} alkyl substituted with 0-3 R^c, C_{2-10} alkenyl substituted with 0-3 R^c, C_{2-10} alkynyl substituted with 0-3 R^c, $-NHR^4$, C_{3-10} membered carbocycle substituted with 0-5 R^a, and 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b;

R^a is independently selected from the groups: R^5 $R^{5a}N(CR^6R^{6a})m$, R^5 $O(CR^6R^{6a})m$, halo, -CN, N_3, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, =O, OR^3, SR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S; alternatively, when two R^a's are present on adjacent carbon atoms they combine to form $-OCH_2O-$ or $-OCH_2CH_2O-$;

R^b is independently selected from the groups: halo, -CN, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $CON(R^6)((CH_2)_mR^7)$, $CO(CH_2)_mR^7$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, and SO_2R^{3b};

R^c is independently selected from the groups: halo, -CN, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^5NR^5R^{5a}$, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, =O, OR^3, COR^3,

CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $SO_2N^3R^{3a}$, SO_2R^{3b}, C_{3-10} membered carbocycle substituted with 0-5 R^a, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3;

R^2 is selected from the groups: H, C^{1-10} alkyl substituted with 0-3 R^c, C_{2-10} alkenyl substituted with 0-3 R^c, C_{2-10} alkynyl substituted with 0-3 R^c, $-(CF_2)_mCF^3$, C_{3-10} membered carbocycle substituted with 0-5 R^a, and 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b;

R^3 is independently selected from the groups: H, halo, -CN, NO_2, C_{1-4} haloalkyl, $R^5R^{5a}N(CR^6R^{6a})m$, $NR^5NR^5R^{5a}$, $NR^5C(O)OR^5$, $NR^5C(O)R^5$, =O, $R^5O(CR^6R^{6a})m$, COR^5, CO_2R^5, $CONR^5R^{5a}$, $NHC(O)NR^5R^{5a}$, $NHC(S)NR^5R^{5a}$, $SO_2NR^5R^{5a}$, SO_2R^{5b}, C_{1-4} alkyl, phenyl, and benzyl;

R^{3a} is independently selected from the groups: H, C_{1-4} alkyl, phenyl, and benzyl;

alternatively, R^3 and R^{3a}, together with the atoms to which they are attached, form a heterocycle having 4-8 atoms in the ring and containing an additional 0-1 N, S, or O atom and substituted with 0-3 R^{3c};

R^{3b} is independently selected from the groups: H, C_{1-4} alkyl, phenyl, and benzyl;

R^{3c} is independently selected from the groups: halo, -CN, N_3, NO_2, C_{1-4} alkyl, C_{3-8} cycloalkyl, C_{4-10} cycloalkylalkyl, C_{1-4} haloalkyl, NR^3R^{3b}, $R^5R^{5a}N(CR^6R^{6a})m$, =O, OR^3, $R^5O(CR^6\ R^{6a})m$, COR^3, CO_2R^3, $CONR^3R^{3b}$, $NHC(O)NR^3R^{3b}$, $NHC(S)NR^3R^{3b}$, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, $C(=NR^5)R^{5a}$, $C(=NR^5)NR^{5a}R^{5b}$, $SO_2NR^3R^{3b}$, SO_2R^{3b}, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S;

R^4 is independently selected from the groups: H, -CN, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, C_{3-10} membered carbocycle substituted with 0-5 R^a, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3;

R^5 is independently selected from the groups: H, C_{1-4} alkyl, phenyl and benzyl;
R^{5a} is independently selected from the groups: H, C_{1-4} alkyl, phenyl and benzyl;
alternatively, R^5 and R^{5a}, together with the atoms to which they are attached, form a heterocycle having 4-8 atoms in the ring and containing an additional 0-1 N, S, or O atom;
R^{5b} is independently selected from the groups: H, C_{1-4} alkyl, phenyl and benzyl;
R^6 is idependently selected from the groups: H, C_{1-4} alkyl;
R^{6a} is independently selected from the groups: H, C_{1-4} alkyl;
R^7 is independently selected from the groups: NR^3R^{3a}, C_{3-10} membered carbocycle substituted with 0-3 R^3, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3; and
m is independently selected from 0, 1, 2, 3, and 4;
provided that: when R^2 is a C_{1-4} unsubstituted, branched alkyl then R^1 is not CH_3; or when R^1 is NHR^4 and R^4 is NR^3R^{3a} then R^3 and R^{3a} can not both be phenyl.

2. A compound according to claim 1, wherein
X is O or S;
R^1 is H, C_{1-10} alkyl substituted with 0-3 R^c, -NHR^4, C_{3-10} membered carbocycle substituted with 0-5 R^a, or 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5;
R^c is independently selected from the groups: halo, C_{3-10} membered carbocycle substituted with 0-5 R^a, 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3, NR^3R^{3a};
R^3 is H, C_{1-4} alkyl, phenyl, benzyl, or together with the atoms to which they are attached, form a heterocycle having 4-8 atoms in the ring and containing an additional 0-1 N, S, or O atom and substituted with 0-3 R^{3c};
R^4 is H, C_{1-4} alkyl, NR^3R^{3a}, C_{3-10} membered carbocycle substituted with 0-5 R^a, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected

from O, N, and S, substituted with 0-3 R^3;

R^2 is selected from the groups: C_{3-10} membered carbocycle substituted with 0-5 R^a, and 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b, and C_{1-10} alkyl substituted with 0-3 R^c.

