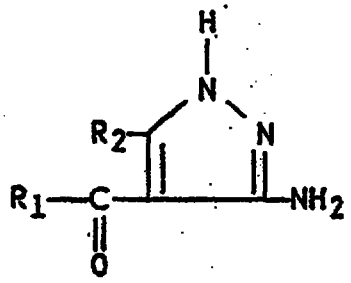
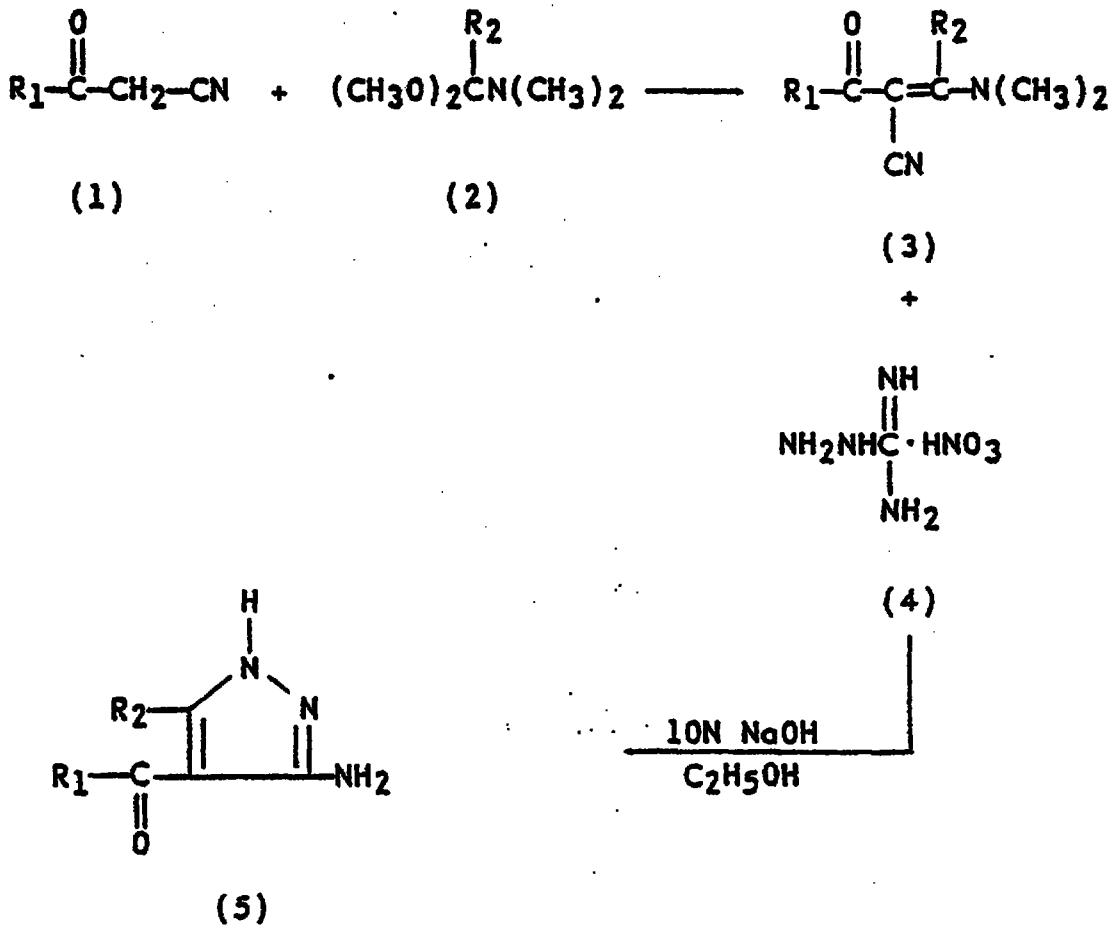
Description

This invention relates to new organic compounds which may be represented by the following structural formula:



wherein R_1 is selected from the group consisting of phenyl substituted by one or two of the group selected from halogen, alkyl(C_1-C_3) and alkoxy(C_1-C_3); phenyl substituted by one of the group consisting of dialkylamino(C_1-C_3), methylenedioxy, alkylthio(C_1-C_3), alkylsulfonyl(C_1-C_3), substituted arylsulfonyl, amino, alkanoyl(C_1-C_3)amino, substituted aroylamino, trifluoromethyl and phenyl; pyridinyl; pyridinyl substituted by one or two of the group selected from halogen, alkyl(C_1-C_3) and alkoxy(C_1-C_3); thienyl; thienyl substituted by one or two of the group selected from halogen, alkyl(C_1-C_3) and alkoxy(C_1-C_3);furanyl; naphthalenyl; and pyrazinyl; and R_2 is selected from the group consisting of hydrogen and alkyl(C_1-C_3).

The compounds of the present invention may be readily prepared as set forth in the following reaction scheme:



In accordance with the above reaction scheme an appropriately substituted acetonitrile (1), where R_1 is as described above is reacted with a dimethylamide dimethylacetal (2) where R_2 is as described above.

