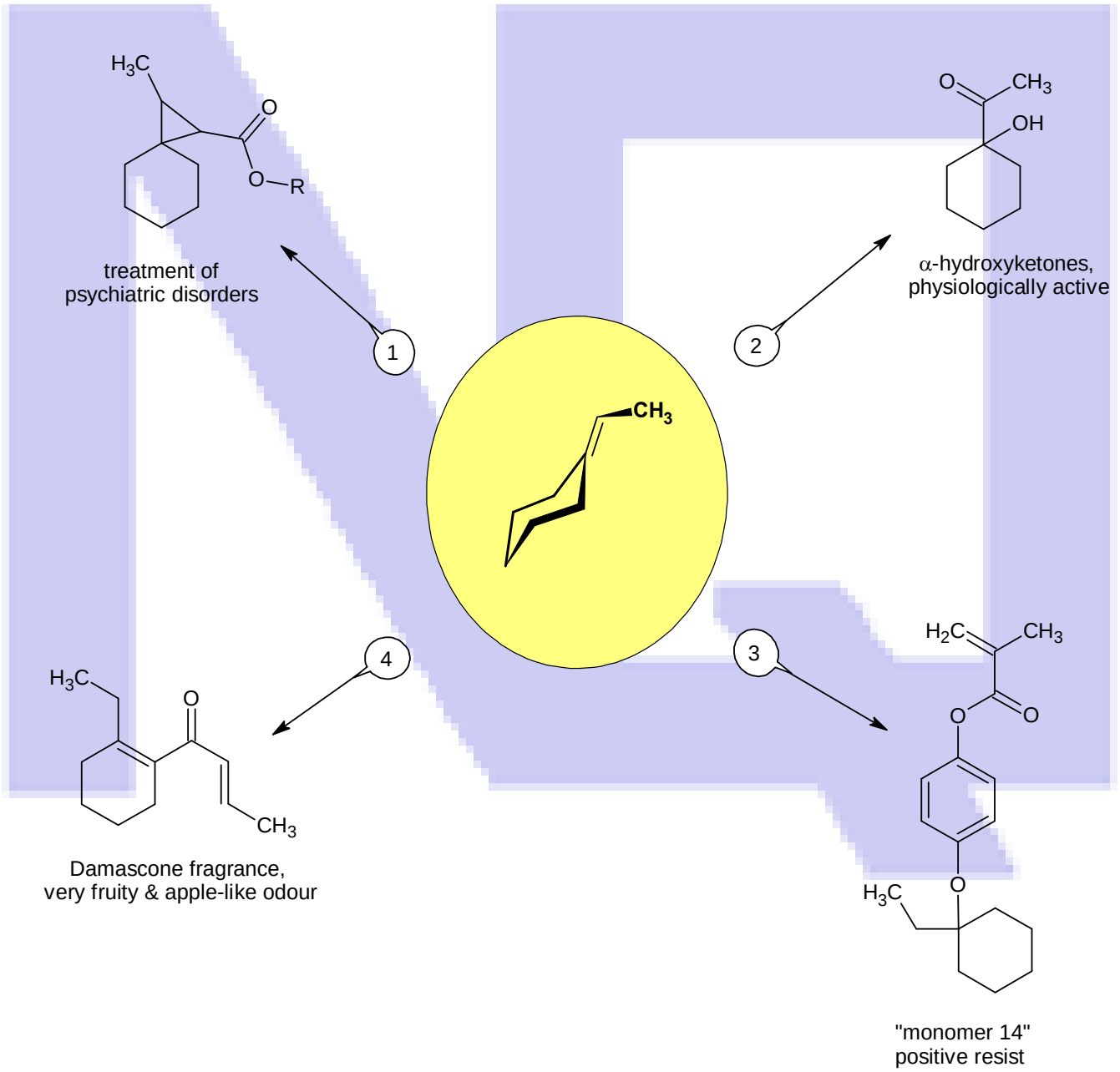
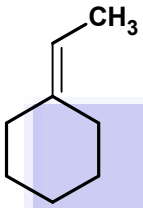
Ethylidenecyclohexane

[1003-64-1]



CAS Number	[1003-64-1]
Molecular Formula	C_8H_{14}
Molecular Weight	110.20
Density, 25°C	0.822 g/ml (literature)
Assay	≥ 99%
Boiling Point	136°C (literature)