3. A compound according to claim 1, wherein

X is O or S;

R^1 is C_{1-4} alkyl substituted with 0-3 R^c, wherein R^c is independently selected from the group consisting of: C_{3-6} membered carbocycle substituted with 0-5 R^a, 5-6 membered heterocycle substituted with 0-3 R^3, NR^3R^{3a}, and OR^3; C_{3-6} membered carbocycle substituted with 0-5 R^a, wherein R^a is independently selected from the group consisting of: $R^5R^{5a}N(CR^6R^{6a})m$-, $R^5O(CR^6R^{6a})m$-, OR^3, halo, C_{1-4} alkyl, $-NR^3C(O)R^3$, COR^3, CO_2R^3, N_3, $NR^3C(O)OR^3$, NR^3R^{3a}, $CONR^3R^{3a}$, and 5-6 membered heterocycle; or when two R^a's are present on adjacent carbon atoms they combine to form $-OCH_2O-$ or $-OCH_2CH_2O-$; or 5-6 membered heterocycle and substituted with 0-5 R^b, wherein R^b is independently selected from the group: OR^3, halo, COR^3, C_{1-4} alkyl, CO_2R^3, $NR^3C(O)R^3$, $NR^3C(O)OR^3$, NR^3R^{3a}, and $CONR^3R^{3a}$;

R^2 is C_{3-6} membered carbocycle substituted with 0-5 R^a, wherein R^a is independently selected from the groups: $R^5R^{5a}N(CR^6R^{6a})m$, $R^5O(CR^6R^{6a})m$, OR^3, halo, C_{1-4} alkyl, $NR^3C(O)R^3$, COR^3, CO_2R^3, N_3, $NR^3C(O)OR^3$, NR^3R^{3a}, $CONR^3R^{3a}$, and 5-6 membered heterocycle, or when two R^a's are present on adjacent carbon atoms they combine to form $-OCH_2O-$ or $-OCH_2CH_2O-$; 3-6 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b, wherein R^b is independently selected from the group: OR^3, halo, COR^3, C_{1-4} alkyl, CO_2R^3, $NR^3C(O)R^3$, $NR^3C(O)OR^3$, NR^3R^{3a}, and $CONR^3R^{3a}$; or C_{1-10} alkyl substituted with 0-3 R^c, wherein R^c is independently selected from the groups: C_{3-6} membered carbocycle substituted with 0-5 R^a, 5-6 membered heterocycle substituted with 0-3 R^3, NR^3R^{3a}, and OR^3.

4. A compound according to claim 1, wherein

X is O or S;

R^1 is selected from the groups: H, -NHR^4, C_{1-4} alkyl substituted with 0-3 R^c, C_{3-6} membered carbocycle substituted with 0-5 R^a, and 5-6 membered heterocycle and substituted with 0-5 R^b;

R^2 is selected from the group: C_{3-6} membered carbocycle substituted with 0-5 R^a, 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b, and C_{1-10} alkyl substituted with 0-3 R^c, C_{2-10} alkenyl substituted with 0-3 R^c;

R^4 is independently selected from the groups: H, C_{1-4} alkyl, NR^3R^{3a}, 3-6 membered carbocycle substituted with 0-5 R^a, and 5-6 membered heterocycle substituted with 0-3 R^3;

R^3 is independently selected from the group: H, halo, COR^5, CO_2R^5, $R^5R^{5a}N(CR^6R^{6a})m$, $R^5O(CR^6R^{6a})m$, $CONR^5R^{5a}$, $NR^5C(O)OR^5$, $NR^5C(O)R^5$, C_{1-4} alkyl, phenyl, and benzyl;

R^{3a} is independently selected from the group: H, C_{1-4} alkyl, phenyl, and benzyl; or R^3 and R^{3a}, together with the atoms to which they are attached, form a 5-6 membered heterocycle containing an additional 0-1 N, S, or O atom and substituted with 0-3 R^{3c};

R^c is independently selected from the groups: C_{3-6} membered carbocycle substituted with 0-5 R^a, 5-6 membered heterocycle substituted with 0-3 R^3, NR^3R^{3a}, and OR^3;

R^a is independently selected from the groups: $R^5R^{5a}N(CR^6R^{6a})m$, $R^5O(CR^6R^{6a})m$, OR^3, halo, C_{1-4} alkyl, $NR^3C(O)R^3$, COR^3, CO_2R^3, N_3, $NR^3C(O)OR^3$, NR^3R^{3a}, $CONR^3R^{3a}$, 5-6 membered heterocycle; or when two R^a's are present on adjacent carbon atoms they combine to form -OCH_2O- or -OCH_2CH_2O-;

R^b is independently selected from the group: OR^3, halo, COR^3, C_{1-4} alkyl, CO_2R^3, $NR^3C(O)R^3$, $NR^3C(O)OR^3$, NR^3R^{3a}, $CONR^3R^{3a}$;

R^{3c} is independently selected from the groups: OR^3, halo, COR^3, $R^5R^{5a}N(CR^6R^{6a})m$-, $R^5O)(CR^6R^{6a})m$-, CO_2R^3, N_3, NR^3R^{3b}, C_{1-4} alkyl,

$NR^3C(O)R^3$, $NR^3C(O)OR^3$, N_3, NR^3R^{3b}, $CONR^3R^{3b}$, and 5-6 membered heterocycle; and

m is independently selected from the group consisting of 1 2, 3 and 4.

5. A compound according to claim 1, wherein

R^1 is selected from the group: $-NHR^4$ and C_{1-2} alkyl substituted with 1 R^c.

6. A compound according to claim 1 wherein

X is O or S; and

R^1 is selected from the group: H, C_{1-4} alkyl substituted with 0-3 R^c, C_{2-4} alkenyl substituted with 0-3 R^c, C_{2-4} alkynyl substituted with 0-3 R^c, $-NHR^4$, C_{3-6} carbocycle substituted with 0-5 R^a, and 3-6 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b.