The resulting exothermic reaction produces a crystalline solid which is recovered by evaporation and dissolved in methylene chloride. This solution is passed through hydrous magnesium silicate and hexane is added to the refluxing eluate, giving the [(α-dimethylamino)methylene]-β-oxoarylpropanenitrile (3) which is then reacted with aminoguanidine nitrate (4) in the presence of 10N sodium hydroxide and a to dryness and crystallized from water, ethanol or other suitable solvent, giving (5). The aminoguanidine nitrate may be replaced by other salts of aminoguanidine, such as the hydrochloride, sulfate, and the like. Alternatively, the aminoguanidine salt-sodium hydroxide combination may be replaced by an equivalent of aminoguanidine bicarbonate or thiosemicarbazide, both reagents resulting in the formation of (5).

The (3-amino-1H-pyrazol-4-yl)(aryl)methanones find utility as intermediates in the preparation of therapeutic aryl and heteroaryl[7-(aryl and heteroaryl)pyrazolo[1,5-a]pyrimidin-3-yl]methanones which are disclosed in the United States patent 4,178,449. The EP-A2 129 847 also describes similar compounds. Such final products are useful as anxiolytic or antiepileptic agents as well as sedative-hypnotic and skeletal muscle relaxant agents. The novel compounds of the instant invention additionally have utility as anxiolytic agents.

The following non-limiting examples illustrate the preparation of the compounds of the present invention.

Example 1

α-[(Dimethylamino)methylene]-β-oxo-2-furanepropanenitrile

A 50 ml portion of dimethylformamide dimethylacetal was added to 25 g of solid β-oxo-2-furanepropanenitrile. This exothermic reaction produced yellow crystals. After one hour the volatiles were removed under reduced pressure and the residue was dissolved in methylene chloride. This solution was passed through a short pad of hydrous magnesium silicate. The eluate was refluxed with the gradual addition of hexane to the point of turbidity. Cooling and filtration gave 35.2 g of the desired compound, mp 117-125° C.

Example 2

α-[(Dimethylamino)methylene]-β-oxo-benzenepropanenitrile

A 100 g portion of β-oxo-benzenepropanenitrile was placed in a 500 ml round-bottom flask and 110 ml of dimethylformamide dimethylacetal was added in one portion. The reaction mixture became warm and a homogeneous dark yellow solution resulted, which then solidified. After cooling to room temperature, hexane was added giving crystals which were recovered by filtration. This material (143.6 g, mp 102-105° C) is suitable for the subsequent reaction without further purification.

An analytical sample of this compound was obtained by dissolution in methylene chloride followed by passage through a short column of hydrous magnesium silicate, concentration of the eluate with the gradual addition of hexane until crystallization occurred, cooling and collection by filtration, mp 111-113° C.

Following the general procedures of Examples 1 or 2, the following compounds of Examples 3-31 , shown in Table I were prepared.

TABLE I

Example	Acetonitrile	Compound	MP°C
3	β-oxo-4-fluorobenzenepropane-nitrile	α-[(dimethylamino)methylene]-β-oxo-4--fluorobenzenepropanenitrile	142-145
4	β-oxo-(3-trifluoromethyl)benzene-propanenitrile	α-[(dimethylamino)methylene]-β-oxo-3-(trifluoromethyl)benzenepropanenitrile	93-96
5	β-oxo-4-pyridinepropanenitrile	α-[(dimethylamino)methylene]-β-oxo-4-pyridinepropanenitrile	127-128
6	β-oxo-2-thiophenepropanenitrile	α-[(dimethylamino)methylene]-β-oxo-2-thiophenepropanenitrile	136-140
7	β-oxo-4-methylbenzenepropane-nitrile	α-[(dimethylamino)methylene]-β-oxo-4--methylbenzenepropanenitrile	132-135
8	β-oxo-2-pyridinepropanenitrile	α-[(dimethylamino)methylene]-β-oxo-2-pyridinepropanenitrile	88-90
9	β-oxo-3-fluorophenylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-3-fluorophenylpropanenitrile	63-68
10	β-oxo-2-chlorophenylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-2-chlorophenylpropanenitrile	152-154

TABLE I (continued)

Example	Acetonitrile	Compound	MP°C
11	β-oxo-3-furanylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-3-furanylpropanenitrile	98-103
12	β-oxo-3,4,5-trimethoxyphenyl-propanenitrile	α-[(dimethylamino)methylene]-β-oxo-3,4,5-trimethoxyphenylpropanenitrile	138-140
13	β-oxo-3,4-dimethoxyphenylpropane-nitrile	α-[(dimethylamino)methylene]-β-oxo-3,4-dimethoxyphenylpropanenitrile	glassy solid
14	β-oxo-3-methylphenylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-3-methylphenylpropanenitrile	74-80
15	β-oxo-3,5-dimethoxyphenylpropane-nitrile	α-[(dimethylamino)methylene]-β-oxo-3,5-dimethoxyphenylpropanenitrile	125-127
16	β-oxo-4-chlorophenylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-4-chlorophenylpropanenitrile	118-121
17	β-oxo-4-methoxyphenylpropane-nitrile	α-[(dimethylamino)methylene]-β-oxo-4-methoxyphenylpropanenitrile	128-130
18	β-oxo-2-fluorophenylpropane-nitrile	α-[(dimethylamino)methylene]-β-oxo-2-fluorophenylpropanenitrile	62-74

TABLE I (continued)

