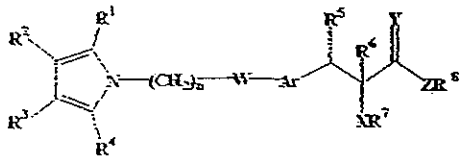
NOVEL PYRROLES HAVING HYPOLIPIDEMIC HYPOCHOLESTEREMIC ACTIVITIES, PROCESS FOR THEIR PREPARATION AND PHARMACEUTICAL COMPOSITIONS CONTAINING THEM AND THEIR USE IN MEDICINE

FIELD OF INVENTION

The present invention relates to novel hypolipidaemic and hypocholesterolemic compounds, their derivatives, their analogs, their tautomeric forms, their stereoisomers, their polymorphs, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates and pharmaceutically acceptable compositions containing them. More particularly, the present invention relates to novel β-aryl-α-substituted propanoic acids of the general formula (I), their derivatives, their analogs, their tautomeric forms, their stereoisomers, their polymorphs, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates, pharmaceutical compositions containing them, use of these compounds in medicine and the intermediates involved in their preparation.



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The present invention also relates to a process for the preparation of the above said novel compounds, their derivatives, their analogs, their tautomeric forms, their stereoisomers, their polymorphs, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates, and pharmaceutical compositions containing them.

The compounds of the general formula (I) lower or modulate triglyceride levels and/or cholesterol levels and/or low-density lipoproteins (LDL) and raise HDL plasma levels and hence are useful in combating different medical conditions, where such lowering (and raising) is beneficial. Thus, it could be used in the treatment and/or prophylaxis of obesity, hyperlipidaemia, hypercholesteremia, hypertension, atherosclerotic disease events, vascular restenosis, diabetes and many other related conditions. The compounds of general formula (I) are useful to prevent or reduce the risk of developing atherosclerosis, which leads to diseases and conditions such as artereosclerotic cardiovascular diseases, stroke, coronary heart diseases, cerebrovascular diseases, peripheral vessel diseases and related disorders.

These compounds of general formula (I) are useful for the treatment and/or prophylaxis of metabolic disorders loosely defined as Syndrome X. The characteristic features of Syndrome X include initial insulin resistance followed by hyperinsulinemia, dyslipidemia and impaired glucose tolerance. The glucose intolerance can lead to non-insulin dependent diabetes mellitus (NIDDM, Type 2 diabetes), which is characterized by hyperglycemia, which if not controlled may lead to diabetic complications or metabolic disorders caused by insulin resistance. Diabetes is no longer considered to be associated only with glucose metabolism, but it affects anatomical and physiological parameters, the intensity of which vary depending upon stages / duration and severity of the diabetic state. The compounds of this

invention are also useful in prevention, halting or slowing progression or reducing the risk of the above mentioned disorders along with the resulting secondary diseases such as cardiovascular diseases, like arteriosclerosis, atherosclerosis; diabetic retinopathy, diabetic neuropathy and renal disease including diabetic nephropathy, glomerulonephritis, glomerular sclerosis, nephrotic syndrome, hypertensive nephrosclerosis and end stage renal diseases, like microalbuminuria and albuminuria, which may be result of hyperglycemia or hyperinsulinemia.

The compounds of the present invention can be useful as aldose reductase inhibitors; for improving cognitive functions in dementia, and in the treatment and/or prophylaxis of disorders such as psoriasis, polycystic ovarian syndrome (PCOS), cancer, osteoporosis, leptin resistance, inflammation and inflammatory bowel diseases, xanthoma, pancreatitis, myotonic dystrophy, endothelial cell dysfunction and hyperlipidemia.

The compounds of the present invention are useful in the treatment of the diseases mentioned herein, alone or in combination one or more hypoglycemic, antihyperglycemic, hypolipidaemic, hypolipoproteinemic agents, antioxidants, antihypertensives, such as HMG CoA reductase inhibitor, fibrate, statins, glitazones, sulfonyl ureas, insulin, α-glycosidase inhibitors, nicotinic acid, cholestyramine, cholestipol or probucol, and the like.

BACKGROUND OF THE INVENTION

Hyperlipidaemia has been recognized as the major risk factor in causing cardiovascular diseases due to atherosclerosis. Atherosclerosis and other such peripheral vascular diseases affect the quality of life of a large population in the world. The therapy aims to lower the elevated plasma LDL cholesterol, low-density lipoprotein and plasma triglycerides in order to prevent or reduce the risk of occurrence of cardiovascular diseases. The detailed etiology of atherosclerosis and coronary artery diseases is discussed by Ross and Glomset [New Engl. J. Med., 295, 369-377 (1976)]. Plasma cholesterol is generally found esterified with various serum lipoproteins and numerous studies have suggested an inverse relationship between serum HDL-cholesterol level and risk for occurrence of cardiovascular disease. Many studies have suggested an increased risk of coronary artery diseases (CAD) due to elevated LDL and VLDL-cholesterol levels [Stampfer *et al., N. Engl. J. Med.*, 325, 373-381(1991)]. The other studies illustrate protective effects of HDL against progression of atherosclerosis. Thus, HDL has become a crucial factor in treating diseases with increased levels of cholesterol [Miller *et. al., Br. Med. J.* 282, 1741-1744(1981); Picardo *et al., Arteriosclerosis,* 6, 434-441 (1986); Macikinnon et *al., J. Biol. Chem.* 261, 2548-2552 (1986)].

Diabetes is associated with a number of complications and also affect a large population. This disease is usually associated with other diseases such as obesity, hyperlipidemia, hypertension and angina. It is well established that improper treatment can aggravate impaired glucose tolerance and insulin resistance, thereby leading to frank diabetes. Further, patients with insulin resistance and type

greater risk of cardiovascular diseases. The present therapy for these diseases includes sulfonylureas and biguanides along with insulin. This type of drug therapy may lead to mild to severe hypoglycemia, which may lead to coma or in some cases may lead to death, as a result of unsatisfactory glycaemic control by these drugs. Recent addition of drugs in the treatment of diabetes are the thiazolidinediones, drugs having insulin-sensitizing action. Thiazolidinediones are prescribed alone or in combination with other anti-diabetic agents like troglitazone, rosiglitazone and pioglitazone. These are useful in treating diabetes, lipid metabolism but are suspected to have tumor-inducing potential and cause hepatic dysfunction, which may lead to liver failure. Further, serious undesirable side-effects have occurred in animal and/or human studies which include cardiac hypertrophy, hema dilution and liver toxicity in a few glitazones progressing to advanced human trials. The drawback is considered to be idiosyncratic. Presently, there is a need for a safe and an effective drug, to treat insulin resistance, diabetes and hyperlipidemia.[*Exp. Clin. Endocrinol. Diabetes*: 109(4), S548-9 (2001)]

Obesity is another major health problem being associated with increased morbidity and mortality. It is a metabolic disorder, in which excess of fat is accumulated in the body. Although, its etiology is unclear, the general feature includes excess of calorie intake than it is consumed. Various therapies such as dieting, exercise, appetite suppression, inhibition of fat absorption etc. have been used to combat obesity. However, more efficient therapies to treat this abnormality is essential as obesity is closely related to several diseases such as coronary heart disease, stroke, diabetes, gout, osteoarthritis, hyperlipidaemia and reduced fertility. It also leads to social and psychological problems.[*Nature Reviews: Drug Discovery* : 1(4), 276-86 (2002)]

Peroxisome Proliferator Activated Receptor (PPAR) is a member of the steroid/ retinoid/ thyroid hormone receptor family. PPARα, PPARγ and PPARδ have been identified as subtypes of PPARs. Extensive reviews regarding PPAR, their role in different diseased conditions are widely published [*Endocrine Reviews*, 20(5), 649-688 (1999); *J. Medicinal Chemistry*, 43(4), 58-550 (2000); *Cell*, 55, 932-943 (1999); *Nature*, 405, 421-424 (2000); *Trends in Pharmacological Sci.*, 469-473 (2000)]. PPARγ activation has been found to play a central role in initiating and regulating adipocyte differentiation [Endocrinology 135, 798-800, (1994)] and energy homeostasis, [*Cell*, 83, 803-812 (1995); *Cell*, 99, 239-242 (1999)]. PPARγ agonists would stimulate the terminal differentiation of adipocyte precursors and cause morphological and molecular changes characteristic of a more differentiated, less malignant state. During adipocyte differentiation, several highly specialized proteins are induced, which are being involved in lipid storage and metabolism. It is accepted that PPARγ activation leads to expression of CAP gene [Cell biology, 95, 14751-14756, (1998)], however, the exact link from PPARγ activation to changes in glucose metabolism and decrease in insulin resistance in muscle has not been clear. PPARα is involved in stimulating β-oxidation of fatty acids [*Trends Endocrine. Metabolism*, 4, 291-296 (1993)] resulting in plasma circulating free fatty acid

reduction [*Current Biol.*, 5, 618-621 (1995)]. Recently, role of PPARγ activation in the terminal differentiation of adipocyte precursors has been implicated in the treatment of cancer. [*Cell*, 79, 1147-1156 (1994); *Cell*, 377-389 (1996); *Molecular Cell*, 465-470 (1998); *Carcinogenesis*, 1949-1953 (1998); *Proc. Natl. Acad. Sci.*, 94, 237-241 (1997); *Cancer Research*, 58, 3344-3352 (1998)]. Since PPARγ is expressed in certain cells consistently, PPARγ agonists would lead to nontoxic chemotherapy. There is growing evidence that PPAR agonists may also influence the cardiovascular system through PPAR receptors as well as directly by modulating vessel wall function [*Med. Res. Rev.*, 20 (5), 350-366 (2000)].

PPAR α agonists have been found useful in the treatment of obesity (WO 97/36579). Dual PPAR α and γ agonists have been suggested to be useful for Syndrome X (WO 97/25042). PPAR γ agonists and HMG-CoA reductase inhibitors have exhibited synergism and indicated the usefulness of the combination in the treatment of atherosclerosis and xanthoma (EP 0753 298).

Leptin is a protein when bound to leptin receptors is involved in sending satiety signal to the hypothalamus. Leptin resistance would therefore lead to excess food in-take, reduced energy expenditure, obesity, impaired glucose tolerance and diabetes [*Science*, 269, 543-46(1995)]. It has been reported that insulin sensitizers lower plasma leptin concentration [*Proc. Natl. Acad. Sci.* 93, 5793-5796 (1996): WO 98/02159)].

A number of compounds belonging to β-aryl-α-hydroxypropanoic acids and their derivatives have been reported to be useful in the treatment of hyperlipidemia, hypercholesterolemia and hyperglycemia [US 5,306,726, US 5,985,884, US 6,054,453, US 6,130,214, EP 90 3343, PCT publications Nos. WO 91/19702, WO 94/01420, WO 94/13650, WO 95/03038, WO 95/17394, WO 96/04260, WO 96/04261, WO 96/33998, WO 97/25042, WO 97/36579, WO 98/28534, WO 99/08501, WO 99/16758, WO 99/19313, WO99/20614, WO 00/23417, WO 00/23445, WO 00/23451, WO 01/53257].

SUMMARY OF INVENTION

The objective of this invention is to develop novel compounds represented by the general formula (I) used as hypocholesterolemic, hypolipidaemic, hypolipoproteinemic, anti-obesity and antihyperglycemic agents which may have additional body weight lowering effect and beneficial effect in the treatment and/or prophylaxis of diseases caused by hyperlipidaemia, diseases classified under syndrome X and atherosclerosis.

The main objective of the present invention is to provide novel β-aryl-α-substituted propanoic acids represented by the general formula (I), their derivatives, their analogs, their tautomeric forms, their stereoisomers, their polymorphs, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates, and pharmaceutical compositions containing them or their mixtures thereof.

Another objective of the present invention is to provide novel β-aryl-α-substituted propanoic acids represented by the general formula (I), their derivatives, their analogs, their tautomeric forms, their stereoisomers, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates, and pharmaceutical compositions containing them or their mixtures thereof having enhanced activities, without toxic effects or with reduced toxic effect.

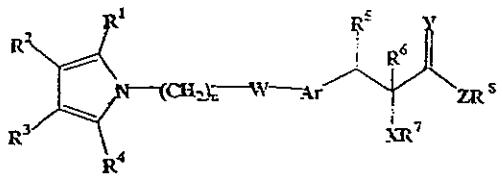
Yet another objective of this invention is to provide a process for the preparation of novel β-aryl-α-substituted propanoic acids represented by the general formula (I), their derivatives, their analogs, their tautomeric forms, their stereoisomers, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates.

Still another objective of the present invention is to provide pharmaceutical compositions containing compounds of the general formula (I), their derivatives, their analogs, their tautomeric forms, their stereoisomers, their polymorphs, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates or their mixtures in combination with suitable carriers, solvents, diluents and other media normally employed in preparing such compositions.

A further objective of the present invention is to provide process for preparation of intermediates involved in the process.

DETAILED DESCRIPTION OF THE INVENTION

Accordingly, the present invention relates to compounds of the general formula (I),



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their derivatives, their analogs, their tautomeric forms, their stereoisomers, their polymorphs, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates, wherein R^2 and R^3 represent hydrogen, and R^1, R^4 may be same or different, and independently represent

hydrogen, haloalkyl, perhaloalkyl, nitro, cyano, formyl,

or substituted or unsubstituted groups selected from

linear or branched (C_1-C_6)alkyl, linear or branched (C_2-C_6)alkenyl, linear or branched (C_2-C_6)alkynyl, (C_3-C_7)cycloalkyl, (C_3-C_7)cycloalkenyl, aryl, aralkyl, heterocyclyl, heteroaryl, heterocyclyl(C_1-C_6)alkyl, heteroar(C_1-C_6)alkyl,

acyl, acyloxy,

carboxylic acid and its derivatives such as esters and amides,

hydroxyalkyl, aminoalkyl, mono-substituted or di-substituted aminoalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl,

(C_1-C_6)alkylthio, thio(C_1-C_6)alkyl, arylthio,
derivatives of sulfenyl and sulfonyl groups,
sulfonic acid and its derivatives;
n represents an integer 2,
W represents O, S or NR^9, where R^9 represents hydrogen, (C_1-C_6)alkyl or aryl groups;
Ar represents a substituted or unsubstituted divalent single or fused aromatic, heteroaromatic group;
R^5 and R^6 represent both hydrogen or together represent a bond;
X represent O or S;
R^7 represents hydrogen, perfluoro(C_1-C_{12})alkyl, substituted or unsubstituted groups selected from linear or branched (C_1-C_{12})alkyl, cyclo(C_3-C_6)alkyl, aryl, ar(C_1-C_{12})alkyl, heteroaryl, heteroar(C_1-C_{12})alkyl, heterocyclyl, alkoxyalkyl, aryloxyalkyl, alkoxycarbonyl, aryloxycarbonyl, cycloalkyloxycarbonyl, alkylaminocarbonyl, arylaminocarbonyl or acyl groups;
Y represents O or S;
Z represents O, S or NR^{10} where R^{10} represents hydrogen or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, aryl, ar(C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, heteroaryl or heteroar(C_1-C_6)alkyl groups;
R^8 represents hydrogen, substituted or unsubstituted groups selected from linear or branched (C_1-C_6)alkyl, aryl, ar(C_1-C_6)alkyl, heteroaryl, heteroar(C_1-C_6)alkyl, heterocylyl, heterocyclylalkyl, hydroxyalkyl, alkoxyalkyl or alkylaminoalkyl groups;
R^{10} and R^8 together may form 5 or 6 membered substituted or unsubstituted heterocyclic ring structure containing one or more heteroatoms selected from O, N or S.

The various groups, radicals and substituents used anywhere in the specification are described in the following paragraphs, unless it is specifically described otherwise:
The term "alkyl" used herein, either alone or in combination with other radicals, denotes a linear or branched radical containing one to twelve carbons, such as methyl, ethyl, *n*-propyl, *iso*-propyl, *n*-butyl, *sec*-butyl, *tert*-butyl, amyl, *t*-amyl, *n*-pentyl , *n*-hexyl, *iso*-hexyl, heptyl, octyl and the like.
The term "alkenyl" used herein, either alone or in combination with other radicals, denotes a linear or branched radical containing one to twelve carbons such as vinyl, allyl, 2-butenyl, 3-butenyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 5-hexenyl, 2-

heptenyl, 3-heptenyl, 4-heptenyl, 5-heptenyl, 6-heptenyl and the like. The term "alkenyl" includes dienes and trienes of straight and branched chains.

The term "alkynyl" used herein, either alone or in combination with other radicals, denotes a linear or branched radical containing one to twelve carbons, such as ethynyl, 1-propynyl, 2-propynyl, 1-butynyl, 2-butynyl, 3-butynyl, 1-pentynyl, 2-pentynyl, 3-pentynyl, 4-pentynyl, 1-hexynyl, 3-hexynyl, 4-hexynyl, 5-hexynyl, and the like. The term "alkynyl" includes di- and tri-ynes.

The term "cyclo(C_3-C_7)alkyl" used herein, either alone or in combination with other radicals, denotes a radical containing three to seven carbons, such as cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl and the like.

The term "cyclo(C_3-C_7)alkenyl" used herein, either alone or in combination with other radicals, denotes a radical containing three to seven carbons, such as cyclopropenyl, 1-cyclobutenyl, 2-cylobutenyl, 1-cyclopentenyl, 2-cyclopentenyl, 3-cyclopentenyl, 1-cyclohexenyl, 2-cyclohexenyl, 3-cyclohexenyl, 1-cycloheptenyl, cycloheptadienyl, cycloheptatrienyl, and the like.

The term "alkoxy" used herein, either alone or in combination with other radicals, denotes a radical alkyl, as defined above, attached directly to an oxygen atom, such as methoxy, ethoxy, *n*-propoxy, *iso*-propoxy, *n*-butoxy, *t*-butoxy, *iso*-butoxy, pentyloxy, hexyloxy, and the like.

The term "alkenoxy" used herein, either alone or in combination with other radicals, denotes an alkenyl radical, as defined above, attached to an oxygen atom, such as vinyloxy, allyloxy, butenoxy, pentenoxy, hexenoxy, and the like.

The term "cyclo(C_3-C_7)alkoxy" used herein, either alone or in combination with other radicals, denotes a radical containing three to seven carbon atoms, such as cyclopropyloxy, cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, cycloheptyloxy and the like.

The term "halo" or "halogen" used herein, either alone or in combination with other radicals, such as "haloalkyl", "perhaloalkyl" etc refers to a fluoro, chloro, bromo or iodo group. The term "haloalkyl" denotes a radical alkyl, as defined above, substituted with one or more halogens such as perhaloalkyl, more preferably, perfluoro(C_1-C_6)alkyl such as fluoromethyl, difluoromethyl, trifluoromethyl, fluoroethyl, difluoroethyl, trifluoroethyl, mono or polyhalo substituted methyl, ethyl, propyl, butyl, pentyl or hexyl groups. The term "haloalkoxy" denotes a haloalkyl, as defined above, directly attached to an oxygen atom, such as fluoromethoxy, chloromethoxy, fluoroethoxy chloroethoxy groups, and the like. The term

"perhaloalkoxy" denotes a perhaloalkyl radical, as defined above, directly attached to an oxygen atom, trifluoromethoxy, trifluoroethoxy, and the like.

The term "aryl" or "aromatic" used herein, either alone or in combination with other radicals, refers to an optionally substituted aromatic system containing one, two or three rings wherein such rings may be attached together in a pendant manner or may be fused, such as phenyl, naphthyl, tetrahydronaphthyl, indane, biphenyl, and the like. The term 'aralkyl" denotes an alkyl group, as defined above, attached to an aryl, such as benzyl, phenethyl, naphthylmethyl, and the like. The term "aryloxy" denotes an aryl radical, as defined above, attached to an alkoxy group, such as phenoxy, naphthyloxy and the like, which may be substituted. The term "aralkoxy" denotes an arylalkyl moiety, as defined above, such as benzyloxy, phenethyloxy, naphthylmethyloxy, phenylpropyloxy, and the like, which may be substituted.

The term "heterocyclyl" or "heterocyclic" used herein, either alone or in combination with other radicals is intended to include a saturated, partially saturated and unsaturated ring-shaped radicals, the heteroatoms selected from nitrogen, sulfur and oxygen. Examples of saturated heterocyclic radicals include aziridinyl, azetidinyl, benzothiazolyl, pyrrolidinyl, imidazolidinyl, piperidinyl, piperazinyl, 2-oxopiperidinyl, 4-oxopiperidinyl, 2-oxopiperazinyl, 3-oxopiperazinyl, morpholinyl, thiomorpholinyl, 2-oxomorpholinyl, azepinyl, diazepinyl, oxapinyl, thiazepinyl, oxazolidinyl, thiazolidinyl, and the like; examples of partially saturated heterocyclic radicals include dihydrothiophene, dihydropyran, dihydrofuran, dihydrothiazole, and the like.

The term "heteroaryl" or "heteroaromatic" used herein, either alone or in combination with other radicals, represents an optionally substituted unsaturated 5 to 6 membered heterocyclic radicals containing one or more hetero atoms selected from O, N or S, attached to an aryl group, such as pyridyl, thienyl, furyl, pyrrolyl, oxazolyl, thiazolyl, imidazolyl, isoxazolyl, oxadiazolyl, tetrazolyl, benzopyranyl, benzofuranyl, benzothienyl, indolinyl, indolyl, quinolinyl, pyrimidinyl, pyrazolyl, quinazolinyl, pyrimidonyl, benzoxazinyl, benzoxazinonyl, benzothiazinyl, benzothiazinonyl, benzoxazolyl, benzothizaolyl, benzimidazolyl, and the like.

The term "heterocyclyl(C_1-C_{12})alkyl" used herein, either alone or in combination with other radicals, represents a heterocyclyl group, as defined above, substituted with an alkyl group of one to twelve carbons, such as pyrrolidinealkyl, piperidinealkyl, morpholinealkyl, thiomorpholinealkyl, oxazolinealkyl, and the like, which may be substituted. The term "heteroaralkyl" used herein, either alone or in combination with other radicals, denotes a heteroaryl group, as defined above, attached to a straight or branched saturated carbon chain

containing 1 to 6 carbons, such as (2-furyl)methyl, (3-furyl)methyl, (2-thienyl)methyl, (3-thienyl)methyl, (2-pyridyl)methyl, 1-methyl-1-(2-pyrimidyl)ethyl and the like. The terms "heteroaryloxy", "heteroaralkoxy", "heterocycloxy", "heterocylylalkoxy" denotes heteroaryl, heteroarylalkyl, heterocyclyl, heterocylylalkyl groups respectively, as defined above, attached to an oxygen atom.

The term "acyl" used herein, either alone or in combination with other radicals, refers to a radical containing one to eight carbons such as formyl, acetyl, propanoyl, butanoyl, *iso*-butanoyl, pentanoyl, hexanoyl, heptanoyl, benzoyl and the like, which may be substituted.

The term "acyloxy" used herein, either alone or in combination with other radicals, refers to a radical acyl, as defined above, directly attached to an oxygen atom, such as acetyloxy, propionyloxy, butanoyloxy, *iso*-butanoyloxy, benzoyloxy and the like.

The term "acylamino" used herein, either alone or in combination with other radicals, denotes an acyl group as defined earlier attached to an amino group and may be CH_3CONH, C_2H_5CONH, C_3H_7CONH, C_4H_9CONH, C_6H_5CONH and the like, which may be substituted.

The term "mono-substituted amino" used herein, either alone or in combination with other radicals, represents an amino group, substituted with one group selected from (C_1-C_6)alkyl, substituted alkyl, aryl, substituted aryl or arylalkyl groups. Examples of monoalkylamino group include methylamine, ethylamine, *n*-propylamine, *n*-butylamine, *n*-pentylamine and the like and may be substituted.

The term 'disubstituted amino" used herein, either alone or in combination with other radicals, denotes an amino group, substituted with two radicals that may be same or different selected from (C_1-C_6)alkyl, substituted alkyl, aryl, substituted aryl, or arylalkyl groups, such as dimethylamino, methylethylamino, diethylamino, phenylmethyl amino and the like and may be substitued.

The term "arylamino" used herein, either alone or in combination with other radicals, refers to an aryl group, as defined above, linked through amino having a free valence bond from the nitrogen atom, such as phenylamino, naphthylamino, N-methyl anilino and the like and may be substituted.

The term "aralkylamino" used herein, either alone or in combination with other radicals, denotes an arylalkyl group as defined above linked through amino having a free valence bond from the nitrogen atom e.g. benzylamino, phenethylamino, 3-phenylpropylamino, 1-napthylmethylamino, 2-(1-napthyl)ethylamino and the like and may be substituted.

The term "oxo" or "carbonyl" used herein, either alone (-C=O-) or in combination with other radicals, such as "alkylcarbonyl", represents a carbonyl radical (–C=O-) substituted with an alkyl radical such as acyl or alkanoyl, as described above.

The term "carboxylic acid" used herein, alone or in combination with other radicals, denotes a –COOH group, and includes derivatives of carboxylic acid such as esters and amides. The term "ester" used herein, alone or in combination with other radicals, denotes –COO- group, and includes carboxylic acid derivatives, where the ester moieties are alkoxycarbonyl, such as methoxycarbonyl, ethoxycarbonyl, and the like, which may be substituted; aryloxycarbonyl group such as phenoxycarbonyl, naphthyloxycarbonyl, and the like, which may be substituted; aralkoxycarbonyl group such as benzyloxycarbonyl, phenethyloxycarbonyl, napthylmethoxycarbonyl, and the like, which may be substituted; heteroaryloxycarbonyl, heteroaralkoxycarbonyl, wherein the heteroaryl group, is as defined above, which may be substituted; heterocyclyloxycarbonyl, where the heterocyclic group, as defined earlier, which may be substituted.

The term "amide" used herein, alone or in combination with other radicals, represents an aminocarbonyl radical (H_2N-C=O-), wherein the amino group is mono- or di-substituted or unsubstituted, such as methylamide, dimethylamide, ethylamide, diethylamide, and the like. The term "aminocarbonyl" used herein, either alone or in combination with other radicals, with other terms such as 'aminocarbonylalkyl", "n-alkylaminocarbonyl", "N-arylaminocarbonyl", "N,N-dialkylaminocarbonyl", "N-alkyl-N-arylaminocarbonyl", "N-alkyl-N-hydroxyaminocarbonyl", and "N-alkyl-N-hydroxyaminocarbonylalkyl", substituted or unsubstituted. The terms "N-alkylaminocabonyl" and "N,N-dialkylaminocarbonyl" denotes aminocarbonyl radicals, as defined above, which have been substituted with one alkyl radical and with two alkyl radicals, respectively. Preferred are "lower alkylaminocarbonyl" having (C_1-C_6) lower alkyl radicals as described above attached to aminocarbonyl radical. The terms "N-arylaminocarbonyl" and "N-alkyl-N-arylaminocarbonyl" denote amiocarbonyl radicals substituted, respectively with one aryl radical, or one alkyl and one aryl radical. The term "aminocarbonylalkyl" includes alkyl radicals substituted with aminocarbonyl radicals.

The term "hydroxyalkyl" used herein, either alone or in combination with other radicals, refers to an alkyl group, as defined above, substituted with one or more hydroxy radicals, such as hydroxymethyl, hydroxyethyl, hydroxypropyl, hydroxybutyl, hydroxypentyl, hydroxyhexyl and the like.

The term "aminoalkyl" used herein, alone or in combination with other radicals, denotes an amino ($-NH_2$) moiety attached to an alkyl radical, as defined above, which may be substituted, such as mono- and di-substituted aminoalkyl. The term "alkylamino" used herein, alone or in combination with other radicals, denotes an alkyl radical, as defined above, attached to an amino group, which may be substituted, such as mono- and di-substituted alkylamino.

The term "alkoxyalkyl" used herein, alone or in combination with other radicals is intended to include an alkoxy group, as defined above, attached to an alkyl group, such as methoxymethyl, ethoxymethyl, methoxyethyl, ethoxyethyl and the like. The term "aryloxyalkyl" used herein, alone or in combination with other radicals, includes phenoxymethyl, napthyloxymethyl, and the like. The term "aralkoxyalkyl" used herein, alone or in combination with other radicals, includes $C_6H_5CH_2OCH_2$, $C_6H_5CH_2OCH_2CH_2$, and the like.

The term "$(C_1$-$C_{12})$alkylthio" or "$(C_1$-$C_6)$alkylthio" used herein, either alone or in combination with other radicals, denotes a straight or branched or cyclic monovalent substituent comprising an alkyl group of one to twelve carbon atoms, as defined above, linked through a divalent sulfur atom having a free valence bond from the sulfur atom, such as methylthio, ethylthio, propylthio, butylthio, pentylthio and the like. Examples of cyclic alkylthio are cyclopropylthio, cyclobutylthio, cyclopentylthio, cyclohexylthio and the like, which may be substituted.

The term "thio$(C_1$-$C_{12})$alkyl" or "thio$((C_1$-$C_6)$alkyl" used herein, either alone or in combination with other radicals, represents an alkyl group, as defined above, attached to a group of formula –SR', where R' represents hydrogen, alkyl or aryl group, e.g. thiomethyl, methylthiomethyl, phenylthiomethyl and the like, which may be substituted.

The term "arylthio' used herein, either alone or in combination with other radicals, refers to an aryl group, as defined above, linked through a divalent sulfur atom, having a free valence bond from the sulfur atom such as phenylthio, napthylthio and the like.

The term "$(C_1$-$C_{12})$alkoxycarbonylamino" used herein, alone or in combination with other radicals, denotes an alkoxycarbonyl group, as defined above, attached to an amino group, such as methoxycarbonylamino, ethoxycarbonylamino, and the like. The term "aryloxycarbonylamino" used herein, alone or in combination with other radicals, denotes an aryloxycarbonyl group, as defined above, attached to the an amino group, such as C_6H_5OCONH, $C_6H_5OCONCH_3$, $C_6H_5OCONC_2H_5$, $C_6H_4(CH_3O)CONH$, $C_6H_4(OCH_3)OCONH$, and the like. The term "aralkoxycarbonylamino" used herein, alone or

in combination with other radicals, denotes an aralkoxycarbonyl group, as defined above, attached to an amino group $C_6H_5CH_2OCONH$, $C_6H_5CH_2CH_2CH_2OCONH$, $C_6H_5CH_2OCONHCH_3$, $C_6H_5CH_2OCONC_2H_5$, $C_6H_4(CH_3)CH_2OCONH$, $C_6H_4(OCH_3)CH_2OCONH$, and the like.

The term "aminocarbonylamino", "alkylaminocarbonylamino", "dialkylaminocarbonylamino" used herein, alone or in combination with other radicals, denotes a carbonylamino (-$CONH_2$) group, attached to amino(NH_2), alkylamino group or dialkylamino group respectively, where alkyl group is as defined above.

The term "alkoxyamino" used herein, alone or in combination with other radicals, denotes an alkoxy group, as defined above, attached to an amino group. The term "hydroxyamino" used herein, alone or in combination with other radicals, denotes –NHOH moiety, and may be substituted.

The term "sulfenyl" or "sulfenyl and its derivatives" used herein, alone or in combination with other radicals, denotes a bivalent group, –SO- or RSO, where R is substituted or unsubstituted alkyl, aryl, heteroaryl, heterocyclyl, and the like.

The term "sulfonyl" or "sulfones and its derivatives" used herein, either alone or in combination with other radicals, with other terms such as alkylsulfonyl, denotes divalent radical $–SO_2-$, or RSO_2-, where R is substituted or unsubstituted groups selected from alkyl, aryl, heteroaryl, heterocyclyl, and the like. "Alkylsulfonyl" denotes alkyl radicals, as defined above, attached to a sulfonyl radical, such as methylsulfonyl, ethylsulfonyl, propylsulfonyl and the like. The term "arylsulfonyl" used herein, either alone or in combination with other radicals, denotes aryl radicals, as defined above, attached to a sulfonyl radical, such as phenylsulfonyl and the like.

The term "sulfonic acid or its derivatives", used herein, either alone or in combination with other radicals, represents SO_3H group and its derivatives such as sulfonylamino(SO_2NH_2); N-alkylaminosulfonyl and N,N-dialkylaminosulfonyl radicals where the sulfonylamino group is substituted with one and two alkyl groups respectively, such as N-methylaminosulfonyl, N-ethylaminosulfonyl, N,N-dimethylaminosulfonyl, N-methyl-N-ethylaminosulfonyl and the like; N-arylaminosulfonyl and N-alkyl-N-arylaminosulfonyl groups where the sulfonylamino group is substituted with one aryl radical, or one alkyl and one aryl radical; -SO_3R, wherein 'R' represents alkyl, aryl, aralkyl groups, as defined above, which may be substituted.