7. A compound according to claim 1 wherein

X is O or S; and

R^1 is selected from the group: H, C_{1-4} alkyl substituted with 0-3 R^c, C_{2-4} alkenyl substituted with 0-3 R^c, C_{2-4} alkynyl substituted with 0-3 R^c, $-NHR^4$, C_{3-6} carbocycle substituted with 0-5 R^a, and $_{3-6}$ membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b;

R^a is independently at each occurrence selected from the group: $-CH_2N(CH_3)_2$, $-CH_2NH_2$, -SH, $-SCH_3$, $-NR_3C(O)R_3$, $-N_3$, halo, C_{1-4} alkyl, NR^3R^{3a}, and OR^3 ; alternatively, when two R^a's are present on adjacent carbon atoms they combine to form $-OCH_2O-$ or $-OCH_2CH_2O-$;

R^b is independently at each occurrence selected from the group: halo, C_{1-4} alkyl, NR^3R^{3a}, OR^3, COR^3, and CO_2R^3;

R^c is independently at each occurrence selected from the group: halo, C_{1-4} alkyl, NR^3R^{3a}, C_{3-6} carbocycle substituted with 0-5 R^a, and 5-7 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3;

R^{3a} is H or C_{1-4} alkyl; and

R^3 is selected from the group: H, $-CH_2CH_2OH$, $-C(O)CH_2NH_2$, $-C(O)CH_2N(CH_3)_2$, $-NR^5R^{5a}$, $-C_{1-4}$ alkyl-NR^5R^{5a}, C_{1-4} alkyl, phenyl, and benzyl.

8. A compound according to claim 1 wherein

X is O or S;

R^1 is selected from the group: H, C_{1-4} alkyl substituted with 0-3 R^c, $-NHR^4$, C_{3-6} carbocycle substituted with 0-5 R^a, and 3-6 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b;

R^a is independently at each occurrence selected from the group: $-CH_2N(CH_3)_2$, $-CH_2NH_2$, -SH, $-SCH_3$, halo, C_{1-4} alkyl, NR^3R^{3a}, and OR^3; alternatively, when two R^a's are present on adjacent carbon atoms they combine to form $-OCH_2O-$ or $-OCH_2CH_2O-$;

R^b is independently at each occurrence selected from the group: halo, C_{1-4} alkyl, NR^3R^{3a}, OR^3, COR^3, and CO_2R^3;

R^c is independently at each occurrence selected from the group: -OH, chloro, C_{1-4} alkyl, $-NH_2$, $-NHCH_3$, $-NHCH_2CH_3$, $-NHCH_2CH_2CH_3$, $-NHCH_2CH_2OH$, $-N(CH_3)_2$, phenyl substituted with 0-5 R^a, and 5-7 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3.

9. A compound according to claim 1 wherein

R^1 is selected from the group: H, C_{1-10} alkyl substituted with 0-3 R^c, C_{2-10} alkenyl substituted with 0-3 R^c, C_{2-10} alkynyl substituted with 0-3 R^c;

R^2 is selected from the group: H, $-(CF_2)_mCF_3$, C_{3-10} carbocycle substituted with 0-5 R^a, and 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b; and

R^c is independently at each occurrence selected from the group: phenyl substituted with 0-5 R^a, and thiophenyl or pyridyl, which is substituted with

0-3 R^3.

10. A compound according to claim 1 wherein
R^1 is selected from the group: H, C_{1-10} alkyl substituted with 0-3 R^c, C_{2-10} alkenyl substituted with 0-3 R^c, C_{2-10} alkynyl substituted with 0-3 R^c;
R^2 is selected from the group: H, $-(CF_2)_mCF_3$, C_{3-10} carbocycle substituted with 0-5 R^a, and 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b; and
R^c is independently at each occurrence selected from the group: thiophenyl, piperazinyl, piperidinyl, thiomorpholinyl, morpholinyl, pyrrolidinyl, and pyridyl, which is substituted with 0-3 substituents independently selected from the group consisting of CH_3, CH_2CH_2OH, $CH_2CH_2NH_2$, $-C(=O)NH_2$, $-OCH_3$, CH_2NH_2, $NHCH_2CH_3$, OH, NH_2, halo, $-CH_2N(CH_3)_2$, $-OCH_2CH_2O-$, $-OCH_2O-$, $-N(CH_3)_2$, uridomethyl, and pyridyl.

11. A compound according to claim 1 wherein
R^1 is selected from the group: H, C_{1-10} alkyl substituted with 0-3 R^c, C_{2-10} alkenyl substituted with 0-3 R^c, C_{2-10} alkynyl substituted with 0-3 R^c;
R^2 is selected from the group: H, $-(CF_2)_mCF_3$, C_{3-10} carbocycle substituted with 0-5 R^a, and 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b; and
R^c is phenyl substituted with 0-5 substituents independently selected from the group consisting of CH_3, CH_2CH_2OH, $CH_2CH_2NH_2$, $-C(=O)NH_2$, $-OCH_3$, CH_2NH_2, $NHCH_2CH_3$, OH, NH_2, halo, $-CH_2N(CH_3)_2$, $-OCH_2CH_2O-$, $-OCH_2O-$, $-N(CH_3)_2$, uridomethyl, and pyridyl.

12. A compound according to claim 1 wherein
X is O or S;
R^1 is $-NHR^4$ or methylene substituted with 0-3 R^c;
R^c is NR^3R^{3a};
R^4 is selected from the group consisting of H, C_{1-4} alkyl, and NR^3R^{3a}; and
R^3 and R^{3a}, are independently hydrogen or C_{1-4} alkyl, or R^3 and R^{3a}, together

with the nitrogen atom to which they are attached, form a 4-8 membered heterocycle containing an additional 0-1 N, S, or O atom and substituted with 0-3 R^{3c}.

13. A compound according to claim 1 wherein
X is O or S;
R^1 is -NHR^4 or methylene substituted with 0-3 R^c;
R^c is NR^3R^{3a};
R^4 is selected from the group consisting of H, C_{1-4} alkyl, and NR^3R^{3a}; and
R^3 and R^{3a}, are independently hydrogen or C_{1-4} alkyl, or R^3 and R^{3a}, together with the nitrogen atom to which they are attached, form a 4-8 membered heterocycle containing an additional 0-1 N, S, or O atom and substituted with with 0-3 substituents independently selected from the group consisting of methyl, $-CH_2OCH_3$, $-C(CH_3)_2OCH_3$, $-CH_2CH_2OH$, $-CH_2OH$, $-CH_2OCH_2$ Phenyl, $-CH_2CH_2NH_2$, $-CH_2NH_2$, $-C(=NH)CH_3$, and NH_2.