1 *8. Preparation of spirocyclopropyl amides and acids as anticonvulsants*
By Bennani, Youssef L.; Bunnelle, William H.; Chang, Sou-Jen; Chemburkar, Sanjay R.; Chen, Jinhua; Dart, Michael J.; Fernando, Dilinie P.; Ku, Yi-Yin; Lockwood, Mark; Wang, Lei
From U.S. Pat. Appl. Publ. (2004), US 20040077616 A1 20040422, Language: English, Database: CAPLUS

2 *9. Process for producing alpha-hydroxy ketones*
By Saito, Takao; Kumobayashi, Hidenori; Murahashi, Shunichi
From Eur. Pat. Appl. (1992), EP 482834 A1 19920429, Language: English, Database: CAPLUS

3 *5. Monomer, polymer, chemically amplified positive resist composition, and patterning process*
By Hatakeyama, Jun; Tachibana, Seiichiro; Hasegawa, Koji
From U.S. Pat. Appl. Publ. (2011), US 20110294070 A1 20111201, Language: English, Database: CAPLUS

4 *6. Cycloalkenylbutenones and fragrance compositions comprising them*
By Granier, Thierry; Hanhart, Andreas; Bajgrowicz, Jerzy A.
From PCT Int. Appl. (2008), WO 2008071025 A1 20080619, Language: English, Database: CAPLUS

Norquay Technology Inc. USA
P. O. Box 468, Chester, PA. 19016-0468
610-874-4330 fax 610-874-3575
www.norquaytech.com
email: sales@norquaytech.com

References, 11 citations with full abstracts:

1. *Fused pyrazole derivatives and their preparation, pharmaceutical compositions, and methods for treatment of metabolic-related disorders,*
By Boatman, Douglas P.; Schrader, Thomas O.; Semple, Graeme; Skinner, Philip J.; Jung, Jae-Kyu
From PCT Int. Appl. (2006), WO 2006069242 A2 20060629, Language: English, Database: CAPLUS

The invention relates to certain fused pyrazole derivs. of formula I, and pharmaceutically acceptable salts thereof, which exhibit useful pharmacol. properties, for example, as agonists for the RUP25 receptor. Compds. of formula I wherein X is N, and Z is CR7, or X is CR7 and Z is N; one dotted lines are single and double bonds such that the ring contg. X and Z is a pyrazole ring; R1 - R6 are independently H, C1-6 acyl(oxy), C2-6 alkenyl, C1-6 alkoxy, C1-6 alkyl(amino), C1-6 alkyl(thio)carboxamide, C2-6 alkynyl, etc.; R7 is carbo-C1-6 alkoxy, carboxy, or tetrazol-5-yl; and their pharmaceutically acceptable salts, hydrates, or solvates thereof are claimed. Also provided by the invention are pharmaceutical compns. contg. compds. of the invention, and methods of using the compds. and compns. of the invention in the treatment of metabolic-related disorders, including dyslipidemia, atherosclerosis, coronary heart disease, insulin resistance, type 2 diabetes, Syndrome-X and the like. In addn., the invention also provides for the use of the compds. of the invention in combination with other active agents such as those belonging to the class of α-glucosidase inhibitors, aldose reductase inhibitors, biguanides, HMG-CoA reductase inhibitors, squalene synthesis inhibitors, fibrates, LDL catabolism enhancers, angiotensin converting enzyme (ACE) inhibitors, insulin secretion enhancers, DP receptor antagonists, and the like. Example compd. II was prepd. by cyclization of (R)-2-(3-butenyl)oxirane; the resulting bicyclo[3.2.1]hexan-2-ol underwent oxidn. of give bicyclo[3.2.1]hexane-2-one, which underwent cyclization with di-Et oxalate and hydrazine to give 1a,2,5,5a-tetrahydro-1H-2,3-diazacyclopropa[a]pentalene-4-carboxylic acid Et ester, which underwent amidation with ammonium hydroxide to give the corresponding amide, which benzylation with benzyl bromide followed by dehydration to give 2-benzyl-1a,2,5,5a-tetrahydro-1H-2,3-diazacyclopropa[a]pentalene-4-carbonitrile, which reacted with sodium azide to give 2-Benzyl-4-(2H-tetrazol-5-yl)-1a,2,5,5a-tetrahydro-2,3-diazacyclopropa[a]pentalene, which underwent debenzylation to give example compd. II. All the invention compds. were evaluated for their antihyperglycemic activity, and 35S-GTPγS, human RUP25, and 3H-nicotinic acid receptor binding affinities. Certain compds. were detd. to have an EC50 value in the cAMP whole cell method of about 25 μM or less. From the in vitro GTPγS binding assay, it was detd. that tested compds. exhibited EC50 values in the range of about 1-100 μM, and the best compds. showed an EC50 value of less than about 1 μM. Certain tested compds. have an EC50 in the 3H-nicotinic acid binding competition assay, in the range of 1 to 100 μM , and the most favorable compds. exhibited an EC50 value of less than about 1 μM.