Ex.	Acetonitrile	Compound	MP°C
19	β-oxo-3-methoxyphenylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-3-methoxyphenylpropanenitrile	Syrup
20	β-oxo-[4-(trifluoromethyl)-phenyl]propanenitrile	α-[(dimethylamino)methylene]-β-oxo-[4-(trifluoromethyl)phenyl]propanenitrile	122-123
21	β-oxo-3-chlorophenylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-3-chlorophenylpropanenitrile	Syrup
22	β-oxo-2,5-dichlorophenylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-2,5-dichlorophenylpropanenitrile	140-143
23	β-oxo-2-methylphenylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-2-methylphenylpropanenitrile	82-84
24	β-oxo-[4-(dimethylamino)phenyl]-propanenitrile	α-[(dimethylamino)methylene]-β-oxo-[4-(dimethylamino)phenyl]propanenitrile	208-210
25	β-oxo-2-methoxyphenylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-2-methoxyphenylpropanenitrile	105-115
26	β-oxo-[3,4-(methylenedioxy)phenyl]propanenitrile	α-[(dimethylamino)methylene]-β-oxo-[3,4-(methylenedioxy)phenyl]propanenitrile	118-124
27	β-oxo-4-ethoxyphenylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-4-ethoxyphenylpropanenitrile	110-115
28	β-oxo-4-ethylphenylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-4-ethylphenylpropanenitrile	48-54

TABLE I (continued)

Ex.	Acetonitrile	Compound	MP°C
29	β-oxo-2-naphthalenylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-2-naphthalenylpropanenitrile	115-118
30	β-oxo-5-methyl-2-thienylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-5-methyl-2-thienylpropanenitrile	152-153
31	β-oxo-2-thienylpropanenitrile	α-[(dimethylamino)methylene]-β-oxo-2-thienylpropanenitrile	118-120

Example 32

α-[(1-Dimethylamino)ethylidene]-β-oxo-phenylpropanenitrile

A solution of 14.5 grams of benzoylacetonitrile in 100 ml of chloroform was cooled to -10° C and stirred as a solution of 13.3 g of N,N-dimethylacetamide dimethylacetal in 20 ml of chloroform was added dropwise during 15 minutes. The reaction temperature was not allowed to exceed -5° C. Stirring was continued at -5° to -10° C for two hours after addition ended. The resultant reaction mixture was dissolved in 150 ml of benzene and the solution passed through a layer of hydrous magnesium silicate. Evaporation of the filtrate in air left a yellow residue which was purified by recrystallization from a mixture of benzene and low boiling petroleum ether; yield, 5.8 g, mp 105° -106° C.

Example 33

(3-Amino-1H-pyrazol-4-yl) (2-furanyl)methanone

A reaction mixture comprising 19.0 g of α-[(dimethylamino)methylene]-β-oxo-2-furanepropanenitrile, 16.1 g of aminoguanidine nitrate, 250 ml of ethanol and 11.0 ml of 10N sodium hydroxide was refluxed for 6 hours and then evaporated to dryness. Water was added to the crude residue and the precipitated solid was collected, giving 17.0 g of the desired product, mp 153-155° C.

Example 34

(3-Amino-1H-pyrazol-4-yl) phenylmethanone

A reaction mixture comprising 73.36 g of α-[(dimethylamino)methylene]-β-oxo-2-benzenepropanenitrile, 63.45 g of aminoguanidine nitrate, 500 ml of ethanol and 36.6 ml of 10N sodium hydroxide was refluxed for 10 hours and then cooled. The resulting precipitate was collected and washed with water, giving 17.1 g of the desired product, mp 177-179° C.

When the aminoguanidine nitrate-10N sodium hydroxide combination was replaced by an equivalent of aminoguanidine bicarbonate, the identical product was obtained as shown by its melting point, elemental analysis and infrared and nuclear magnetic resonance absorption spectra. A similar result was obtained when an equivalent of thiosemicarbazide replaced the aminoguanidine nitrate-10N sodium hydroxide combination.

Following the general procedures of Examples 33 and 34, employing the compounds of Examples 3-32 and the appropriate guanidine derivatives, the products of Examples 35-64, given in Table II, were prepared.

TABLE II

Example	Starting Material of Example	Product	MP°C
35	3	(3-amino-1H-pyrazol-4-yl)(4-fluorophenyl)methanone	172-175
36	4	(3-amino-1H-pyrazol-4-yl)[3-(trifluoromethyl)phenyl]methanone	134-136
37	5	(3-amino-1H-pyrazol-4-yl)(4-pyridinyl)methanone	275-277
38	6	(3-amino-1H-pyrazol-4-yl)(2-thienyl)methanone	144-145
39	32	(3-amino-5-methyl-1H-pyrazol-4-yl) phenylmethanone	179-180
40	7	(3-amino-1H-pyrazol-4-yl)(4-methylphenyl)methanone	177-179
41	8	(3-amino-1H-pyrazol-4-yl)(2-pyridinyl)methanone	118-120
42	9	(3-amino-1H-pyrazol-4-yl)(3-fluorophenyl)methanone	188-189

TABLE II (continued)