14. A compound according to claim 1 wherein
X is O or S; and
R^1 is selected from the group: methylene substituted with a substituent selected from the group consisting of: halo, NR^3R^{3a}, C_{3-6} carbocycle substituted with 0-5 R^a, and 5-7 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3 R^3.

15. A compound according to claim 1 wherein
X is O or S;
R^1 is selected from the group: methylene substituted with NR^3R^{3a}; and
R^3 and R^{3a}, together with the nitrogen atom to which they are attached, form pyrrolyl, pyrrolinyl, pyrrolidinyl, imidazolyl, imidazolinyl, imidazolidinyl, pyrazolyl, pyrazolinyl, pyrazolidinyl, thiomorpholinyl, pymorpholinyl, piperidinyl, piperazinyl, or piperadinyl, which is substituted with 0-3 R^{3c}.

16. A compound according to claim 1 wherein
R^1 is -NHR^4;
R^4 is NR^3R^{3a}; and
R^3 and R^{3a}, together with the nitrogen atom to which they are attached, form pyrrolyl, pyrrolinyl, pyrrolidinyl, imidazolyl, imidazolinyl, imidazolidinyl, pyrazolyl, pyrazolinyl, pyrazolidinyl, thiomorpholinyl, pymorpholinyl, piperidinyl, piperazinyl, or piperadinyl, which is substituted with 0-3 R^{3c}.

17. A compound according to claim 1 wherein
R^1 is -NHR^4;
R^4 is NR^3R^{3a}; and
R^3 and R^{3a}, together with the nitrogen atom to which they are attached, form pyrrolyl, pyrrolinyl, pyrrolidinyl, imidazolyl, imidazolinyl, imidazolidinyl, pyrazolyl, pyrazolinyl, pyrazolidinyl, thiomorpholinyl, pymorpholinyl, piperidinyl, piperazinyl, or piperadinyl, which is substituted with 0-3 substituents independently selected from the group consisting of methyl, -CH_2OCH_3, -$C(CH_3)_2OCH_3$, -CH_2CH_2OH, -CH_2OH, -CH_2OCH_2Phenyl, -$CH_2CH_2NH_2$, -CH_2NH_2, -$C(=NH)CH_3$, and NH_2.

18. A compound according to claim 1, wherein
R^2 is selected from the group: 5- to 7- membered monocyclic saturated, or partially saturated, heterocyclic ring substituted with 0-5 R^b.

19. A compound according to claim 1, wherein
R^2 is selected from the group: 5- to 7- membered monocyclic aromatic heterocyclic ring substituted with 0-5 R^b.

20. A compound according to claim 1, wherein
R^2 is selected from the group: $C_{1\text{-}10}$ alkyl substituted with 0-3 R^c, $C_{3\text{-}10}$ carbocycle substituted with 0-5 R^a, and 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b.

21. A compound according to claim 1, wherein
R^2 is selected from the group: C_{1-6} alkyl substituted with 0-3 R^c, C_{3-6} carbocycle substituted with 0-5 R^a, and 3-7 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R^b.

22. A compound according to claim 1, wherein
R^2 is selected from the group: C_{1-6} alkyl substituted with C_{3-10} carbocycle substituted with 0-5 R^a, and C_{1-6} alkyl substituted with 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S.

23. A compound according to claim 1, wherein
R^2 is selected from the group: phenyl substituted with 0-5 R^a, and cyclopropyl or cyclohexyl substituted with 0-2 R^a; and
R^a is independently at each occurrence selected from the group: $-CH_2N(CH_3)_2$, $-CH_2NH_2$, $-SR^3$ halo, -CN, N_3, NO_2, C_{1-4} alkyl, C_{1-4} haloalkyl, NR^3R^{3a}, =O, OR^3, COR^3, CO_2R^3, $CONR^3R^{3a}$, $NHC(O)NR^3R^{3a}$, $NHC(S)NR^3R^{3a}$, $NR^3C(O)OR^3$, $NR^3C(O)R^3$, $SO_2NR^3R^{3a}$, SO_2R^{3b}, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S.

24. A compound according to claim 1, wherein
R^2 is selected from the group: phenyl substituted with 0-5 R^a, and cyclopropyl or cyclohexyl substituted with 0-2 R^a; and
R^a is independently at each occurrence selected from the group: C_{1-4} alkyl, COR^3, CO_2R^3, and $CONR^3R^{3a}$;
R^{3a} is H or C_{1-4} alkyl.

25. A compound according to claim 1, wherein
R^2 is selected from the group: phenyl substituted with 0-5 R^a, and cyclopropyl or cyclohexyl substituted with 0-2 R^a;
R^a is independently at each occurrence selected from the group: C_{1-4} alkyl, COR^3, CO_2R^3, and $CONR^3R^{3a}$;
R^{3a} is H or C_{1-4} alkyl;

R^3 is C_{1-4} alkyl, C_{1-4} alkyl-NR^5R^{5a}; and
R^5 and R^{5a}, together with the atoms to which they are attached, form a heterocycle having 4-8 atoms in the ring and containing an additional 0-1 N, S, or O atom.

26. A compound according to claim 1, wherein
R^2 is selected from the group: phenyl substituted with 0-5 R^a, and cyclopropyl or cyclohexyl substituted with 0-2 R^a;
R^a is independently at each occurrence selected from the group: C_{1-4} alkyl, COR^3, CO_2R^3, and $CONR^3R^{3a}$; and
R^{3a} is H or C_{1-4} alkyl.

27. A compound according to claim 1, wherein
R^2 is phenyl substituted with NR^3R^{3a}, wherein R^3 and R^{3a}, together with the nitrogen atom to which they are attached, form a 4-8 membered heterocycle containing an additional 0-1 N, S, or O atom and substituted with 0-3 R^{3c}.

28. A compound according to claim 25, wherein
R^2 is phenyl substituted with NR^3R^{3a}; and
R^3 and R^{3a}, together with the nitrogen atom to which they are attached, form a pyrrolinyl, pyrrolidinyl, imidazolinyl, pyrazolidinyl, pyrazolinyl, piperidinyl, morpholinyl,thiomorpholinyl, homopiperazinyl or piperazinyl group, substituted with 0-3 R^{3c}.