The term "substituted" used in combination with other radicals, intends to include suitable substituents on that radical such as substituted alkyl, substituted alkenyl, substituted alkynyl, substituted cycloalkyl, substituted aryl, etc, mentioned anywhere in the specification. The

suitable substituents include, but are not limited to the following radicals, alone or in combination with other radicals, such as, hydroxyl, oxo, halo, thio, nitro, amino, cyano, formyl, amidino, guanidino, hydrazino, alkyl, haloalkyl, perhaloalkyl, alkoxy, haloalkoxy, perhaloalkoxy, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, bicycloalkyl, bicycloalkenyl, alkoxy, alkenoxy, cycloalkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocylyl, heteroaryl, heterocyclylalkyl, heteroaralkyl, heteroaryloxy, heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, heterocyclylalkoxyacyl, acyl, acyloxy, acylamino, monosubstituted or disubstituted amino, arylamino, aralkylamino, carboxylic acid and its derivatives such as esters and amides, carbonylamino, hydroxyalkyl, aminoalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, thioalkyl, arylthio, alkoxycarbonylamino, aryloxycarbonylamino, aralkyloxycarbonylamino, aminocarbonylamino, alkylaminocarbonylamino, alkoxyamino, hydroxyl amino, sulfenyl derivatives, sulfonyl derivatives, sulfonic acid and its derivatives.

The groups R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, and Ar, may be substituted, where the term "substituted" includes radicals as defined above, or any other group mentioned in the specification.

Some of the above defined terms may occur more than once in the above defined formula (I) and upon such occurences, each such term may be defined independently of the other.

It is preferred that R^8 represents (C_1-C_6)alkyl, aralkyl or hydrogen; Z represents O or NH or N(C_1-C_3)alkyl; Y represents O atom; X represents O or S atom; R^7 represents optionally substituted groups selected from linear or branched (C_1-C_6)alkyl, aralkyl or aryl radical; R^5 and R^6 each represent a H atom or R^5 and R^6 together may represent a bond; Ar represents a divalent phenyl group or a naphthyl group optionally substituted; W represents O or S atom; n represents an integer 2; R^2, R^3, represent hydrogen, and R^1, R^4, represent formyl, perhaloalkyl, substituted or unsubstituted groups selected from (C_1-C_6)alkyl, aralkyl, (C_3-C_6)cycloalkyl, aryl, heterocyclyl, heteroaryl, heterocyclylalkyl, heteroaralkyl, alkylthio, arylthio, acyl, alkoxycarbonyl, aryloxycarbonyl, carboxylic acid and its derivatives.

It is more preferred that R^8 represents (C_1-C_3)alkyl, aralkyl or hydrogen; Z represents O atom; Y represents O atom; X represents O atom; R^7 represents linear or branched (C_1-C_6)alkyl, optionally substituted with one or more halogen atoms; R^5 and R^6 represent each a hydrogen atom; Ar represents a divalent phenyl group, optionally substituted with halogen, linear or branched alkyl, linear or branched alkoxy groups; W represents O atom; n represents an integer 2; R^2, R^3 each represent a hydrogen atom and R^1, R^4 may be same or different and represent optionally substituted groups selected from (C_1-C_6)alkyl, especially, (C_1-C_4)alkyl

such as methyl, ethyl, propyl, butyl groups; aralkyl groups such as benzyl, phenethyl; hydroxyalkyl especially hydroxymethyl; aminoalkyl especially aminomethyl; aryl, especially, phenyl optionally substituted with one or more groups such as halo, nitro, cyano, alkyl, alkenyl, phenyl, alkoxy, 1,2-methylenedioxy, heterocyclylalkyl, heteroaralkyl, aryloxy, aralkyl, alkylthio, thioalkyl, hydroxy, alkylcarbonyloxy, halogen, amino, acylamino alkylamino, acyl, acyloxy, alkylsulfinyl, alkylsulfonyl, arylthio, alkylthio, arylsulfenyl, arylsulfonyl, carboxylic acid and its derivatives; heterocyclyl, (C_3-C_6)cycloalkyl groups; optionally substituted heteroaryl group especially, furyl, thienyl, quinolyl, benzofuryl, benzothienyl, pyridyl groups; Alternatively, R^1, R^2, R^3 represent hydrogen atom and R^4 represent optionally substituted groups selected from aryl, 1,2-methylenedioxyphenyl, heteroaryl, such as furyl, pyridyl, thienyl, benzofuranyl, benzothiophenyl, and the like; (C_1-C_4)alkyl, alkylthio, alkoxy, and acyl groups.

Pharmaceutically acceptable salts forming part of this invention are intended to define but not limited to salts of the carboxylic acid moiety such as alkali metal salts like Li, Na, and K salts; alkaline earth metal salts like Ca and Mg salts; salts of organic bases such as lysine, arginine, guanidine and its derivatives, which may be optionally substituted, diethanolamine, choline, tromethamine and the like; ammonium or substituted ammonium salts and aluminium salts. Salts may be acid addition salts which defines but not limited to sulfates, bisulfates, nitrates, phosphates, perchlorates, borates, hydrohalides, acetates, tartrates, maleiates, fumarates, maleates, citrates, succinates, palmoates, methanesulfonates, benzoates, salicylates, hydroxynaphthoates, benzenesulfonates, ascorbates, glycerophosphates, ketoglutarates and the like. Pharmaceutically acceptable solvates may be hydrates or comprising other solvents of crystallization such as alcohols.

Particularly useful compounds according to the present invention includes

[(2R)-N(1S)]-2-Ethoxy-3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-N-(2-hydroxy-1-phenylethyl)propanamide

[(2S)-N(1S)]-2-Ethoxy-3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-N-(2-hydroxy-1-phenylethyl) propanamide

(±) 3-{4-[2-(2,4-dimethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2,4-dimethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2,4-dimethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-ethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-ethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-ethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-formylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-formylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-formylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-acetylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-acetylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-acetylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-ethyl-5-methylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-ethyl-5-methylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-ethyl-5-methylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-propylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-propylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-propylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-*n*-butylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-*n*-butylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-*n*-butylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-methoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-methoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-methoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-propoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-propoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-propoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-3-phenylpyrrol-1-yl)ethoxy]phenyl}-2- ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-3-phenylpyrrol-1-yl)ethoxy]phenyl}-2- ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-3-phenylpyrrol-1-yl)ethoxy]phenyl}-2- ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(3-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(3-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(3-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts;

(±) 3-{4-[2-(5-methyl-2-(2-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(2-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(2-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-methoxyphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-methoxyphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-methoxyphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-bromophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-bromophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-bromophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-fluorophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-fluorophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-fluorophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters:

(±) 3-{4-[2-(5-methyl-2-(4-chlorophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-chlorophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-chlorophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(4-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2- ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(4-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2- ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(4-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2- ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2,3-diphenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2,3-diphenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2,3-diphenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2,5-diisopropylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2,5-diisopropylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2,5-diisopropylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-isopropyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-isopropyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-isopropyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-(4-{2-[2-(4-fluorophenyl)-5-isopropyl-4-phenylcarbamoylpyrrol-1-yl]ethoxy}phenyl)-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-(4-{2-[2-(4-fluorophenyl)-5-isopropyl-4-phenylcarbamoylpyrrol-1-yl]ethoxy}phenyl)-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-(4-{2-[2-(4-fluorophenyl)-5-isopropyl-4-phenylcarbamoylpyrrol-1-yl]ethoxy}phenyl)-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-methylthiopyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-methylthiopyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-methylthiopyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2,5-diethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2,5-diethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2,5-diethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-ethyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-ethyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-ethyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-ethyl-2-(2-phenylethyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-ethyl-2-(2-phenylethyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-ethyl-2-(2-phenylethyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(3-methoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(3-methoxyphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(3-methoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-cyclohexyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(÷) 3-{4-[2-(5-methyl-2-cyclohexyl-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-cyclohexyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-biphenyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-biphenyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-biphenyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(furan-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-furan-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(furan-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(5-methyl furan-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(÷)3-{4-[2-(5-methyl-2-(5-methyl furan-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(5-methyl furan-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-thiomethyl phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-thiomethyl phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-thiomethyl phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-cyanophenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-cyanophenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-cyanophenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-phenoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-phenoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-phenoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-1'-(toluene-4-sulfonyl)-1'H-[2,2']bipyrrolyl-1-yl])ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-1'-(toluene-4-sulfonyl)-1'H-[2,2']bipyrrolyl-1-yl])ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-1'-(toluene-4-sulfonyl)-1'H-[2,2']bipyrrolyl-1-yl])ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(3,4-dimethoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(3,4-dimethoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(3,4-dimethoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-methanesulfinyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-methanesulfinyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts;

(-) 3-{4-[2-(5-methyl-2-(4-methanesulfinyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-acetylamino-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-acetylamino-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-acetylamino-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-(2-piperidin-1-yl-ethoxy)-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-(2-piperidin-1-yl-ethoxy)-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-(2-piperidin-1-yl-ethoxy)-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-vinyloxy-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-vinyloxy-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-vinyloxy-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-phenylsulfonyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-phenylsulfonyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-phenylsulfonyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-phenylsulfinyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-phenylsulfinyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-phenylsulfinyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-methanesulfonyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-methanesulfonyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-methanesulfonyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-cyclohexylmethoxy-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-cyclohexylmethoxy-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-cyclohexylmethoxy-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-benzoyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-benzoyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-benzoyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-cyclopropyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-cyclopropyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-cyclopropyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(benzofuran-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(benzofuran-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(benzofuran-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(3-carboxymethyl-2-methyl-5-phenyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(3-carboxymethyl-2-methyl-5-phenyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(3-carboxymethyl-2-methyl-5-phenyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(Benzo[1,3]dioxol-5-yl-) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(Benzo[1,3]dioxol-5-yl-) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(Benzo[1,3]dioxol-5-yl-) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(naphthalen-1-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(naphthalen-1-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(naphthalen-1-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(3-benzyloxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(3-benzyloxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(3-benzyloxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(5-bromo-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(5-bromo-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(5-bromo-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-isopropoxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-isopropoxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-isopropoxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(3,5-dimethyl-2-phenyl-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(3,5-dimethyl-2-phenyl-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(3,5-dimethyl-2-phenyl-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-benzyloxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-benzyloxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-benzyloxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-hydroxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-hydroxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-hydroxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-phenyl-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-phenyl-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-phenyl-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(5-chloro-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(5-chloro-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(5-chloro-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-ethoxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-ethoxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-ethoxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(5-methyl-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(5-methyl-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(5-methyl-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2,3-dimethyl-5-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2,3-dimethyl-5-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2,3-dimethyl-5-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(quinolin-2-yl-)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(quinolin-2-yl-)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(quinolin-2-yl-)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(pyridin-4-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(pyridin-4-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(pyridin-4-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(pyridin-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(pyridin-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(pyridin-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(pyridin-3-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(pyridin-3-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(pyridin-3-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(E/Z) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxyprop-2-enoic acid and its pharmaceutically acceptable salts and its esters;

(E) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxyprop-2-enoic acid and its pharmaceutically acceptable salts and its esters;

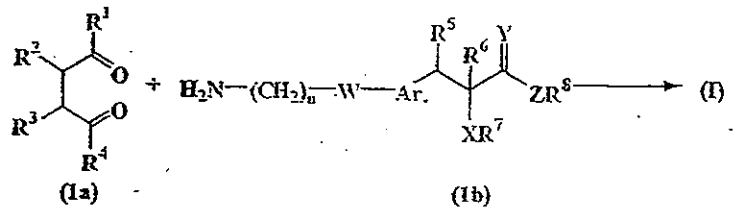
(Z) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxyprop-2-enoic acid and its pharmaceutically acceptable salts and its esters.

The signs (+) and (-) in the beginning of the name or number of a compound intends to denote the dextrorotatory or laevorotatory isomers of the compound. They may contain only one optical isomer or varying amounts of the other optical isomer, keeping the net sign of rotation of plane polarised light (+) or (-) as the case may be. The sign (±) in the beginning of the name or number of a compound intends to indicate a racemic mixture of the two enantiomers with almost zero net rotation of the plane polarized light. The term "and its esters" includes the ester derivative of the carboxylic acid as defined earlier, preferably methyl or ethyl esters. The present invention encompasses the use

of not only the compounds of present invention described in formula (I) but also the metabolic products of these compounds formed in vivo for the treatment of diseases mentioned anywhere in the specificaiton.

The present invention also provides methods for the preparation of novel compounds described in the general formula (I), their tautomeric forms, their derivatives, their analogs, their stereoisomers, their pharmaceutically acceptable salts and their pharmaceutically acceptable solvates, wherein R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, W, X, Y, Z, Ar and n are as defined earlier. These methods are described below, comprising :

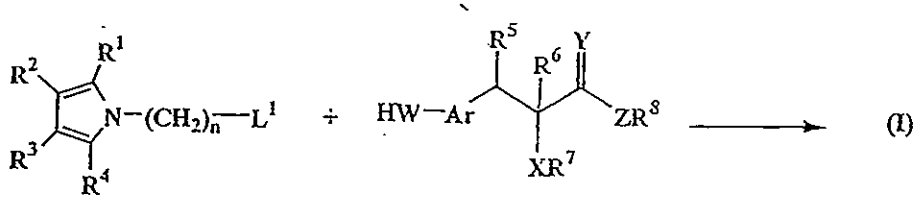
Route 1:



(1a) (1b)

The reaction of a compound of general formula (1a), wherein all symbols are as defined earlier with a compound of formula (1b) which may be optically active or racemic, wherein all symbols are as defined earlier to yield a compound of general formula (I) may be carried out using Paal-Knorr cyclization (Paal C. Ber., 1885, 18, 367; Knorr, L., Ber., 1885, 18, 299). The reaction may be carried out neat or in the presence of a solvent or a mixture thereof such as tetrahydrofuran, hexane, cyclohexane, toluene, methanol, ethanol, heptane, petroleum ether, xylene, benzene, ethyl acetate, *tert*-butyl acetate, 1,2-dichloroethane, *iso*-propanol, dioxane, cyclohexane, acetonitrile and the like. The reaction temperature may range from 0 °C to the reflux temperature of the solvent(s) used. The water produced may be removed by using a Dean Stark water separator or by water scavengers such as molecular sieves. The reaction may be carried out in the absence or presence of an inert atmosphere such as N_2, He or Ar. The reaction may be carried out under acidic condition provided by acids like acetic acid, propanoic acid, butyric acid, isobutyric acid, pivalic acid, *p*-toluenesulfonic acid, camphorsulfonic acid, benzenesulfonic acid, trifluoroacetic acid, chloroacetic acid, chloropropanoic acid, phenylacetic acid, phenylpropanoic acid, malonic acid, succinic acid, benzoic acid, halogenated benzoic acid, toluic acid and the like. Mineral acids such as HCl or HBr may also be used. The reaction time may range from 5 minutes to 72 hours, preferably from 1 to 48 hours.

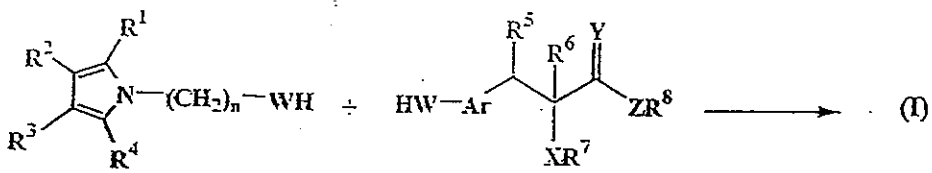
Route 2:



(1c) (1d)

The reaction of compound of formula (1c), where all symbols are as defined earlier and L^1 represents a leaving group such as halogen atom, *p*-toluenesulfonate, methanesulfonate, trifluoromethanesulfonate and the like with a compound of formula (1d) which may be optically active or racemic, where W is either O or S and all other symbols are as defined earlier, to produce a compound of general formula (I). This reaction may be carried out in the presence of solvents such as acetone, tetrahydrofuran, dimethylsulfoxide, dioxane, acetonitrile, dimethyl formamide, DME, benzene, toluene, pet. ether, heptane, hexane, 2-butanone, xylene, alcohols such as methanol, ethanol, propanol, butanol, iso-butanol, *tert*-butanol, pentanol and the like or a mixture thereof. Base such as alkali metal carbonate such as K_2CO_3, Na_2CO_3, $CsCO_3$, and the like; or alkali metal hydroxide such as NaOH, KOH and the like, may be used during this reaction. Alkali metal hydrides such as NaH, KH can be used whenever solvent employed is not protic or contain carbonyl group. The reaction may be carried out at a temperature in the range 0 °C to reflux temperature of the solvent(s) used and the reaction time may range from 1 to 48 hours.

Route 3:



(1e) (1d)

The reaction of compound of general formula (1e) where all symbols are as defined earlier and W represents oxygen atom, with a compound of general formula (1d) which may be optically active or racemic, where W is O or S and all other symbols are as defined earlier may be carried out using coupling agents such as DCC, EDC, triaryl phosphine/dialkyl azadicarboxylate such as PPh_3/DEAD or PPh_3/DIAD and the like. Inert atmosphere may be maintained using N_2, Ar or He. Solvents such as tetrahydrofuran, dioxane, DME, toluene, dichloromethane, chloroform, carbon tetrachloride, acetonitrile and the like may be used. Compounds such as 4-dimethylaminopyridine, hydroxybenzotriazole etc. may be used in the range of 0.05 to 2 equivalents. The reaction temperature in the range of 0 °C to reflux temperature of the solvent may be used, preferably, 20 °C to 80 °C. The duration of the reaction may range from 0.5 to 24 h, preferably 0.5 to 12 hours.

Route 4:

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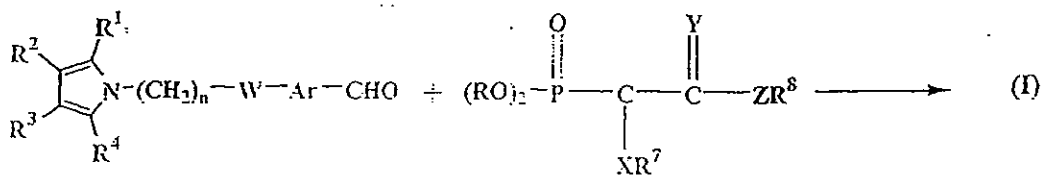
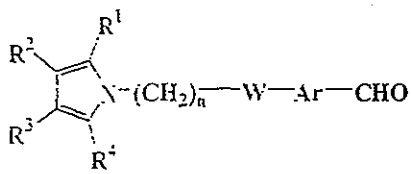


(1h) (1i)

The reaction of a compound of general formula (1h) wherein all the symbols are as defined earlier, with a compound of formula (1i), where all the symbols are as defined earlier and R represents (C_1-C_8) alkyl to afford a compound of formula (I) where R^5 and R^6 represent a bond and all other symbols are as defined earlier, may be carried out under Wittig Horner reaction conditions in the presence of a base such as alkali metal hydrides, like NaH or KH, alkali metal alkoxides such as NaOMe, NaOEt, K^+ t-BuO^- or mixture thereof, organolithiums like CH_3Li, BuLi, *sec*-BuLi, LDA and the like. Aprotic solvents such as THF, dioxane, DMF, DMSO, DME and the like or mixture thereof may be employed. HMPA favours the progression of the reaction but not essential. The reaction may be carried out at a temperature ranging from -80 °C to 100 °C, preferably from 0 °C to 30 °C. The reaction proceeds more effectively under anhydrous and inert conditions.

The compound of formula (I) where R^5 and R^6 represent a bond may be reduced to a compound of general formula (I) where R^5 and R^6 each represent hydrogen atom by reacting with hydrogen gas in the presence of a catalyst such as 5-10 % Pd C, Rh/C, Pt/C Raney Ni and the like, 5-100 % w/w of the catalyst may be employed or the mixture thereof. The pressure of hydrogen gas may be one atmosphere to 80 psi. Suitable solvents are alcohols such as ethanol, methanol and the like, ethyl acetate, THF, dioxane, acetic acid and the like. Temperature may be in the range of 20 °C to 80 °C, may be used for this reduction process. Metal-solvent such as magnesium in alcohol or sodium amalgam in alcohol may also be used, for this reduction process.

According to a feature of the present invention, there is provided an intermediate of formula (1h),

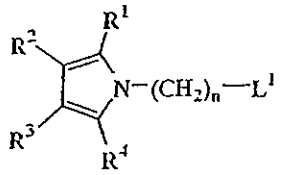


(1h)

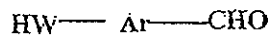
wherein R^2 and R^3 represent hydrogen, and R^1, R^4 may be same or different, and represent hydrogen, haloalkyl, perhaloalkyl, nitro, cyano, formyl, or substituted or unsubstituted groups selected from linear or branched(C_1-C_6)alkyl, linear or branched (C_2-C_6)alkenyl, linear or branched(C_2-C_6)alkynyl, (C_3-C_7)cycloalkyl, (C_3-C_7)cycloalkenyl, aryl, aralkyl, heterocyclyl, heteroaryl, heterocyclyl(C_1-C_6)alkyl, heteroar(C_1-C_6)alkyl, acyl, acyloxy, carboxylic acid and its derivatives such as esters and amides, hydroxyalkyl, aminoalkyl, mono-substituted or di-substituted aminoalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, (C_1-C_6)alkylthio, thio(C_1-C_6)alkyl, arylthio, derivatives of sulfenyl and sulfonyl groups, sulfonic acid and its derivatives; *n* represents an integer 2, W represents O, S or NR^9,

where R^9 represents hydrogen, (C_1-C_6)alkyl or aryl groups; Ar represents a substituted or unsubstituted divalent single or fused aromatic, heteroaromatic group;

According to another feature of the present invention, there is provided a process for the preparation of intermediate of the general formula (1h) as defined earlier which comprises reacting a compound of general formula (1c),



(1c)

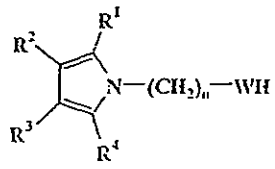


(1j)

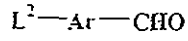
wherein, $R^1 - R^4$, n are as defined earlier and L^1 is a halogen atom such as chlorine, bromine or iodine or a leaving group such as methanesulfonate, trifluoromethanesulfonate, p-toluenesulfonate and the like with the compound of the formula (1j), where Ar and W are as defined earlier.

The reaction of the compound of formula (1c) with the compound of formula (1j) to produce a compound of formula (1h) may be carried out in the presence of solvents such as acetone, THF, DMSO, dioxane, 2-butanone, acetonitrile, DMF, DME, benzene, toluene, xylene, alcohols such as methanol, ethanol, propanol, butanol, iso-butanol, *tert*-butanol, pentanol and the like or a mixture thereof. Bases such as alkali metal carbonates such as K_2CO_3, Na_2CO_3, $CsCO_3$ and the like may be used; alkali metal hydroxides like NaOH, KOH and the like; or mixtures thereof may be used. Alkali metal hydrides such as NaH, KH and the like, may be used in cases when the solvent used is not protic and does not contain carbonyl group. The reaction temperature may range from 20 °C to reflux temperature of the solvent(s) used and the reaction time may range from 1 to 48 hours. The inert atmosphere may be maintained by using inert gases such as N_2, Ar or He.

Alternatively, the intermediate of the general formula (1h), can also be prepared by the reaction of compound of general formula (1e),



(1e)



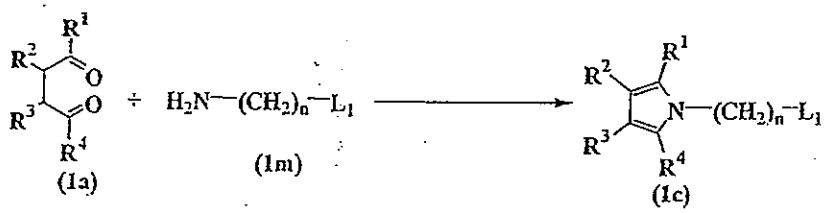
(1k)

wherein $R^1 - R^4$, n and W are as defined earlier and with a compound of the formula (1k), where Ar is as defined earlier and L^2 is a halogen atom such as fluorine, chlorine, bromine or iodine. The reaction of the compound of formula (1e) with the compound of formula (1k) to produce a compound of formula (1h) may be carried out in the presence of solvents such as THF, DMF, DMSO, DME and the like. Mixture of solvents may be used. The inert atmosphere may be maintained by using inert gases such as N_2, Ar or He. The reaction may be effected in the presence of a base such as K_2CO_3, Na_2CO_3, NaH or mixtures thereof. The reaction temperature may range from 20 °C to 150 °C, preferably at a

temperature in the range from 30 °C to 100 °C. The duration of reaction may range from 1 to 24 hours, preferably from 2 to 6 hours.

The reaction of compound of general formula (1e) wherein W represents O and all other symbols are as defined earlier with the compound of formula (1j) may be carried out using suitable coupling agents such as dicyclohexyl urea, triarylphosphine/dialkylazadicarboxylate such as PPh_3 /DEAD and the like. The reaction may be carried out in the presence of solvents such as THF, DME, CH_2Cl_2, $CHCl_3$, toluene, acetonitrile, carbontetrachloride and the like. The inert atmosphere may be maintained by using inert gases such as N_2, Ar or He. The reaction may be effected in the presence of DMAP, HOBT and they must be used in the range of 0.05 to 2 equivalents, preferably 0.25 to 1 equivalents. The reaction temperature may range from 0 °C to 100 °C, preferably at a temperature in the range from 20 °C to 80 °C. the duration of reaction of the reaction may range from 0.5 to 24 hours, preferably from 6 to 12 hours.

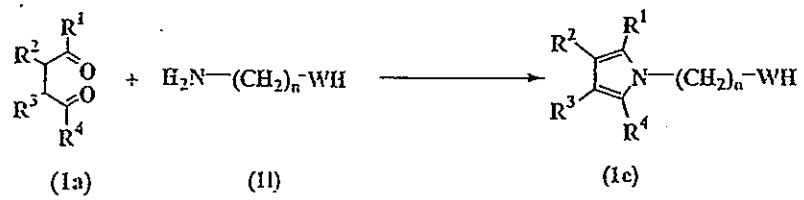
In another embodiment of this invention, there is provided a process for the preparation of a compound of the general formula (1c), which comprises reacting the compound of general formula (1a) wherein $R^1 - R^4$ are as defined earlier,



(1a) (1m) (1c)

with substituted amino compound (1m), where all symbols are is as defined earlier, to yield the intermediate of the general formula (1c).

In yet another embodiment of this invention, there is provided a process for the preparation of a compound of the general formula (1e), which comprises reacting the compound of general formula (1a) wherein $R^1 - R^4$ are as defined earlier,



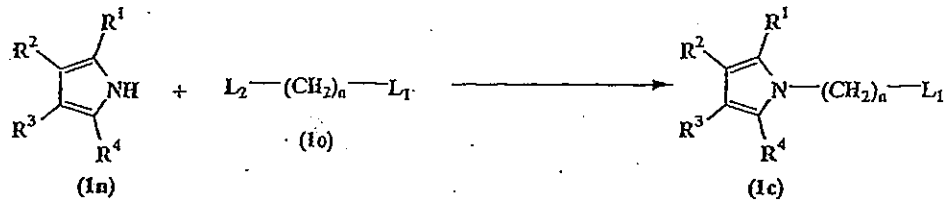
(1a) (1l) (1e)

with substituted amino compound (1l), where all symbols are is as defined earlier, to yield the intermediate of the general formula (1e).

The reactions of a compound of general formula (1a) with a compound of general formula (1l) or a compound of general formula (1m) may be carried out neat or in presence of solvents or a mixture thereof such as tetrahydrofuran, hexane, toluene, methanol, ethanol, heptane, petroleum ether, xylene, benzene, ethyl acetate, *tert*-butyl acetate, 1,2-dichloroethane, *iso*-propanol, *tert*-butanol, dioxane, cyclohexane, acetonitrile and the like. The reaction temperature may range from 0 °C to the reflux temperature of the solvent(s) used. The water produced may be removed by using a Dean Stark water separator or by water scavengers such as molecular sieves. The reaction may be carried out in the

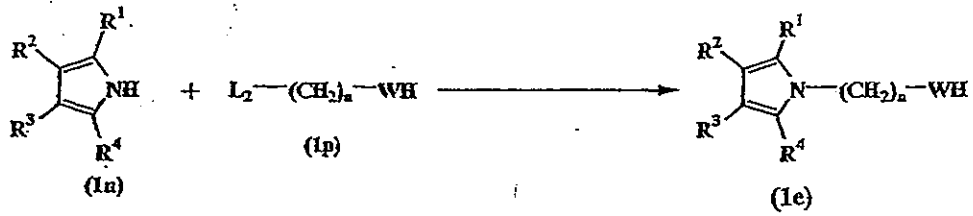
presence of an inert atmosphere such as N_2, He or Ar. The reaction may be carried out in the presence of an acid, such as acetic acid, propanoic acid, butyric acid, isobutyric acid, pivalic acid, *p*-toluenesulfonic acid, camphorsulfonic acid, benzenesulfonic acid, trifluoroacetic acid, chloroacetic acid, chloropropanoic acid, phenylacetic acid, phenylpropanoic acid, malonic acid, succinic acid, benzoic acid, halogenated benzoic acid, toluic acid and the like.

In yet another embodiment of this invention, there is provided an alternate process for the preparation of a compound of the general formula (1c), which comprises reacting the compound of general formula (1n) wherein $R^1 - R^4$ are as defined earlier,



with the compound of formula (1o) where L_1 and L_2 may be same or different and represent leaving groups such as halogen atom as Cl, Br, or I, methanesulfonate, p-toluenesulfonate and the like; and n as defined earlier.

In yet another embodiment of this invention, there is provided an alternate process for the preparation of a compound of the general formula (1e), which comprises reacting the compound of general formula (1n) where $R^1 - R^4$ are as defined earlier,



with the compound of formula (1p) where L_2 represent leaving groups such as halogen atom as Cl, Br, or I, methanesulfonate, p-toluenesulfonate and the like; and n as defined earlier.

The reaction of compound of general formula (1n), with either (1o) or (1p) may be carried out in solvents such as alcohol like methanol, ethanol, iso-propanol and the like; THF, dioxane, DMSO, DMF, acetonitrile, heptane, benzene, toluene, xylene and the like. The reaction may be carried out in presence of bases such as NaH, KH, Na_2CO_3, K_2CO_3, NaOH, KOH, $LiNH_2$, $NaNH_2$ and the like. Phase transfer catalyst such as tetrabutyl ammonium halide, tetrabutyl ammonium hydroxide (TBAH) and the like may be used. The reaction temperature may range from 0 °C to the reflux temperature of the solvent employed. The reaction may be carried out in the presence of an inert atmosphere such as N_2, He or Ar.

In another embodiment of this invention, there is provided a process for the preparation of a compound of the general formula (1e), wherein $R^1 - R^4$ and n are as defined earlier and W represents O, which comprises reducing the corresponding acid



(1q) (1c)

The reduction of compound of general formula (1q) may be carried out in presence of solvents or a mixture thereof such as tetrahydrofuran, dioxane, ether and the like. The reaction temperature may range from 0 °C to the reflux temperature of the solvent(s) used. The reaction may be carried out in the presence of an inert atmosphere such as N_2, He or Ar. Suitable reducing agent such as sodium borohydride/iodine, diborane and its derivative, $LiAlH_4$ and the like may be used.

The compound of general formula (1q) may be prepared by the reaction of compound of general formula (1n) with a compound of $L_1(CH_2)_{n-1}COOR$, where L_1 and R are as defined earlier, followed by hydrolysis of the ester group to acid using methods commonly used.

The compounds of the present invention have asymmetric centers and occur either as racemates or racemic mixtures as well as individual diastereomers of any of the possible isomers, including optical isomers, being included in the present invention The stereoisomers of the compounds of the present invention may be prepared by one or more ways presented below:

i. One or more of the reagents may be used in their single isomeric form. For example, compound (1b) or (1d) may be pure stereoisomers.

ii. Optically pure catalysts or chiral ligands along with metal catalysts may be employed in the reduction process. The metal catalyst may be Rhodium, Ruthenium, Indium and the like. The chiral ligands may preferably be chiral phosphines. (Principles of Asymmetric synthesis J E Baldwin Ed. Tetrahedron series, Volume 14, Page no. 311-316)

iii. Mixture of stereoisomers may be resolved by conventional methods such as microbial resolution, resolving the diastereomeric salts formed with chiral acids or chiral bases. Chiral acids may be tartaric acid, mandelic acid, lactic acid, camphorsulfonic acid, amino acids and the like. Chiral bases may be cinchona alkaloids, (+) or (-) brucine, α-methyl benzylamine, (+) or (-) phenyl glycinol, ephedrine, amino sugars such as glucosamines or a basic amino acid such as lysine, arginine and the like.

iv. Resolution of the mixture of stereoisomers may also be effected by chemical methods by derivatization of the compound with a chiral compound such as chiral amines, chiral acids, chiral amino alcohols, amino acids into a 1:1 mixture of diastereomers and the diastereomers may be separated by conventional methods of fractional crystallization, chromatography and the like followed by cleaving the derivative (Jaques et al. "Enantiomers, Racemates and Resolution", Wiley Interscience, 1981; R. A. Sheldon, in "Chirotechnology", Marcel Dekker, Inc. NY, Basel, 1993, 173-204 and references therein; A. N. Collins, G. N. Sheldrack and J Crosby, in "Chirality in Industry II", John Wiley & Sons, Inc, 1997, 81-98 and references therein; E. L. Eliel and S. H. Wilen, in "Stereochemistry of Organic Compound", John Wiley & Sons, Inc, 1999, 297-464 and references therein.)