2. *Aralkylation of benzene or alkylbenzenes*
By Shimizu, Isoo; Tsuji, Okitsugu; Matsuzaka, Eiichi; Sato, Atsushi
From Ger. Offen. (1980), DE 2932382 A1 19800228, Language: German, Database: CAPLUS

Selective aralkylation of alkylbenzenes with aryl olefins contg. a double bond conjugated with a benzene ring was carried out in the presence of CnF(2n+1-m)ClmSO3H. Thus, 3 g 1:1 1-octene-styrene were added to 10 g o-xylene and 0.05 g CF3SO3H at 50° to give a mixt. shown via mass spectra to contain 1:1 styrene-xylene adduct; no octene adduct was found.

3. *Preparation and application of chiral 2,5-dimethylborolanes*
By Masamune, Satoru
From U.S. (1987), US 4644075 A 19870217, Language: English, Database: CAPLUS

Chiral borane compds. I, II, III and IV (R = primary or secondary alkyl, Me3Si), useful in asym. reactions, were prepd. A soln. of 4.66 g (S)-(+)-prolinol in Et2O was added to a soln. of 12.9 g (±)-trans-borolane V (prepn. given) to give (S,S)-V and ~100% (S)-(+)-prolinol-(R,R)-trans-borolane complex VI, which (3.55 g) was treated with HCl/Et2O to yield 81% (R,R)-V, to which (1.83 g) in ether was added a soln. of 14.5 mmol LiAlH4 to give 78% (R,R)-VII. The reaction of cis-2-butene with VII gave 75% 2-butanol, [α]21 D = +13.3°.

4. Chelating agents
By Johnson, Bruce Fletcher; Carter, Randall Lee; Rishel, Michael James; Darey, Mark Christopher Patrick; Wu, Tao; Yang, Yang; Valliant, John Fitzmaurice; Stephenson, Karin Ann
From PCT Int. Appl. (2013), WO 2013113801 A2 20130808, Language: English, Database: CAPLUS

The present invention provides radiopharmaceutical agents for in vivo imaging, which comprise a metal complex of a radiometal conjugated to a biol. targeting mol. The invention provides novel tetradentate diaminedioxime chelating agents, useful for prepg. such radiometal complexes and radiopharmaceuticals. The invention also provides radiometal complexes of the chelators, and their methods of prepn., plus radiopharmaceutical compns., kits and methods of imaging.

3

5. Monomer, polymer, chemically amplified positive resist composition, and patterning process
By Hatakeyama, Jun; Tachibana, Seiichiro; Hasegawa, Koji
From U.S. Pat. Appl. Publ. (2011), US 20110294070 A1 20111201, Language: English, Database: CAPLUS

A polymer is obtained from a hydroxyphenyl methacrylate monomer having an acid labile group substituted thereon I [R1 = H, methyl; R2 = H, C1-4-alkyl; R3 = acid labile group; m = 1-4]. A pos. resist compn. comprising the polymer as a base resin has a very high contrast of alk. dissoln. rate before and after exposure, a high resoln., a good profile and minimal line edge roughness of a pattern after exposure, a retarded acid diffusion rate, and good etching resistance.

4 *6. Cycloalkenylbutenones and fragrance compositions comprising them*
By Granier, Thierry; Hanhart, Andreas; Bajgrowicz, Jerzy A.
From PCT Int. Appl. (2008), WO 2008071025 A1 20080619, Language: English, Database: CAPLUS

The present invention relates to substituted cycloalkenylbutenones of the formula I (R1 = H, Me, Et; n = 1-5), as well as to methods for their prodn. and to fragrance compns. comprising them for applications in perfumes, household products, laundry products, body care products, and cosmetics. Thus, 1-(2-ethylcyclohex-1-enyl)but-2-en-1-one was prepd. in a yield of 65%, starting from 2-ethylcyclohexanol through intermediates 2-ethylcyclohexanone, 2-ethyl-1-ethynylcyclohexanol, and 1-(2-ethylcyclohex-1-enyl)ethanone, and incorporated at 2.8 parts by wt./1000 in a perfume compn. for a soap, bringing a rosy-fruity aspect to the compn. and enhancing its diffusion and its vol.