29. A compound according to claim 25, wherein
R^2 is phenyl substituted with NR^3R^{3a}, wherein R^3 and R^{3a}, together with the nitrogen atom to which they are attached, form a piperidinyl, homopiperazinyl or piperazinyl group, substituted with 0-3 R^{3c}.

30. A compound according to claim 25, wherein
R^2 is phenyl substituted with NR^3R^{3a}; and
R^3 and R^{3a}, together with the nitrogen atom to which they are attached, form a

piperidinyl, homopiperazinyl or piperazinyl group, substituted with 0-3 substituents independently selected from the group consisting of: -C(=NH)CH_3, pyrrolinyl, pyrrolidinyl, imidazolinyl, pyrazolidinyl, pyrazolinyl, piperidinyl, morpholinyl, thiomorpholinyl, homopiperazinyl or piperazinyl group, pyridyl, C_{1-4} alkyl, $-NR^3R^{3b}$.

31. A compound according to claim 1 which is selected from Table 1.

32. A compound according to claim 1 which is selected from Table 2.

33. A compound according to claim 1 which is selected from Table 3.

34. A compound according to claim 1 which is selected from Table 4.

35. A compound according to claim 1, wherein the compound is selected from:
3-(4-methoxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-phenyl-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methylthiophenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methanesulfonylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-(N,N-dimethylamino)phenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(3-pyridyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(formamido)indeno[1,2-c]pyrazol-4-one;
3-(4-hydroxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-piperidinophenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-morpholinophenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-ethoxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-butylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-ethylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-n-propylphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((4-aminophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-pyridyl)-5-(formamido)indeno[1,2-c]pyrazol-4-one;

3-(4-pyridyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((4-aminophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((4-azidophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((4-(methoxycarbonylamino)phenyl) acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((4-(aminomethylcarbonylamino)phenyl) acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((4-((N,N-dimethylamino)methylcarbonyl amino)phenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((4-acetamidophenyl)acetamido) indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(pyrrolidinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(morpholinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(thiomorpholinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(ethylaminoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(piperidinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(4-(aminomethyl)piperidinoacetamido) indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(piperazinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(4-methylpiperazinoacetamido) indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(4-(2-hydroxyethyl)piperazinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(N,N-dimethylaminoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((2-hydroxyethyl)aminoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(aminoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((2-chlorophenyl)acetamido)indeno[1,2-c]pyrazol-4-

one;
3-(4-methoxyphenyl)-5-((2,4-dichlorophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((3',4-dichlorophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((2-methoxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-dimethoxyphenyl)-5-(3-thienylacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((3,4-methylenedioxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(3,4-dimethoxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(2-methoxyphenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((2,5-dimethoxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((3,4-dimethoxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((4-methoxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((3-methoxyphenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((4-chlorophenyl)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((butylcarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((4-aminobenzylcarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((4-pyridylcarbamoyl) amino)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((phenylcarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(cyclobutanecarboxamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(cyclopentanecarboxamido)indeno[1,2-c]pyrazol-4-

one;
3-(4-methoxyphenyl)-5-(butanamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(propanamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(phenylacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(2-methylpropanamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(cyclopropanecarboxamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(chloroacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-(4-(aminomethyl)piperidinoacetamido)-indeno[1,2-c]pyrazol-4-one;
3-(4-(N,N-dimethylamino)phenyl)-5-(morpholinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-(N,N-dimethylamino)phenyl)-5-(N,N-dimethylaminoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-(trifluoromethyl)phenyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-(N,N-dimethylamino)phenyl)-5-(4-methyl-piperazinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-(N,N-dimethylamino)phenyl)-5-(4-(aminomethyl)-piperidinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-(N,N-dimethylamino)phenyl)-5-(4-hydroxy-piperidinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-morpholinophenyl)-5-(morpholinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-morpholinophenyl)-5-(4-methylpiperazinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-morpholinophenyl)-5-(4-hydroxy-piperidinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-morpholinophenyl)-5-(4-(aminomethyl)-piperidinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-(morpholinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((N,N-dimethylamino)acetamido)indeno[1,2-c]pyrazol-4-one;

3-(4-piperazinophenyl)-5-(4-methylpiperazinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-(4-(aminomethyl)-piperidinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-(aminocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-methylpiperazino)phenyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-ethylpiperazino)phenyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-isopropylpiperazino)phenyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-t-butoxycarbonylpiperazino)phenyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(N,N-dimethylamino)phenyl)-5-((4-methylpiperazino)-carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(c-propyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(2-thienyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(3-methyl-2-thienyl)-5-(acetamido)indeno[1,2-c]pyrazol-4-one;
3-(ethyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(n-propyl)-5-(carbamoylamino)aminoindeno[1,2-c]pyrazol-4-one;
3-(i-propyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(c-propyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(c-hexyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(2-thienyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(3-methyl-2-thienyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-methyl-2-thienyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-carboethoxy-2-thienyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(3-thienyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(1-methyl-3-pyrrolyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(2,5-dimethyl-3-thienyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(2-furanyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(i-propyl)-5-((N,N-dimethylaminocarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(c-propyl)-5-((N,N-dimethylaminocarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(c-hexyl)-5-((N,N-dimethylaminocarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(2-thienyl)-5-((N,N-dimethylaminocarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(5-methoxy-2-thienyl)-5-((N,N-dimethylaminocarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(5-methyl-2-thienyl)-5-((N,N-dimethylaminocarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(5-carboethoxy-2-thienyl)-5-((N,N-dimethylaminocarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(3-thienyl)-5-((N,N-dimethylaminocarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(5-chloro-3-thienyl)-5-((N,N-dimethylaminocarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(2,5-dimethyl-3-thienyl)-5-((N,N-dimethylaminocarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(2-furanyl)-5-((N,N-dimethylaminocarbamoyl)amino)indeno[1,2-c]pyrazol-4-one;
3-(i-propyl)-5-((4-carbamoylpiperidino)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(c-hexyl)-5-((4-carbamoylpiperidino)acetamido)indeno[1,2-c]pyrazol-4-one;
3-(ethyl)-5-(4-(aminomethyl)piperidinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(i-propyl)-5-(4-(aminomethyl)piperidinoacetamido)indeno[1,2-c]pyrazol-4-one;