Example	Starting Material of Example	Product	MP°C
43	10	(3-amino-1H-pyrazol-4-yl)(2-chlorophenyl)methanone	glassy solid
44	11	(3-amino-1H-pyrazol-4-yl)(3-furanyl)methanone	211-215
45	12	(3-amino-1H-pyrazol-4-yl)(3,4,5-trimethoxyphenyl)methanone	199-201
46	13	(3-amino-1H-pyrazol-4-yl)(3,4-dimethoxyphenyl)methanone	108-109
47	14	(3-amino-1H-pyrazol-4-yl)(3-methylphenyl)methanone	137-139
48	15	(3-amino-1H-pyrazol-4-yl)(3,5-dimethoxyphenyl)methanone	91-92
49	16	(3-amino-1H-pyrazol-4-yl)(4-chlorophenyl)methanone	235-237
50	17	(3-amino-1H-pyrazol-4-yl)(4-methoxyphenyl)methanone	172-174
51	18	(3-amino-1H-pyrazol-4-yl)(2-fluorophenyl)methanone	glassy solid

TABLE II (continued)

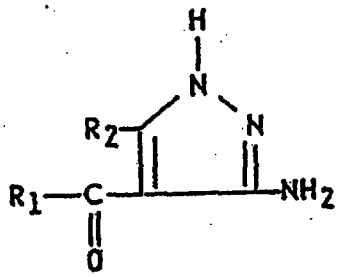
Ex.	Starting Material of Example	Product	MP°C
52	19	(3-amino-1H-pyrazol-4-yl)-(3-methoxyphenyl)methanone	96-98
53	20	(3-amino-1H-pyrazol-4-yl)-[4-(trifluoromethyl)phenyl]methanone	172-174
54	21	(3-amino-1H-pyrazol-4-yl)-(3-chlorophenyl)methanone	229-230
55	22	(3-amino-1H-pyrazol-4-yl)-(2,5-dichlorophenyl)methanone	Syrup
56	23	(3-amino-1H-pyrazol-4-yl)-(2-methylphenyl)methanone	Glass
57	24	(3-amino-1H-pyrazol-4-yl)-[4-(dimethylamino)phenyl]-methanone	240-243
58	25	(3-amino-1H-pyrazol-4-yl)-(2-methoxyphenyl)methanone	Glass
59	26	(3-amino-1H-pyrazol-4-yl)-[3,4-(methylenedioxy)phenyl]methanone	228-230
60	27	(3-amino-1H-pyrazol-4-yl)-(4-ethoxyphenyl)methanone	155-156
61	28	(3-amino-1H-pyrazol-4-yl)-(4-ethylphenyl)methanone	108-109

TABLE II (continued)

Ex.	Starting Material of Example	Product	MP°C
62	29	(3-amino-1H-pyrazol-4-yl)-(2-naphthalenyl)methanone	215-217
63	30	(3-amino-1H-pyrazol-4-yl)-(5-methyl-2-thienyl)methanone	165-166
64	31	(3-amino-1H-pyrazol-4-yl)-(2-thienyl)methanone	181-183

Claims

1. A compound of the formula:



wherein R_1 is phenyl substituted by one or two of halogen, alkyl(C_1-C_3) or alkoxy(C_1-C_3); phenyl substituted by one of dialkylamino(C_1-C_3), methylenedioxy, alkylthio(C_1-C_3), alkylsulfonyl(C_1-C_3), substituted arylsulfonyl, amino, alkanoyl(C_1-C_3)amino, substituted aroylamino, trifluoromethyl or phenyl; pyridinyl; pyridinyl substituted by one or two of halogen, alkyl(C_1-C_3)or alkoxy(C_1-C_3); thienyl; thienyl substituted by one or two of halogen, alkyl(C_1-C_3) or alkoxy(C_1-C_3); furanyl; naphthalenyl; or pyrazinyl; and R_2 is hydrogen or alkyl(C_1-C_3).

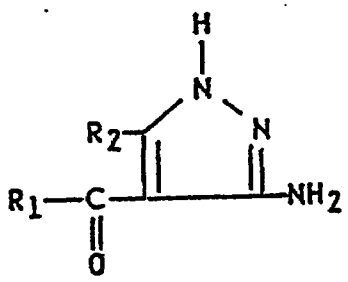
2. The compound according to Claim 1, (3-amino-1H-pyrazol-4-yl)(2-furanyl)methanone; (3-amino-1H-pyrazol-4-yl)(4-chlorophenyl)methanone; (3-amino-1H-pyrazol-4-yl)(4-fluorophenyl)methanone; (3-amino-1H-pyrazol-4-yl)-(4-methoxyphenyl)methanone; (3-amino-1H-pyrazol-4-yl)[3-(trifluoromethyl)phenyl]-methanone; (3-amino-1H-pyrazol-4-yl)(4-pyridinyl)methanone; (3-amino-1H-pyrazol-4-yl)-(2-thienyl)-methanone; (3-amino-5-methyl-1H-pyrazol-4-yl)-phenylmethanone; (3-amino-1H-pyrazol-4-yl)(4-methylphenyl)methanone; (3-amino-1H-pyrazol-4-yl)(2-pyridinyl)-methanone; (3-amino-1H-pyrazol-4-yl)(3-fluorophenyl)methanone; (3-amino-1H-pyrazol-4-yl)(3-furanyl)methanone; (3-amino-1H-pyrazol-4-yl)-(3,4,5-trimethoxyphenyl)methanone; (3-amino-1H-pyrazol-4-yl)(3,4-dimethoxyphenyl)methanone; (3-