7. Preparation of α-hydroxyketones from trisubstituted olefins and organic hydroperoxides
By Hagitani, Hirotoshi
From Jpn. Kokai Tokkyo Koho (2008), JP 2008115128 A 20080522, Language: Japanese, Database: CAPLUS

α-Hydroxyketones are prepd. by oxidative addn. of org. hydroperoxides to trisubstituted olefins in the presence of Os compds., and tertiary amines or tertiary amine oxides, preferably in ionic liqs. After prepn., ionic liq. phases contg. the Os compds., and tertiary amines or tertiary amine oxides are recovered from reaction mixts., and recycled. Thus, 1.82 g Me 3,3-dimethyl-2-(2-methyl-1-propenyl)cyclopropanecarboxylate was treated with 3.0 g 70% aq. tert-BuOOH soln. in the presence of 1 mg K2OsO4.2H2O and 10 mg N-methylmorpholine-N-oxide in 1 g 1-methyl-3-butylimidazolium tetrafluoroborate to give 90% Me 3,3-dimethyl-2-(2-hydroxy-2-methyl-1-oxopropyl)cyclopropanecarboxylate.

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From U.S. Pat. Appl. Publ. (2004), US 20040077616 A1 20040422, Language: English, Database: CAPLUS

Title compds. I [A = cycloalkyl, bicycloalkyl; R2-4 = H, alkyl; R1 = alkoxy, amino] are prepd. For instance, methylenecyclohexane is treated with Et diazoacetate (methylcyclohexane, Cu, 100-105°) and the resulting ester sapond. to give II. Representative examples of I exhibit ED50 = 0.84 - 0.35 mmol/kg in the s.c. pentylenetetrazole (PTZ) seizure model. I are useful in the treatment of epilepsy, bipolar disorder, psychiatric disorders, migraine, pain, or movement disorders, and to provide neuroprotection.

Norquay Technology Inc. USA
P. O. Box 468, Chester, PA. 19016-0468
610-874-4330 fax 610-874-3575
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2 *9. Process for producing alpha-hydroxy ketones*
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R1COC(OH)R2R3 (R1 = alkyl, aralkyl, alkoxycarbonyl; R2, R3 = H, alkyl, aralkyl; R1 and R2, R1 and R3 or R2 and R3 together form a ring) were prepd. by oxidizing R1CH:CR2R3 in the presence of a Ru catalyst. Thus, oxidizing cyclohexene with peracetic acid in the presence of RuCl3 gave 74% 2-hydroxycyclohexanone.

10. Reductive ozonolysis of olefins to produce carbonyl compounds and intermediate products
By Story, Paul R.; Whited, E. A.; Alford, J. A.; Ray, Wesley C.; Burgess, John R.
From U.S. (1975), US 3862142 A 19750121, Language: English, Database: CAPLUS

Olefins were ozonized in the presence of an aldehyde or ketone capable of undergoing the Baeyer-Villiger oxidn., e.g., EtCHO, cyclohexanone, to give carbonyl compds. Ozonide formation was eliminated; instead, a dioxetane intermediate, which could be isolated, was formed. Thus, ethylidenecyclohexane was ozonized in pinacolone at -45° to give cyclohexanone and AcH. Then the ozonolysis residue after the removal of solvent was heated rapidly to 170°, it decompd. with luminescence to give AcH.

11. Reductive ozonolysis of olefins
By Story, Paul R.; Whited, Everest A.; Alford, John A.; Ray, Wesley C.; Burgess, John R.
From Ger. Offen. (1974), DE 2329873 A1 19740103, Language: German, Database: CAPLUS

Ozonolysis of olefins was carried out in a Baeyer-Villiger solvent to promote cross-ozonization and avoid formation of explosive peroxides. Ethylidenecyclohexane, methylenecyclohexane, cis- and trans-Me2CHCH:CHCHMe2, and cis- and trans-stilbene were ozonolyzed in EtCHO, PrCHO, Me3CCHO or cyclohexanone.