3-(c-propyl)-5-(4-(aminomethyl)piperidinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(c-hexyl)-5-(4-(aminomethyl)piperidinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-(i-propyl)-5-((4-methylpiperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-carboethoxy-2-thienyl)-5-((4-methylpiperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-carboxyl-2-thienyl)-5-((4-methylpiperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(2,5-dimethyl-3-thienyl)-5-((4-methylpiperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(i-propyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-methoxycarbonyl-4-piperidinyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-methyl-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-chloro-3-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(2,5-dimethyl-3-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-carboethoxy-2-thienyl)-5-(morpholinylcarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-carboxyl-2-thienyl)-5-(morpholinylcarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(benzylaminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((4-methylpiperazino)carbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((2-(1-methyl-2-pyrrolidinyl)ethyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((N,N-dimethylamino)aminocarbonyl)-2-thienyl-5-

(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((2-(N,N-dimethylamino)ethyl)aminocarbonyl)-2-thienyl-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(2-pyrrolidinoethyl)aminocarbonyl)-2-thienyl-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(2-morpholinoethyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(morpholinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((3-(2-pyrrolidon-1-yl)propyl)aminocarbonyl)-2-thienyl-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((2-(3-pyridyl)ethyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((3-(1-imidazolyl)propyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((2-(2-pyridyl)ethyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((2-pyridyl)methyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((2-piperidinoethyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((N,N-dimethylamino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-methylpiperazino)phenyl)-5-((N,N-dimethylamino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((4-methylpiperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-methylpiperazino)phenyl)-5-((4-methylpiperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-ethylpiperazino)phenyl)-5-((4-methylpiperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-isopropylpiperazino)phenyl)-5-((4-

methylpiperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinopheny)-5-((2,6-
dimethylpiperidino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((4-(2-
hydroxyethyl)piperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((2(R)-
(methoxymethyl)pyrrolidino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((2(S)-
(methoxymethyl)pyrrolidino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((2(R)-(1-methoxy-1-
methylethyl)pyrrolidino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((2(S)-(1-methoxy-1-
methylethyl)pyrrolidino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((2(R)-
(hydroxymethyl)pyrrolidino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((2(S)-
(hydroxymethyl)pyrrolidino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((2(R)-
(benzyloxymethyl)pyrrolidino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((2(S)-
(benzyloxymethyl)pyrrolidino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(3-methylpiperazino)phenyl)-5-(morpholinocarbamoylamino)indeno[1,2-
c]pyrazol-4-one;
3-(4-(cis-3,5-dimethylpiperazino)phenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(cis-3,4,5-trimethylpiperazino)phenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-isopropylpiperazino)-2-methylphenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-homopiperazinophenyl)-5-(morpholinocarbamoylamino)indeno[1,2-
c]pyrazol-4-one;
3-(4-(4-methylhomopiperazino)phenyl)-5-

(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-ethylhomopiperazino)phenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-isopropylhomopiperazino)phenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-homopiperazino-2-methylphenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-ethylhomopiperazino)-2-methylphenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-isopropylhomopiperazino)-2-methylphenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-(N,N-dimethylamino)piperidino)phenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-(N,N-diethylamino)piperidino)phenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-piperidinopiperidino)phenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-pyrrolidinopiperidino)phenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-(N,N-diethylamino)piperidino)phenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-methoxyphenyl)-5-((4-methylpiperazino)-
thionocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-methyl-3-pyrrolyl)-5-(carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-pyrrolidinoaminocarbonyl-2-thienyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-piperidinoaminocarbonyl-2-thienyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-piperidinocarbonyl-2-thienyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-piperazinocarbonyl-2-thienyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(5-(4-methylpiperazinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-ethylpiperazinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-(2-hydroxyethyl)piperazinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-(cyclopropylmethyl)piperazinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-(t-butoxycarbonyl)piperazinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-(2-pyridyl)piperazinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(((1S,4S)-(+)-2,5-diazabicyclo[2.2.1]heptyl)carbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(((1S,4S)-(+)-2-methyl-2,5-diazabicyclo[2.2.1]heptyl)carbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-(N,N-dimethylamino)piperidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-pyrrolidinopiperidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-piperidinopiperidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-cyclohexylaminocarbonyl-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-piperidylaminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((1-(t-butoxycarboxyl)piperidin-4-yl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-(1-methylpiperidin-4-yl)methylaminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(3-(N,N-dimethylamino)piperidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(5-(3-p-toluenesulfonylamino)piperidinocarbonyl-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(3-hydroxypiperidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((3-piperidyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((3-quinuclidyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((3-aminocyclohexyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((3-(t-butoxycarbonylamino)cyclohexyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(2-(N,N-dimethylaminomethyl)piperidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(2-(N,N-diethylaminomethyl)piperidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-pyrrolidinocarbonyl-2-thienyl)-5-(morpholinocarbamnoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(3-aminopyrrolidinocarbonyl)-2-thienyl)-5-(morpholinocarbamnoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5(3(S)-N-methylamino)pyrrolidinocarbonyl-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(3(S)-acetamidopyrrolidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(3(S)-(N-methylacetamido)pyrrolidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5(3(S)-(N-methyl-t-butoxycarbonylamino)pyrrolidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(3-(N,N-dimethylamino)pyrrolidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(3(R)-(N,N-dimethylamino)pyrrolidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(5-(3(S)-(N,N-dimethylamino)pyrrolidinocarbonyl)-2-thienyl)-5-(morpholino carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((1-methylpyrrolidin-3-yl)methylaminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(2(R)-(pyrrolidinomethyl)pyrrolidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(2(S)-(hydroxymethyl)pyrrolidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(2(R)-(methoxymethyl)pyrrolidinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(2(S)-(phenylaminomethyl)pyrrolidinocarbonyl)-2-thienyl)-5-(morpholino carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(2(R)-(methoxymethyl)pyrrolidinoaminocarbonyl)-2-thienyl)-5-(morpholin ocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-homopiperidinocarbonyl-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-homopiperazinocarbonyl-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-methylhomopiperazinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-ethylhomopiperazinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-(cyclopropylmethyl)homopiperazinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-(t-butoxycarbonyl)homopiperazinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-acetylhomopiperazinocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((4-methylaminophenyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((4-acetamidophenyl)aminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(5-(4-(diethylamino)phenylaminocarbonyl)-2-thienyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-((1-methyl-3-cyclopropylpyrazo-5-yl)aminocarbonyl)-2-thienyl)-5-(morph olinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-methyl-3-pyrrolyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-carboethoxy-2-thienyl)-5-(2(R)-(methoxymethyl)pyrrolidinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-carboxyl-2-thienyl)-5-(2(R)-(methoxymethyl)pyrrolidinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-methylpiperazinocarbonyl)-2-thienyl)-5-(2(R)-(methoxymethyl)pyrrolidinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-piperazinocarbonyl-2-thienyl)-5-(2(R)-(methoxymethyl)pyrrolidinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-(t-butoxycarbonyl)piperazinocarbonyl)-2-thienyl)-5-(2(R)-(methoxymethyl)pyrrolidinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-methylhomopiperazinocarbonyl)-2-thienyl)-5-(2(R)-(methoxymethyl)pyrrolidinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-homopiperazinocarbonyl-2-thienyl)-5-(2(R)-(methoxymethyl)pyrrolidinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(5-(4-(t-butoxycarbonyl)homopiperazinocarbonyl)-2-thienyl)-5-(2(R)-(methoxymethyl)pyrrolidinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(c-propyl)-5-(4-carbamoylpiperidinoacetamido)indeno[1,2-c]pyrazol-4-one;
3-ethyl-5-(4-methylpiperazinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(c-propyl)-5-(4-methylpiperazinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(c-hexyl)-5-(4-methylpiperazinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-ethyl-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(c-propyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(c-hexyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-ethoxycarbonylpiperidin-4-yl)-5-