TABLE II (continued)

Ex.	Starting Material of Example	Product	MP°C
62	29	(3-amino-1H-pyrazol-4-yl)-(2-naphthalenyl)methanone	215-217
63	30	(3-amino-1H-pyrazol-4-yl)-(5-methyl-2-thienyl)methanone	165-166
64	31	(3-amino-1H-pyrazol-4-yl)-(2-thienyl)methanone	181-183

Claims

1. A compound of the formula:

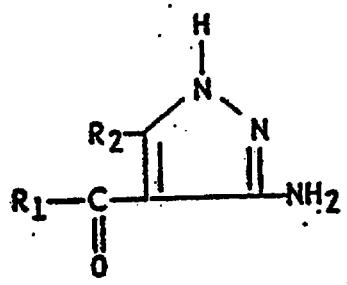


wherein R_1 is phenyl substituted by one or two of halogen, alkyl(C_1-C_3) or alkoxy(C_1-C_3); phenyl substituted by one of dialkylamino(C_1-C_3), methylenedioxy, alkylthio(C_1-C_3), alkylsulfonyl(C_1-C_3), substituted arylsulfonyl, amino, alkanoyl(C_1-C_3)amino, substituted aroylamino, trifluoromethyl or phenyl; pyridinyl; pyridinyl substituted by one or two of halogen, alkyl(C_1-C_3)or alkoxy(C_1-C_3); thienyl; thienyl substituted by one or two of halogen, alkyl(C_1-C_3) or alkoxy(C_1-C_3); furanyl; naphthalenyl; or pyrazinyl; and R_2 is hydrogen or alkyl(C_1-C_3).

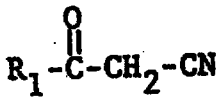
2. The compound according to Claim 1, (3-amino-1H-pyrazol-4-yl)(2-furanyl)methanone; (3-amino-1H-pyrazol-4-yl)(4-chlorophenyl)methanone; (3-amino-1H-pyrazol-4-yl)(4-fluorophenyl)methanone; (3-amino-1H-pyrazol-4-yl)-(4-methoxyphenyl)methanone; (3-amino-1H-pyrazol-4-yl)[3-(trifluoromethyl)phenyl]-methanone; (3-amino-1H-pyrazol-4-yl)(4-pyridinyl)methanone; (3-amino-1H-pyrazol-4-yl)-(2-thienyl)-methanone; (3-amino-5-methyl-1H-pyrazol-4-yl)-phenylmethanone; (3-amino-1H-pyrazol-4-yl)(4-methylphenyl)methanone; (3-amino-1H-pyrazol-4-yl)(2-pyridinyl)-methanone; (3-amino-1H-pyrazol-4-yl)(3-fluorophenyl)methanone; (3-amino-1H-pyrazol-4-yl)(3-furanyl)methanone; (3-amino-1H-pyrazol-4-yl)-(3,4,5-trimethoxyphenyl)methanone; (3-amino-1H-pyrazol-4-yl)(3,4-dimethoxyphenyl)methanone; (3-

amino-1H-pyrazol-4-yl)(3-methylphenyl)methanone; (3-amino-1H-pyrazol-4-yl)(3,5-dimethoxyphenyl)-methanone; or (3-amino-1H-pyrazol-4-yl)(2-fluorophenyl)methanone.

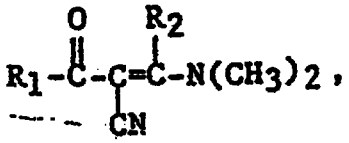
3. A process of preparing a compound of the formula:



wherein R_1 and R_2 are as defined in claim 1, which comprises reacting an appropriately substituted acetonitrile of the formula



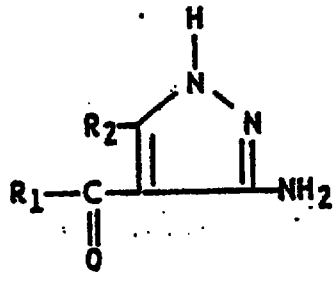
(where R_1 is as described above) with an N,N-dimethylamide dimethylacetal producing, after an exothermic reaction, a crystalline solid, recovering said crystalline solid, dissolving in methylene chloride, passing through hydrous magnesium silicate, adding hexane to the refluxing eluate, precipitating an [(α-dimethylamino)methylene]-β-oxoarylpropanenitrile of the formula



reacting with aminoguanidine salt in a lower alkanol solution of 10N sodium hydroxide at reflux for 6-10 hours, giving the desired product.