It will be appreciated that in any of the above mentioned reactions any reactive group in the substrate molecule may be protected, according to conventional chemical practice. Suitable protecting groups in any of the above mentioned reactions are those used conventionally in the art. The methods of formation and removal in such protecting groups are those conventional methods appropriate to the molecule being protected. T. W. Greene and P. G. M. Wuts "Protective groups in Organic Synthesis", John Wiley & Sons, Inc, 1999, 3rd Ed., 201-245 along with references therein.

It will be appreciated that the above-mentioned preparation of the compounds of Formula (I), or a pharmaceutically acceptable salt thereof, and/or pharmaceutically acceptable solvate thereof is a stereoselective procedure and that the compound of formula (I) is a single stereoisomer. Favorably, a compound of formula (I) is present in admixture with less than 50% w/w of its racemic isomer, suitably 80 - 100 % and preferably 90 - 100 % pure, such as 90 - 95 %, most preferably 95 - 100 %, for example 95 %, 96 %, 97 %, 98 %, 99 % and 99.99 % optically pure.

Preferably the compounds of Formula (I), or a pharmaceutically acceptable salt thereof, and/or pharmaceutically acceptable solvate thereof is in optically pure form.

The absolute stereochemistry of the compounds may be determined using conventional methods, such as X-ray crystallography.

The pharmaceutically acceptable salts forming a part of this invention may be prepared by treating the compound of formula (I) with 1-6 equivalents of a base such as sodium hydride, sodium methoxide, sodium ethoxide, sodium hydroxide, potassium tert-butoxide, calcium hydroxide, calcium acetate, calcium chloride, magnesium hydroxide, magnesium chloride, magnesium alkoxide and the like. Solvents such as water, acetone, ether, THF, methanol, ethanol, t-butanol, 2-butanone, dioxane, propanol, butanol, isopropanol, di*iso*propyl ether, *tert*-butyl ether or mixtures thereof may be used. Organic bases such as lysine, arginine, methyl benzylamine, ethanolamine, diethanolamine, tromethamine, choline, guanidine and their derivatives may be used. Acid addition salts, wherever applicable may be prepared by treatment with acids such as tartaric acid, mandelic acid, fumaric acid, malic acid, lactic acid, maleic acid, salicylic acid, citric acid, ascorbic acid, benzene sulfonic acid, p-toluene sulfonic acid, hydroxynaphthoic acid, methane sulfonic acid, acetic acid, benzoic acid, succinic acid, palmitic acid, hydrochloric acid, hydrobromic acid, sulfuric acid, nitric acid and the like in solvents such as water, alcohols, ethers, ethyl acetate, dioxane, THF, acetonitrile, DMF or a lower alkyl ketone such as acetone, or mixtures thereof.

Another aspect of the present invention comprises a pharmaceutical composition, containing at least one of the compounds of the general formula (I), their derivatives, their analogs, their tautomeric forms, their stereoisomers, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates thereof as an active ingredient, together with pharmaceutically employed carriers diluents and the like.

Pharmaceutical compositions containing a compound of the present invention may be prepared by conventional techniques, e.g. as described in Remington: the Science and Practice of Pharmacy, 19th

Ed., 1995. The compositions may be in the conventional forms, such as capsules, tablets, powders, solutions, suspensions, syrups, aerosols or topical applications. They may contain suitable solid or liquid carriers or in suitable sterile media to form injectable solutions or suspensions. The compositions may contain 0.5 to 20 %, preferably 0.5 to 10 % by weight of the active compound, the remaining being pharmaceutically acceptable carriers, excipients, diluents, solvents and the like.

Typical compositions containing a compound of formula (I) or a pharmaceutically acceptable acid addition salt thereof, associated with a pharmaceutically acceptable excipients which may be a carrier or a diluent or be diluted by a carrier, or enclosed within a carrier which can be in the form of a capsule, sachet, paper or other container. When the carrier serves as a diluent, it may be a solid, semi-solid, or liquid material, which acts as a vehicle, excipients or medium for the active compound. The active compound can be absorbed on a granular solid container for example in a sachet. Some of suitable carriers are water, salt solutions, alcohols, polyethylene glycols, polyhydroxyethoxylated castor oil, peanut oil, olive oil, gelatin, lactose, terra alba, sucrose, cyclodextrin, amylose, magnesium sterate, talc, gelatin, agar, pectin, acacia, stearic acid or lower alkyl ethers of cellulose, silicic acid, fatty acids, fatty acid amines, fatty acids monoglycerides and diglycerides, pentaerythritol fatty acids esters, polyoxyethylene, hydroxymethylcellulose and polyvinylpyrrolidone. Similarly, the carrier or diluent may include any sustained release material known in the art, such as glyceryl monostearate or glyceryl distearate, alone or mixed with a wax. The formulations may also include wetting agents, emulsifying and suspending agents, preservatives, sweetening agents or flavoring agents. The formulations of the invention may be formulated so as to provide quick, sustained, or delayed release of the active ingredient after administration to the patient by employing procedures well known in the art.

The pharmaceutical compositions can be sterilized and mixed, if desired, with auxiliary agents, emulsifiers, buffers and/or coloring substances and the like, which do not deleteriously react with the active compounds.

The route of administration may be any route, which effectively transports the active drug to the appropriate or desired site of action effectively, such as oral, nasal, transdermal, pulmonary or parental e.g. rectal, depot, subcutaneous, intravenous, intraurethral, intramuscular, intranasal, ophthalmic solution or an ointment, preferably through oral route.

If a solid carrier is used for oral administration, the preparation may be tabletted, placed in a hard gelatin capsule in powder or pellet form or it can be in the form of a troche or lozenge. If a liquid carrier is used, the preparation may be in the form of a syrup, emulsion, soft gelatin capsule or sterile injectable liquid such as an aqueous or non-aqueous liquid suspension or solution.

For nasal administration, the preparation may contain a compound of formula (I) dissolved or suspended in a liquid carrier, in particular an aqueous carrier, for aerosol application. The carrier may contain additives such as solubilizing agent, e.g. propylene glycol, surfactants, absorption enhancers such as lecithin (phosphatidylcholine) or cyclodextrin, or preservatives such as parabens.

For parental application, particularly suitable are injectable solutions or suspensions, preferably aqueous solutions with the active compound dissolved in polyhydroxylated castor oil.

Tablet, dragees or capsules having talc and/or a carbohydrate carrier or binder or the like are particularly suitable for oral application. Preferably, carriers for tablets, dragees or capsules include lactose, corn starch and/or potato starch. A syrup or elixir can be used in cases where a sweetened vehicle can be employed.

A typical tablet which may be prepared by conventional tabletting techniques may contain:

Core:	
Active compound (as free compound or salt thereof)	5.0 mg
Colloidal silicon dioxide	1.5 mg
Cellulose, misrocrytalline	70.0 mg
Modified cellulose gum	7.5 mg
Magnesium sterate	ad.
Coating:	
HPMC approx	9.0 mg
*Mywacett 9-40 T approx.	0.9 mg

*Acylated monoglyceride used as plasticizer for film coating.

The compounds of general formula (I) or the compositions thereof are useful for the treatment and/or prophylaxis of disease caused by metabolic disorders such as hyperlipidemia, insulin resistance, Leptin resistance, hyperglycemia, obesity, or inflammation.

These compounds are useful for the treatment of hypercholesteremia, familial hypercholesteremia, hypertriglyceridemia, type 2 diabetes, dyslipidemia, disorders related to syndrome X such as hypertension, obesity, insulin resistance, coronary heart disease, atherosclerosis, xanthoma, stroke, peripheral vascular diseases and related disorders, diabetic complications, certain renal diseases such as glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, retinopathy, nephropathy, psoriasis, polycystic ovarian syndrome, osteoporosis, inflammatory bowel diseases, myotonic dystrophy, arteriosclerosis, Xanthoma, pancreatitis and for the treatment of cancer.

The compounds of the invention may be administered to a mammal, especially, a human in need of such treatment, prevention, elimination, alleviation or amelioration of diseases mentioned above.

The compounds of the present invention are effective over a wide dosage range, however, the exact dosage, mode of administration and form of composition depends upon the subject to be treated and is determined by the physician or veterinarian responsible for treating the subject. Generally, dosages from about 0.025 to about 200 mg preferably from about 0.1 to about 100 mg, per day may be used. Generally, the unit dosage form comprises about 0.01 to 100 mg of the compound of formula (I), as an active ingredient together with a pharmaceutically acceptable carrier. Usually suitable dosage forms for nasal, oral, transdermal or pulmonary administration comprises from about

0.001 mg to about 100 mg, preferably from 0.01 mg to about 50 mg of the active ingredient mixed with a pharmaceutically acceptable carrier or diluent.

In another aspect of the present invention, method of treatment and/or prevention of the diseases mentioned above are provided.

In a further aspect of the present invention, use of one or more compounds of the general formula (I) or pharmaceutically acceptable salts, for the preparation of a medicament thereof for the treatment and/or prevention of diseases mentioned in this document is provided.

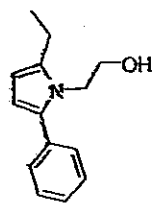
In still further aspect of the present invention use of the compounds of the present invention alone or in combination with statins, glitazones, biguanides, angiotensin II inhibitors, aspirin, insulin secretagogue, β-sitosterol inhibitor, sulfonylureas, insulin, fibric acid derivatives, nicotinic acid, cholestyramine, cholestipol or probucol, α-glycosidase inhibitors or antioxidants, which may be administered together or within such a period as to act synergistically together.

The invention is explained in detail by the examples given below, which are provided by way of illustration only and therefore should not be construed to limit the scope of the invention.

1H NMR spectral data given in the tables (vide infra) are are recorded using a 300 MHz spectrometer (Bruker AVANCE-300) and reported in δ scale. Until and otherwise mentioned the solvent used for NMR is $CDCl_3$ using Tetramethyl silane as the internal standard.

Preparation 1

Preparation of 1-(2-hydroxyethyl)-5-ethyl-2phenyl-1*H*-pyrrole (Compound No. 17):

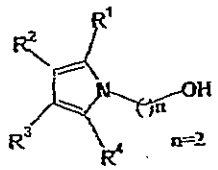


(Compound No. 17)

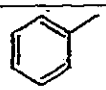
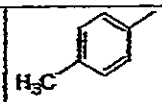
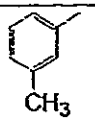
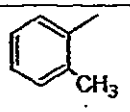
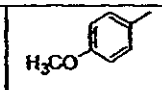
A mixture of 1-phenyl-hexane-1,4-dione (5 g), ethanol amine (1.6 g) and pivalic acid (2.15 g) in a solvent mixture containing n-heptane: tetrahydrofuran: toluene (4:1:1, 50 mL) was refluxed with stirring at 110 – 120 °C. Water formed during the reaction was removed azeotropically during 3 to 4 hrs. The reaction mixture was cooled and the solvent was removed. The residue obtained was dissolved in dichloromethane (50 mL), washed with saturated sodium bicarbonate solution (50 mL), water (50 mL), and then with brine (50 mL), dried (Na_2SO_4) and the solvent was evaporated. The crude compound obtained as an oily mass. The crude substance was used in the next step without purification.

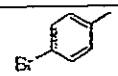
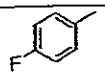
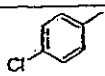
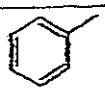
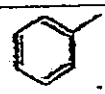
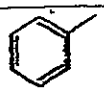
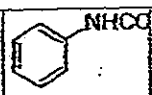
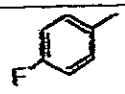
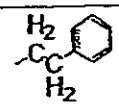
In the like manner to that described in Preparation 1, the following compounds of general formula (1e) were prepared from the appropriately substituted diketones as mentioned in Table 1. The latter can be synthesized by using various routes found in literature.

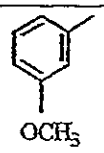
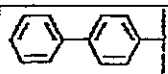
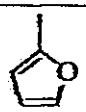
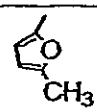
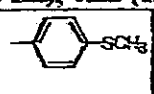
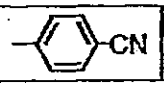
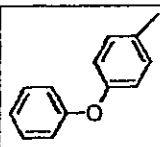
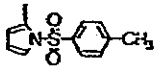
Table 1:

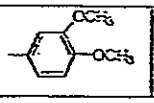
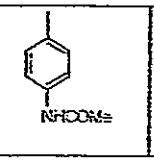
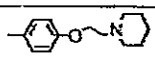
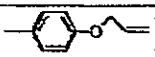
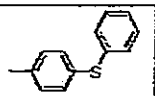
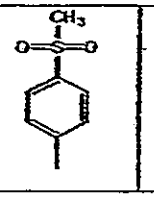
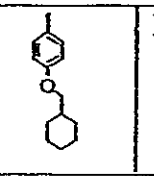
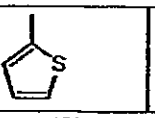


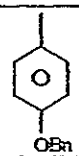
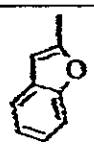
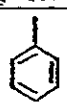
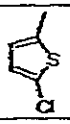
(1e)

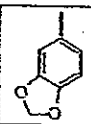
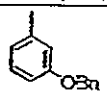
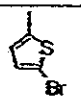
Comp. No.	Substituents on the pyrrole ring in (1e)					
	R^1	R^2	R^3	R^4		
1.	CH_3	H	H	CH_2CH_3	Mol. Wt.=153	Yield=53%
	^{1}H: 1.26 (3H, t, J = 7.4 Hz); 2.22 (3H, s);2.56 (2H, q, J = 7.4 Hz); 3.71 (2H, t, J = 5.86 Hz); 3.88 (2H, t, J = 5.89 Hz); 5.79 - 5.81 (2H, m).					
2.	CH_3	H	H	$(CH_2)_2CH_3$	Mol. Wt.=167	Yield=36%
	^{1}H: 1.02 (3H, t, J = 7 Hz); 1.65 (2H, m); 2.25 (3H, s); 2.5 (2H, t, J = 7.7 Hz); 4.1 (2H, t, J = 5.9 Hz); 4.35 (2H, t, J = 5.9 Hz); 5.8 - 5.82 (2H, m).					
3.	CH_3	H	H	$(CH_2)_5CH_3$	Mol. Wt.=181	Yield =58%
	^{1}H: 0.94 (3H, t, J = 7.2 Hz); 1.36 - 1.4 (2H, m); 1.58 - 1.67 (2H, m); 2.22 (3H, s); 2.53 (2H, t, J = 7.7 Hz); 3.7 (2H, t, J = 5.8 Hz); 3.89 (2H, t, J = 5.8 Hz); 5.7 - 5.8 (2H, m).					
4.	CH_3	H	H		Mol. Wt.=201	Yield = 62%
	^{1}H: 2.33 (3H, s); 3.5 - 3.6 (2H, t, J = 5.9 Hz); 4.05-4.09 (2H, t, J = 6.0 Hz); 5.95 (1H, d, J = 3.3 Hz); 6.09 (1H, d, J = 3.3 Hz); 7.25-7.29 (1H, m); 7.30- 7.38 (4H, m).					
5.	CH_3	H	H		Mol. Wt.=215	Yield = 55%
	^{1}H: 2.32 (3H, s); 2.37 (3H, s); 3.59 (2H, t, J = 6.9 Hz); 4.10 (2H, t, J = 6.9 Hz); 5.94 (1H, d, J = 3.36 Hz); 6.0 (1H, d, J = 3.36 Hz); 7.2 (2H, d, J = 8.5 Hz); 7.25 (2H, d, J = 8.5 Hz)					
6.	CH_3	H	H		Mol. Wt.=215	Yield = 60%
	^{1}H: 2.32 (3H, s); 2.36 (3H, s); 3.57 (2H, t, J = 6 Hz); 4.08 (2H, t, J = 6.06 Hz); 5.94 (1H, d, J = 2.28 Hz); 6.1 (1H, d, J = 3.39 Hz); 7.09-7.3 (4H, m).					
7.	CH_3	H	H		Mol. Wt.=215	Yield = 60%
	^{1}H: 2.32 (3H, s); 2.36 (3H, s); 3.58 (2H, t, J = 6 Hz); 4.07 (2H, t, J = 6.06 Hz); 5.94 (1H, d, J = 2.28 Hz); 6.07 (1H, d, J = 3.39 Hz); 7.09-7.15 (2H, m); 7.24-7.29 (2H, m).					
8.	CH_3	H	H		Mol. Wt.=231	Yield = 45%
	^{1}H: 2.3 (3H, s); 3.53 (2H, t, J = 6.9 Hz); 3.84 (3H, s); 4.0 (2H, t, J = 6.9 Hz); 5.9 (1H, d, J = 3.36 Hz); 6.0 (1H, d, J = 3.36 Hz); 6.95 (2H, d, J = 6.78 Hz); 7.2 (2H, d, J = 6.78 Hz).					

9.	CH_3	H	H		Mol. Wt.=280	Yield = 55%
	^{1}H: 2.32 (3H, s); 3.61 - 3.63 (2H, m) 4.05 (2H, t, J = 6.2 Hz); 5.95 (1H, dd); 6.1 (1H, d, J = 3.4 Hz); 7.25 - 7.3 (2H, m); 7.47 - 7.52 (2H, m).					
10.	CH_3	H	H		Mol. Wt.=219	Yield = 32%
	^{1}H: 2.3 (3H, s); 3.6 (2H, t, J = 6.0 Hz); 4.05 (2H, t, J = 6.0 Hz); 5.9 (1H, d, J=2.8 Hz); 6.0 (1H, d, J = 3.3 Hz); 7.04 - 7.1 (2H, m); 7.26 - 7.37 (2H, m)					
11.	CH_3	H	H		Mol. Wt.=235.5	Yield = 61%
	^{1}H: 2.3 (3H, s); 3.6 (2H, t, J = 5.9 Hz); 4.12 (2H, t, J = 5.9 Hz); 5.97 (1H, d, J = 3.2 Hz); 6.10 (1H, d, J = 3.2 Hz); 7.09 – 7.37 (4H, m).					
12.	CH_3	H			Mol. Wt.=277	Yield = 90%
	^{1}H: 2.37 (3H, s); 3.5 (2H, t, J = 6 Hz); 3.95 (2H, t, J = 6.0 Hz); 6.2 (1H, d, J=2.8 Hz); 7.1 - 7.4 (10H, m).					
13.	i-Pr	H	H	i-Pr	Mol. Wt.=195	Yield = 93%
	^{1}H: 1.21-1.24(12H, d, J=6.7 Hz); 2.91 - 2.98 (2H, m); 3.77 (1H, t, J = 6.2 Hz); 4.01 (2H, t, J = 6.2 Hz); 5.8 (2H, s).					
14.	i-Pr	H	H		Mol. Wt. =229	Yield = 86%
	^{1}H: 1.29 (6H, d, J = 6.78 Hz); 3.0-3.05 (1H, m); 3.51 (2H, t, J = 6.21 Hz); 4.12 (2H, t, J = 6.25 Hz); 6.0 (1H, d, J = 3.54 Hz); 6.125 (1H, d, J = 3.54 Hz); 7.27-7.31 (3H, m) 7.37 (2H, m)					
15.	i-Pr		H		Mol. Wt. =366	Yield = 45%
	^{1}H: 1.43-1.45 (6H, d, J = 7.2 Hz); 3.3 – 3.4 (1H, m); 4.09 - 4.1 (2H, m); 3.80 - 3.85 (2H, m); 6.85 (1H, s); 7.0 – 7.5 (9H, m).					
16	$-C_2H_5$	H	H	$-C_2H_5$	Mol. Wt. =167	Yield = 82%
	^{1}H: 1.26 (6H, t, J = 7.4 Hz); 2.59 (4H, q, J = 7.4 Hz); 3.76 (2H, t, J = 5.8 Hz); 3.93 (2H, t, J = 5.9 Hz); 5.86 (2H, s)					
17	$-C_2H_5$	H	H		Mol. Wt. =215	Yield = 82%
	^{1}H: 1.32 (3H, t, J = 7.3 Hz); 2.68 (2H, q, J = 7.6 Hz); 3.57 (2H, t, J = 5.9 Hz); 4.09 (2H, t, J = 5.9 Hz); (1H,d, J = 3.4 Hz); 6.1(1H,d, J = 3.4 Hz); 7.28-7.39 (5H, m)					
18	$-CH_3$	H	H		Mol. Wt. =229	Yield = 76%
	^{1}H: 2.23 (3H, s); 2.8-2.9 (2H,m); 2.91-2.99 (2H, m); 3.69 (2H, t, J = 5.8 Hz); 3.86 (2H, t, J = 5.8 Hz); 5.83 (1H,d, J = 3.3 Hz); 5.88 (1H,d, J = 3.6 Hz); 7.17-7.31 (5H, m)					

19	$-CH_3$	H	H		Mol. Wt. =231	Yield = 80%
	^1H: 2.33 (3H, s); 3.64 (2H, t, J = 6 Hz); 3.82 (3H, s); 4.11 (2H, t, J = 6 Hz); 5.9 (1H,d, J = 3.3 Hz); 6.12 (1H,d, J = 3.3 Hz);6.8-7.32 (4H, m)					
20	$-CH_3$	H	H		Mol. Wt. =207	Yield = 82%
	^1H: 1.24–1.81 (10H, m); 2.23 (3H, s); 2.47-2.52 (1H, m); 3.76-3.78 (2H, m); 3.94 (2H, t, J = 6 Hz); 5.79-5.83 (2H,m)					
21	$-CH_3$	H	H		Mol. Wt. =277	Yield = 76%
	^1H: 2.32 (3H,s); 3.6 (2H, t, J = 6 Hz); 4.09 (2H, t, J = 6 Hz); (1H,d, J = 2.94 Hz); 6.15 (1H, d, J = 3.39 Hz); 7.2-7-6 (9H, m)					
22	$-CH_3$	H	H		Mol. Wt. =191	Yield = 70%
	^1H: 2.3 (3H, s); 3.81-3.83 (2H, m); 4.17 (2H, t, J = 5.8 Hz); 5.93 (1H, d, J = 3.5 Hz); 6.33 (2H, dd, J = 3.3 Hz, J_2 = 3.4 Hz); 6.43 (1H, dd, J = 1.87 Hz, 1.88 Hz); 7.402-7.407 (1H, m)					
23	$-CH_3$	H	H		Mol. Wt. =205	Yield = 80%
	^1H: 2.30 (3H,s); 2.32 (3H, s); 3.85 (2H, t, J = 5.77 Hz); 4.15 (2H, t, J = 5.8 Hz); 5.9 (1H, d, J = 3.5 Hz); 6.0 (1H, d, J = 3.43 Hz); 6.22 (1H, d, J=3.09 Hz); 6.27 (1H, d, J=3.54 Hz)					
24	$-CH_3$	H	H		Mol. Wt. =247	Yield = 100%
	^1H: 2.3 (3H,s); 2.49 (3H, s); 3.58 (2H,t, J = 6.03 Hz); 4.0 (2H, t, J = 6.0 Hz); 5.93 -5.94 (1H, dd, J = .738 Hz, J_2 = 0.665 Hz); 6.0(1H, d, J=3.4 Hz) 7.22-7.32 (4H, m)					
25	$-CH_3$	H	H		Mol. Wt. =226	Yield = 70%
	^1H: 2.34 (3H, s); 3.67 (2H, t, J = 5.9 Hz); 4.14 (2H, t, J = 6 Hz); 6.011(1H, d, J= 3.4 Hz); 6.23 (1H, d,J= 3.5 Hz); 7.5 (2H, d,J= 8.5 Hz); 7.65 (2H, d, J = 8.5 Hz)					
26	$-CH_3$	H	H		Mol. Wt. =293	Yield = 76%
	^1H: 2.33 (3H,s); 3.65 (2H, t, J = 6 Hz); 4.09 (2H, t, J = 6 Hz); 5.9 (1H, d J = 3.31 Hz); 6.08 (1H, d, J = 3.38 Hz); 6.99-7.38 (9H, m)					
27	$-CH_3$	H	H		Mol. Wt. =344	Yield = 85%
	^1H: 2.28 (3H, s); 2.4 (3H, s); 3.59 (2H, t, J = 5.7 Hz); 3.74 (2H, t, J = 5.7 Hz); 5.63 (1H, d, J = 3.4 Hz); 5.86 (1H, d, J=3.4 Hz); 6.25-6.26 (1H, m); 6.31 (1H, t, J = 3.3 Hz); 7.23 (2H, d, J= 8.3 Hz); 7.43-7.48 (3H, m)					

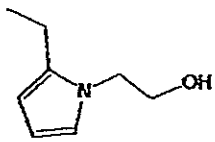
28	$-CH_3$	H	H		Mol. Wt. =261	Yield = 100%
	^{1}H: 2.3 (3H, s); 3.65 (2H, t, J = 5.9 Hz); 3.88 (3H, s); 3.9 (3H, s); 4.06 (2H, t, J = 6.0 Hz); 5.94-5.95 (1H, m) 6.0 (1H, d, J = 3.1 Hz); 6.87-7.26 (3H, m)					
29	$-CH_3$	H	H		Mol. Wt. =258	Yield = 78%
	^{1}H: 2.12 (3H, s); 2.3 (3H, s); 3.61 (2H, t, J= 6.03 Hz); 4.15 (2H, t, J = 6.0 Hz); 5.9 (1H, d, J=2.7 Hz); 6.02 (1H, d, J=3.3 Hz); 6.7(2H, d, J=8.5 Hz); 7.16 (2H, d, J=8.5 Hz)					
30	$-CH_3$	H	H		Mol. Wt. = 328	Yield = 92%
	^{1}H: 1.4-1.63 (6H, m); 2.3 (3H, s); 2.48-2.5 (4H, m); 2.75 (2H, t, J = 6.03 Hz); 3.5 (2H, t, J = 6.2 Hz); 4.0 (2H, t, J = 6.3 Hz); 4.1 (2H, t, J = 6.0 Hz); 5.91-5.92 (1H, m); 6.0 (1H, d, J = 3.3 Hz); 6.889 (2H, d, J = 8.5 Hz); 7.2 (2H, d, J = 8.5 Hz)					
31	$-CH_3$	H	H		Mol. Wt. = 257	Yield = 83%
	^{1}H: 2.3 (3H, s); 3.6 (2H,t, J= 6 Hz); 4.03 (2H, t, J= 6.1 Hz); 4.55 (2H, d, J= 5.3 Hz); 5.28-5.32(2H, dd, J= 1.35 Hz J_2 = 1.35 Hz); 5.40-5.46 (1H, dd, J = 1.56 Hz, J_2 = 1.5 Hz); 5.93 (1H, d, J=5.36 Hz); 6.04 (1H, d, J=3.42 Hz); 6.93 (2H, d, J = 8.5 Hz), 7.28 (2H, d, J=8.5 Hz)					
32	$-CH_3$	H	H		Mol. Wt. = 309	Yield = 79%
	^{1}H: 2.3 (3H, s); 3.64 (2H, t, J= 6 Hz); 4.08 (2H, t, J= 6.09 Hz); 5.96 (1H, d, J=3.36 Hz); 6.11 (1H, d, J=3.45 Hz); 7.25-7.42 (9H, m)					
33	$-CH_3$	H	H		Mol. Wt. = 279	Yield = 80%
	^{1}H: 2.35 (3H,s); 2.08(3H, s) 3.68 (2H, t, J = 5.7 Hz); 4.17 (2H, t, J = 5.8 Hz); 6.02 (1H, d, J= 3.5 Hz); 5.7 (1H, d, J=3.5 Hz); 7.6 (2H, d, J=8.5 Hz); 7.94 (2H, d, J=8.5 Hz)					
34	$-CH_3$	H	H		Mol. Wt. = 313	Yield = 89%
	^{1}H: 1.03-1.69 (11H, m); 2.3 (3H, s); 3.6 (2H, t, J = 6.0 Hz); 3.7 (2H, d, J= 6.2 Hz); 4.04 (2H, t, J = 6 Hz); 5.9 (1H, d, J=3.3 Hz); 6.0 (1H, d, J=3.3 Hz); 6.88 (2H, d, J= 8.5 Hz); 7.29 (2H, d, J= 8.5 Hz)					
35	$-CH_3$	H	H		Mol. Wt. = 207	Yield = 55%
	^{1}H: 2.3 (3H, s); 3.74 (2H, t, J = 3.4 Hz); 4.13 (2H, t, J = 6 Hz); 5.9 (1H, d, J = 3.4 Hz); 6.2 (1H, d, J = 3.4 Hz); 7.03-7.05 (2H, m); 7.25-7.27 (1H, m)					

36	$-CH_3$	H	H		Mol. Wt.= 307	Yield = 98%
	^{1}H: 2.3 (3H, s); 3.58 (2H, t, J =6.0 Hz); 4.0 (2H, t, J = 6.0 Hz); 5.0 (2H,s); 5.91 (1H, d, J = 3.3 Hz); 6.0 (1H, d, J = 3.3 Hz); 6.96-6.99 (2H, m); 7.27-7.45 (7H, m)					
37	H	H	H		Mol. Wt.= 187	Yield = 99%
	^{1}H: 3.7 (2H, t, J = 5.4 Hz); 4.1 (2H, t, J = 5.4 Hz); 6.23 (2H, m); 6.8 (1H, m); 7.4-7.8 (5H, m)					
38	$-CH_3$	H	H		Mol. Wt.= 165	Yield = 61%
	^{1}H: 0.58 - 0.61 (2H, m); 0.79-0.85 (2H, m); 1.66-1.7 (1H, m); 2.24 (3H, s); 3.87 (2H, t, J = 5.87) Hz; 4.11 (2H, t, J = 5.89 Hz); 5.69 (1H, d, J = 3.26 Hz); 5.76 (1H, d, J = 3.2 Hz)					
39	$-CH_3$	H	H		Mol. Wt.= 241	Yield = 47%
	^{1}H: 2.36 (3H, s); 3.93 (2H, t, J = 5.77 Hz); 4.32 (2H, t, J = 5.76 Hz); 6.0 (1H, d, J = 3.63 Hz); 6.57 (1H, d, J = 3.63 Hz); 6.69 (1H, s); 7.54-7.2 (4H, m)					
40	$-CH_3$	$COOCH_3$	H		Mol. Wt. = 259	Yield = 92%
	^{1}H: 2.63 (3H, s); 3.61-3.63; (2H, m); 3.79 (3H, s); 4.07-4.15 (2H, m); 6.54 (1H, s); 7.34-7.43 (5H, m)					
41	$-CH_3$	H	H		Mol. Wt. = 241	Yield = 58%
	^{1}H: 2.3 (3H, s); 3.74 (2H, t, J = 5.7 Hz); 4.13 (2H, t, J = 5.9 Hz); 5.9 (1H, d, J = 3.0 Hz); 6.1 (1H, d, J = 3.5 Hz); 6.8 (1H, d, J = 3.8 Hz); 6.84 (1H, d, J = 3.8 Hz)					
42	$-CH_3$	H	H		Mol. Wt. = 245	Yield = 99%
	^{1}H: 1.43 (3H, t, J = 6.97 Hz); 2.33 (3H,s); 3.6 (2H, t, J = 5.99 Hz); 4.02 (4H, m); 5.94 (1H, d, J - 3.28 Hz); 6.04 (1H, d, J = 3.35 Hz); 6.91 (2H, d, J = 8.69 Hz); 7.28 (2H, d, J = 8.6.9 Hz)					
43	$-CH_3$	H	H		Mol. Wt. = 221	Yield = 93%
	^{1}H: 2.3 (3H, s); 2.4 (3H, s); 3.74 (2H, t, J = 6.0) Hz; 4.13 (2H, t, J = 6 Hz); 5.9 (1H, d, J = 3.4 Hz), 6.17(1H, d, J=3.4 Hz); 6.67(1H, d, J=3.4Hz); 6.8 (1H, d, J = 3.4 Hz);					
44	$-CH_3$	CH_3	H	C_6H_5	Mol. Wt. = 215	Yield = 50%
	^{1}H: 2.06 (3H, s); 2.2 (3H, s); 3.62 (2H, t, J = 6 Hz); 4.07 (2H, t, J = 6 Hz); 6.0(1H,s); 7.25 (1H, m); 7.3-7.4 (4H, m)					

45	$-CH_3$	H	H		Mol. Wt. = 245	Yield = 100%
	^{1}H: 2.32 (3H, s); 3.62 (2H, t, J = 6.03 Hz); 4.05 (2H, t, J = 6.04 Hz); 5.92 (1H, d, J = 3.27 Hz); 5.98 (2H, s); 6.03 (1H, d, J = 3.36 Hz); 6.84 (2H, d, J = 8.46 Hz); 7.16 (1H, s)					
46	$-CH_3$	H	H		Mol. Wt. = 251	Yield = 36%
	^{1}H: 2.37 (3H, s); 3.42 (2H, t, J = 5.85 Hz); 3.5-3.8 (2H, m); 6.02 (1H, d, J = 3.27 Hz); 6.15 (1H, d, J = 3.36 Hz); 7.43-7.89 (7H, m)					
47	$-CH_3$	H	H		Mol. Wt. = 307	Yield = 100%
	^{1}H: 2.31 (3H, s); 3.56 (2H, t, J = 6.03 Hz); 4.03 (2H, t, J = 6.03 Hz); 5.08 (2H,s); 5.94 (1H, d, J = 3.36 Hz); 6.1 (1H, d, J = 3.39 Hz); 6.93-7.44 (9H, m)					
48	$-CH_3$	H	H		Mol. Wt. = 286	Yield = 30%
	^{1}H: 2.31 (3H, s); 3.76 (2H, t, J = 5.9 Hz); 4.1 (2H, t, J = 5.9 Hz); 5.9 (1H, d, J = 3.48 Hz); 6.95 (1H, d, J = 3.54 Hz); 6.7 (1H, d, J = 3.78 Hz); 6.9 (1H, d, J = 3.78 Hz).					
49	$-CH_3$	H	H		Mol. Wt. = 259	Yield = 100%
	^{1}H: 1.33 (6H, d, J = 5.13 Hz); 2.94 (3H, s); 3.60 (2H, t, J = 6.07 Hz); 4.03 (2H, t, J = 6.07 Hz); 4.52-4.60 (1H, m); 5.92 (1H, d, J = 2.82 Hz); 6.03 (1H, d, J = 3.36 Hz); 6.88 (2H, d, J = 8.7 Hz); 7.27 (2H, d, J = 8.67 Hz)					
50	$-CH_3$	H	CH_3		Mol. Wt. = 215	Yield = 57%
	^{1}H: 1.97 (3H, s); 2.29 (3H, s); 3.51 (2H, t, J = 6 Hz); 3.95 (2H, t, J = 6 Hz); 5.83 (1H, s); 7.25-7.43 (5H, m)					

Preparation 2

1-(2-hydroxyethyl)-2-ethyl-1*H*-pyrrole (compound no. 51):



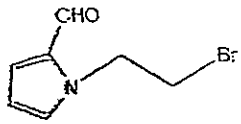
A mixture containing 1-(2-bromoethyl)-2-acetyl-1H-pyrrole (8.2 g), ethylene glycol (45 mL), 85 % potassium hydroxide pellets (8.91 g) and 80 % hydrazine hydrate (6.76 mL) was stirred at 200 °C for about 1.5 hr along with simultaneous distillation of volatile materials. The product obtained was extracted with ethyl acetate (2 x 100 mL). The ethyl acetate layer was washed with water (100 mL), dried over sodium sulfate, filtered and evaporated. The crude product obtained was purified by column chromatography (silica gel 100-200), using ethyl acetate : pet. ether (8 : 2) as an eluent to obtain 2.2 g of the title compound.