(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-phenoxycarbonylpiperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(imidazol-1-ylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(2-thienylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-carbamoylpiperidin-4-yl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(ethylcarbamoyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(2-(1-methylpyrrolidin-2-yl) ethylaminocarbamoyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(4-(dimethylamino)piperidinocarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(piperazinocarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno [1,2-c]pyrazol-4-one;
3-(1-(4-(-butoxycarbonyl)piperazinoarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(((1S,4S)-(+)-2,5-diazabicyclo[2.2.1]hept-2-yl)carbonyl)piperidin-4-yl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(((1S,4S)-(+)-5-methyl-2,5-diazabicyclo[2.2.1]hept-2-yl)carbonyl)piperidin-4-yl)-5-(morpholinocarbamoylamnino)indeno[1,2-c]pyrazol-4-one;
3-(1-(3-aminopropylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(3-(dimethylamino)propylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(3-(t-butoxycarbonylamino)propylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylainino)indeno[1,2-c]pyrazol-4-one;
3-(1-(4-aminobutylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(1-(4-(dimethylamino)butylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoyl amnino)indeno[1,2-c]pyrazol-4-one;
3-(1-(4-(t-butoxycarbonylamino)butylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamnoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-((1-methylpiperidin-4-yl)carbonyl)piperidin-4-yl)-5-
(morpholinocarbamroylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-((1-(t-butoxycarbonyl)piperidin-4-yl) carbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(cis-4-aminocyclohexylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(4-aminocyclohexylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3(1-(cis-4-(dimethylamino)cyclohexylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(4-(t-butoxycarbonylamino)cyclohexylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(trans-4-(t-butoxycarbonylamino)cyclohexylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(piperidin-3-ylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(1-methylpiperidin-3-ylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(1-(t-butoxycarbonyl)piperidin-3-ylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(3-aminocyclohexylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(3-(dimethylamino)cyclohexylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(trans-4-methoxycyclohexylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(cis-4-methoxycyclohexylcarbonyl)piperidin-4-yl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(1-(4-aminobenzylcarbonyl)piperidin-4-yl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(4-(dimethylamino)benzylcarbonyl)piperidin-4-yl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(4-(t-butoxycarbonylamino)benzylcarbonyl)piperidin-4-yl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(4-aminophenylcarbonyl)piperidin-4-yl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(4-(dimethylamino)phenylcarbonyl)piperidin-4-yl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(1-(4-(t-butoxycarbonylamino)phenylcarbonyl)piperidin-4-yl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(trans-4-carboxylcyclohexyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(trans-4-(methoxycarbonyl)cyclohexyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(trans-4-(3-(dimethylamino)pyrrolidinocarbonyl)cyclohexyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(trans-4-(piperazinocarbonyl)cyclohexyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(trans-4-(4-methylpiperazinocarbonyl)cyclohexyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(trans-4-(homopiperazinocarbonyl)cyclohexyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(trans-4-(4-methylhomopiperazinocarbonyl)cyclohexyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
or pharmaceutically acceptable salt form thereof.

36. A compound according to claim 1, wherein the compound is selected from:
3-(4-piperazinophenyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-methylpiperazino)phenyl)-5-(morpholinocarbamoylamino)indeno[1,2-

c]pyrazol-4-one;
3-(4-(4-ethylpiperazino)phenyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-isopropylpiperazino)phenyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((N,N-dimethylamino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-methylpiperazino)phenyl)-5-((N,N-dimethylamino)-carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((4-methylpiperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-methylpiperazino)phenyl)-5-((4-methylpiperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-ethylpiperazino)phenyl)-5-((4-methylpiperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-isopropylpiperazino)phenyl)-5-((4-methylpiperazino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((2(R)-(methoxymethyl)pyrrolidino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-piperazinophenyl)-5-((2(R)-(1-methoxy-1-methylethyl)pyrrolidino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-homopiperazinophenyl)-5-(morpholinocarbamoylamino)-indeno[1,2-c]pyrazol-4-one;
3-(4-(4-methylhomopiperazino)phenyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-ethylhomopiperazino)phenyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-isopropylhomopiperazino)phenyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-(N,N-dimethylamino)piperidino)phenyl)-5-(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-(N,N-diethylamino)piperidino)phenyl)-5-

(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-piperidinopiperidino)phenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
3-(4-(4-pyrrolidinopiperidino)phenyl)-5-
(morpholinocarbamoylamino)indeno[1,2-c]pyrazol-4-one;
or pharmaceutically acceptable salt form thereof.