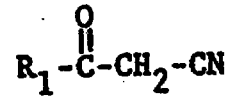
Claim for the following Contracting State: AT

1. A process of preparing a compound of the formula:

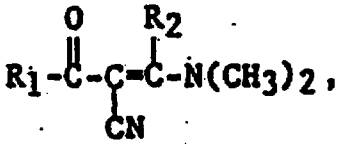


wherein R_1 is phenyl substituted by one or two of halogen, alkyl(C_1-C_3) or alkoxy(C_1-C_3); phenyl substituted by one of dialkylamino(C_1-C_3), methylenedioxy, alkylthio(C_1-C_3), alkylsulfonyl(C_1-C_3), substituted arylsulfonyl, amino, alkanoyl(C_1-C_3)amino, substituted aroylamino, trifluoromethyl or phenyl; pyridinyl; pyridinyl substituted by one or two of halogen, alkyl(C_1-C_3)or alkoxy(C_1-C_3); thienyl; thienyl substituted by one or two of halogen, alkyl(C_1-C_3) or alkoxy(C_1-C_3); furanyl; naphthalenyl; or pyrazinyl; and R_2 is hydrogen or alkyl(C_1-C_3)which comprises reacting an appropriately substituted acetonitrile of the formula





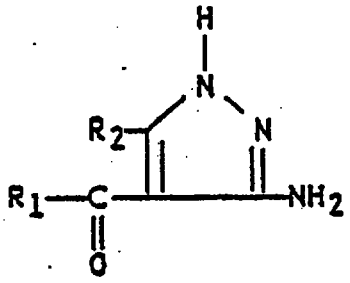
(where R_1 is as described above) with an N,N-dimethylamide dimethylacetal producing, after an exothermic reaction, a crystalline solid, recovering said crystalline solid, dissolving in methylene chloride, passing through hydrous magnesium silicate, adding hexane to the refluxing eluate, precipitating an [(α-dimethylamino)methylene]-β-oxoarylpropanenitrile of the formula



reacting with aminoguanidine salt in a lower alkanol solution of 10N sodium hydroxide at reflux for 6-10 hours, giving the desired product.

Revendications

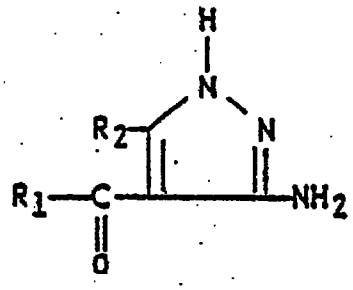
1. Un composé de formule :



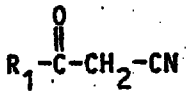
dans laquelle R_1 est choisi parmi un groupe phényle substitué par 1 ou 2 substituants choisis parmi les halogènes et les groupes alkyles en C_1-C_3 et les groupes alcoxy en C_1-C_3 ; un groupe phényle substitué par un substituant choisi parmi un grope dialkylamino en C_1-C_3, un groupe méthylènedioxy, un groupe alkylthio en C_1-C_3, un groupe alkylsulfonyle en C_1-C_3, un groupe arylsulfonyle substitué, un groupe amino, un groupe alcanoylamino en C_1-C_3, un groupe aroylamino substitué, un groupe trifluorométhyle et un groupe phényle ; un groupe pyridyle ; un groupe pyridyle substitué par 1 ou 2 substituants choisis parmi les halogènes et les groupes alkyles en C_1-C_3 et alcoxy en C_1-C_3 ; le groupe thiényle ; un groupe thiényle substitué par 1 ou 2 substituants choisis parmi les halogènes et les groupes alkyles en C_1-C_3 et alcoxy en C_1-C_3 ; un groupe furyle ; un groupe naphtyle ; et un groupe pyrazinyle ; et R_2 est choisi parmi l'hydrogène et les groupes alkyles en C_1-C_3.

2. Le composé selon la revendication 1, qui est la (3-amino-1H-pyrazole-4-yl)-(2-furyl)cétone, la (3-amino-1H-pyrazole-4-yl)-(4-chlorophényl)cétone, la (3-amino-1H-pyrazole-4-yl)-(4-fluorophényl)cétone, la (3-amino-1H-pyrazole-4-yl)-(4-méthoxyphényle)cétone, la (3-amino-1H-pyrazole-4-yl)[3-(trifluorométhyl) phényl]cétone, la (3-amino-1H-pyrazole-4-yl)-(4-pyridyl)cétone, la (3-amino-1H-pyrazole-4-yl)-(2-thiényl)-cétone, la (3-amino-1H-5-méthyl-1H-pyrazole-4-yl)-phénylcétone, la (3-amino-1H-pyrazole-4-yl)-(4-méthylphényl)cétone, la (3-amino-1H-pyrazole-4-yl)-(2-pyridyl)cétone, la (3-amino-1H-pyrazole-4-yl)-(3-fluorophényl)cétone, la (3-amino-1H-pyrazole-4-yl)-(3-furyl)cétone, la (3-amino-1H-pyrazole-4-yl)-(3,4,5-triméthoxyphényl)cétone, la (3-amino-1H-pyrazole-4-yl)-(3,4-diméthoxyphényl)cétone, la (3-amino-1H-pyrazole-4-yl)-(3-méthylphényl)cétone, la (3-amino-1H-pyrazole-4-yl)-(3,5-diméthoxyphényl)cétone ou la (3-amino-1H-pyrazole-4-yl)-(2-fluorophényl)cétone.