Table 2:

Comp. No.	Substituents on the pyrrole ring in (1e)					
	R^1	R^2	R^3	R^4		
51.	C_2H_5	H	H	H	Mol. Wt. = 139	Yield = 42%
	^{1}H: 1.26 (3H, t, J = 6.0 Hz); 2.59 (2H, q, J_1 = 7.62 Hz, J_2 = 7.44 Hz); 3.84 (2H, t, J = 5.4 Hz); 3.98 (2H, t, J = 5.35 Hz); 5.92 - 5.93 (1H, m); 6.11 (1H, t, J = 3.12 Hz); 6.65 (1H, t, J = 2.22 Hz).					

Preparation 3

1-(2-Bromoethyl)-1H-pyrrole-2-carbaldehyde (compound no. 52):

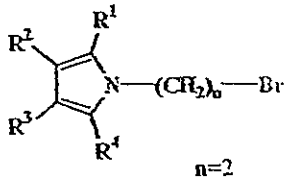


(Compound No. 52)

A mixture of 2-formylpyrrole (1 g), potassium hydroxide (2.3 g) and dry DMSO (20 mL) was stirred under nitrogen atmosphere. 1,2-dibromoethane (7.9 g) was added dropwise at 20 - 25 °C and stirred till the reaction is complete. Water (50 mL) was added and the reaction mixture was extracted with diethyl ether (3 x 50 mL). The combined organic layer was washed with water (30 mL), followed by brine (30 mL) and was dried over Na_2SO_4. The solvent was evaporated and the compound obtained was purified by column chromatography (silica gel 100 - 200) using ethyl acetate: hexane (2:8) as an eluent to obtain the title compound.

In like manner to that described in Preparation 3, following compounds of the formula (1c) (Given in Table 3) were prepared from the appropriately substituted pyrrole derivatives. The latter can be synthesized by using various routes found in literature.

Table 3:



n=2

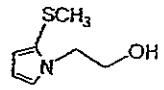
(1c)

Comp. No.	Substituents on the pyrrole ring in (1c)					
	R^1	R^2	R^3	R^4		
52.	CHO	H	H	H	Mol. Wt = 202	Yield = 47%
	^{1}H: 3.65 (2H, t, J = 6 Hz); 4.65 (2H, t, J = 6 Hz); 6.33 (1H, m); 6.95 - 7.05 (2H, m); 9.5 (1H, m).					
53.	$COCH_3$	H	H	H	Mol. Wt = 216	Yield = 32%
	^{1}H: 2.44 (3H, s); 3.67 (2H, t, J = 6 Hz); 4.65 (2H, t, J = 6 Hz); 6.16-6.18 (1H, m); 6.94 (1H, t, J = 6 Hz); 7.01-7.03 (1H, m).					

54.	-COPh	H	H	H	Mol. Wt.= 277	Yield = 66%
	^{1}H: 3.79(2H,t, J=6.08 Hz); 4.75(2H,t, J=6.12 Hz); 6.22(1H, dd, J_1=2.57Hz, J_2=2.53Hz); 6.825(1H, dd, J_1=1.64 Hz, J_2=1.67 Hz); 7.06-7.08 (1H, m); 7.45-7.80(5H, 1m)					

Preparation 4

Preparation of 1-(2-hydroxyethyl)-2-methylthio-1H-pyrrole (compound no. 55):



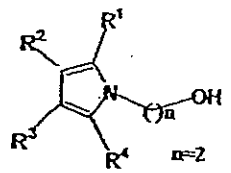
(Compound No. 55)

To a mixture of potassium hydroxide (7.9 g) and dry DMSO (90 mL), 2-thiomethylpyrrole (4 g) was added dropwise at 20 - 25 °C, with stirring under nitrogen atmosphere. Stirring was continued for 1 hr at 20 - 25 °C. Ethyl bromoacetate (11.85 g) was added dropwise at 20 - 25 °C and stirring was continued for 2 hr. In the reaction mixture (100 mL) DM water was added and pH was made acidic (pH = 3) with 20 % HCl (30 mL). The reaction mixture was extracted with diethyl ether (2 x 50 mL). The combined organic extract was washed with DM water (50 mL), saturated brine (50 mL) and dried over Na_2SO_4. The solvent was evaporated to obtain 2-thiomethylpyrrol-1-yl-acetic acid (4.5 g).

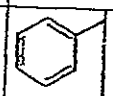
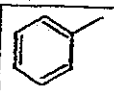
To a suspension of sodium borohydride (1.77 g) in tetrahydrofuran (50 mL), 2-thiomethylpyrrol-1-yl-acetic acid (4 g) dissolved in THF (50 mL) was added dropwise at 20 °C - 25 °C within 10 - 15 min under nitrogen atmosphere. When the evolution of hydrogen gas ceases, the reaction mixture was cooled to 5 - 10 °C and iodine (5.94 g) dissolved in THF (20mL) was added dropwise at 5 °C - 10 °C and was stirred further for 2 hrs at 20 °C - 25 °C. The reaction mixture poured in mixture of ice-cold KOH solution (10 mL) and DM water (50 mL). The solution was extracted with ethyl acetate (2 x 50 mL). The organic extract was washed with water (30 mL), brine (30 mL) and dried over Na_2SO_4. The solvent was evaporated under reduced pressure, to obtain the title compound.

In like manner to that described in Preparation 4, following compounds of the formula (1e) (Given in Table 4) were prepared from the appropriately substituted pyrrole. The latter can be synthesized by using various routes found in literature.

Table 4:

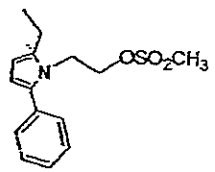


(1e)

Comp. No.	Substituents on the pyrrole ring in (1e)					
	R^1	R^2	R^3	R^4		
55.	SCH_3	H	H	H	Mol. Wt.= 157	Yield = 90%
	^{1}H: 2.2 (3H, s); 3.85 (2H, t, J = 6.0 Hz); 4.1 (2H, t, J = 5.5 Hz); 6.14 (1H, dd); 6.38 (1H, dd); 6.85 (1H, dd)					
56.		H	CH_3	H	Mol. Wt.= 201	Yield =13%
	^{1}H: 2.05 (3H, s); 3.75 (2H, t, J = 6 Hz); 4.03 (2H, t, J = 5.5 Hz); 6.07 (1H, s); 6.62 (1H, s); 7.27 - 7.42 (5H, m).					
57.	CH_3	H		H	Mol. Wt.= 201	Yield =57%
	^{1}H: 2.24 (3H, s); 3.82 - 4.01 (4H, m); 6.19 (1H, s); 6.9 (1H, s); 7.1 - 7.4 (5H, m).					
58.	CH_3	H	CH_3	H	Mol. Wt.= 139	Yield = 40.4%
	^{1}H: 2.02 (3H, s); 2.19 (3H, s); 3.7 - 3.9 (4H, m); 5.73 (1H, s); 6.38 (1H, s).					

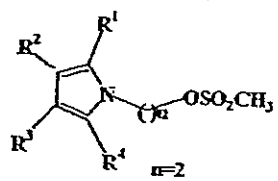
Preparation 5

Preparation of **Methyl 2-(5-ethyl-2-phenyl-1*H*-pyrrol-1-yl)ethane sulfonate (Compound No. 80):**



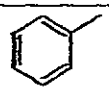
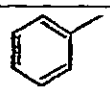
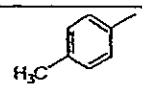
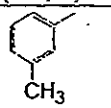
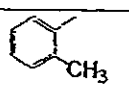
To a solution of compound 17 (4.0 g in 30 mL dichloromethane) obtained in preparation 1, triethylamine (2.75 mL) was added followed by addition of methanesulfonyl chloride (2.1 g) at 0 °C. The reaction mixture was stirred at 0 °C for 1h under nitrogen atmosphere. The mixture was warmed to temperature of about 20 to 25 °C and was stirred at that temperature for about 2 h (TLC). After the completion of the reaction, water (30 mL) was added and the organic layer was separated. The mixture was washed with saturated sodium bicarbonate solution (20 mL), water (20 mL) and then with brine (20 mL) and dried over Na_2SO_4. The organic layer was concentrated under reduced pressure. The crude substance was used in the next step without purification.

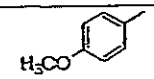
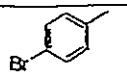
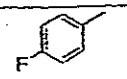
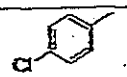
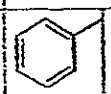
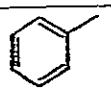
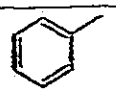
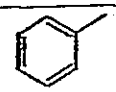
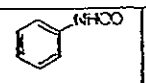
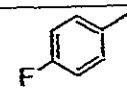
In like manner to that described in Preparation 5 following compounds of the formula (1c) (given in Table 5) were prepared from the appropriately substituted pyrrole derivatives (1e) described earlier.

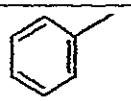
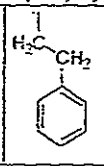
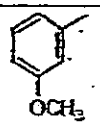
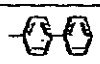
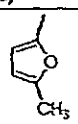
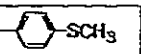


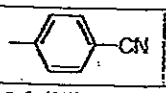
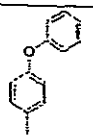
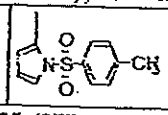
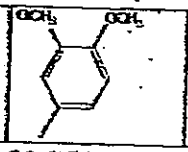
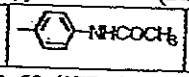
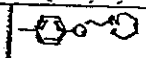
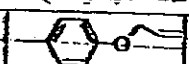
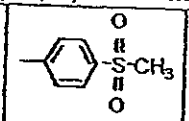
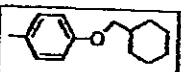
(1e)

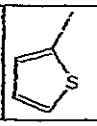
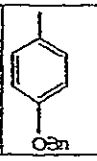
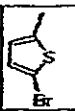
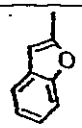
Table 5:

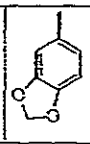
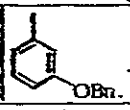
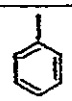
Comp. No.	Substituents on the pyrrole ring in (1c)					
	R^1	R^2	R^3	R^4		
59.	CH_3	H	CH_3	H	Mol. Wt. = 217	Yield = 98%
	—					
60.	C_2H_5	H	H	H	Mol. Wt. = 217	Yield = 90%
	^{1}H: 1.29 (3H, t, J = 2.64 Hz); 2.58 (2H, q, J = 7.32 Hz); 2.71 (3H, s); 4.15 (2H, t, J = 5.52 Hz); 4.41 (2H, t, J = 5.5 Hz); 5.92 (1H, m); 6.11 (1H, t, J = 3.16 Hz); 6.63 (1H, t, J = 2.26 Hz).					
61.	CH_3	H	H	CH_2CH_3	Mol. Wt. = 231	Yield = 56%
	^{1}H: 1.26 (3H, t, J = 7.4 Hz); 2.25 (3H, m) 2.57 (2H, q, J = 7.42 Hz); 2.69 (3H, s); 4.12 (2H, t, J = 5.9 Hz); 4.34 (2H, t, J = 5.9 Hz); 5.8 - 5.83 (2H, m).					
62.	CH_3	H	H	$(CH_2)_2CH_3$	Mol. Wt. = 246	Yield = 45%
	^{1}H: 1.02 (3H, t, J = 7 Hz); 1.65 (2H, m); 2.25 (3H, s); 2.5 (2H, t, J = 7.7 Hz); 2.69 (3H, s); 4.1 (2H, t, J = 5.9 Hz); 4.35 (2H, t, J = 5.9 Hz); 5.8 - 5.83 (2H, m)					
63.	CH_3	H	H	$(CH_2)_3CH_3$	Mol. Wt. = 259	Yield = 72%
	^{1}H: 0.95 (3H, t, J = 7.2 Hz); 1.44 - 1.46 (2H, m); 1.58 - 1.62 (2H, m); 2.25 (3H, s); 2.5 (2H, t, J = 5.9 Hz); 2.7 (3H, s); 4.1 (2H, t, J = 5.9 Hz); 4.39 (2H, t, J = 5.9 Hz); 5.8 (2H, s).					
64.	CH_3	H	H		Mol. Wt. = 279	Yield = 98%
	^{1}H: 2.34 (3H, s); 2.83 (3H, s); 4.11 (2H, t, J = 5.7 Hz); 4.27 (2H, t, J = 5.7 Hz); 5.96 (1H, d, J = 3.4 Hz); 6.10 (1H, d, J = 3.4 Hz); 7.27- 7.43 (5H, m).					
65.	CH_3	H		H	Mol. Wt. = 279	Yield = 86%
	^{1}H: 2.28 (3H, s); 2.73 (3H, m); 4.16 (2H, d, J = 5.4 Hz); 4.4 (2H, d, J = 5.4 Hz); 6.2 (1H, s); 6.9 (1H, s); 7.17 (1H, d, J = 6.75 Hz); 7.3 (2H, d, J = 7.0 Hz); 7.46 (2H, d, J = 7.0 Hz).					
66.	CH_3	H	H		Mol. Wt. = 293	Yield = 68%
	^{1}H: 2.33 (3H, s); 2.38 (3H, s); 2.65 (3H, s); 4.12 (2H, t, J = 6.3 Hz); 4.25 (2H, t, J = 6.3 Hz); 5.95 (1H, d, J = 3.4 Hz); 6.10 (1H, d, J = 3.4 Hz); 7.19- 7.25 (4H, m).					
67.	CH_3	H	H		Mol. Wt. = 293	Yield = 95%
	^{1}H: 2.33 (3H, s); 2.38 (3H, s); 2.66 (3H, s); 4.12 (2H, t, J = 5.8 Hz); 4.27 (2H, t, J = 5.7 Hz); 5.95 (1H, d, J = 3.37 Hz); 6.09 (1H, d, J = 3.42 Hz); 7.12- 7.16 (2H, m); 7.25- 7.31 (2H, m).					
68.	CH_3	H	H		Mol. Wt. = 293	Yield = 55%
	^{1}H: 2.34 (3H, s); 2.38 (3H, s); 2.67 (3H, s); 4.13 (2H, t, J = 5.8 Hz); 4.27 (2H, t, J = 5.7 Hz); 5.96 (1H, d, J = 3.36 Hz); 6.1 (1H, d, J = 3.39 Hz); 7.13- 7.29 (4H, m).					

69.	CH_3	H	H		Mol. Wt. = 309	Yield = 62%
	^{1}H: 2.3 (3H, s); 2.67 (3H, s); 3.8 (3H, s); 4.12 (2H, t, J = 5.45 Hz); 4.24 (2H, t, J = 5.45 Hz); 5.9 (1H, d, J = 3.39 Hz); 6.0 (1H, d, J = 3.39 Hz); 6.95 (2H, d, J = 6.78 Hz); 7.26 (2H, d, J = 6.78 Hz).					
70.	CH_3	H	H		Mol. Wt. = 358	Yield = 70%
	^{1}H: 2.33 (3H, s); 2.7 (3H, s); 4.13 - 4.15 (2H, m); 4.2 - 4.25 (2H, m); 5.97 (1H, d, J = 3.4 Hz); 6.12 (1H, d, J = 3.4 Hz); 7.21 - 7.26 (2H, m); 7.52 - 7.55 (2H, m).					
71.	CH_3	H	H		Mol. Wt. = 297	Yield = 90%
	^{1}H: 2.3 (3H, s); 2.7 (3H, s); 3.6 (2H, t, J = 6.0 Hz); 4.1 (2H, d, J = 5.6 Hz); 4.22 (2H, d, J = 5.4 Hz); 5.9 (1H, d, J = 3.4 Hz); 6.0 (1H, d, J = 3.4 Hz); 7.04 - 7.1 (2H, m); 7.2 - 7.3 (2H, m).					
72.	CH_3	H	H		Mol. Wt. = 313.5	Yield = 82%
	^{1}H: 2.3 (3H, s); 2.69 (3H, s); 4.15 (2H, d, J = 6.3 Hz); 4.25 (2H, d, J = 6.3 Hz); 5.96 - 5.97 (1H, dd); 6.1 (1H, d, J = 3.4 Hz); 7.27 - 7.4 (4H, m).					
73.		H	CH_3	H	Mol. Wt. = 279	Yield = 90%
	^{1}H: 2.13 (3H, s); 2.73 (3H, m); 4.2 - 4.28 (4H, m); 6.05 (1H, s); 6.59 (1H, s); 7.29 - 7.43 (5H, m).					
74.	CH_3	H			Mol. Wt. = 355	Yield = 90%
	^{1}H: 2.3(3H, s); 2.73 (3H, s); 4.09 - 4.14 (4H, m); 6.2 (1H, s); 7.0 - 7.4 (10H, m).					
75.	i-Pr	H	H	i-Pr	Mol. Wt. = 272	Yield = 37%
	^{1}H: 1.23-1.25(12H, d, J = 6.7 Hz); 2.76 (3H, s); 2.82 - 2.99 (2H, m); 4.18 (2H, m); 4.33 (2H, m); 5.86 (2H, s)					
76.	i-Pr	H	H		Mol. Wt. = 307	Yield = 100%
	^{1}H: 1.30 (6H, t, J = 6.78 Hz); 2.65 (3H, m); 2.96 - 3.00 (1H, m); 4.04 (2H, t, J = 6 Hz); 4.32 (2H, t, J = 6 Hz); 6.0 (1H, d, J = 3.54 Hz); 6.12 (1H, d, J = 3.54 Hz); 7.32-7.43 (5H, m).					
77.	i-Pr		H		Mol. Wt. = 444	Yield = 15%
	^{1}H: 1.5-1.52 (6H, d, J = 7.1 Hz); 2.84 (3H, s); 3.44 - 3.52 (1H, m); 4.12 - 4.15 (2H, t, J = 6.4 Hz); 4.3-4.34 (2H, t, J = 6.4 Hz); 6.32 (1H, s); 7.12-7.18 (3H, t, J = 8.5 Hz); 7.3-7.4 (4H, m); 7.56-7.59 (2H, d, J = 7.6 Hz).					
78.	SCH_3	H	H	H	Mol. Wt. = 235	Yield = 95%
	^{1}H: 2.29 (3H, s); 2.77 (3H, s); 4.35 - 4.48 (4H, m); 6.17 (1H, dd); 6.4 (1H, dd); 6.85 (1H, dd).					

79	C_2H_5	H	H	C_2H_5	Mol. Wt. = 245	Yield = 82%
	^{1}H: 1.27 (6H, t, 7.3 Hz); 2.58 (4H, q, J = 7.4 Hz); 2.7 (3H, s); 4.11 (2H, t, J= 6.04 Hz); 4.34 (2H, t, J=6.2 Hz); 5.8 (2H, s)					
80.	C_2H_5	H	H		Mol. Wt. = 293	Yield = 92%
	^{1}H: 1.33 (3H, t, J=7.3 Hz); 2.6-2.7 (5H, m); 4.1 (2H, t, J = 5.9 Hz); 4.28 (2H, t, J=5.9 Hz); 5.9 (1H, d, J=3.59 Hz); 6.1 (1H, d, J=3.48 Hz); 7.3-7.43 (5H, m)					
81.	CH_3	H	H		Mol. Wt. = 307	Yield = 96%
	^{1}H: 2.24 (3H, s); 2.65 (3H, s); 2.8-2.85 (2H, m); 2.94-2.99 (2H, m); 4.03 (2H, t, J= 5.8 Hz); 4.28 (2H, t, J=5.8 Hz); 5.84 (1H, d, J=3.39 Hz); 5.9 (1H, d, J=3.39 Hz); 7.18-7.23 (3H, m), 7.31-7.32 (2H, m)					
82.	CH_3	H	H		Mol. Wt. = 309	Yield = 75%
	^{1}H: 2.34 (3H, s); 2.68 (3H, s); 3.83 (3H, s); 4.16 (2H, t, J= 5.6 Hz); 4.29 (2H, t, J=5.9 Hz); 5.96 (1H, d, J=3.36 Hz); 6.12 (1H, d, J=3.42 Hz); 6.94- 7.34 (4H, m)					
83.	CH_3	H	H		Mol. Wt. = 285	Yield = 84%
	^{1}H: 1.21-1.88 (10H, m); 2.24 (3H, s) 2.24-2.45 (1H, m); 2.7 (3H, s); 4.12 (2H, t, J = 5.94 Hz); 4.34 (2H, t, J= 6 Hz); 5.79-5.83 (2H, m)					
84.	CH_3	H	H		Mol. Wt. = 355	Yield = 74%
	^{1}H: 2.35 (3H, s); 2.68 (3H, s); 4.17 (2H, t, J = 5.59 Hz); 4.33 (2H, t, J = 5.55 Hz); 5.99 (1H, d, J= 2.49 Hz); 6.12 (1H, d, J=3.18 Hz); 7.2-7.65 (9H, m)					
85.	CH_3	H	H		Mol. Wt. = 269	Yield = 84%
	^{1}H: 2.31 (3H, s), 2.69 (3H, s); 4.35 (2H, t, J=5.2 Hz); 4.43 (2H, J=4.9 Hz); 5.91-5.92 (1H, dd, J_1=0.68 Hz, J_2=0.73 Hz); 6.3 (2H, d, J=3.5 Hz); 6.35 (1H, d, J=2.8 Hz); 7.41-7.42 (1H, dd, J_1=0.7 Hz, J_2=0.65 Hz)					
86.	CH_3	H	H		Mol. Wt. = 283	Yield = 90%
	^{1}H: 2.30 (3H, s); 2.32 (3H, s); 2.68(3H,s),3.88 (2H, t, J=5.2 Hz); 4.20 (2H, t, J=4.9 Hz); 5.93 (1H, d, J=3.5 Hz); 6.33 (1H, d, J=3.5 Hz); 6.22 (1H, d, J=3.09 Hz); 6.27 (1H, d, J=3.54 Hz)					
87.	CH_3	H	H		Mol. Wt. = 325	Yield = 80%
	^{1}H: 2.33 (3H, s); 2.5 (3H, s); 2.68 (3H, s); 4.14 (2H, t, J=5.82 Hz); 4.25 (2H, t, J=5.64 Hz); 5.96 (1H, d, J= 3.33 Hz); 6.0 (1H, d, J=3.4 Hz); 7.25-7.27 (4H, m)					

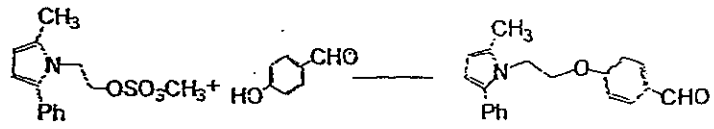
88.	CH_3	H	H		Mol. Wt. = 304	Yield = 90%
	^1H: 2.36 (3H, s); 2.73 (3H, s); 4.16 (2H, t, J= 5.6 Hz); 4.32 (2H, t, J= 5.8 Hz), 6.03 (1H, d, J=3.5 Hz); 6.238 (1H, d, J=3.54 Hz); 7.45 (2H, d, J=8.5 Hz); 7.69 (2H, d, J= 8.5 Hz)					
89.	CH_3	H	H		Mol. Wt. = 371	Yield = 85%
	^1H: 2.33 (3H,s); 2.69 (3H, s); 4.15 (2H, t, J = 5.5 Hz); 4.26 (2H, t, J=5.7 Hz); 5.96 (1H, d, J=3.29 Hz); 6.09 (1H, d, J=3.4 Hz); 7.0-7.39 (9H, m)					
90.	CH_3	H	H		Mol. Wt. = 422	Yield = 93%
	^1H: 2.3 (3H, s); 2.4 (3H, s); 2.75 (3H, s); 3.96 (2H, t, J=5.8 Hz); 4.18 (2H, t, J=5.98 Hz); 5.68 (1H, d, J=3.47 Hz); 5.86 (1H, d, J=3.38 Hz); 6.27-6.28 (1H, dd, J_1= 1.72 Hz, J_2=1.75 Hz); 6.32 (1H, t, J=3.3 Hz); 7.18 (2H, d, J=8.3 Hz); 7.41 (2H, d, J=8.3 Hz); 7.46-7.47 (1H, dd, J_1=1.7 Hz, J_2= 1.72 Hz)					
91.	CH_3	H	H		Mol. Wt. = 339	Yield = 78%
	^1H: 2.26 (3H, s); 2.7 (3H, s); 3.89 (3H, s); 3.92 (3H, s); 4.15-4.25 (4H, m); 5.95 (1H, d, J=3.0 Hz); 6.0 (1H, d, J=3.1 Hz); 6.87-7.26 (3H, m)					
92.	CH_3	H	H		Mol. Wt. = 336	Yield = 90%
	^1H: 2.1 (3H, s); 2.29 (3H, s); 2.69 (3H, s); 4.11 (2H, t, J=5.35 Hz); 4.27 (2H, t, J = 5.6 Hz); 7.29 (2H, d, J=8.5 Hz); 7.58 (2H, d, J=8.5 Hz)(no peak of py proton)					
93.	CH_3	H	H		Mol. Wt. = 406	Yield = 93%
	^1H: 1.45-1.65 (6H, m); 2.32 (3H, s); 2.51-2.52 (4H, m); 2.67 (3H, s); 2.8 (2H, t, J=6 Hz); 4.1-4.15 (4H, m); 4.2 (2H, t, J= 5.5 Hz); 5.9 (1H, d, J= 3.33 Hz); 6.0 (1H, d, J=3.4 Hz); 6.96 (2H, d, J=8.5 Hz); 7.26 (2H, d, J=8.5 Hz)					
94.	CH_3	H	H		Mol. Wt. = 335	Yield = 73%
	^1H: 2.32 (3H, s); 2.67 (3H, s); 4.14 (2H, t, J = 5.3 Hz); 4.23 (2H, t, J = 5.5 Hz); 4.57 (2H, d, J= 5.3 Hz) Hz; 5.32-5.47 (1H, dd, J_1 = 1.35 Hz, J_2=1.35 Hz); 5.4-5.48 (1H, dd, J = 1.5 Hz, 1.5 Hz); 5.9 (1H, d, J = 3.36 Hz); 6.05 (1H, d, J=3.42 Hz); 6.08-6.14 (1H, m); 6.94 (2H, d, J=8.5 Hz); 6.728 (2H, d, J=8.5 Hz)					
95.	CH_3	H	H		Mol. Wt. = 357	Yield = 93%
	^1H: 2.36 (3H, s); 2.74 (3H, s); 3.1 (3H, s); 4.15 (2H, t, J = 5.86 Hz); 4.34 (2H, t, J=5.83 Hz); 6.03 (1H, d, J=3.5 Hz); 6.25 (1H, d, J=3.54 Hz); 7.5 (2H, d, J= 8.5 Hz); 7.97 (2H, d, J=8.5 Hz)					
96.	CH_3	H	H		Mol. Wt. = 391	Yield = 90%
	^1H: 1.03-1.69 (11H, m); 2.3 (3H, s); 2.67 (3H, s); 3.7 (3H, t, J= 6.24 Hz); 4.11 (2H, t, J= 3.3 Hz); 4.2 (2H, t, J= 3.3 Hz); 5.9 (1H, d, J=3.39 Hz); 6.04 (1H, d, J=3.39 Hz); 6.91 (2H, d, J=8.5 Hz); 7.24 (2H, d, J=8.5 Hz)					

97.	CH_3	H	H		Mol. Wt. = 285	Yield - 94%
	^{1}H: 2.3 (3H,s); 2.6 (3H,s); 4.29 (4H, m); 5.9 (1H, d, J = 3.4Hz); 6.2 (1H, d, J = 3.4 Hz); 6.9-7.01 (1H, m); 7.05-7.06 (1H, m); 7.29 (1H, m)					
98.	CH_3	H	H		Mol. Wt. = 385	
	^{1}H: 2.3 (3H, s); 2.7 (3H,s); 4.13 (2H, t, J = 5.3 Hz); 4.2 (2H, t, J = 5.3 Hz); 5.09 (2H, s); 5.9 (1H, d, J = 3.3 Hz); 6.0 (1H, d, J = 3.3 Hz); 7.0 (2H, d, J = 8.7 Hz); 7.25-7.46; (7H, m)					
99.	H	H	H	C_6H_5	Mol. Wt. = 265	Yield = 40%
	^{1}H: 2.7 (3H, s); 4.12 (4H, m); 6.22 (2H, m); 6.8 (1H, m); 7.3-7.9 (5H, m)					
100.	CH_3	H	H		Mol. Wt. = 320	Yield = 98%
	^{1}H: 2.3 (3H, s); 2.75 (3H, s); 4.29 (4H, m); 5.9 (1H, d, J = 3.4 Hz); 6.2 (1H, d, J = 3.5 Hz); 6.78 (1H, d, J = 3.78 Hz); 6.88 (1H, d, J = 3.4 Hz)					
101.	CH_3	H	H		Mol. Wt. = 323	Yield = 99%
	^{1}H: 1.44 (3H, t, J = 6.98 Hz); 2.33 (3H, s); 2.67 (3H,s); 4.05 (2H, t, J = 6.98 Hz); 4.09 (2H, t, J = 5.0 Hz); 4.23 (2H, m), 5.94 (1H, d, J=3.24 Hz); 6.04 (1H,d, J=3.34 Hz); 6.93 (2H, d, J = 9.43 Hz); 7.26 (2H d, J = 8.63 Hz)					
102.	CH_3	H	H		Mol. Wt. = 299	96%
	^{1}H: 2.3 (3H, s); 2.6 (3H,s); 4.29 (4H,s); 5.9 (1H, d, J = 3.4 Hz); 6.17 (1H, d, J = 3.5 Hz); 6.7 (1H, d, J = 3.4 Hz); 6.77 (1H, d, J= 3.4 Hz)					
103.	CH_3	CH_3	H	C_6H_5	Mol. Wt. = 293	Yield = 92%
	^{1}H: 2.04 (3H, s); 2.24 (3H, s); 2.67 (3H, s); 4.12 (2H, t, J = 5.6 Hz); 4.24 (2H, t, J = 5.6 Hz); 6.01 (1H, s); 7.2-7.4 (5H, m)					
104.	CH_3	H	H		Mol. Wt. = 243	Yield = 95%
	^{1}H: 0.59-0.62 (2H, m); 0.82-0.87 (2H, m); 1.5-1.6 (1H, m); 2.24 (3H, s); 2.69 (3H,s); 4.27 (2H, t, J = 5.9 Hz); 4.45 (2H, t, J = 5.8 Hz), 5.68 (1H, d, J = 3.3 Hz); 5.75 (1H, d, J = 3.34 Hz)					
105.	CH_3	H	H		Mol. Wt. = 319	Yield = 81%
	^{1}H: 2.36 (3H, s); 2.73 (3H, s); 3.93 (2H, t, J = 5.77 Hz); 4.32 (2H, t, J = 5.76 Hz); 6.0 (1H, d, J = 3.63 Hz); 6.57 (1H, d, J = 3.63 Hz); 6.69 (1H, s); 7.54-7.72 (4H, m)					

106.	CH_3	$COOCH_3$	H		Mol. Wt. = 337	Yield = 84%
	^{1}H: 2.64 (3H, s); 2.73 (3H,s); 3.81 (3H, s); 4.11 (2H, t, J = 5.76 Hz); 4.29 (2H, t, J = 5.76 Hz); 6.56 (1H, s); 7.26-7.45 (5H, m).					
107.	CH_3	H	H		Mol. Wt. = 323	Yield = 85%
	^{1}H: 2.32 (3H, s); 2.7 (3H, s); 4.14 (2H, t, J = 5.37 Hz), 4.23 (2H, t, J = 5.47 Hz); 5.92 (1H, d, J = 2.85 Hz); 6.0 (2H, s); 6.03 (1H, d, J = 3.39 Hz); 6.74-6.86 (3H, m)					
108.	CH_3	H	H		Mol. Wt. = 329	Yield = 97%
	^{1}H: 2.39 (3H, s); 2.59 (3H, s); 3.91-3.98 (2H, m); 4.1-4.16 (2H, m); 6.07 (1H, d, J = 3.33 Hz); 6.17 (1H, d, J = 3.36 Hz); 7.43-7.90 (7H, m)					
109.	CH_3	H	H		Mol. Wt. = 385	Yield = 100%
	^{1}H: 2.31 (3H, s); 2.62 (3H, s); 4.06 (2H, t, J = 5.56 Hz); 4.18 (2H, t, J = 5.65 Hz); 5.1 (2H, s); 5.94 (1H, d, J = 3.03 Hz); 6.1 (1H, d, J = 3.42 Hz); 6.92-7.44 (9H, m)					
110.	CH_3	H	H		Mol. Wt. = 364	Yield = 96%
	^{1}H: 2.32 (3H, s); 2.73 (3H, s); 4.28 (4H, s); 5.9 (1H, d, J = 3.5 Hz); 6.2 (1H, d, J = 3.54 Hz); 6.7 (1H, d, J = 3.75 Hz); 7.02 (1H, d, J = 3.81 Hz)					
111.	CH_3	H	H		Mol. Wt. = 337	Yield = 100%
	^{1}H: 1.36 (6H, d, J = 6.03 Hz); 2.32 (3H, s); 2.66 (3H, s); 4.13 (2H, t, J = 5.29 Hz); 4.22 (2H, t, J = 5.53 Hz); 4.53-4.61 (1H, m); 5.92 (1H, d, J = 3.36 Hz); 6.03 (1H, d, J = 3.39 Hz); 6.90 (2H, d, J = 8.7 Hz); 7.24 (2H, d, J = 8.1 Hz)					
112.	CH_3	H	CH_3		Mol. Wt. = 293	Yield = 95%
	^{1}H: 1.88 (3H, s); 2.29 (3H, s); 2.68 (3H, s); 4.03 (2H, t, J = 5.26 Hz); 4.13 (2H, t, J = 5.61 Hz); 5.83 (1H, s); 7.26-7.45 (5H, m)					

Preparation 6

4-[2-(5-Methyl-2-phenylpyrrol-1-yl)ethoxy]benzaldehyde (compound No. 113):

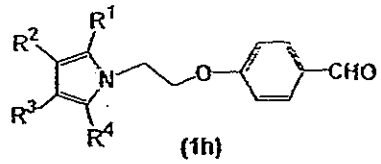


(1c) (1j) (1h)

To a suspension of potassium carbonate (16.43 g) in dimethyl formamide (50 mL), 4-hydroxy benzaldehyde (4.37 g) was added and warmed to 90 °C to 95 °C. To the solution, methyl 1-[5-methyl-2-phenyl-1H-pyrrol-1yl]ethane sulfonate (10 g) (compound no. 64 dissolved in dimethyl formamide

(50 mL) was added within 30 min and the reaction was continued for further 4 hours. The reaction mixture was diluted with water (100 mL) and was extracted with ethyl acetate (3 x 100 mL), washed with water (3 x 100 mL), brine (200 mL), and was dried over sodium sulfate. The solvent was evaporated under reduced pressure, to yield the title compound.