37. A pharmaceutical composition, comprising a pharmaceutically acceptable carrier, a compound according to claim 1 or a pharmaceutically acceptable salt or prodrug form thereof, and a cytostatic or cytotoxic agent.

38. Use of a pharmaceutically effective amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof for the manufacture of a medicament for treating a cell proliferative disease associated with CDK activity in a patient in need thereof, wherein the proliferative diseases is selected from the group consisting of: Alzheimer's disease, viral infections, auto-immune diseases, fungal disease, cancer, psoriasis, vascular smooth cell proliferation associated with atherosclerosis, pulmonary fibrosis, arthritis glomerulonephritis, neurodegenerative disorders and post-surgical stenosis and restenosis.

39. Use of a pharmaceutically effective amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for treating cancer associated with CDK activity in a patient in need thereof, wherein the cancer is selected from the group consisting of: carcinoma; hematopoietic tumors of lymphoid lineage; hematopoietic tumors of myeloid lineage; tumors of mesenchymal origin, tumors of the central and peripheral nervous system, melanoma, seminoma, teratocarcinoma, osteosarcoma, xenoderoma pigmentosum, keratoctanthoma, thyroid follicular cancer and Kaposi's sarcoma.

40. Use of a pharmaceutically effective amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for treating a disease associated with apoptosis in a patient in need thereof, wherein the disease associated with apoptosis is selected from the group consisting of: cancer, viral infections, autoimmune diseases and neurodegenerative disorder.

41. Use of a pharmaceutically effective amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting tumor angiogenesis and metastasis in a patient in need thereof.

42. Use of a CDK inhibitory effective amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for modulating the level of cellular RNA and DNA synthesis in a patient in need thereof.

43. Use of a CDK inhibitory effective amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for treating viral infections in a patient in need thereof, wherein the viral infections is selected from the group consisting of HIV, human papilloma virus, herpesvirus, poxyirus, Epstein-Barr virus, Sindbis virus and adenovirus.

44. Use of a CDK inhibitory effective amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for chemopreventing cancer in a patient.

45. A method of inhibiting CDK activity comprising combining an effective amount of a compound according to claim 1, with a composition containing CDK.

46. Use of a pharmaceutically effective amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof, in the manufacture of a medicament for treating cancer associated with CDK activity in a patient in need thereof in combination with known anti-cancer treatments.

47. Use of a pharmaceutically effective amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof, in combination with known anti-proliferating agents selected from the group consisting of: altretamine, busulfan, chlorambucil, cyclophosphamide, ifosfamide, mechlorethamine, melphalan, thiotepa, cladribine, fluorouracil, floxuridine, gemcitabine, thioguanine, pentostatin, methotrexate, 6-mercaptopurine, cytarabine, carmustine, lomustine, streptozotocin, carboplatin, cisplatin, oxaliplatin, iproplatin, tetraplatin, lobaplatin, JM216, JM335, fludarabine, aminoglutethimide, flutamide, goserelin, leuprolide, megestrol acetate, cyproterone acetate, tamoxifen, anastrozole, bicalutamide, dexamethasone, diethylstilbestrol, prednisone, bleomycin, dactinomycin, daunorubicin, doxirubicin, idarubicin, mitoxantrone, losoxantrone, mitomycin-c, plicamycin, paclitaxel, docetaxel, CPT-11, epothilones , topotecan, irinotecan, 9-amino camptothecan, 9-nitro camptothecan, GS-211, etoposide, teniposide, vinblastine, vincristine, vinorelbine, procarbazine, asparaginase, pegaspargase, methoxtrexate, octreotide, estramustine, and hydroxyurea, in the manufacture of a medicament for treating cell proliferative diseases associated with CDK activity in a patient in need thereof.

48 Use of an effective CDK1 inhibitory amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of medicament for inhibiting CDK1 activity in a patient in need thereof.

49. Use of an effective CDK2 inhibitory amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK2 activity in a patient in need

thereof.

50. Use of an effective CDK3 inhibitory amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK3 activity in a patient in need thereof.

51. Use of an effective CDK4 inhibitory amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK4 activity in a patient in need thereof.

52. Use of an effective CDK5 inhibitory amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK5 activity in a patient in need thereof.

53. Use of an effective CDK6 inhibitory amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK6 activity in a patient in need thereof.

54. Use of an effective CDK7 inhibitory amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK7 activity in a patient in need thereof.

55. Use of an effective CDK8 inhibitory amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK8 activity in a patient in need thereof.

56. Use of an effective CDK9 inhibitory amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for inhibiting CDK9 activity in a patient in need thereof.

57. A pharmaceutical kit for treating a cell proliferative disease associated with CDK activity, said kit comprising a plurality of separate containers, wherein at least one of said containers contains a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof, and at least another of said containers contains one or more compounds selected from the group consisting of cytostatic or cytotoxic agents; topoisomerase II inhibitors; topoisomerase I inhibitors tubulin interacting agents; hormonal agents; thymidilate synthase inhibitors; and anti-metabolites, and said containers optionally contain a pharmaceutical carrier, which kit may be effectively utilized for carrying out combination therapies according to the invention.

58. A pharmaceutical composition comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of claim 1.

59. Use of a therapeutically effective amount of a compound of claim 1, or a pharmaceutically acceptable salt or prodrug form thereof in the manufacture of a medicament for treating cancer and proliferative diseases in a host in need of such treatment.