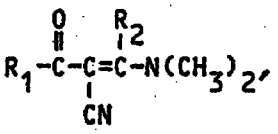
3. Un procédé de la fabrication d'un composé de formule :



dans laquelle R_1 et R_2 sont définis à la revendication 1, qui consiste à faire réagir un acétonitrile substitué de manière convenable de formule :



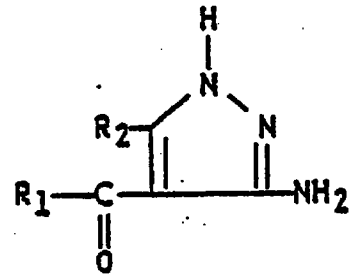
dans laquelle R_1 est comme décrit ci-dessus avec un diméthylacétal de N,N-diméthylamide produisant, après une réaction exothermique, un solide cristallisé, à récupérer ledit solide cristallisé, à le dissoudre dans le chlorure de méthylène, à faire passer sur du silicate de magnésium hydraté, à ajouter de l'hexane à l'éluat au reflux, à précipiter un [(α-diméthylamino)méthylène]-β-oxoarylpropionitrilede formule



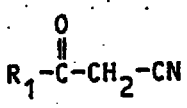
à faire réagir avec un sel d'aminoguanidine dans une solution d'hydroxyde de sodium 10N dans un alcanol inférieur au reflux pendant 6-10 h, ce qui donne le produit désiré.

Revendication pour l'Etat contractant suivant: AT

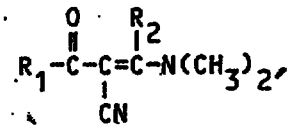
1. Un procédé de fabrication d'un composé de formule :



dans laquelle R_1 est choisi parmi un groupe phényle substitué par 1 ou 2 substituants choisis parmi les halogènes et les groupes alkyles en C_1-C_3 et les groupes alcoxy en C_1-C_3 ; un groupe phényle substitué par un substituant choisi parmi un grope dialkylamino en C_1-C_3, un groupe méthylènedioxy, un groupe alkylthio en C_1-C_3, un Groupe alkylsulfonyle en C_1-C_3, un groupe arylsulfonyle substitué, un groupe amino, un groupe alcanoylamino en C_1-C_3, un groupe aroylamino substitué, un groupe trifluorométhyle et un groupe phényle ; un groupe pyridyle ; un groupe pyridyle substitué par 1 ou 2 substituants choisis parmi les halogènes et les groupes alkyles en C_1-C_3 et alcoxy en C_1-C_3 ; le groupe thiényle ; un groupe thiényle substitué par 1 ou 2 substituants choisis parmi les halogènes et les groupes alkyles en C_1-C_3 et alcoxy en C_1-C_3 ; un groupe furyle ; un groupe naphtyle ; et un groupe pyrazinyle ; et R_2 est choisi parmi l'hydrogène et les groupes alkyles en C_1-C_3, qui consiste à faire réagir un acétonitrile substitué de manière convenable de formule :



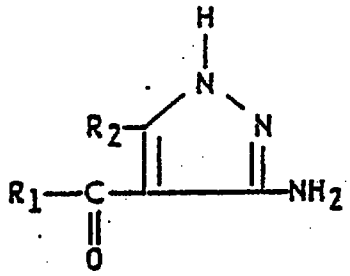
dans laquelle R_1 est comme décrit ci-dessus avec un diméthylacétal de N,N-diméthylamide produisant, après une réaction exothermique, un solide cristallisé, à récupérer ledit solide cristallisé, à le dissoudre dans le chlorure de méthylène, à faire passer sur du silicate de magnésium hydraté, à ajouter de l'hexane à l'éluat au reflux, à précipiter un [(α-diméthylamino)méthylène]-β-oxoarylpropionitrile de formule



à faire réagir avec un sel d'aminoguanidine dans une solution d'hydroxyde de sodium 10N dans un alcanol inférieur au reflux pendant 6-10 h, ce qui donne le produit désiré.

Ansprüche

1. Verbindung der Formel

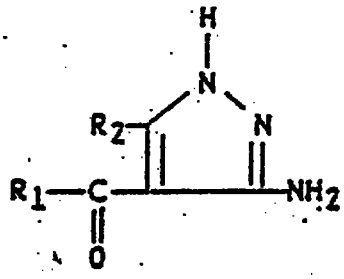


wobei R_1 für Phenyl, substituiert mit einem oder zwei von Halogen, Alkyl-(C_1-C_3) oder Alkoxy-(C_1-C_3); Phenyl , substituiert mit einem von Dialkylamino-(C_1-C_3), Methylendioxy, Alkylthio-(C_1-C_3), Alkylsulfonyl-(C_1-C_3), substituiertes Arylsulfonyl, Amino, Alkanoyl-(C_1-C_3)-amino, substituiertes Aroylamino, Trifluormethyl oder Phenyl; Pyridinyl; Pyridinyl, substituiert mit einem oder zwei von Halogen, Alkyl-(C_1-C_3) oder Alkoxy(C_1-C_3); Thienyl; Thienyl, substituiert mit einem oder zwei von Halogen, Alkyl-(C_1 -C_3) oder Alkoxy-(C_1 -C_3); Furanyl; Naphthalenyl; oder Pyrazinyl steht; und R_2 für Wasserstoff oder Alkyl-(C_1 -C_3) steht.