Table 6:

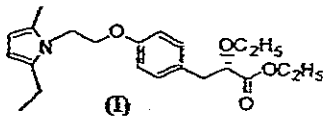


(1h)

Comp. No.	Substituents on the pyrrole ring in (1p)					
	R^1	R^2	R^3	R^4		
113.	CH_3	H	H	Phenyl	Mol. Wt. =306	Yield = 99%
	^1H: 2.39 (3H, s); 4.0 (2H, t, J = 6.3 Hz); 4.35 (2H, t, J = 6.3 Hz); 5.98 (1H, d, J = 3.4 Hz); 6.12 (1H, t, J = 3.4 Hz); 6.74 (2H, d, J = 8.7); 7.38 - 7.42 (5H, m); 7.73-7.75 (2H, d, J = 8.8 Hz); 9.85 (1H,s).					

Example 7

(S)-Ethyl 3-{4-[2-(2-ethyl-5-methyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoate (Example 5)



(I)

A mixture of (*S*)-ethyl 3-(4-hydroxyphenyl)-2-ethoxypropionate (2.24 g) and dry potassium carbonate (3.7 g) in dimethyl formamide (30 mL) was stirred at 80 °C for 30 min. Compound No. 61(2.27 g) was added at 40 °C and stirring was continued at 80 °C for 24 h. The reaction mixture was cooled to 20 °C – 25 °C and 20 mL water was added. The reaction mixture was extracted with ethyl acetate (2 x 40 mL), washed with water (2 x 40 mL), brine (40 mL) and was dried over sodium sulfate. The organic layer was evaporated under reduced pressure to obtain an oily product. The crude oily product was chromatographed over silica gel (100 -200 mesh) using ethyl acetate: petroleum ether (1:9) as an eluent to afford the title compound as a yellow oil (1.654 g, 45 %).

Preparation 8

(S)-Ethyl 3-{4-[2-(2-formylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoate (Example 3)

A mixture of (*S*)-ethyl 3-(4-hydroxyphenyl)-2-ethoxypropionate (1.12 g) and dry potassium carbonate (2.37 g) in dimethyl formamide (20 mL) was stirred at 80 °C for 30 min. 1-(2-bromoethyl)2-carbaldehyde pyrrole (1.0 g, Compound. No. 52) was added at 40 °C and stirring was continued at 80 °C for 24 h. The reaction mixture was cooled to 20 °C – 25 °C and 20 mL water was added. The reaction mixture was extracted with ethyl acetate (2 x 25 mL), washed with water (2 x 20

mL), brine (25 mL) and was dried over sodium sulfate. The organic layer was evaporated under reduced pressure to obtain an oily product. The crude oily product was chromatographed over silica gel (100 -200 mesh) using ethyl acetate : petroleum ether (1:9) as an eluent to afford the title compound as a yellow oil (0.4 g, 22 %).

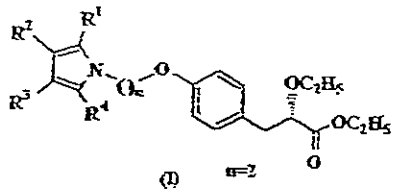
Preparation 9

(S)-Ethyl 3-{4-[2-(5-ethyl -2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoate (Example 24)

A mixture of (S)-ethyl 3-(4-hydroxyphenyl)-2-ethoxypropionate (2.3 g), and dry potassium carbonate (2.6 g) in toluene (15 mL) was heated to reflux for 45 min with continuous removal of water using a Dean-Stark water separation. The mixture was cooled to 50 °C and mesylate compound No. 80 (2 .9 g) was added. The reaction mixture was continued to reflux for 24 hrs. Later it was cooled to 20 °C – 25 °C and toluene was distilled at reduced pressure. To the residue, DM water (30 mL) was added and the crude product was extracted with ethyl acetate (2 x 25 mL), washed with water (2 x 20 mL), brine (25 mL) and was dried over sodium sulfate. The solvent was evaporated under reduced pressure to obtain an oily product. The crude oily product was chromatographed over silica gel using ethyl acetate: petroleum ether (60-80) (1:9) as an eluent to afford the title product as a yellow oil (73 %).

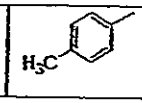
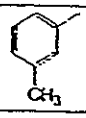
In like manner to that described in preparation 7-9, the following compounds of the formula (I) (given in Table 7) were prepared from appropriately substituted pyrrole derivatives described in either Table 5 or obtained from other methods described herein.

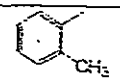
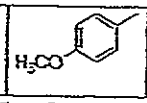
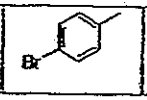
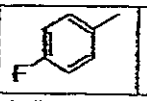
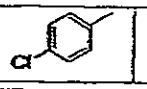
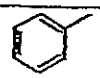
Table 7:

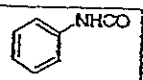
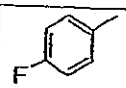
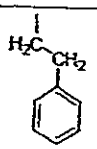
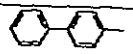


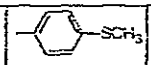
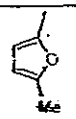
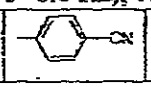
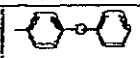
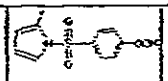
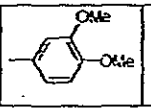
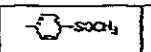
(I) n=2

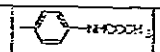
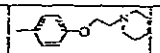
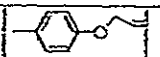
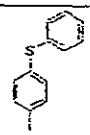
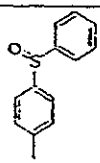
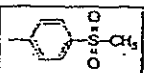
Ex. No.	Substituents on the pyrrole ring in (I)					
	R^1	R^2	R^3	R^4		
1.	CH_3	H	CH_3	H	Mol. Wt. = 359	Yield = 18%
	^{1}H: 1.15 (3H, t, J = 7 Hz); 1.26 (3H, t, J = 7 Hz); 2.04 (3H, s); 2.23 (3H, s); 2.91 - 2.94 (2H, m); 3.3 - 3.39 (1H, m); 3.5 - 3.62 (1H, m); 3.92 (1H, dd, J = 6.0 Hz); 4.12 - 4.2 (6H, m); 5.7 (1H, s); 6.4 (1H, s); 6.77 (2H, d, J = 8.6 Hz); 7.15 (2H, d, J = 8.6 Hz).					
2.	C_2H_5	H	H	H	Mol. Wt. = 359	Yield = 18%
	^{1}H: 1.15 (3H, t, J = 7.02 Hz); 1.22 (3H, t, J = 5.74 Hz); 1.26 (3H, t, J = 6.03 Hz); 2.62 (2H, q); 2.93 (2H, d, J = 5.7 Hz); 3.3-3.4(1H,m); 3.5-3.6(1H,m); 3.94 (2H, t, J = 6.0 Hz); 4.12-4.20 (5H, m); 5.91 (1H, m); 6.10 (1H, t, J = 3.12 Hz); 6.69-6.75 (1H, m); 6.76 (2H, d, J = 6.7 Hz); 7.13 (2H, d, J = 8.61 Hz).					
3.	CHO	H	H	H	Mol. Wt. = 359	Yield = 22%
	^{1}H: 1.1 (3H, t, J = 6.9 Hz); 1.26 (3H, t, J = 6.9 Hz); 2.94 - 4.08 (5H, m); 4.08-4.1(2H, m); 4.22 (2H, t, J = 4.9 Hz); 4.7 (2H, t, J = 4.9 Hz); 6.23 (1H, d); 6.7 (2H, d, J = 8.5 Hz); 6.97 (1H, dd); 7.1 (1H, dd); 7.4(2H, d, J=8.5 Hz); 9.5 (1H, s).					

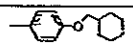
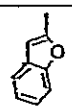
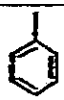
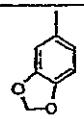
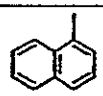
4.	$COCH_3$	H	H	H	Mol. Wt. = 137	Yield = 10%
	^{1}H: 1.15 (3H, t, J = 3.48 Hz); 1.2 (3H, t, J = 5.1 Hz); 2.44 (3H, s); 2.93 (2H, dd, J = 5.55 Hz); 3.0-3.35 (2H, m); 3.94 (2H, t, J = 3.58 Hz); 4.16 (2H, q, J_1 = 1.44 Hz, J_2 = 1.41 Hz); 4.21 (1H, t, J = 5.04 Hz); 4.69 (2H, t, J = 4.99 Hz); 6.14-6.15 (1H, m); 6.75 (2H, d, J = 8.37 Hz); 6.99 - 7.01 (2H, m) 7.11 (2H, d, J = 8.64 Hz).					
5.	CH_3	H	H	CH_2CH_3	Mol. Wt. = 373	Yield = 45%
	^{1}H: 1.15 (3H, t, J = 7 Hz); 1.22 (3H, t, J = 7 Hz); 1.27 (3H, t, J = 7 Hz); 2.28 (3H, m); 2.63 (2H, q, J = 7.4 Hz); 2.9 - 2.96 (2H, m); 3.3 - 3.6 (2H, m); 3.92 -4.19 (7H, m); 5.8 - 5.83 (2H, m); 6.75 (2H, d, J = 6.78 Hz); 7.14 (2H, d, J = 6.78 Hz).					
6.	CH_3	H	H	$(CH_2)_2CH_3$	Mol. Wt. = 389	Yield = 41%
	^{1}H: 1.02 (3H, t, J = 6.9 Hz); 1.15 (3H, t, J = 6.9 Hz); 1.23 (3H, t, J = 7.14 Hz); 1.65 - 1.7 (2H, m); 2.28 (3H, s); 2.5 (2H, t, J = 7.75 Hz); 2.9 -2.92 (2H, m); 3.25 - 3.5 (2H, m); 3.94 (1H, t, J = 3.66 Hz); 4.0 - 4.2 (6H, m) 5.8 -5.83 (2H, m); 6.75 (2H, d, J = 8.5 Hz); 7.15 (2H, d, J = 8.5 Hz).					
7.	CH_3	H	H	$(CH_2)_3CH_3$	Mol. Wt. = 401	Yield = 46%
	^{1}H: 0.95 (3H, t, J = 7.2 Hz); 1.15 (3H, t, J = 7 Hz); 1.23 (3H, t, J = 7 Hz); 1.4 - 1.47 (2H, m); 1.6 - 1.7 (2H, m); 2.28 (3H, s); 2.5 (2H, t, J = 7.7 Hz); 2.9 -2.97 (2H, m); 3.3 - 3.39 (1H, m); 3.55 – 3.63 (1H, m); 4.04 - 4.22 (7H, m) 5.8 –5.83 (2H, m); 6.7 (2H, d, J = 8.5 Hz); 7.15 (2H, d, J = 8.5 Hz).					
8.	CH_3	H	H		Mol. Wt. = 421	Yield = 85%
	^{1}H: 1.15 (3H, t, J = 6.9 Hz); 1.22 (3H, t, J = 7.1 Hz); 2.37 (3H, s); 2.9 - 2.92 (2H, dd); 3.32 - 3.35 (1H, m); 3.5 – 3.58 (1H, m); 3.9 - 3.92 (3H, m); 4.12 - 4.19 (2H, q); 4.28 (2H, t, J = 6.5 Hz); 5.96 -5.97 (1H, d, J = 3.1 Hz); 6.1- 6.11 (1H, d, J = 3.11 Hz); 6.6 (2H, d, J = 8.5 Hz); 7.06- 7.09 (2H, d, J = 8.5 Hz); 7.3 - 7.4 (5H, m).					
9.	CH_3	H		H	Mol. Wt. = 421	Yield = 63%
	^{1}H: 1.15 (3H, t, J = 6.9 Hz); 1.22 (3H, t, J = 7.1 Hz); 2.37 (3H, s); 2.9 - 2.92 (2H, m); 3.3 - 3.4 (1H, m); 3.53 – 3.62 (1H, m); 3.9 (1H, t, J = 6.6 Hz); 4.1 - 4.22 (6H, m); 6.2 (1H, s); 6.8 (2H, d, J = 8.5 Hz); 6.98 (1H, s); 7.15 (2H, d, J = 8.5 Hz); 7.23 - 7.33 (3H, m)7.4 (2H, t, J = 7.1 Hz).					
10.	CH_3	H	H		Mol. Wt. = 435	Yield = 34%
	^{1}H: 1.16 (3H, t, J = 6.9 Hz); 1.22 (3H, t, J = 6.9 Hz); 2.37 (3H, s); 2.39 (3H, s); 2.9-2.92 (2H, m); 3.3 - 3.37 (1H, m); 3.56 - 3.62 (1H, m); 3.91 - 4.2 (5H, m); 4.27 (2H, m); 5.95 (1H, d, J = 3.36 Hz);6.10 (1H, d, J = 3.36 Hz);6.6 (2H, d, J = 8.5 Hz); 7.0 (2H, d, J = 6.78 Hz); 7.19 (2H, d, J = 8.5 Hz); 7.28 (2H, d, J = 6.78 Hz).					
11.	CH_3	H	H		Mol. Wt. = 435	Yield = 37%
	^{1}H: 1.15 (3H, t, J = 6.9 Hz); 1.22 (3H, t, J = 7.13 Hz); 2.37 (6H, s); 2.91 (2H, d, J = 5.94 Hz); 3.89 - 3.95 (5H, m); 4.15 (2H, q, J_1 = 7.11Hz, J_2 = 7.11 Hz); 4.28 (2H, t, J = 6.63 Hz); 5.95 (1H, d, J = 3.39 Hz); 6.07 (1H, d, J = 3.39 Hz); 6.59 (2H, d, J = 7.62 Hz); 7.07 (2H, d, J = 8.64 Hz); 7.15 - 7.28 (4H, m).					

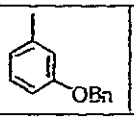
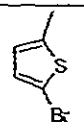
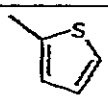
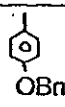
12.	CH_3	H	H		Mol. Wt. = 435	Yield = 53%
	^{1}H: 1.15 (3H, t, J = 6.9 Hz); 1.22 (3H, t, J = 7.13 Hz); 2.37 (6H, s); 2.9 - 2.92 (2H, m); 3.3 - 3.58 (2H, m); 3.89 - 3.95 (3H, m); 4.15 (2H, t, J = 6 Hz); 4.28 (2H, t, J = 6 Hz); 5.95 (1H, d, J = 3.2 Hz); 6.0 (1H, d, J = 3.2 Hz);6.6 (2H, d, J = 7.62 Hz);7.0 (2H, d, J = 8.64 Hz);7.12 - 7.28 (4H, m).					
13.	CH_3	H	H		Mol. Wt. = 451	Yield = 41%
	^{1}H: 1.1 (3H, t, J = 7 Hz); 1.22 (3H, t, J = 7 Hz); 2.36 (3H, s); 2.9 -2.92 (2H, dd); 3.3 –3.32 (1H, m); 3.52 – 3.62 (1H, m); 3.84 (3H, m); 3.9 - 3.94 (3H, m); 4.14 (2H, t, J = 6.68 Hz); 4.22 (2H, t, J = 6.68 Hz); 5.9 (1H, d, J = 3.36 Hz); 6.0 (1H, d, J = 3.36 Hz); 6.64 (2H, d, J = 8.58 Hz); 6.95 (2H, d, J = 6.78 Hz); 7.10 (2H, d, J = 8.5 Hz); 7.31 (2H, d, J = 6.78 Hz).					
14.	CH_3	H	H		Mol. Wt. = 500	Yield = 40%
	^{1}H: 1.15(3H, t, J = 7 Hz); 1.2 (3H, t, J = 7 Hz); 2.37 (3H, s); 2.95 (2H, dd); 3.29 - 3.38 (1H, m); 3.55 – 3.63 (1H, m); 3.9 - 3.95 (3H, m); 4.17 (2H, t, J = 6.3 Hz); 4.28 (2H, t, J = 6.3 Hz); 5.9 (1H, d, J = 3.42 Hz); 6.1 (1H, d, J = 3.42 Hz);6.6 (2H, d, J = 8.5 Hz);7.21 (2H, d, J = 8.5 Hz); 7.29 (2H, d, J = 8.5 Hz); 7.5 (2H, d, J = 8.5 Hz).					
15.	CH_3	H	H		Mol. Wt. = 439	Yield = 30%
	^{1}H: 1.15 (3H, t, J = 6.99 Hz); 1.23 (3H, t, J = 6.99 Hz); 1.58 (3H, s); 2.9 - 2.93 (2H, dd); 3.32-3.4(1H,m); 3.55 – 3.65 (1H, m); 3.85 - 4.0 (3H, m); 4.1 - 4.2 (2H, m); 4.24 (2H, t, J = 6.4 Hz); 5.9 (1H, d, J = 3.3); 6.0 (1H, d, J = 3.4 Hz); 6.6 (2H, t, J = 8.6 Hz); 7.0 - 7.1 (4H, m); 7.26 - 7.38 (2H, m).					
16.	CH_3	H	H		Mol. Wt. = 455.5	Yield = 62%
	^{1}H: 1.15 (3H, t, J = 7 Hz); 1.23 (3H, t, J = 7 Hz); 2.36 (3H, s); 2.9 - 2.95 (2H, dd); 3.33 - 3.4 (1H, m); 3.53 – 3.62 (1H, m); 3.9 - 4.13 (3H, m); 4.18 (2H, t, J = 6.3 Hz); 4.26 (2H, t, J = 6.3 Hz); 5.97 (1H, d, J = 3.27 Hz); 6.1 (1H, d, J = 3.4 Hz);6.6 (2H, d, J = 8.4 Hz);7.1 (2H, d, J = 8.4 Hz); 7.25 - 7.38 (2H, m); 7.4 (2H, d, J=8.5 Hz).					
17.		H	CH_3	H	Mol. Wt. = 421	Yield = 13%
	^{1}H: 1.15 (3H, t, J = 6.9 Hz); 1.23 (3H, t, J = 7.2 Hz); 2.13 (3H, s); 2.92 (2H, d); 3.33 (1H, m); 3.59 (1H, m); 3.94 (3H, m); 4.07-4.26 (4H, m); 6.05 (1H, s); 6.67 - 6.72 (3H, m); 7.12 (2H, m); 7.3 - 7.43 (5H, m).					
18.	CH_3	H			Mol. Wt. = 497	Yield = 32%
	^{1}H: 1.153 (3H, t, J = 7.0 Hz); 1.24 (3H, t, J = 7 Hz); 2.4 (3H, s); 2.9 - 2.92 (2H, m); 3.33 - 3.36 (1H, m); 3.53– 3.63 (1H, m); 3.85 - 3.95 (3H, m); 4.1 - 4.2 (4H, m); 6.2 (1H, s); 6.5 - 7.4 (14H, m).					
19.	i-Pr	H	H	i-Pr	Mol. Wt. = 415	Yield = 36%
	^{1}H: 1.15 (3H, t, J = 6.9 Hz); 1.23 (3H, t, J = 7.0 Hz); 1.24 - 1.26 (12H, d, J = 6.7 Hz); 2.9 (4H, m); 3.35 1(H); 3.6 (1H, m); 3.95 (1H, m); 4.05 (2H, t); 4.1- 4.2 (2H, q, J_1= 6.8 Hz, J_2 = 7.1 Hz); 4.23 (2H, t, J = 6.6 Hz); 5.87 (2H, s); 6.75 - 6.76 (2H, d, J = 8.6 H); 7.12 - 7.15 (2H, d, J = 8.6 Hz)					

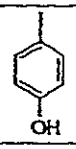
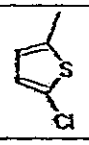
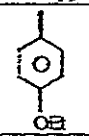
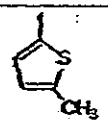
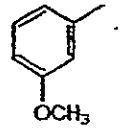
20.	i-Pr	H	H		Mol. Wt. = 449	Yield = 31%
	^{1}H: 1.14 (3H, t, J = 6.99 Hz); 1.21 (3H , t, J = 5.55 Hz); 1.31 (6H, d, J = 6.15 Hz); 2.90 (2H, d, J = 6.15 Hz); 3.1(1H,m); 3.32 – 3.57 (2H, m); 3.84 (2H, t, J = 6.75 Hz); 3.91 (1H, t, J = 3.55 Hz); 4.12–4.19 (2H, q, J_1 = 7.14 Hz, J_2 =7.14 Hz); 4.33 (2H, t, J = 6.8 Hz); 6.00 (1H, d, J = 3.51 Hz); 6.12 (1H, d, J = 3.51 Hz); 6.53 (2H, d, J = 8.64 Hz); 6.93 (2H, d, J = 8.7 Hz); 7.05 (2H, d, J = 8.61 Hz); 7.31 7.40 (5H, m).					
21.	i-Pr		H		Mol. Wt. = 586	Yield = 20%
	^{1}H: 1.15 (3H, t, J = 6.9 Hz); 1.23 (3H, t, J = 7.1 Hz); 1.51- 1.53 (6H, d, J = 7.1 Hz); 2.92 (2H, dd, J= 7.11 Hz); 3.33 - 3.4 (1H, m); 3.5 - 3.6 (2H, Complex); 3.9-4.0 (3H, m); 4.1 - 4.2 (2H, q, J = 7.11 Hz); 4.3 - 4.4 (2H, t, J = 6.3 Hz); 6.31 (1H, s); 6.58 - 6.61 (2H, d, J = 8.5 Hz); 7.0-7.2 (4H, m); 7.3-7.4 (4H, m); 7.5 (1H, s); 7.6 (2H, d, J = 7.6 Hz)					
22.	SCH_3	H	H	H	Mol. Wt. = 377	Yield = 20%
	^{1}H: 1.14 (3H, t, J = 7.0 Hz); 1.24 (3H, t, J = 7.0 Hz); 2.29 (3H, s); 2.90 - 2.94 (2H, m); 3.30 - 3.40 (1H, m); 3.54 - 3.62 (1H, m); 3.95 (1H, t, J = 3.6 Hz); 4.13 - 4.22 (4H, m); 4.40 (2H, t, J = 5.6 Hz); 6.15 (2H, d, J = 3.2 Hz); 6.37 (1H, dd); 6.80 (2H, d, J = 8.5 Hz); 6.94 (1H, m); 7.15 (2H, d, J = 8.5 Hz).					
23.	C_2H_5	H	H	C_2H_5	Mol. Wt. = 387	Yield = 73%
	^{1}H: 1.15 (3H, t, J=7 Hz); 1.25 (3H, t, J= 7 Hz); 1.28 (6H, t, J=7.3 Hz); 2.64 (4H, t, J=7.4 Hz); 2.92-2.94 (2H, m); 3.29-3.38 (1H, m); 3.53-3.61 (1H, m); 3.94 (1H, t, J = 1.38 Hz); 4.07 (2H, t, J = 5.97 Hz); 4.12-4.21 (4H, m); 5.8 (2H, s); 6.7 (2H, d, J=8.6 Hz); 7.15 (2H, d, J= 8.6 Hz)					
24.	C_2H_5	H	H	C_6H_5	Mol. Wt. = 435	Yield = 73%
	^{1}H: 1.15 (3H, t, J=6.9Hz); 1.22 (3H, t, J= 7.1Hz); 1.24 (3H, t, J = 7.3Hz); 2.73 (2H, q, 2 = 7.4Hz); 2.9-3.1 (2H, m); 3.28-3.38 (1H, m); 3.53-3.61 (1H, m); 3.88-3.95 (3H, m); 4.19 (2H, t, J = 7.1Hz); 4.29 (2H, t, J = 7.2Hz); 6.0 (1H, d, J=3.42Hz); 6.15 (1H, d, J=3.45Hz); 6.59 (2H, d, J=8.5Hz); 7.0 (2H, d, J=8.5Hz); 7.3-7.4 (5H, m)					
25.	CH_3	H	H		Mol. Wt. = 449	Yield = 72%
	^{1}H: 1.15 (3H, t, J=6.9Hz); 1.25 (3H t, J= 7Hz); 2.29 (3H ,s); 2.9-2.97 (6H, m); 3.29-3.37 (1H, m); 3.53-3.62(1H,m); 3.9-4.2(7H,m) 5.85 (1H, d, J=3.1Hz); 5.9 (1H, d, J=3.37Hz); 6.73 (2H, d, J=8.6Hz); 7.13 (2H, J=8.6Hz); 7.21-7.3 (5H, m)					
26.	CH_3	H	H		Mol. Wt. = 497	Yield = 60%
	^{1}H: 1.14 (3H, t, J=6.9Hz); 1.23 (3H, t, J=7.1Hz); 2.39 (3H, s); 2.9 (2H, d, J=6.1Hz); 3.28-3.38 (1H, m); 3.53-3.61 (1H, m); 3.92-4.2 (5H, m); 4.34 (2H, t, J = 6.5Hz); 5.9)1H, d, J=3.3Hz); 6.17 (1H, d, J=3.4Hz); 6.6 (2H, d, J=8.5Hz); 7.0 (2H, d, J=8.5Hz); 7.43-7.5 (5H, m); 7.6-7.68 (4H, m)					

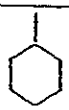
27.	CH_3	H	H		Mol. Wt. = 411	Yield = 60%
	^{1}H: 1.15 (3H, t, J=6.9Hz); 1.22 (3H, t, J=7 Hz); 2.35 (3H, s); 2.91-2.94 (2H, m); 3.29-3.38 (1H, m); 3.53-3.63 (1H, m); 3.9 (1H, t, J = 6.0 Hz); 4.12-4.2 (4H, m); 4.4 (2H, t, J = 6.4 Hz); 5.91-5.92 (1H, m); 6.31-6.38 (2H, m); 6.42-6.45 (1H, m); 6.7 (2H, d, J=8.6 Hz); 7.13 (2H, d, J=8.5 Hz); 7.41-7.42 (1H, m)					
28.	CH_3	H	H		Mol. Wt. = 467	Yield = 80%
	^{1}H: 1.15 (3H, t, J=6.9 Hz); 1.22 (3H, t, J=7.1 Hz); 2.29 (3H, s); 2.3 (3H, s); 2.92 (2H, d, J=7.26 Hz); 3.28-3.38 (1H, m); 3.53-3.61(1H, m); 3.89-3.97 (3H,m); 4.19(2H, t, J=7 Hz); 4.29 (2H, t, J = 6.55 Hz); 5.96 (1H, d, J=3.36 Hz); 6.0 (1H, d, J=3.39 Hz); 6.6 (2H, d, J=8.5 Hz); 7.0 (2H, d, J=8.5Hz); 7.22-7.33(4H,m)					
29.	CH_3	H	H		Mol. Wt. = 425	Yield = 60%
	^{1}H: 1.15 (3H, t, J=6.9Hz); 1.22 (3H, t, J=7.1 Hz); 2.29 (3H, s); 2.3 (3H, s); 2.94 (2H, d, J = 7.26 Hz); 3.3-3.38 (1H, m); 3.54-3.63 (1H, m); 3.94 (1H, t, J=6.0 Hz); 4.12-4.19 (4H, m); 4.36 (2H, t, J=6.4 Hz); 5.91 (1H, d, J=3.4 Hz); 5.9-6.0(1H,m) 6.22 (1H, d, J=3.06 Hz); 6.26(1H, d, J=3.5 Hz); 6.7 (2H, d, J=8.6 Hz), 7.13- (2H, d, J=8.58 Hz)					
30.	CH_3	H	H		Mol. Wt. = 446	Yield = 70%
	^{1}H: 1.15(3H, t, J = 6.69 Hz); 1.23 (3H, t, J = 7 Hz); 2.38 (3H, s); 2.91-2.95 (2H, m); 3.3-3.40 (1H, m); 3.54-3.64 (1H, m); 3.9-3.98 (3H, m); 4.16 (2H, q, J=7.1 Hz); 4.34 (2H, t, J = 6.18 Hz); 6.0 (1H, d, J=3.48 Hz); 6.2 (1H, d, J=3.54 Hz); 6.62 (2H, d, J=8.6 Hz); 6.75 (2H, d, J=8.49 Hz); 7.5 (2H, d, J=8.37 Hz); 7.67 (2H, d, J= 8.3 Hz)					
31.	CH_3	H	H		Mol. Wt. = 513	Yield = 60%
	^{1}H: 1.15 (3H, t, J = 7Hz); 1.22 (3H, t, J = 6.9 Hz); 2.37 (3H, s); 2.93 (2H, d, J=7 Hz); 3.29-3.38 (1H, m); 3.54-3.62 (1H, m); 3.94 (3H, t, J=6.2 Hz); 4.17 (2H, q, J=7 Hz) 4.28 (2H, t, J=6.3 Hz); 5.96 (1H, d, J=3.3 Hz); 6.08 (1H, d, J=3.39 Hz); 6.64 (2H, d, J=8.6 Hz); 7.0-7.4 (11H, m)					
32.	CH_3	H	H		Mol. Wt. = 564	Yield = 30%
	^{1}H: 1.15 (3H, t, J=6.9 Hz); 1.22 (3H, t, J=7.1 Hz); 2.28 (3H, s); 2.3 (3H, s); 2.95 (2H, d, J=6.5 Hz); 3.3-3.38 (1H, m); 3.54-3.62 (1H, m); 3.86-4.2 (7H, m); 5.7 (1H, d, J=3.48Hz); 5.88-7.8 (12H, m)					
33.	CH_3	H	H		Mol. Wt. = 481	Yield = 64%
	^{1}H: 1.15, (3H, t, J=6.9 Hz); 1.22 (3H, t, J=9 Hz); 2.37 (3H, s); 2.9-2.92 (2H, m); 3.28-3.35 (1H, m); 3.55-3.62 (1H, m); 3.86 (3H, s); 3.91 (3H, s); 3.9-3.95 (3H, m); 4.17 (2H, q, J=7.1 Hz); 4.27 (2H, t, J=6.6 Hz); 5.96 (1H, d, J=3.39 Hz); 6.0 (1H, d, J=3.39 Hz); 6.64 (2H, d, J=8.5 Hz); 6.91-6.94 (3H, m); 7.1 (2H, d, J= 8.5 Hz)					
34.	CH_3	H	H		Mol. Wt. = 483	Yield = 90%
	^{1}H: 1.15, (3H, t, J=6.9 Hz); 1.22 (3H, t, J=9 Hz); 2.38 (3H, s); 2.77(s,3H); 2.90-2.93 (2H, m); 3.28-3.38 (1H, m); 3.54-3.62 (1H, m); 3.9-3.99 (3H, m); 4.17 (2H, q, J= 7.1 Hz); 4.34 (2H, t, J=6.3 Hz); 5.9 (1H, d, J=3.48 Hz); 6.18 (1H, d, J=3.48 Hz); 6.64 (2H, d, J= 8.6Hz); 7.11 (2H, d, J=8.6 Hz); 7.58 (2H, d, J=8.4 Hz); 7.66 (2H, d, J=8.4 Hz)					

35.	CH_3	H	H		Mol. Wt. = 464	Yield = 40%
	^{1}H: 1.15 (3H, t, J = 7.0 Hz); 1.22 (3H, t, J=6.9 Hz); 2.32 (3H, s); 2.8-2.9 (2H, m); 3.23-3.4 (1H, m); 3.48-3.59 (1H, m); 3.64 (3H, s); 3.9 (2H, t, J=6.0 Hz); 3.9-4.0(3H,m); 4.28(2H, t, J= 6.0 Hz); 5.85 (1H, d, J=3.28 Hz); 5.96 (1H, d, J=3.4 Hz); 6.58 (2H, d, J=8.6 Hz); 7.02 (2H, d, J=8.5 Hz); 7.32 (2H, J=8.5 Hz); 7.57 (2H, d, J=8.5 Hz)					
36.	CH_3	H	H		Mol. Wt. = 548	Yield = 60%
	^{1}H: 1.15 (3H, t, J=6.9 Hz); 1.22 (3H, t, J=6.9 Hz); 1.4-1.7 (6H, m); 2.36 (3H, s); 2.5-2.55 (4H, m); 2.79 (2H, t, J=6.06 Hz); 2.9-2.95 (2H, m); 3.3-3.41 (1H, m); 3.53-3.62 (1H, m); 3.88-3.98 (3H, m); 4.1-4.2 (4H, m); 4.26 (2H, t, J = 6 Hz); 5.94 (1H, d, J=3.1 Hz); 6.0 (1H, d, J = 3.1 Hz); 6.6 (2H, d, J=8.5 Hz); 6.94 (2H, d, J= 8.5 Hz); 7.1 (2H, d, J=8.5 Hz); 7.31 (2H, d, J=8.6 Hz)					
37.	CH_3	H	H		Mol. Wt. = 477	Yield = 50%
	^{1}H: 1.15(3H, t, J = 6.9 Hz); 1.22 (3H, t, J = 7.1 Hz); 2.36 (3H,s); 2.9 (2H, d, J=7.1 Hz); 3.28 –3.99 (1H, m); 3.53-3.63 (1H, m); 3.91 (3H, t, J=6.6 Hz); 4.15 (2H, q, J = 7.1 Hz); 4.25 (2H, t, J=6.6 Hz); 4.56 (2H, d, J=3.9 Hz); 5.29-5.34 (1H, dd); 5.4-5.5 (1H, dd); 5.94 (1H, d, J=2.9 Hz); 6.05 (1H, d, J=3.48 Hz); 6.08-6.13 (1H, m); 6.63 (2H, d, J=8.6 Hz); 6.95 (2H, d, J=8.7 Hz); 7.09 (2H, d, J=8.5 Hz); 7.3 (2H, d, J=8.69 Hz);					
38.	CH_3	H	H		Mol. Wt. = 529	Yield = 50%
	^{1}H: 1.15 (3H, t, J=7 Hz); 1.22 (3H, t, J=7 Hz); 2.36 (3H, s); 2.90-2.91 (2H, m); 3.29-3.38 (1H, m); 3.53-3.61 (1H, m); 3.94 (3H, t, J=6.25 Hz); 4.19 (2H, q, J=7 Hz); 4.3 (2H, t, J=6.3 Hz); 5.9 (1H, d, 3.3 Hz); 6.11 (1H, J=3.4 Hz); 6.6 (2H, d, J=8.67 Hz); 7.1 (2H, d, J=8.6 Hz); 7.26-7.42 (9H, m)					
39.	CH_3	H	H		Mol. Wt. = 545	Yield = 80%
	^{1}H: 1.15 (3H, t, J = 7 Hz); 1.22 (3H, t, J = 7 Hz); 2.36 (3H, s); 2.9-2.93 (2H, m); 3.3-3.39 (1H, m); 3.52-3.64 (1H, m); 3.91-3.94 (3H, m); 4.26 (2H, t, J=6.0 Hz); 4.3 (2H, t, J = 6.0 Hz); 5.97 (1H, d, J=3.6 Hz); 6.14 (1H, d, J=3.48 Hz); 6.6 (2H, J=8.6 Hz); 7.09 (2H, d, J= 8.5 Hz); 7.46-7.7 (9H, m)					
40.	CH_3	H	H		Mol. Wt. = 499	Yield = 75%
	^{1}H: 1.15 (3H, t, J = 7 Hz); 1.22 (3H, t, J = 7 Hz); 2.39 (3H, s); 2.9-3.0 (2H, m); 3.09 (3H, s); 3.4-3.62 (2H, m); 3.91-3.94 (3H, m); 4.26 (2H, t, J=6.0 Hz); 4.3 (2H, t, J=6 Hz); 6.02 (1H, d, J=3.3 Hz); 6.2 (1H, d, J=3.5 Hz); 6.6 (2H, d, J=8.58 Hz); 7.11 (2H, d, J=8.5 Hz); 7.6 (2H, d, J=8.4 Hz); 7.9 (2H, d, J=8.4 Hz)					

41.	CH_3	H	H		Mol. Wt. = 533	Yield = 64%
	^{1}H: 1.12-1.29 (6H, m); 1.15 (3H, t, J = 7 Hz); 1.22 (3H, t, J = 7 Hz); 1.56-1.86 (5H, m); 2.35 (3H, s); 2.9 (2H, d, J=7.05 Hz); 3.3-3.38 (1H, m); 3.53-3.62 (1H, m); 3.78 (2H, d, J=6.18 Hz); 3.89-3.97 (3H, m); 4.17 (2H, t, J = 7.1 Hz); 4.23 (2H, t, J=7 Hz); 5.9 (1H, d, J=3.3 Hz); 6.04 (1H, d, J=3.36 Hz); 6.62 (2H, d, J=8.6 Hz); 6.92 (2H, d, J=8.7 Hz); 7.09 (2H, d, J=8.58 Hz); 7.3 (2H, d, J=8.7 Hz)					
42.	COPh	H	H	H	Mol. Wt. = 435	Yield = 45%
	^{1}H: 1.15 (3H, t, J=6.9 Hz); 1.22 (3H, t, J=7.1 Hz); 2.95 (2H, d, J=6.6 Hz); 3.3-3.4 (1H, m); 3.51-3.62 (1H, m); 3.95-4.2 (7H, m); 5.66-6.15 (2H, m); 6.72-6.75 (1H, m); 6.74 (2H, d, J=8.5 Hz); 6.8-7.96 (7H, m)					
43.	CH_3	H	H		Mol. Wt. = 385	Yield = 60%
	^{1}H: 0.6-0.62 (2H, m); 0.81-0.84 (2H, m); 1.15 (3H, t, J = 6.99 Hz); 1.23 (3H, t, J = 7.1 Hz); 1.7 (1H, m); 2.27 (3H, s); 2.94 (2H, d, J = 5.64 Hz); 3.3-3.9 (2H, m); 3.95-3.96 (1H, m); 4.12-4.2 (4H, m); 4.32 (2H, t, J = 6.43 Hz); 5.7 (1H, d, J = 3.3 Hz); 5.76 (1H, d, J = 3.3 Hz); 6.76 (2H, d, J = 8.61 Hz); 7.14 (2H, d, J = 8.58 Hz)					
44.	CH_3	H	H		Mol. Wt. = 461	Yield = 41.5%
	^{1}H: 1.14 (3H, t, J = 6.98 Hz); 1.21 (3H, t, J = 6.04 Hz); 2.39 (3H, s); 2.92 (2H, d, J = 6 Hz); 3.57-3.32 (2H, m); 3.92 (1H, t, J = 3.56 Hz); 4.15 (2H, q, J_1 = 7.13 Hz, J_2 = 7.12 Hz); 4.23 (2H, t, J = 6.06 Hz); 4.53 (2H, t, J = 6.05 Hz); 5.99 (1H, d, J = 3.5 Hz); 6.56 (1H, d, J = 3.6 Hz); 6.69 (1H, s); 6.73 (2H, d, J = 8.59 Hz); 7.1 (2H, d, J = 8.56 Hz); 7.54-8.2 (4H, m)					
45.	CH_3	$COOCH_3$	H		Mol. Wt. = 479	Yield = 33%
	^{1}H: 1.12-1.28 (6H, m); 2.69 (3H, s); 2.91 (2H, d, J = 5.8 Hz); 3.32 (2H, m); 3.8 (3H, s); 3.8-3.93 (3H, m); 4.11-4.19 (2H, m); 4.3 (2H, t, J = 6.18 Hz); 6.54-6.61 (3H, m); 7.07 (2H, d, J=8.58 Hz); 7.36-7.44 (5H, m)					
46.	CH_3	H	H		Mol. Wt. = 465	Yield = 28%
	^{1}H: 1.15 (3H, t, J = 6.99 Hz); 1.22 (3H, t, J = 7.12 Hz); 2.35 (3H, s); 2.92 (2H, d, J = 5.91 Hz); 3.0-3.8 (2H, m); 3.89-3.95 (3H, m); 4.12-4.17 (2H, q, J_1 = 7.11 Hz, J_2 = 7.11 Hz); 4.25 (2H, t, J = 6.72); 5.93 (1H, d, J = 3.33 Hz); 5.99 (2H,s); 6.03 (1H, d, J = 3.39 Hz); 6.62 (2H, d, J = 8.67 Hz); 6.84-6.88 (3H, m); 7 (2H, d, J = 8.64 Hz)					
47.	CH_3	H	H		Mol. Wt. = 417	Yield = 56%
	^{1}H: 1.16 (3H, t, J = 6.16 Hz); 1.23 (3H, t, J = 7.81 Hz); 2.43 (3H, s); 2.87 (2H, d, J = 6.84 Hz); 2.9-3.3 (2H, m); 3.74 (2H, t, J = 6.48 Hz); 3.89 (2H, t, J = 6.64 Hz); 4.1-4.18 (3H, m); 6.06 (1H, d, J = 3.33 Hz); 6.15 (1H, d, J = 3.36 Hz); 6.38 (2H, d, J=8.61 Hz); 6.98 (2H, d, J = 8.58 Hz); 7.41-7.9 (7H, m)					

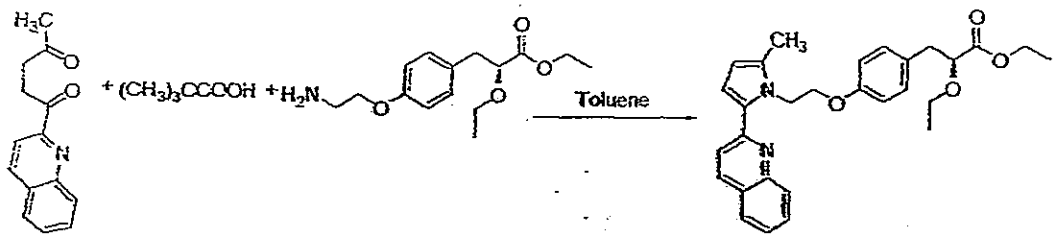
48.	CH_3	H	H		Mol. Wt. = 527	Yield = 42%
	^{1}H: 1.14 (3H, t, J = 6.99 Hz); 1.22 (3H, t, J = 7.14 Hz); 2.36 (3H, s); 2.89-2.92 (2H, m); 3.0-3.85 (2H, m); 3.86-3.92 (3H, m); 4.15 (2H, q, J_1= 7.14 Hz, J_2 = 7.10 Hz); 4.23 (2H, t, J=6.42 Hz); 5.08 (2H, s); 5.94 (1H, d, J = 3.27); 6.1 (1H, d, J = 3.39 Hz); 6.6 (2H, d, J = 8.61 Hz); 6.98-7.05 (3H, m); 7.08 (2H, d, J = 8.58 Hz); 7.3-7.4 (6H, m)					
49.	CH_3	H	H		Mol. Wt. = 506	Yield = 50%
	^{1}H: 1.15 (3H, t, J = 6.99 Hz); 1.123 (3H, t, J = 7.14 Hz); 2.35 (3H,s); 2.92 (2H, m); 3.33-3.59 (2H, m); 3.94 (1H, t, J = 6.7 Hz); 4.04 (2H, t, J = 6.22 Hz); 4.13-4.2 (2H, q, J_1 = 7.11 Hz, J_2 = 7.11 Hz); 4.31 (2H, t, J = 6.24 Hz); 5.92 (1H, d, J = 3.48 Hz); 6.2 (1H, d, J = 3.51 Hz); 6.7 (2H, d, J = 8.61 Hz); 6.78 (1H, d, J = 3.78 Hz); 6.99 (1H, d, J = 3.75 Hz); 7.12 (2H, d, J = 8.58 Hz)					
50.	CH_3	H	H		Mol. Wt. = 479	Yield = 60%
	^{1}H: 1.15 (3H, t, J = 6 Hz); 1.22 (3H, t, J = 6 Hz); 1.36 (6H, d, J = 6.06 Hz); 2.36 (3H, s); 2.91 (2H, d, J = 7.11 Hz); 3.33-3.58 (2H, m); 3.89-3.95 (3H, m); 4.12-4.26 (4H, m); 4.3-4.57 (1H, m); 5.93 (1H, d, J = 3.33 Hz); 6.04 (1H, d, J = 3.39 Hz); 6.62 (2H, d, J = 8.61 Hz); 6.90 (2H, d, J = 8.67 Hz); 7.07 (2H, d, J = 8.55 Hz); 7.26 (2H, d, J = 8.28 Hz)					
51.	CH_3	H	CH_3		Mol. Wt. = 435	Yield = 49%
	^{1}H: 1.15 (3H, t, J = 6.9 Hz); 1.21 (3H, t, J = 7.1 Hz); 1.91 (3H, s); 2.33 (3H, s); 2.90 (2H, d, J = 7.02 Hz) 3.32-3.58 (2H, m); 3.83 (2H, t, J = 6.67 Hz); 3.90-3.95 (1H, m); 4.10-4.19 (4H, m); 5.84 (1H, s); 6.54 (2H, d, J = 8.64 Hz); 7.05 (2H, d, J = 8.61 Hz); 7.30-7.42 (5H, m)					
52.	CH_3	H	H		Mol. Wt. = 427	Yield = 42%
	^{1}H: 1.15 (3H, t, J = 6.9 Hz), 1.23 (3H, t, J = 7 Hz), 2.36 (3H, s); 2.9 (2H, m), 3.3 (1H, m) 3.6 (1H, m); 3.9 (1H, m); 4.05 (2H, t, J = 6.4 Hz), 4.12-4.2 (2H, q, J_1=J_2 = 7 Hz); 4.3 (2H, t, J = 6.4 Hz); 5.9 (1H, d, J = 3.5 Hz); 6.2 (1H, d, J = 3.5 Hz); 6.6 (2H, d, J = 8.6 Hz); 7.0-7.1 (2H, m), 7.12-7.15 (2H, m); 7.25-7.27 (1H, m)					
53.	CH_3	H	H		Mol. Wt. = 527	Yield = 52%
	^{1}H: 1.15 (3H, t, J = 6.9 Hz); 1.23 (3H, t, J = 6.9); 2.3 (3H, s); 2.90-2.93 (2H, m); 3.3 (1H, m); 3.55 (1H, m); 3.9 (2H, m) 4.1-4.15 (3H, m); 4.2 (2H, m); 5.1 (2H, s); 5.9 (1H, d, J = 3.3 Hz); 6.0 (1H, d, J = 3.3 Hz); 6.6 (2H, d, J = 8.5 Hz); 6.99 (2H, d, J = 8.5 Hz); 7.1 (2H, d, J = 8.5 Hz); 7.3-7.47 (7H, m)					

54.	CH_3	H	H		Mol. Wt.= 437	Yield = 50%
	^{1}H: 1.17 (3H, t, J = 6.9 Hz); 1.23 (3H, t, J = 7 Hz); 2.3 (3H, s); 2.9 (2H, m); 3.3 (1H, m); 3.6 (1H, m); 3.9-4.0 (3H, m); 4.1-4.2 (4H, m); 5.9 (1H, d, J = 3.3 Hz); 6.0 (1H, d, J = 3.3 Hz); 6.5 (2H, d, J = 8.6 Hz); 6.8 (2H, d, J = 8.6 Hz); 7.0 (2H, d, J = 8.6 Hz); 7.2 (2H, d, J = 8.6 Hz)					
55.	H	H	H	C_6H_5	Mol. Wt.= 407	Yield = 99%
	^{1}H: 1.1(3H, t, J = 6.9 Hz); 1.22 (3H, J = 7.11 Hz); 2.9 (2H, m); 3.3-3.4 (1H, m); 3.55-3.6 (1H, m); 3.9 (1H, m); 4.08 (2H, t, J = 6.1 Hz); 4.12-4.17 (2H, q; $J_1 = J_2 = 7.1$ Hz); 4.3 (2H, t, J = 5 Hz); 6.0 (2H, m); 6.6 (2H, d, J = 8.6 Hz); 6.9 (1H, m); 7.0 (2H, d, J = 8.6 Hz); 7.1-7.4 (5H, m)					
56.	CH_3	H	H		Mol. Wt.= 461.5	Yield = 60%
	^{1}H: 1.1(3H, t, J = 6.9 Hz); 1.23 (3H, t, J = 7 Hz); 2.36 (3H, s); 2.9 (2H, m); 3.3 (1H, m); 3.6 (1H, m); 3.9 (1H, t, J = 5.9 Hz); 4.05 (2H, t, J = 6.1 Hz); 4.16 (2H, q, J = 7 Hz); 4.3 (2H, t, J = 6.3 Hz), 5.9 (1H, d, J = 3.5 Hz); 6.2 (1H, d, J = 3.5 Hz); 6.6 (2H, d, J = 8.6 Hz); 6.8 (1H, d, J = 3.8); 6.86(1H, d, J = 3.8 Hz); 7.12 (2H, d, J = 8.58 Hz)					
57.	CH_3	H	H		Mol. Wt.= 465	Yield = 56%
	^{1}H: 1.15 (3H, t, J = 7.14 Hz); 1.2 (3H, t, J = 7.14 Hz); 1.45 (3H, t, J = 6.99 Hz); 2.36 (3H, s); 2.9 (2H, d, J = 5.97 Hz); 3.35 (1H, m); 3.6(1H,m); 3.91 (3H, m); 4.15 (4H, m); 4.23 (2H, m); 5.94 (1H, d, J = 3.30 Hz); 6.05 (1H, d, J = 3.33 Hz); 6.62 (2H, d, J = 8.64 Hz); 6.92 (2H, d, J = 6.78 Hz); 7.08 (2H, d, J = 8.64 Hz); 7.3 (2H, d, J = 6.69 Hz)					
58.	CH_3	H	H		Mol. Wt.= 441	Yield = 53%
	^{1}H: 1.15 (3H, t, J = 6.99 Hz); 1.23 (3H, t, J = 7 Hz); 2.36 (3H, s); 2.48 (3H, s); 2.93 (2H, d, J = 6.17 Hz); 3.33-3.59 (2H, m); 3.9 (1H, t, J = 6.6 Hz); 4.05 (2H, t, J = 6.4 Hz); 4.15 (2H, t, $J_1 = 6.4$ Hz, $J_2 = 7$ Hz); 4.32 (2H, l, J=6.4 Hz); 5.91 (1H, d, J = 3.38 Hz); 6.17 (1H, d, J = 3.4 Hz), 6.68-6.71 (3H, m); 6.8 (1H, d), 7.1 (2H, d, J = 8.2 Hz)					
59.	CH_3	CH_3	H	C_6H_5	Mol. Wt.= 435	Yield = 51%
	^{1}H: 1.15 (3H, t, J = 7Hz) Hz; 1.22 (3H, t, J = 7 Hz); 2.05 (3H, s); 2.27 (3H, s); 2.9 (2H, m); 3.3 (1H, m); 3.5 (1H, m); 3.9 (3H, m); 4.1 (2H, m); 4.26 (2H, t, J = 6.6 Hz); 6.0 (1H, s); 6.6 (2H, d, J = 8.6 Hz); 7.05 (2H, d, J = 8.5 Hz); 7.26 (1H, m); 7.29-7.35 (4H, m)					
60.	CH_3	H	H		Mol. Wt. = 451	Yield = 70%
	^{1}H: 1.15 (3H, t, J=6.9Hz); 1.22 (3H, t, J=7 Hz); 2.37 (3H, s); 2.9-2.95 (2H, m); 3.29-3.38 (1H, m); 3.55-3.63 (1H, m); 3.8 (3H, s); 3.94 (3H, t, J=6.24Hz); 4.17 (2H, q, J=7.1Hz); 4.3 (2H, t, J= 6.6Hz); 5.96 (1H, d, J=2.8Hz); 6.12 (1H, d, J=3.39Hz); 6.69 (2H, d, J= 8.6Hz); 6.88-7.0 (2H, m); 7.09 (2H, d, J=8.6Hz); 7.26-7.31 (2H, m)					

61.	CH_3	H	H		Mol. Wt. = 427	Yield = 54%
	^{1}H: 1.16 (3H, t, J=6.9Hz); 1.23 (3H, t, J=7Hz); 1.3-1.88 (10H, m); 2.27 (3H, s); 2.51-2.53 (1H, m); 2.92-2.95 (2H, m); 3.3-3.4 (1H, m); 3.53-3.63 (1H, m); 3.95 (1H, t, J= 5.9Hz); 4.0-4.1 (2H, m); 4.1-4.22 (4H, m); 5.8 (1H, d, J=3.4Hz); 5.84 (1H, d, J=3.3Hz); 6.7 (2H, d, J=8.6Hz); 7.13 (2H, d, J=8.5Hz)					

Preparation 10

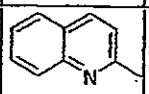
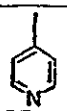
(S)-Ethyl[3-{4-[2-(5-methyl-2-quinolinyl)pyrrole-1-yl)ethoxy]phenyl}-2-ethoxypropanoate (Example 62)

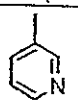


A mixture of diketo compound (0.8 g), pivalic acid (0.06 g), amino ester (0.4 g) in toluene(20 ml.) was heated to reflux for 3 hours with continuous removal of water using a Dean-Stark apparatus. Later it was cooled to 20-25 °C and toluene was distilled at reduced pressure. To the residue was added D.M. water (20 ml) and crude product was extracted with ethylacetate (2 x 30 ml), washed with water (2 x 30 ml) and saturated brine solution (30 mL). Organic layer was dried over Na_2SO_4 to obtain brown thick oil (0.32 g). The crude product was purified by column chromatography using sillica gel(100-200) and ethyl acetate:PET ether(1:9) as an eluent to afford yellowish thick oil(0.1 g).

In like manner to that described in preparation 10, the following compounds of general formula (I) were prepared.

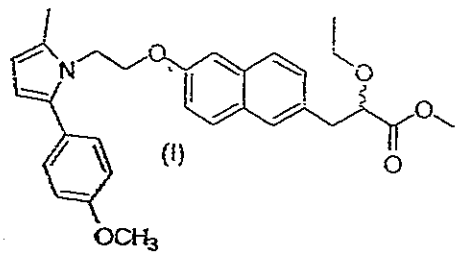
Table 8:

Ex. No.	Substituents on the pyrrole ring in (I)					
	R_1	R_2	R_3	R_4		
62.	CH_3	H	H		Mol. Wt. = 472	Yield = 35%
	^{1}H: 1.14 (3H, t, J = 6.99 Hz); 1.23 (3H, t, J = 7.14 Hz); 2.4 (3H, s); 2.89-2.92 (2H, m); 3.28-3.38 (1H, m); 3.52-3.6 (1H, m); 3.9-3.95 (1H,m); 4.14 (2H, q, J_1 = 7.08 Hz, J_2=7.08 Hz); 4.45 (2H, t, J = 5.76 Hz); 5.02 (2H, t, J = 5.79 Hz); 6.02 (1H, d, J = 3.72 Hz); 6.75-6.78 (3H, m); 7.10 (2H, d, J = 8.6 Hz); 7.4-7.7 (4H, m); 7.89 (1H, d, J = 8.3 Hz); 8.0 (1H, d, J=8.7 Hz)					
63.	CH_3	H	H		Mol. Wt. = 422	Yield = 23%
	^{1}H: 1.15 (3H, t, J = 6.99 Hz); 1.23 (3H, t, J = 7.14 Hz); 2.39 (3H, s); 2.91 (2H, d, J = 7.44 Hz); 3.58-3.80 (2H, m); 3.93 (1H, t, J = 6.63 Hz); 3.99 (2H, t, J = 6.12 Hz); 4.12-4.20 (2H, q, J_1 = 7.11 Hz, J_2=7.11 Hz); 4.38 (2H, t, J = 6.12 Hz); 6.01 (1H, d, J = 3.45 Hz); 6.30 (1H, d, J = 3.54 Hz); 6.63 (2H, d, J = 8.61 Hz); 7.10 (2H, d, J = 8.55 Hz); 7.33 (2H, d, J = 6 Hz); 8.58 (2H, d, J = 5.89 Hz)					

64.	CH_3	H	H		Mol. Wt. = 422	Yield = 21%
	^{1}H: 1.15 (3H, t, J = 7 Hz); 1.22 (3H, t, J = 6.9 Hz); 2.39 (3H, s); 2.91 (2H, d, J = 7.02 Hz); 3.32-3.57 (2H, m); 3.94 (1H, t, J = 6.63 Hz); 4.15 (2H, q, J_1 = 7.14 Hz, J_2=7.11 Hz); 4.25 (2H, t, J = 6.06 Hz); 4.81 (2H, t, J = 6.07 Hz); 5.95 (1H, d, J = 3.21 Hz); 6.53 (1H, d, J = 3.63 Hz); 6.75 (2H, d, J = 8.49 Hz); 7.02-7.08 (1H, m); 7.10 (2H, d, J = 8.64); 7.51 (1H, d, J = 8.07 Hz); 7.5-7.6 (1H, m); 8.49-8.50 (1H, m)					
65.	CH_3	H	H		Mol. Wt. = 422	24%
	^{1}H: 1.15 (3H, t, J = 7 Hz); 1.23 (3H, t, J = 7.11 Hz); 2.38 (3H, s); 2.91 (2H, t, J = 3.78 Hz); 3.32-3.58 (2H, m); 3.9-3.97 (3H, m); 4.16 (2H, q, J_1 = 7.11 Hz, J_2 = 7.11 Hz); 4.29 (2H, t, J = 6.15 Hz); 6.0 (1H, d, J = 3.45 Hz); 6.17 (1H, d, J = 3.48 Hz); 6.62 (2H, d, J = 8.64 Hz); 7.09 (2H, d, J = 8.58 Hz); 7.32-7.34 (1H, m); 7.71-7.74 (1H, m); 8.53-8.55 (1H, m); 8.68-8.69 (1H, m)					

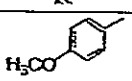
Preparation 11

(R/S) Methyl-2-ethoxy-3[6-[2-[2-(4-methoxyphenyl)-5-methyl-pyrrol-1-yl]ethoxy]napthalen-2yl] propanoate (Example 66)



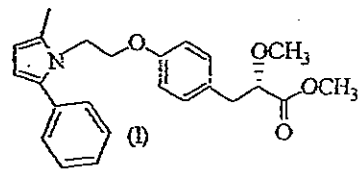
A mixture of (R/S)-ethyl 3-(4-hydroxynapthyl)-2-ethoxypropionate (1 g) and dry potassium carbonate (0.7 g) in dimethyl formamide (20 mL) was stirred at 80 °C for 30 min. Compound. No. 69(1.2 g) was added at 40 °C and stirring was continued at 80 °C for 24 h. The reaction mixture was cooled to 20 °C – 25 °C and 20 mL water was added. The reaction mixture was extracted with ethyl acetate (2 x 30 mL), washed with water (2 x 30 mL), brine (30 mL) and was dried over sodium sulfate. The organic layer was evaporated under reduced pressure to obtain an oily product. The crude oily product was chromatographed over silica gel (100 -200 mesh) using ethyl acetate : petroleum ether (1:9) as an eluent to afford the title compound as a yellow oil (0.6 g, 31 %).

Table 9:

Ex. No.	Substituents on the pyrrole ring in (I)					
	R^1	R^2	R^3	R^4		
66.	CH_3	H	H		Mol. Wt. = 487	Yield = 31%
	^{1}H: 1.14 (3H, t, J = 7Hz) Hz; 2.4 (3H, s); 3.1-3.16 (2H, m); 3.3-3.8 (1H, m); 3.55-3.64 (1H, m); 3.68 (3H, s); 3.84 (3H, s); 4.03-4.41 (3H, m); 4.32 (2H, t, J=6.6 Hz); 5.96 (1H, d, J = 3.36 Hz); 6.0 (1H, d, J=3.39 Hz); 6.8 (1H, d, J = 2.37 Hz); 6.9-7.0 (3H, m); 7.33-7.38 (3H, m); 7.52-7.64 (3H, m)					

Preparation 12

(*S*)-Methyl 3-{4-[2-(2-phenyl-5-methyl pyrrol-1-yl)ethoxy]phenyl}-2-methoxypropanoate (Example



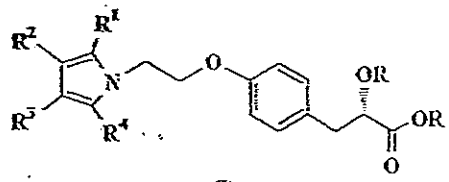
(I)

67)

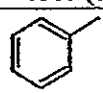
Using a similar procedure to that described in preparation 7, (*S*)-methyl 3-(4-hydroxyphenyl)-2-methoxypropanoate (3.3 g), and mesylate (Compound. No. 64 (table 5), 4.38 g), gave the titled compound (1.2 g, 20 %).

In the like manner to that described in above example, the corresponding propoxy derivative (Example no. 68) was prepared using (*S*)-Propyl 3-(4-hydroxyphenyl)-2-propoxy propionate and mesylate (given in the Table 5).

Table 10:

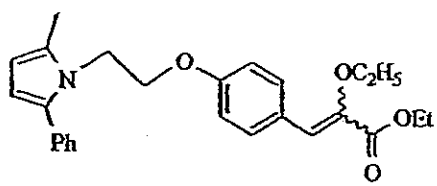


(I)

Ex. No.	Substituents on the pyrrole ring in (I)						
	R^1	R^2	R^3	R^4			
67.	CH_3	H	H		R=CH_3	Mol. Wt.=393	Yield = 20%
	^{1}H: 2.37 (3H, s); 2.9-3(2H, m); 3.33 (3H, s); 3.71 (3H, m); 3.92 (3H, t, J = 6.96 Hz); 4.29 (2H, t, J = 6.6 Hz); 5.97 (1H, d, J = 3.36 Hz); 6.11 (1H, d, J = 3.39 Hz); 6.6 (2H, d, J = 8.67 Hz); 7.05 (2H, d, J = 8.64 Hz); 7.30 - 7.40 (5H, m).						
68.	CH_3	H	H		R=C_3H_7	Mol. Wt.=449	Yield = 20%
	^{1}H: 0.83 (3H, t, J = 7.4 Hz); 0.89 (3H, t, J = 7.4 Hz); 1.53 - 1.63 (4H, m); 2.37 (3H, s) 2.91 (2H, d, J = 5.54 Hz); 3.20 - 3.48 (2H, m); 3.92 (3H, t, J = 6.59 Hz); 4.06 (2H, t, J = 6.67 Hz); 4.28 (2H, t, J = 7.4 Hz); 5.97 (1H, d, J = 3.39 Hz); 6.11 (1H, d, J = 3.4 Hz); 6.59 (2H, d, J = 8.64 Hz); 7.07 (2H, d, J = 8.63 Hz); 7.25 - 7.4 (5H, m).						