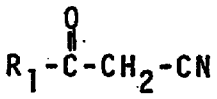
2. Verbindung gemäß Anspruch 1, nämlich
(3-Amino-1H-pyrazol-4-yl)-(2-furanyl)-methanon;
(3-Amino-1H-pyrazol-4-yl)-(4-chlorphenyl)-methanon;
(3-Amino-1H-pyrazol-4-yl)-(4-fluorphenyl)-methanon;
(3-Amino-1H-pyrazol-4-yl)-(4-methoxyphenyl)-methanon;
(3-Amino-1H-pyrazol-4-yl)-[3-(trifluormethyl)-phenyl]-methanon;
(3-Amino-1H-pyrazol-4-yl)-(4-pyridinyl-methanon;
(3-Amino-1H-pyrazol-4-yl)-(2-thienyl)-methanon;
(3-Amino-5-methyl-1H-pyrazol-4-yl)-phenylmethanon;
(3-Amino-1H-pyrazol-4-yl)-(4-methylphenyl)-methanon;
(3-Amino-1H-pyrazol-4-yl)-(2-pyridinyl)-methanon;
(3-Amino-1H-pyrazol-4-yl)-(3-fluorphenyl)-methanon;
(3-Amino-1H-pyrazol-4-yl)-(3-furanyl)-methanon;
(3-Amino-1H-pyrazol-4-yl)-(3,4,5-trimethoxyphenyl)-methanon;

(3-Amino-1H-pyrazol-4-yl)-(3,4-dimethoxyphenyl)-methanon;
(3-Amino-1H-pyrazol-4-yl)-(3-methylphenyl)-methanon;
(3-Amino-1H-pyrazol-4-yl)-(3,5-dimethoxyphenyl)-methanon; oder
(3-Amino-1H-pyrazol-4-yl)-(2-fluorphenyl)-methanon.

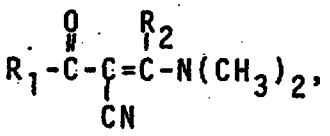
3. Verfahren zur Herstellung einer Verbindung der Formel



wobei R_1 und R_2 wie in Anspruch 1 definiert sind, umfassend die Umsetzung eines zweckentsprechend substituierten Acetonitrils der Formel



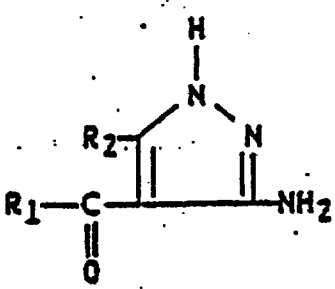
(wobei R_1 die oben angegebene Bedeutung hat) mit einem N,N-Dimethylamid-dimethylacetal, um nach einer exothermen Reaktion einen kristallinen Feststoff zu erzeugen, Isolierung des kristallinen Feststoffs, Auflösung in Methylenchlorid, Durchleiten durch wässriges Magnesiumsilikat, Zugabe von Hexan zu dem refluxierenden Eluat, Präzipitation eines [(α -Dimethylamino)-methylen]-β-oxoarylpropannitrils der Formel



Umsetzung mit Aminoguanidinsalz in einer Niederalkanollösung von 10N Natriumhydroxid bei Rückfluß während 6 bis 10 Stunden, um das gewünschte Produkt zu erhalten.

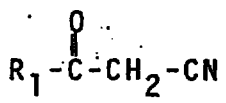
Patentanspruch für folgenden Vertragsstaat: AT

1. Verfahren zur Herstellung einer Verbindung der Formel

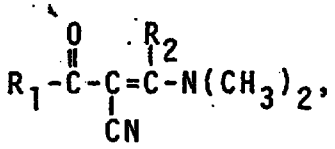


wobei R_1 für Phenyl, substituiert mit einem oder zwei von Halogen, Alkyl-(C_1-C_3) oder Alkoxy-(C_1-C_3); Phenyl, substituiert mit einem von Dialkylamino-(C_1-C_3), Methylendioxy, Alkylthio-(C_1-C_3), Alkylsulfonyl-(C_1-C_3), substituiertes Arylsulfonyl, Amino, Alkanoyl-(C_1-C_3)-amino, substituiertes Aroylamino, Trifluormethyl oder Phenyl; Pyridinyl; Pyridinyl, substituiert mit einem oder zwei von Halogen, Alkyl-(C_1-C_3)

oder Alkoxy(C_1-C_3); Thienyl; Thienyl, substituiert mit einem oder zwei von Halogen, Alkyl-(C_1-C_3) oder Alkoxy-(C_1-C_3); Furanyl; Naphthalenyl; oder Pyrazinyl steht; und R_2 für Wasserstoff oder Alkyl-(C_1-C_3) steht, umfassend die Umsetzung eines zweckentsprechend substituierten Acetonitrils der Formel



(wobei R_1 die oben angegebene Bedeutung hat) mit einem N,N-Dimethylamid-dimethylacetal, um nach einer exothermen Reaktion einen kristallinen Feststoff zu erzeugen, Isolierung des kristallinen Feststoffs, Auflösung in Methylenchlorid, Durchleiten durch wässriges Magnesiumsilikat, Zugabe von Hexan zu dem refluxierenden Eluat, Präzipitation eines [(α-Dimethylamino)-methylen]-β-oxoarylpropannitrils der Formel



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