Preparation no. 13

Ethyl (E/Z) 2-ethoxy-3-[4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl]prop-2-enoate (Example



69)

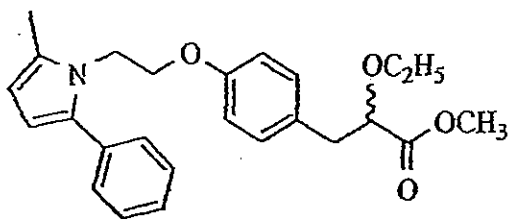
To a solution of triethyl 2-ethoxyphosphonoacetate (12.5 g) in dry THF (60 mL) was added slowly to a well-stirred ice-cold suspension of NaH (1.8 g, 60 % dispersion in oil) in dry THF (60 mL) under N_2 atmosphere. The reaction mixture was stirred at 0°C for 30 min. and 4-[2-(5-methyl-2-phenylpyrrol-1-yl) ethoxy]benzaldehyde (compound no. 113) (10.8 g) in dry THF (80 mL) was added. The mixture was allowed to warm up to 20 °C to 25 °C and stirred for 3.5 hrs. The solvent was evaporated and the residue was diluted with water (150 mL) further the product was extracted with ethyl acetate (2 x 150 mL). The combined extract was washed with water (150 mL), brine (50 mL), and was dried over sodium sulfate. The solvent was evaporated under reduced pressure to afford crude product. The crude product was chromatographed over silica gel using pet. ether : ether (9 : 1) as an eluent to afford E and Z isomers, which were isolated by removing the of solvents.

Table 11:

Ex. No.	Substituents on the pyrrole ring					
	R^1	R^2	R^5	R^4		
69.	CH_3	H	H	Phenyl	Mol. Wt. = 419	Yield = 40% E/Z-isomer
70.	CH_3	H	H	Phenyl	Mol. Wt. = 419	Yield = 15%
	E-isomer ^{1}H: 1.13 (3H, t, J = 7.14 Hz); 1.4 (3H, t, J = 6.9 Hz); 2.3 (3H, s); 3.86 - 3.95 (4H, m); 4.13 (2H, q, J = 7.1 Hz); 4.27 - 4.31 (2H, t, J = 6.6 Hz); 5.96 (1H, d, J = 3.3 Hz); 6.03 (1H, s); 6.11 (1H, d, J = 3.3 Hz); 6.5 - 6.6 (2H, d, J = 8.7 Hz); 7.03 - 7.06 (2H, d, J = 8.5 Hz) 7.32 - 7.34 (1H, m); 7.35 - 7.41 (4H, m).					
71.	CH_3	H	H	Phenyl	Mol. Wt. = 419	Yield = 15%
	Z-isomer ^{1}H: 1.33-1.38 (6H, t, J =7.0 Hz); 2.38 (3H, s); 3.92 - 3.99 (4H, m); 4.24 - 4.33 (4H, m); 5.98 (1H, d, J = 3.3 Hz); 6.11 (1H, d, J = 3.3 Hz); 6.63 - 6.6 (2H, d, J = 8.9 Hz); 6.92 (1H, s); 7.33 (1H, m); 7.36 - 7.41 (4H, m); 7.64-7.67 (2H, d, J = 8.8 Hz).					

Preparation 14

(R/S) Methyl 2-ethoxy-3[4-[2-[2-methyl-5-phenyl-1*H*-pyrrol-1-yl]ethoxy]phenyl] propanoate (Example 72)



Mixture of E/Z compounds (Example no. 70 and 71) obtained in preparation 13 (7.1 g, 0.016 mole) and magnesium turnings (7.3 g, 0.3 mole) in dry methanol (70 mL) was stirred at 25 °C for 3.5 hrs. H_2O (150 mL) was added and pH of the reaction mixture was adjusted to 2-3 with 35 % hydrochloric acid. The product was extracted in ethyl acetate (2 x 100 mL) combined extract was

washed with H_2O (2 x 100 mL) brine (100 mL) and dried over Na_2SO_4. The extract was concentrated under reduced pressure. The crude product was chromatographed over silica gel using pet. ether : ether (9 : 1) as an eluent. The product obtained was racemic mixture but the ethyl ester was converted to methyl ester.

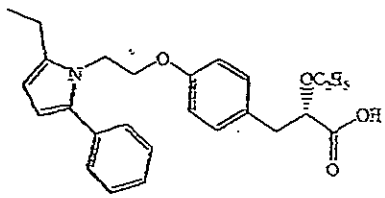
Alternatively, the E and Z compound mixture is hydrogenated in the presence of 10 % Pd/C catalyst at 60 psi pressure to obtain the title compound.

Table 12:

Ex. No.	Substituents on the pyrrole ring					
	R^1	R^2	R^3	R^4		
72.	CH_3	H	H	Phenyl	Mol. Wt. = 407	Yield = 50%
	^1H: 1.15 (3H, t, J =7.0 Hz); 2.37 (3H, s); 2.90 - 2.92 (2H, dd); 3.32 - 3.35 (1H, m); 3.55 - 3.57 (1H, m); 3.69 (3H, s); 3.90 - 3.97 (3H, m); 4.29 (2H, t, J = 6.9 Hz); 5.9 (1H, d, J = 3.4 Hz); 6.1 (1H, d, J = 3.4 Hz); 6.59 (2H, d, J = 8.6 Hz); 7.05 (2H, d, J = 8.5 Hz); 7.26 - 7.41 (5H, m).					

Preparation 15

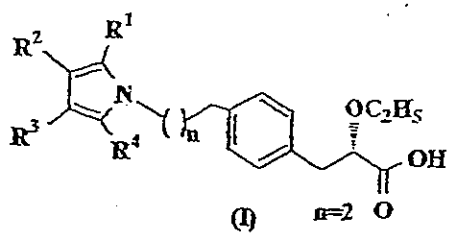
(S)-3-{4-[2-(5-Ethyl-2-phenyl-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid (Example 96)



A mixture of substituted ester (prepared in example 24) (1.3 g), sodium hydroxide (0.24 g in 5 mL D. M. water) in methanol (10 mL) was stirred at 20 °C to 25 °C for 10 h. Methanol was evaporated under reduced pressure. The residue was diluted with water (10 mL) and was acidified with dilute hydrochloric acid. The product was extracted with ethyl acetate (3 x 20 mL) and washed with water (2 x 30 mL), brine (30 mL) and was dried over sodium sulfate to obtain an oily product (1.17 g, 96 %). The crude product (3 g) was used in next step without purification.

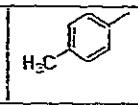
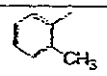
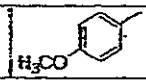
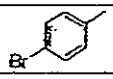
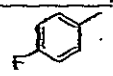
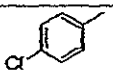
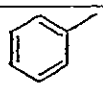
In like manner to that described in Preparation 15 above following compounds of the formula (I) (given in Table 13) were prepared from the appropriately substituted pyrrole derivatives described elsewhere:

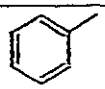
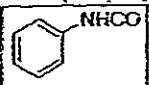
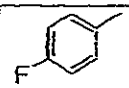
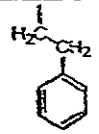
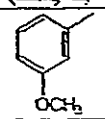
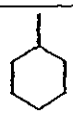
Table 13:

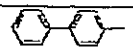
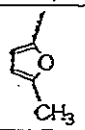
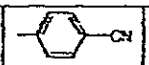
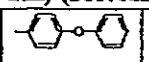
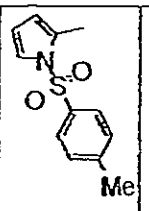


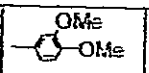
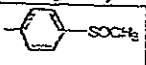
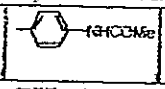
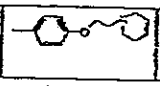
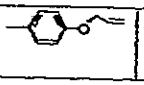
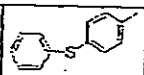
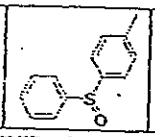
(I) n=2

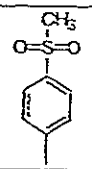
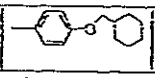
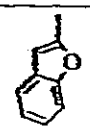
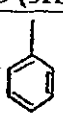
Ex. No.	Substituents on the pyrrole ring in (I)					
	R^1	R^2	R^3	R^4		
73.	CH_3	H	CH_3	H	Mol. Wt. = 331	Yield = 88%
	^{1}H: 0.96 (3H, t, J = 6.76 Hz); 1.9 (3H, s); 2.13 (3H, s); 2.78 (2H, m); 3.3 - 3.6 (2H, m); 4.05 (5H, m); 5.53 (1H, s); 6.43 (1H, s) 6.75 (2H, d, J = 9.0 Hz); 7.07 (2H, d, J = 9.0 Hz).					
74.	C_2H_5	H	H	H	Mol. Wt. = 331	Yield = 10%
	^{1}H: 1.16 (3H, t, J = 6.9 Hz); 1.27 (3H, t, J = 3.51Hz); 2.62 (2H, q); 2.5(2H, m); 3.44-3.46 (2H, m); 4.03 (1H, dd, J_1 = 4.23 Hz, J_2 = 4.5 Hz); 4.13 (2H, t, J = 5.2 Hz); 4.18 (2H, t, J = 3.76 Hz); 5.91-5.92 (1H, m); 6.10 (1H, t, J = 3.12 Hz); 6.70 (1H, d, J = 2.01 Hz); 6.77 (2H, d, J = 8.7 Hz); 7.135 (2H, d, J = 8.64 Hz).					
75.	CHO	H	H	H	Mol. Wt. = 331	Yield = 75%
	^{1}H: 1.10 (3H, t, J = 7 Hz); 2.8 – 4.0(5H,m); 4.16 (2H, t, J = 4.9 Hz); 4.65 (2H, t, J = 4.9 Hz); 6.22 (1H, dd); 6.7 (2H, d, J = 8.5 Hz); 6.97(1H, dd); 7.1-7.14(1H, m); 7.14(2H, d, J = 8.5 Hz); 9.49 (1H, s).					
76.	$COCH_3$	H	H	H	Mol. Wt. = 345	Yield = 10%
	^{1}H: 0.87 (3H, t, J = 6.87 Hz); 2.39 (3H, s); 2.66 (2H, dd, J = 11.55 Hz); 2.95 – 3.06 (2H, m); 3.73 (1H, t, J = 4.5 Hz); 4.09 (2H, t, J = 4.74 Hz); 4.60 (2H, t, J = 4.89 Hz); 6.08 (1H, dd, J_1 = 2.64 Hz, J_2 = 2.64 Hz); 6.58 (2H, d, J = 8.37 Hz); 6.92-6.99 (2H, m); 7.00 (2H, d, J = 8.34 Hz).					
77.	CH_3	H	H	CH_2CH_3	Mol. Wt. = 345	Yield = 54%
	^{1}H: 1.16 (3H, t, J = 7 Hz); 1.28 (3H, t, J = 7 Hz); 2.28 (3H, m); 2.55 (2H, t, J = 7.4 Hz); 3.06 (2H, dd); 3.4 - 3.62 (2H,m); 4.0 - 4.16 (5H, m); 5.8 - 5.84 (2H, m); 6.75 (2H, d, J = 6.78 Hz); 7.14 (2H, d, J = 6.78 Hz).					
78.	CH_3	H	H	$(CH_2)_2CH_3$	Mol. Wt. = 423	Yield = 66%
	^{1}H: 1.02 (3H, t, J = 6.9 Hz); 1.17 (3H, t, J = 6.9 Hz); 1.7 (2H, sextet); 2.28 (3H, s); 2.55 (2H, t, J = 7.7 Hz); 2.94 (1H, dd); 3.4 (1H, dd); 3.4 - 3.62 (2H,m); 4.0 - 4.2 (5H, m); 5.8 - 5.84 (2H, m); 6.75 (2H, d, J = 8.5 Hz); 7.14 (2H, d, J = 8.5 Hz).					
79.	CH_3	H	H	$(CH_2)_3CH_3$	Mol. Wt. = 373	Yield = 76%
	^{1}H: 0.95 (3H, t, J = 7.2 Hz); 1.17 (3H, t, J = 7.0 Hz); 1.4 - 1.5 (2H, m); 1.6 - 1.7 (2H, m); 2.28 (3H, s); 2.57 (2H, t, J = 7.7 Hz); 2.95 (1H, dd); 3.07 (1H, dd); 3.4 - 3.5 (1H, m); 3.53 - 3.62 (1H, m); 4.0 - 4.2 (5H, m); 5.8 - 5.83 (2H, m); 6.77 (2H, d, J = 8.5 Hz); 7.15 (2H, d, J = 8.5 Hz).					
80.	CH_3	H	H		Mol. Wt. = 393	Yield = 96%
	^{1}H: 1.16 (3H, t, J = 6.9 Hz); 2.37 (3H, s); 2.92 – 3.02 (2H, dd, J_1 = 7 Hz, J_2 = 4.2 Hz); 3.41 - 3.58 (2H, m); 3.92 (2H, t); 3.98 - 4.01 (1H, m); 4.1 - 4.3 (2H, t, J = 6.5 Hz); 5.96 (1H, d, J = 3.3 Hz); 6.1 (1H, d, J = 3.3 Hz); 6.6 (2H, d, J = 8.5 Hz); 7.0 (2H, d, J = 8.5 Hz); 7.06- 7.09 (2H, d, J = 8.6 Hz); 7.2 - 7.4 (5H, m).					
81.	CH_3	H		H	Mol. Wt. = 393	Yield = 96%
	^{1}H: 1.12(3H, t, J = 6.9 Hz); 2.37 (3H, s); 2.92 – 3.02 (2H, dd, J_1 = 7 Hz, J_2 = 4.2 Hz); 3.41 - 3.58 (2H, m); 3.92 (2H, t); 3.98 - 4.01 (1H, m); 4.1 - 4.3 (2H, t, J = 6.5 Hz); 5.96 (1H, d, J = 3.3 Hz); 6.1 (1H, d, J = 3.3 Hz); 6.6 (2H, d, J = 8.5 Hz); 7.0 (2H, d, J = 8.5 Hz); 7.2 - 7.4 (5H, m).					

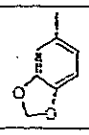
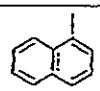
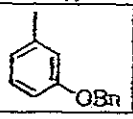
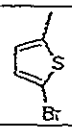
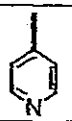
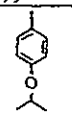
82.	CH_3	H	H		Mol. Wt. = 407	Yield = 75%
	^{1}H: 1.02 (3H, t, J = 6.9 Hz); 2.34 (3H, s); 2.36 (3H, s); 2.74 (1H, dd); 3.0 (1H, dd); 3.19 - 3.22 (1H, m); 3.4 - 3.45 (1H, m); 3.78 - 3.79 (1H, m); 3.8 (2H, t, J = 6.4 Hz); 4.25 (2H, t, J = 6.4 Hz); 5.96 (1H, d, J = 3.36 Hz); 6.07 (1H, d, J=3.36 Hz); 6.6(1H, d, J = 8.5 Hz); 7.09(2H, d, J = 8.5 Hz); 7.19 (2H, d, J = 8.5 Hz); 7.28 (2H, d, J = 8.5 Hz).					
83.	CH_3	H	H		Mol. Wt. = 407	Yield = 100%
	^{1}H: 1.08(3H, t, J=6.99 Hz); 2.33(3H, s); 2.35 (3H, s); 2.62(2H, m); 3.28-3.31 (2H, m); 3.71 (1H, m); 3.90(2H, t, J=6.0 Hz); 4.3 (2H, t, J=6.05 Hz); 5.86 (1H, d, J=3.33 Hz); 5.96 (1H, d, J=3.4 Hz); 6.57 (2H, d, J=8.6 Hz); 7.09 (2H, d, J=8.6 Hz); 7.13-7.29 (4H, m).					
84.	CH_3	H	H		Mol. Wt. = 407	Yield = 85%
	—					
85.	CH_3	H	H		Mol. Wt. = 423	Yield = 62%
	^{1}H: 1.077 (3H, t, J = 7 Hz); 2.368 (3H, s); 2.93 (3H, s); 2.94 (1H, m); 3.35 - 3.5 (2H, m); 3.78 (1H, t, J = 7.1 Hz); 3.8 (3H, m); 3.9 (2H, t J = 7 Hz); 4.25 (2H, t, J = 7 Hz); 5.9 (1H, d, J = 3.36 Hz); 6.0 (1H, d, J = 3.36 Hz); 6.64 (2H, d, J = 8.5 Hz); 7.1 (2H, d, J = 8.5 Hz); 7.31 (2H, d, J = 6.78 Hz).					
86.	CH_3	H	H		Mol. Wt. = 472	Yield = 84%
	^{1}H: 1.02 (3H, t, J = 6.9 Hz); 2.353 (3H, s); 2.74 (1H, dd); 2.95 (1H, dd); 3.19 - 3.28 (1H, m); 3.4 - 3.45 (1H, m); 3.8 (1H, dd); 3.9 (2H, t, J = 6.21 Hz); 4.26 (2H, t, J = 6.2 Hz); 5.9 (1H, d, J = 3 Hz); 6.1 (1H, d, J = 3.4 Hz); 6.6 (2H, d, J = 8.5 Hz); 7.1 (2H, d, J = 8.5 Hz); 7.29 (2H, d, J = 8.5 Hz); 7.5(2H, d, J = 8.5 Hz).					
87.	CH_3	H	H		Mol. Wt. = 419	Yield = 77%
	^{1}H: 1.02 (3H, t, J = 6.9 Hz); 2.3 (3H, s); 2.7 - 2.8 (1H, m); 2.96 (1H, m); 3.8(1H, m); 3.1 - 3.2 (1H, m); 3.4 - 3.5 (1H, m); 3.86-3.91 (2H, t, J = 6.3 Hz); 4.2 -4.24 (2H, t, J = 6.3 Hz); 5.9 (1H, d, J = 3.3 Hz); 6.05 (1H, d, J = 3.3 Hz); 6.56- 6.59 (2H, d, J = 8.6 Hz); 7.05-7.09 (4H,m); 7.28-7.37 (2H, m).					
88.	CH_3	H	H		Mol. Wt. = 427.5	Yield = 37%
	—					
89.		H	CH_3	H	Mol. Wt. = 393	Yield = 41%
	—					
90.	CH_3	H			Mol. Wt. = 469	Yield = 83%
	^{1}H: 1.16 (3H, t, J = 7 Hz); 2.41 (3H, s); 2.9 (1H, dd); 3.05 (1H, dd); 3.4 - 3.6 (2H, m); 3.9 (2H, t, J = 6.5 Hz); 4.03 (1H, dd); 4.16 (2H, t, J = 6.5 Hz); 6.2 (1H,s); 6.5 - 7.4 (14H, m).					
91.	i-Pr	H	H	i-Pr	Mol. Wt. = 387	Yield = 50%
	^{1}H: 1.19 (3H, t, J = 6.8 Hz); 1.24-1.26(12H, d, J = 6.7 Hz); 2.92 - 2.99 (4H, complex); 3.40 (1H, m); 3.6 (1H, m); 4.03 (3H, complex); 4.24 (2H, t, J = Hz); 5.87 (2H, s); 6.75 - 6.76 (2H, d, J = 8.8 Hz); 7.13- 7.15 (2H, d, J = 8.6 Hz).					

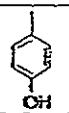
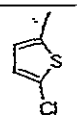
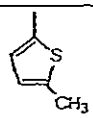
92.	i-Pr	H	H		Mol. Wt. = 443	Yield = 87%
	^{1}H: 0.94 (3H, t, J = 7.29 Hz); 1.22 (6H, d, J = 7.29 Hz); 2.49-2.51(2H, dd, J= 6.75Hz); 3.03 – 3.08 (2H, m); 3.45- 3.55(2H, m); 3.82 (2H, t, J = 5.91 Hz); 4.29 (2H, t, J = 5.92 Hz); 5.85 (1H, d, J = 3.51 Hz); 5.95 (1H, d, J = 3 Hz); 6.52 (2H, d, J = 8.58 Hz); 7.01 (2H, d, J = 8.52 Hz) 7.29-7.40 (5H, m)					
93.	i-Pr		H		Mol. Wt. = 558	Yield = 50%
	^{1}H: 1.18 (3H, t, J = 6.9 Hz); 1.51- 1.53 (6H, d, J = 7 Hz); 2.9 - 3.1 (2H, m); 3.5-3.6 (3H, Complex); 3.92 (2H, t, J = 6.2 Hz); 4.05 (1H, m); 4.3 (2H, t, J = 6.2 Hz); 6.31(1H, s); 6.58-6.60 (2H, d, J = 6.7 Hz); 7.1 (4H, m); 7.30 - 7.38 (4H, m); 7.5 (1H, s); 7.58 - 7.59 (2H, d)					
94.	SCH_3	H	H	H	Mol. Wt. = 349	Yield = 93%
	^{1}H: 1.18 (3H, t, J = 7 Hz); 2.29 (3H, s); 2.9 - 3.1 (2H, m); 3.4 - 3.6 (2H, m); 4.0 -4.04 (1H, m); 4.2 (2H, t, J = 5.6 Hz); 4.42 (2H, t, J = 5.6 Hz); 6.1 (1H, t, J = 3.2 Hz); 6.38 (1H, dd); 6.8 (2H, d, J = 8.5 Hz); 6.95 (1H, dd); 7.15 (2H, d, J = 8.5 Hz).					
95.	C_2H_5	H	H	C_2H_5	Mol. Wt. = 359	Yield = 99%
	^{1}H: 1.16 (3H, t, J=6.8 Hz); 1.29 (6H, t, J = 7.4 Hz); 2.65 (4H, q, J = 7.4 Hz); 2.94-3.05 (2H, m); 3.39-3.49 (1H, m); 3.51-3.6 (1H, m); 4.01-4.07 (3H, m); 4.15 (2H, t, J = 5.8 Hz); 5.86 (2H, s); 6.7 (2H, d, 8.5 Hz); 7.15 (2H, d, J = 8.5 Hz)					
96.	C_2H_5	H	H	C_6H_5	Mol. Wt. = 407	Yield = 90%
	^{1}H: 1.16 (3H, t, J = 6.99 Hz); 1.34 (3H, t, J = 7.4Hz); 2.73-2.78 (2H, q, J= 7.5 Hz,); 2.9-3.9 (2H, m); 3.4-3.48 (1H, m); 3.52-3.6 (1H, m); 3.9 (2H, t, J= 6.63 Hz); 4.0-4.05 (1H, m); 4.3 (2H, t, 6.75 Hz); 6.0 (1H, d, J=3.48 Hz); 6.15 (1H, d, J=3.5 Hz); 6.6 (2H, d, J=8.5 Hz); 7.08 (2H, d, J=8.6 Hz); 7.3-7.4 (5H, m)					
97.	CH_3	H	H		Mol. Wt. = 421	Yield = 98%
	^{1}H: 1.16 (3H, t, J=6.9 Hz); 2.29 (3H, s); 2.88-3.04 (6H, m); 3.38-3.48 (1H, m); 3.53-3.62 (1H, m); 3.99-4.07 (3H, m); 4.15 (2H, t, J = 7 Hz); 5.85 (1H, d, J=3.3 Hz); 5.9 (1H, d, J= 3.3 Hz); 6.7 (2H, d, J=8.6 Hz); 7.14 (2H, d, J=8.6 Hz); 7.2-7.3 (5H, m)					
98.	CH_3	H	H		Mol. Wt. = 423	Yield = 90%
	^{1}H: 1.15 (3H, t, J=6.9 Hz; 2.24 (3H, s); 2.89-2.95 (2H, m); 3.3-3.58 (2H, m); 3.67 (3H, s); 3.78-4.17 (3H, m); 4.28 (2H, t, J= 6 Hz); 5.89 (1H, d, J= 3.1 Hz); 6.06 (1H, d, J= 3 Hz); 6.49-7.21 (8H, m)					
99.	CH_3	H	H		Mol. Wt. = 399	Yield = 92%
	^{1}H: 1.17 (3H, t, J = 6.9 Hz); 1.3-1.4 (6H, m); 1.75-2.5 (5H, m); 2.27 (3H, s); 2.9-3.08 (2H, m); 3.38-3.45 (1H, m); 3.57-3.65 (1H, m); 3.98-4.15 (3H, m); 4.2 (2H, t, J=7.2 Hz); 5.8 (1H, d, J=3.4 Hz); 5.84 (1H, d, J=3.3 Hz); 6.78 (2H, d, J=8.5 Hz); 7.17 (2H, d, J= 8.5 Hz)					

100.	CH_3	H	H		Mol. Wt. = 469	Yield = 85%
	^{1}H: 1.16(3H, t, J=6.9 Hz); 2.33 (3H, s); 2.9-3.0 (2H, m); 3.38-3.48 (1H, m); 3.55-3.66 (1H, m); 3.88-3.94 (1H, m); 3.99 (2H, t, J=5.8 Hz); 4.3 (2H, t, J=6.3 Hz); 5.91 (1H, d, J=3.3 Hz); 6.07 (1H, d, J=3.4 Hz); 6.63 (2H, d, J= 8.5 Hz); 7.1 (2H, d, J=8.5 Hz); 7.3-7.5 (5H, m); 7.68 (4H, d, J=8.2 Hz)					
101.	CH_3	H	H		Mol. Wt. = 383	Yield = 92%
	^{1}H: 1.16 (3H, t, J= 6.99 Hz); 2.32 (3H, s); 2.9-3.0 (2H, m); 3.38-3.48 (1H, m); 3.55-3.64 (1H, m); 4.00-4.04 (1H, dd, J= 4.2 Hz); 4.15 (2H, t, J=5.98 Hz); 4.38 (2H, t, J= 6.1 Hz); 5.9 (1H, d, J=3.48 Hz); 6.32 (1H, d, J=3.55 Hz); 6.35 (1H, d, J=3.5 Hz); 6.42-6.43 (1H, m); 6.7 (2H, d, J=8.5 Hz); 7.14 (2H, d, J=8.5 Hz); 7.4-7.41 (1H, m)					
102.	CH_3	H	H		Mol. Wt. = 439	Yield = 99%
	^{1}H: 1.14(3H, t, J=6.9 Hz); 2.37 (3H, s); 2.48 (3H, s); 2.92-3.06 (2H, m); 3.32- 3.42 (1H, m); 3.57-3.64 (1H, m); 3.9 (2H, t, J =6.36Hz); 4.0(1H,dd);4.28(2H, t, J=6.z); 5.9 (1H, d, J=3.3 Hz); 6.08 (1H, d, J=3.38 Hz); z); 6.6 (2H, d, J=8.5Hz); 7.1(2H, d, J=8.5Hz);7.26 (2H, d, J= 8.4 Hz); 7.3 (2H, d, J=8.34 Hz)					
103.	CH_3	H	H		Mol. Wt. = 397	Yield = 95%
	^{1}H: 1.07 (3H, t, J= 6.97 Hz); 2.27 (3H, s); 2.3 (3H, s); 2.7-2.8 (1H, m); 2.89-2.96 (1H, m); 3.2-3.3 (1H, m); 3.5-3.6 (1H, m); 3.76-3.8 (1H, m); 4.12 (2H, t, J=5.8 Hz); 4.35 (2H, t, J=5.9 Hz); 5.79-5.81 (1H, dd, J=0.69 Hz, J=0.69 Hz); 6.01-6.02 (1H, dd, J=1,1 Hz); 6.15 (1H, d, J=3.5 Hz); 6.2 (1H, d, J=3.1 Hz); 6.7 (2H, d, 8.6) Hz; 7.14 (2H, d, J=8.6 Hz) (solvent used is CD_3OD)					
104.	CH_3	H	H		Mol. Wt. = 418	Yield = 85%
	^{1}H: 1.069 (3H, t, J= 6.9 Hz); 2.34 (3H, s); 2.74-2.8 (2H, m); 3.2-3.25 (1H, m); 3.5-3.58 (1H, m); 3.76-3.8 (1H, dd); 3.93 (2H, t, J=5.58 Hz); 4.37 (2H, t, J = 5.56 Hz); 5.9 (1H, d, J=3.3 Hz); 6.16 (1H, d, J=3.5 Hz); 6.57 (2H, d, J=8.5 Hz); 7.1 (2H, d, J=8.5 Hz); 7.56 (2H, d, J=8.57 Hz); 7.68 (2H, d, J=8.59 Hz) (solvent used is CD_3OD)					
105.	CH_3	H	H		Mol. Wt. = 485	Yield = 92%
	^{1}H: 1.07 (3H, t, J=6.96 Hz); 2.33 (3H, s); 2.7-2.95 (2H, m); 3.2-3.35 (1H, m); 3.5 -3.6 (1H, m); 3.76-3.8 (1H, m); 3.94 (2H, t, J=5.9 Hz); 4.28 (2H, t, J=5.9 Hz); 5.86 (1H, d, J=3.1 Hz); 5.96 (1H, d, J=3.4 Hz); 6.6 (2H, d, J=8.5 Hz); 7.08-7.37 (11H, m) (solvent used is CD_3OD)					
106.	CH_3	H	H		Mol. Wt. = 535	Yield = 80%
	^{1}H: 1.07 (3H, t, J= 6.96 Hz); 2.26 (3H, s); 2.37 (3H, s); 2.7-2.95 (2H, m); 3.17-3.3 (1H, m); 3.5-3.6 (1H, m); 3.6-3.8 (5H, m); 5.7 (1H, d, J=3.48 Hz); 5.8 (1H, d, J= 2.79 Hz); 6.25-6.27 (1H, m); 6.34 (1H, t, J=3.36 Hz); 6.6 (2H, d, J=8.5 Hz); 7.12 (2H, d, J=8.5 Hz); 7.25 (2H, d, J=8.1 Hz); 7.35 (2H, d, J=8.4Hz); 7.5-7.51 (1H, m) (solvent used is CD_3OD)					

107.	CH_3	H	H		Mol. Wt. = 453	Yield = 88%
	^{1}H: 1.07 (3H, t, J=6.9 Hz); 2.32 (3H, s); 2.7-2.93 (2H, m); 3.2-3.3 (1H, m); 3.5-3.6 (1H, m); 3.78 (3H, s); 3.84 (3H, s); 3.93-3.95(1H, m); 3.9 (2H, t, J=6 Hz); 4.2 (2H, t, J= 6 Hz); 5.84 (1H, d, J=3.1 Hz); 6.0 (1H, d, J=3.1 Hz); 6.59 (2H, d, J=8.5 Hz); 6.92-7.0 (3H, m); 7.07 (2H, d, J= 8.57 Hz) (solvent used is CD_3OD)					
108.	CH_3	H	H		Mol. Wt. = 455	Yield = 88%
	^{1}H: 1.19 (3H, t, J=6.9 Hz); 2.38 (3H, s); 2.8 (3H, s); 2.9-3.06 (2H, m); 3.43-3.52 (1H, m); 3.62-3.72 (1H, m); 4.0-4.12 (3H, m); 4.23 (2H, t, J=3.8 Hz); 6.0 (1H, d, J=3.2 Hz); 6.18 (1H, d, J=3.2 Hz); 6.52-6.55 (2H, dd, J= 6.4 Hz); 7.02-7.07 (2H, dd, J= 6.3 Hz); 7.49-7.5 (2H, dd, J=3.2 Hz); 7.6-7.63 (2H, dd, J=3.69 Hz)					
109.	CH_3	H	H		Mol. Wt. = 450	Yield = 99%
	^{1}H: 1.09 (3H, t, J=6.99 Hz); 2.13 (3H, s); 2.32 (3H, s); 2.77-2.98 (2H, m); 3.25-3.36 (1H, m); 3.5-3.6 (1H, m); 3.90 (2H, t, J=6.18 Hz); 3.92-3.94 (1H, m); 4.27 (2H, t, J= 6.0 Hz); 5.85 (1H, d, J=3.0 Hz); 5.96 (1H, d, J=3.3 Hz); 6.58 (2H, d, J=8.6 Hz); 7.06 (2H, d, J= 8.6 Hz); 7.3 (2H, d, J= 8.6 Hz); 7.57 (2H, d, J=8.6 Hz)					
110.	CH_3	H	H		Mol. Wt. = 520	Yield = 80%
	^{1}H: 1.15 (3H, t, J=6.9 Hz); 1.25-2.1 (6H, m); 2.3 (3H, s); 2.9-3.03 (2H, m); 3.2-3.33 (1H, m); 3.22-3.6(5H,m); 3.58-3.66(1H,m); 3.9 (2H, t, J= 6.9 Hz); 3.98 (2H, t, J= 6.9 Hz); 4.15 (2H, t, J= 6 Hz); 4.57 (2H, t, J = 4.87 Hz); 5.9 (1H, d, J= 3.1 Hz); 6.0 (1H, d, J= 3.3 Hz); 6.45 (2H, d, J=8.5 Hz); 6.96 (2H, d, J=8.6 Hz); 7.0 (2H, d, J=8.5 Hz); 7.3 (2H, d, J=8.5 Hz)					
111.	CH_3	H	H		Mol. Wt. = 449	Yield = 97%
	^{1}H: 1.07 (3H, t, J=6.9Hz); 2.3 (3H, s); 2.9-3.2 (2H, m); 3.2-3.8 (3H, m); 3.9 (2H, t, J=6.03 Hz); 4.2 (2H, t, J=6.2 Hz); 4.55 (2H, d, J=1.5 Hz); 5.12-5.3 (1H, dd); 5.43-5.44 (1H, dd, J=1.67 Hz); 5.83 (1H, d, J=3.3 Hz); 5.9 (1H, d, J=3.2 Hz); 6.0-6.12 (1H, m); 6.58 (2H, d, J= 8.5 Hz); 6.96 (2H, d, J=8.6 Hz); 7.1 (2H, d, J=8.5 Hz); 7.28 (2H, d, J=8.7 Hz) (solvent used is CD_3OD)					
112.	CH_3	H	H		Mol. Wt. = 501	Yield = 94%
	^{1}H: 1.07 (3H, t, J=6.97 Hz); 2.3 (3H, s); 2.7-2.8 (1H, m) 2.88-2.95 (1H, m); 3.2-3.33 (1H, m); 3.5-3.6 (1H, m); 3.73-3.8 (1H, m); 3.92 (2H, t, J=5.8 Hz); 4.3 (2H, t, J=5.9 Hz); 5.87 (1H, d, J=3.4 Hz); 6.0 (1H, d, J=3.4 Hz); 6.57 (2H, d, J=8.5 Hz); 7.1 (2H, d, J=8.6 Hz); 7.26-7.35 (9H, m) (solvent used is CD_3OD)					
113.	CH_3	H	H		Mol. Wt. = 517	Yield = 90%
	^{1}H: 1.07 (3H, t, J=6.98 Hz); 2.3 (3H, s); 2.7-2.94 (2H, m); 3.2-3.34 (1H, m); 3.5-3.6 (1H, m); 3.74-3.8 (1H, m); 3.9 (2H, t, J=5.87 Hz); 4.30 (2H, t, J=5.87 Hz); 5.87 (1H, d, J=3.45 Hz); 6.1 (1H, d, J=3.45 Hz); 6.56 (2H, d, J=8.56 Hz); 7.17 (2H, d, J=8.54 Hz); 7.51-7.56 (5H, m); 7.65-7.77(4H, m) (solvent used is CD_3OD)					

114.	CH_3	H	H		Mol. Wt. = 471	Yield = 80%
	^{1}H: 1.26 (3H, t, J=6.2 Hz); 2.39 (3H, s); 2.97-3.09 (2H, m); 3.09 (3H, s); 3.4-3.5 (1H, m); 3.55-3.64 (1H, m); 4.0 (2H, t, 6.0 Hz); 4.02-4.06 (1H, m); 4.33 (2H, t, J=6.12 Hz); 6.02 (1H, d, J=3.3 Hz); 6.24 (1H, d, J= 3.5 Hz); 6.6 (2H, d, J=8.58 Hz); 7.11 (2H, d, J=8.58 Hz); 7.6 (2H, d, J=8.4) Hz; 7.93 (2H, d, J=8.4 Hz)					
115.	CH_3	H	H		Mol. Wt. = 505	Yield = 94%
	^{1}H: 0.88-1.86 (14H, m); 2.29 (3H, s); 2.52-3.4 (4H, m); 3.75 (2H, d, J=3.39 Hz); 3.76-4.18 (5H, m); 5.9 (1H, d, J=2.97Hz); 6.01 (1H, d, 3.3 Hz); 6.5 (2H, d, J=8.0 Hz); 6.8 (2H, d, J=8.6 Hz); 7.0 (2H, d, J=8.0 Hz); 7.26 (2H, d, J=8.5 Hz)					
116.	COPh	H	H	H	Mol. Wt. = 407.2	Yield = 76%
	^{1}H: 1.15 (3H, t, J=6.96Hz); 2.84-2.95 (2H, m); 3.33-3.42 (1H, m); 3.48-3.58 (1H, m); 3.98-4.13 (5H, m); 5.64-5.66 (1H, dd, J_1=1.5 Hz, J_2= 1.5 Hz); 6.17 (1H, , d, J= 3.4 Hz); 6.64-6.72 (1H, dd, J_1=1.65Hz, J_2= 1.65 Hz); 6.7-7.9 (9H, m)					
117.	CH_3	H	H		Mol. Wt. = 394	Yield = 36%
	^{1}H: 1.07 (3H, t, J=6.99 Hz); 2.35 (3H, s); 2.75-2.89 (2H, m); 3.22-3.28 (1H, m); 3.57-3.76 (2H, m); 3.96 (2H, t, J = 5.5 Hz); 4.32 (2H, t, J = 5.5 Hz); 5.9 (1H, d, J = 3.45 Hz); 6.12 (1H, d, J=3.49 Hz); 6.55 (2H, d, J=8.6 Hz); 7.08 (2H, d, J = 8.6 Hz); 7.42-7.45 (1H, m); 7.85-7.88 (1H, m); 8.4-8.42 (1H, m); 8.55 (1H, s)					
118.	CH_3	H	H		Mol. Wt. = 357	Yield = 58%
	^{1}H: 0.6-0.62 (2H, m); 0.81-0.84 (2H, m); 1.3 (3H, t, J = 6.99 Hz); 1.3-1.8(1H, m); 2.28 (3H, s); 2.97-3.04 (2H, m); 3.4-3.6 (2H, m); 4.02-4.03 (1H, m); 4.15 (2H, t, J = 7.9 Hz); 4.33 (2H, t, J = 6.38 Hz); 5.7 (1H, d, J = 3.3 Hz); 5.76 (1H, d, J = 3.28 Hz); 6.78 (2H, d, J = 8.6 Hz); 7.15 (2H, d, J = 8.57 Hz)					
119.	CH_3	H	H		Mol. Wt. = 433	Yield = 29%
	^{1}H: 1.06 (3H, t, J = 6.99 Hz); 2.37 (3H,s); 2.60-2.68 (2H, m); 3.2-3.6 (2H, m); 3.7-3.8 (1H, m); 4.22 (2H, t, J = 5.5 Hz); 4.55 (2H, t, J = 5.63 Hz); 5.93 (1H, d, J = 3.63 Hz); 6.52 (1H, d, J = 3.62 Hz); 6.69 (2H, d, J = 8.57 Hz); 6.76 (1H, s); 7.1 (2H, d, J = 8.55 Hz); 7.18-7.54 (4H, m)					
120.	CH_3	$COOCH_3$	H		Mol. Wt. = 451	Yield = 46%
	^{1}H: 1.08 (3H, t, J = 6.98 Hz); 2.66 (3H, s); 2.88-2.89 (2H, m); 3.22-3.31 (3H, m); 3.77 (3H, s); 3.93 (2H, t, J = 5.64 Hz); 4.37 (2H, t, J = 5.64 Hz); 6.45 (1H, s); 6.59 (2H, d, J = 8.6 Hz); 7.11 (2H, d, J = 8.58v); 7.36-7.45 (5H, m)					
121.	CH_3	COOH	H		Mol. Wt. = 437	Yield = 58%
	^{1}H: 1.2 (3H, t, J = 6.99 Hz); 2.68 (3H, s); 2.93-3.03 (2H, m); 3.43-3.49 (2H, m); 3.89 (2H, t, J = 5.74 Hz); 4.04 (1H, t, J = 5.88 Hz); 4.31 (2H, t, J = 5.75 Hz); 6.58-6.61 (3H, m); 7.09 (2H, d, J = 8.58 Hz); 7.37-7.45 (5H, m)					

122.	CH_3	H	H		Mol. Wt. = 437	Yield = 82%
	^{1}H: 1.07 (3H, t, J = 6.99 Hz); 2.32 (3H, s); 2.6-2.63 (2H, m); 3.23-3.31 (2H, m); 3.32-3.8 (1H, m); 3.92 (2H, t, J = 5.98 Hz); 4.26 (2H, t, J = 5.97 Hz); 5.83 (1H, d, J = 3.36 Hz); 5.91 (1H, d, J = 3.39 Hz); 5.98 (2H, s); 6.6 (2H, d, J = 8.64 Hz); 6.84-6.88 (3H, m); 7.11 (2H, d, J = 8.58 Hz)					
123.	CH_3	H	H		Mol. Wt. = 443	Yield = 82%
	^{1}H: 1.06 (3H, t, J=6.97 Hz); 2.4 (3H, s); 2.6-2.62 (2H, m); 3.21-3.31 (2H, m); 3.71 (2H, t, J = 6.04 Hz); 3.8-4.0 (3H, m); 5.99 (1H, d, J = 3.35 Hz); 6.03 (1H, d, J = 3.36 Hz); 6.35 (2H, d, J = 8.64 Hz); 6.99 (2H, d, J = 8.61 Hz); 7.4-7.92 (7H, m)					
124.	CH_3	H	H		Mol. Wt. = 499	Yield = 93%
	^{1}H: 1.07 (3H, t, J = 6.97 Hz); 2.33 (3H, s); 2.64-3.2 (2H, m); 3.28-3.33 (3H, m); 3.9 (2H, t, J = 5.88 Hz); 4.25 (2H, t, J = 5.88 Hz); 5.11 (2H, s); 5.86 (1H, d, J = 3.78 Hz); 6.01 (1H, d, J = 3.39 Hz); 6.58 (2H, d, J = 8.61 Hz); 6.69-7.01 (3H, m); 7.1 (2H, d, J = 8.58 Hz); 7.28-7.43 (6H, m)					
125.	CH_3	H	H		Mol. Wt. = 478	Yield = 79%
	^{1}H: 1.08 (3H, t, J = 6.97 Hz); 2.33 (3H, s); 2.6-2.62 (2H, m); 3.26-4 (3H, m); 4.06 (2H, t, J = 5.73 Hz); 4.34 (2H, t, J = 5.7 Hz); 5.86 (1H, d, J = 3.51 Hz); 6.12 (1H, d, J = 3.54 Hz); 6.67 (2H, d, J = 8.64 Hz); 6.86 (1H, d, J = 3.81 Hz); 7.05 (1H, d, J = 3.87 Hz); 7.13 (2H, d, J = 8.58 Hz)					
126.	CH_3	H	H		Mol. Wt. = 394	Yield = 20%
	^{1}H: 1.08 (3H, t, J = 6.91 Hz); 2.37 (3H, s); 2.7-3.1 (2H, m); 3.23-4.0 (3H, m); 4.17 (2H, t, J = 5.64 Hz); 4.71-4.78 (2H, m); 5.92 (1H, d, J = 3.66 Hz); 6.49 (1H, d, J = 3.69 Hz); 6.67 (2H, d, J = 8.52 Hz); 7.10-7.14 (5H, m); 7.58 (1H, d, J = 8.1 Hz); 7.69-7.72 (1H, m); 8.47-8.49 (1H, m)					
127.	CH_3	H	H		Mol. Wt. = 394	Yield = 20%
	^{1}H: 1.23 (3H, t, J = 6 Hz); 2.38 (3H, s); 3.01 (2H, m); 3.51-3.67 (2H, m); 4.02-4.13 (3H, m); 4.37 (2H, t, J = 6 Hz); 6.05 (1H, d, J = 3.45 Hz); 6.34 (1H, d, J = 3.57 Hz); 6.49 (2H, d, J = 8.55 Hz); 7.04 (2H, d, J = 8.55 Hz); 7.30 (2H, d, J = 6.27 Hz); 8.44 (2H, d, J = 6.12 Hz)					
128.	CH_3	H	H		Mol. Wt. = 451	Yield = 87%
	^{1}H: 1.07 (3H, t, J = 6.67 Hz); 1.32 (6H, d, J = 6 Hz); 2.32 (3H, s); 2.61-2.62 (2H, m); 3.28-3.32 (1H, m); 3.33-3.83 (2H, m); 3.91 (2H, t, J = 6.03 Hz); 4.25 (2H, t, J = 6.03 Hz); 4.62 (1H, t, J = 6.06 Hz); 5.83 (1H, d, J = 3.39 Hz); 5.91 (1H, d, J = 3.39 Hz); 6.59 (2H, d, J = 8.37 Hz); 6.92 (2H, d, J = 8.7 Hz); 7.10 (2H, d, J = 8.43 Hz); 7.27 (2H, d, J = 8.73 Hz)					
129.	CH_3	H	CH_3		Mol. Wt. = 407	Yield = 87%
	^{1}H: 1.1 (3H, t, J = 6.29 Hz); 2.2 (3H, s); 2.61 (3H, s); 2.87 (2H, d, d, 2H); 3.22-3.28 (2H, m); 3.75-3.82 (1H, m); 3.8 (2H, t, J = 6.16 Hz); 4.14 (2H, t, J = 6.16 Hz); 5.73 (1H, s); 6.5 (2H, d, J = 8.5 Hz); 7.08 (2H, d, J = 8.5 Hz); 7.26-7.44 (5H, m)					

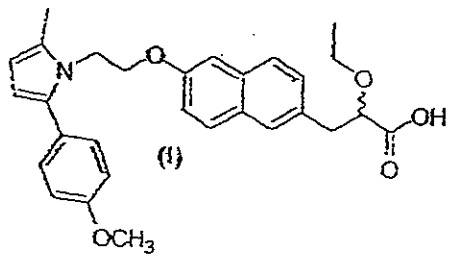
130.	CH_3	H	H		Mol. Wt. = 399	Yield = 55%
	^{1}H: 1.08 (3H, t, J = 6.9 Hz); 2.3 (3H, s); 2.88 (2H, m); 3.22-3.6 (2H, m); 3.8 (1H, m); 4.02 (2H, t, J = 6.0 Hz); 4.3 (2H, t, J = 6.0 Hz); 5.8 (1H, d, J = 3.5 Hz); 6.1 (1H, d, J = 3.5 Hz); 6.6 (2H, d, J = 8.6 Hz); 7.04-7.1 (2H, m); 7.13-7.15 (2H, m); 7.32-7.34 (1H, m) (solvent used is CD_3OD)					
131.	CH_3	H	H		Mol. Wt. = 499	Yield = 78%
	^{1}H: 1.07 (3H, t, J = 6.9 Hz); 2.3(3H, s); 2.7-2.9 (2H, m); 3.4-3.5 (2H, m); 3.7-3.8 (1H, m); 3.9 (2H, m); 4.2 (2H, m); 5.0 (2H, s), 5.8 (1H, d, J=3.4 Hz); 5.9 (1H, d, J = 3.3 Hz); 6.5 (2H, d, J = 8.7 Hz); 7.0 (2H, d, J = 8.5 Hz); 7.2 (2H, d, J = 8.8 Hz); 7.35-7.44 (7H, m) (solvent used is CD_3OD)					
132.	CH_3	H	H		Mol. Wt. = 409	Yield = 88%
	^{1}H: 1.2 (3H, t, J = 7 Hz); 2.3 (3H,s); 3.0 (2H, m); 3.5 (2H, m); 3.9 (2H, m); 4.1 (1H, m); 4.2 (2H, m); 5.9 (1H, d, J = 3.3 Hz); 6.0 (1H, d, J = 3.3 Hz); 6.5 (2H, d, J = 8.6 Hz); 6.86 (2H, d, J = 8.6 Hz); 7.0 (2H, d, J = 8.7 Hz); 7.22-7.26 (2H, m)					
133.	H	H	H	Ph	Mol. Wt. = 379	Yield = 73%
	^{1}H: 1.08 (3H, t, J = 6.99 Hz); 2.7-2.9 (2H, m); 3.1-3.2 (1H, m); 3.4-3.5 (1H, m); 3.7 (1H, m); 4.06 (2H, t, J = 5.6 Hz); 4.29 (2H, t, J = 5.6 Hz); 6.08 (2H, m); 6.6 (2H, d, J = 8.6 Hz); 6.8 (1H, m); 7.1 (2H, d, J = 8.6 Hz); 7.38-7.39 (5H, m) (solvent used is CD_3OD)					
134.	CH_3	H	H		Mol. Wt. = 433	Yield = 90%
	^{1}H: 1.08 (3H, t, J = 6.9 Hz); 2.3 (3H, s); 2.75-3 (2H, m); 3.2-3.3 (1H, m); 3.5-3.6 (1H, m); 3.8 (1H, m); 4.05 (2H, t, J = 5.6 Hz); 4.31 (2H, t, J = 5.6 Hz); 5.8 (1H, d, J = 3.4 Hz); 6.1 (1H, d, J = 3.5 Hz); 6.6 (2H, d, J = 8.6 Hz); 6.8 (1H, d, J = 3.8 Hz); 6.9 (1H, d, J = 3.8 Hz); 7.1 (2H, d, J = 8.6 Hz) (solvent used is CD_3OD)					
135.	CH_3	H	H		Mol. Wt. = 437	Yield = 77%
	^{1}H: 1.07 (3H, t, J = 6.98 Hz); 1.39 (3H, t, J = 6.96 Hz); 2.31 (3H, s); 2.88 (2H, m); 3.29 (1H, m); 3.6(1H, m); 3.78 (1H, m); 3.88 (2H, t, J = 6.03 Hz); 4.04 (2H, q, J = 6.97 Hz); 4.23 (2H, t, J = 6.12 Hz); 5.82 (1H, d, J = 3.36 Hz); 5.9 (1H, d, J = 3.37 Hz); 6.7 (2H, d, J = 8.61 Hz); 6.91 (2H, d, J = 6.93 Hz); 7.8 (2H, d, J = 8.58) Hz; 7.25 (2H, d, J = 6.67 Hz)					
136.	CH_3	H	H		Mol. Wt. = 399	Yield = 97%
	^{1}H: 1.08 (3H, t, J = 6.9 Hz), 2.3 (3H, s); 2.45 (3H, s); 2.89 (2H, m); 3.23-3.57 (2H, m); 3.6-3.9 (1H, m); 4.0 (2H, t, J = 6 Hz); 4.3 (2H, t, J = 6 Hz); 5.8 (1H, d, J = 3.3 Hz); 6.0 (1H, d, J = 3.47 Hz); 6.65 (2H, d, J = 8.6 Hz); 6.69-6.71 (1H, m); 6.79 (1H, d, J = 3.44); 7.11 (2H, d, J = 8.6 Hz) (solvent used is CD_3OD)					
137.	CH_3	CH_3	H	C_6H_5	Mol. Wt. = 407	Yield = 50%
	^{1}H: 1.0 (3H, t, J = 7 Hz); 2.1 (3H, s); 2.23 (3H, s); 2.7-2.9 (2H, m); 3.55 (1H, m); 3.56 (1H, m), 3.75 (1H, m); 3.9 (2H, t, J = 6.1 Hz); 4.2 (2H, t,); 5.87 (1H, s); 6.5 (2H, d, J = 8.5 Hz); 7.0 (2H, d, J = 8.5 Hz); 7.2-7.3 (3H, m); 7.3-7.36 (2H, m) (solvent used is CD_3OD)					

138.	CH_3	H	H		Mol. Wt. = 487	Yield = 50%
	^{1}H: 0.9 (3H, t, J = 6.9 Hz); 2.6 (3H, s); 2.7-2.8 (1H, m), 2.9-3.0 (1H, m); 3.0-3.1 (4H, m); 3.3-3.4 (1H, m); 3.7-3.8 (1H, m); 3.8-3.9 (2H, m); 4.1-4.2 (2H, m); 5.9 (1H, d, J = 3.3 Hz); 6.0 (1H, d, J = 3.4 Hz); 6.4 (2H, d, J = 8.4 Hz); 6.9 (2H, d, J = 8.47 Hz); 7.2-7.3 (2H, m); 7.38 (2H, d, J = 8.6 Hz)					

Preparation 16

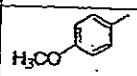
(R/S) 2-ethoxy-3[6-[2-[2-(4-methoxyphenyl)-5-methyl-pyrrol-1-yl]ethoxy]napthalen-2yl] propanoic acid

In a like manner to the procedure given in Preparation 15, the esters described in examples 66 can be converted to a corresponding acid.



(I)

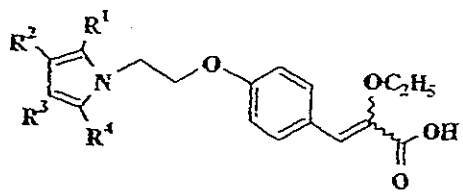
Table 14:

Ex. No.	Substituents on the pyrrole ring in (I)					
	R^1	R^2	R^3	R^4		
139.	CH_3	H	H		Mol. Wt. = 473	Yield = 82%
	^{1}H: 1.15 (3H, t, J = 7Hz); 2.4 (3H, s); 3.1-3.16 (2H, m); 3.4-3.62 (2H, m); 3.57 (3H, s); 4.07 (2H, t, J=6.6 Hz); 4.13-4.18 (1H, dd, J=3.48 Hz); 4.32 (2H, t, J=6.6 Hz); 5.96 (1H, d, J = 3.36 Hz); 6.0 (1H, d, J=3.39 Hz); 6.8 (1H, d, J = 2.37 Hz); 6.9-7.0 (3H, m); 7.33-7.38 (3H, m); 7.52-7.64 (3H, m)					

Preparation 17

(E/Z) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropen-2-oic acid

In a like manner to the procedure given in Preparation 15, the esters described in examples 69,70,71 can be converted to a corresponding acid.



(Example 140)

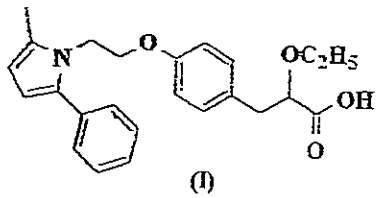
Table 15:

Ex. No.	Substituents on the pyrrole ring in (1h)					
	R^1	R^2	R^3	R^4		
140.	CH_3	H	H	Phenyl	Mol. Wt. = 391	Yield = 59%
141.	CH_3	H	H	Phenyl	Mol. Wt. = 391	Yield = 25%
	E-isomer ^1H: 1.35 (3H, t, J = 6.8 Hz); 2.36 (3H, s); 3.8 - 3.9 (4H, m); 4.28 (2H, t, J = 6.4 Hz); 5.5 (1H, s); 5.9 (1H, d, J = 3.3 Hz); 6.0 (1H, d, J = 3.3 Hz); 6.5 (2H, d, J = 8.7 Hz); 7.1 (2H, d, J = 8.6 Hz); 7.3 - 7.4 (5H, m).					
142.	CH_3	H	H	Phenyl	Mol. Wt. = 391	Yield = 25%
	Z-isomer ^1H: 1.37 (3H, t, J =7.0 Hz); 2.3 (3H, s); 3.9 - 4.02 (4H, m); 4.3 (2H, t, J =6.4 Hz); 5.9 (1H, d, J = 3.2 Hz); 6.1 (1H, d, J = 3.2 Hz); 6.6 (2H, d, J = 8.8 Hz); 7.0 (1H, s); 7.26 - 7.42 (5H, m); 7.6 (2H, d, J = 8.8 Hz).					

Preparation 18

(R/S) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid

(Example 143)



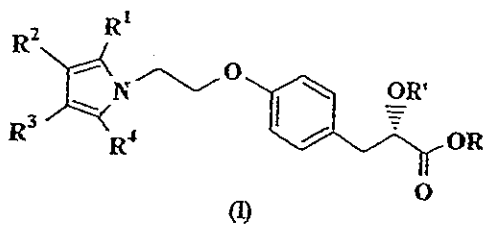
(I)

Using the procedure similar to that described in Preparation 15, the racemic ester (Example 72) was hydrolysed to its corresponding acid.

Table 16:

Ex. No.	Substituents on the pyrrole ring					
	R^1	R^2	R^3	R^4		
143.	CH_3	H	H	Phenyl	Mol. Wt. = 393	Yield = 50%
	^1H: 1.06 (3H, t, J= 6.0 Hz); 2.3(3H, s); 2.75-2.84(2H, m); 3.15-3.25(1H, m); 3.5-3.6(1H, m); 3.7 (1H, m); 3.88 (2H, t, J=6.0 Hz); 4.29 (2H, t, J=6.0 Hz); 5.8 (1H, d, J=3.3 Hz); 5.91 (1H, d, J=3.3); 6.53-6.56 (2H, d, J=8.6 Hz); 7.1 (2H, d, J=8.6 Hz); 7.28-7.38 (5H, m).					

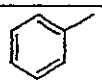
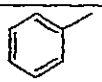
Preparation 19



(I)

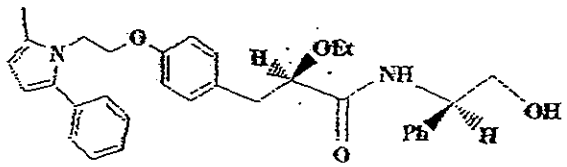
Using the procedure similar to that described in Preparation 15, the methoxy and propoxy ester (Example 67 and 68) was hydrolysed to its corresponding acid.

Table 17:

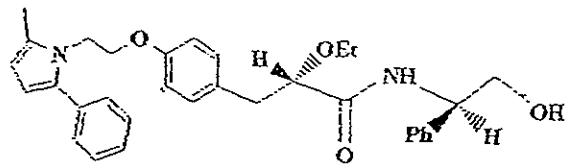
Ex. No.	Substituents on the pyrrole ring				R'		
	R^1	R^2	R^3	R^4			
144.	CH_3	H	H		CH_3	Mol. Wt. = 379	Yield = 20%
	—						
145.	CH_3	H	H		C_3H_7	Mol. Wt. = 408	Yield =22%
	—						

Preparation 20

[2R, N(1S)] / [2S, N(1S)] 2-Ethoxy-N-(2-hydroxy-1-phenylethyl)-3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}propanamide



(Example no. 146)



(Example no. 147)

To a well-stirred solution of (±) 2-ethoxy 3-{4-[2-(5-Methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy] phenyl}-propanoic acid (1 g, 2 mmole) (prepared as in Example no. 143) in dry dichloromethane (10 mL), triethylamine (0.674 mL, 0.485 g, 4 mmole) was added at 0 °C, followed by ethylchloroformate (0.311 g, 0.275 mL, 2 mmole) and stirred for 3.5 hr at same temperature. To this reaction, solution containing of (*S*)-phenyl glycinol (0.329 g, 2 mmole) in dichloromethane (5 mL) and triethylamine (0.674 mL, 0.485 g, 4 mmole) was added at 0 °C to 5 °C. After stirring for 3 hrs at 0 to 10 °C, the reaction was warmed to 20 - 25 °C and stirred for 16 hrs. The reaction mixture was diluted with dichloromethane (20 mL) and washed with H_2O (20 mL), brine (20 mL), dried over anhy. Na_2SO_4 and evaporated.

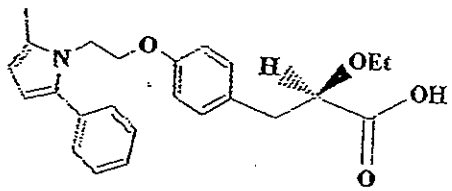
The residue was chromatographed over silica gel using a gradient of 10 - 50 % of ethyl acetate : pet. ether as an eluent to afford firstly diastereomer assigned as [(2R)-N(1S)]-2-Ethoxy-3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-N-(2-hydroxy-1-phenylethyl)propanamide and [(2S)-N(1S)]-2-Ethoxy -3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-N-(2-hydroxy-1-phenylethyl) propanamide.

Table 18:

Ex. No.	Substituents on the pyrrole ring					
	R^1	R^2	R^3	R^4		
146.	CH_3	H	H	Phenyl	Mol. Wt. = 407	Yield = 50%
	(2R) diastereomer ^{1}H: 1.12 (3H, t, J =6.9 Hz); 2.30 (3H, s); 2.80 - 3.1 (2H, dd); 3.5 (2H, m); 3.91 – 3.95 (5H, m); 4.30 (2H, t, J = 6.5 Hz); 5.00 (1H, m); 5.90 (1H, d, J = 3.3 Hz); 6.10 (1H, d, J = 3.3 Hz); 6.60 (2H, d, J = 8.4 Hz); 6.9 -7.1 (4H, m); 7.2 -7.3 (3H, m); 7.32 - 7.4 (5H, m).					
147.	CH_3	H	H	Phenyl	Mol. Wt. = 407	Yield = 50%
	(2S) diastereomer ^{1}H: 1.18 (3H, t, J =7.0 Hz); 2.39 (3H, s); 2.80 - 3.1 (2H, dd); 3.5 - 3.55 (2H, m); 3.84 – 3.97 (5H, m); 4.30 (2H, t, J = 6.7 Hz); 5.00 (1H, m); 5.90 (1H, d, J = 3.3 Hz);6.10 (1H, d, J = 3.3 Hz);6.55 (2H, d, J = 8.6 Hz);6.9-7.1 (4H, d, J = 8.5 Hz);7.22 - 7.26 (3H, m)7.41 (5H, m).					

Preparation 21

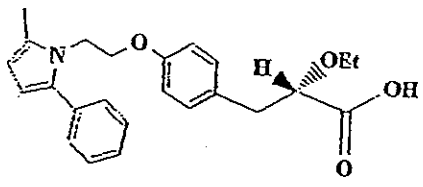
(*R*)-3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid from the corresponding diastereomer (Example no. 148)



A solution of [(2R)-N(1S)]-2-Ethoxy-3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-N-(2-hydroxy-1-phenylethyl)propanamide (Example no. 146)(280 mg, 0.546 mmole) in a mixture of 1M sulfuric acid (7 mL) and dioxane : H_2O :HCl (1:1:56 mL) was heated for at 100 °C for 24 hrs. The reaction mixture was cooled to 20 °C to 30 °C. Product was extracted in ethyl acetate (2 x 30 mL). Combined extract was washed with H_2O (3 x 30 mL), brine (30 mL) and dried over anhy. Na_2SO_4. Ethyl acetate was evaporated under reduced pressure to afford (252 mg) product.

Preparation 22

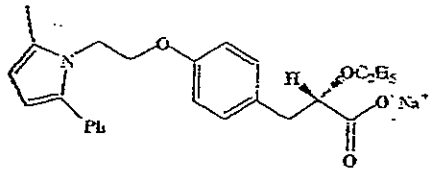
(*S*)-3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid from the corresponding diastereomer(Example No. 149)



A solution of [(2S)-N(1S)]-2-Ethoxy-3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-N-(2-hydroxy-1-phenylethyl) propanamide (Example no. 147) was treated same as in preparation 20 to obtain the corresponding optically active acid. This was found identical to that obtained in (Example no. 80).

Preparation 23

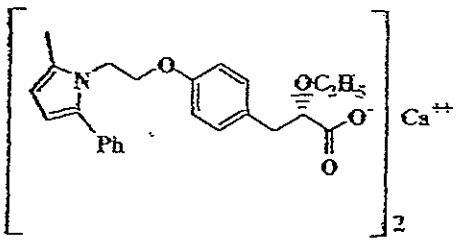
(S)3-{4-[2-(5-Methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid sodium salt (Example 164)



The acid prepared in example 80 (2.6 g) was dissolved in methanol (30 mL), sodium hydroxide (0.264 g) was added and stirred for 1 hour at 20 °C to 25 °C. Afterwards, methanol was distilled at reduced pressure, to obtain an oily product. It was stirred with diisopropyl ether (50 mL) at 20–30 °C. Solid sodium salt obtained was carefully filtered (2.3 g).

Preparation 24

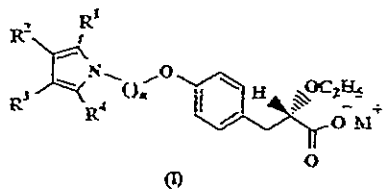
(S)3-{4-[2-(5-Methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxy propanoic acid calcium salt (Example 165)



The sodium salt of example 164 (0.200 g), was dissolved in methanol (10 mL) and treated with calcium acetate (0.090 g) at 20 °C – 25 °C. Further, 50 mL of water was added when the calcium salt of the acid precipitates out. The precipitate was filtered, washed with water and then with di-isopropyl ether (2 x 20 mL) to afford the title compound.

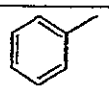
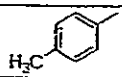
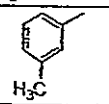
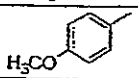
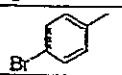
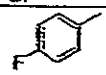
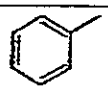
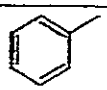
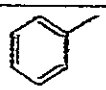
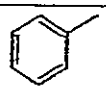
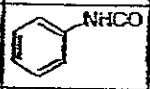
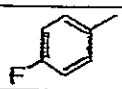
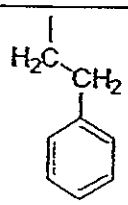
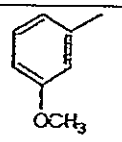
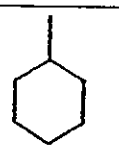
Using the above procedure for Example 164 and Example 165 following salts are prepared using the appropriate acids/bases or according to the methods known in literature.

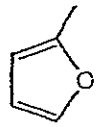
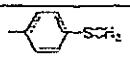
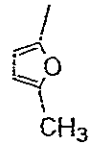
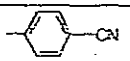
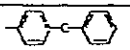
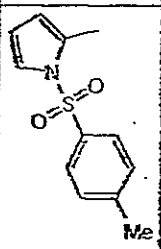
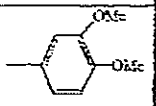
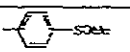
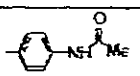
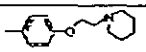
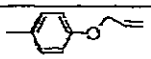
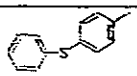
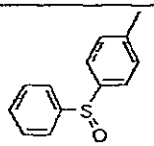
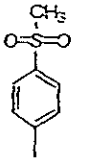
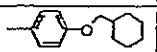
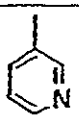
Table 19:

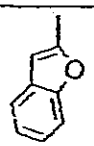
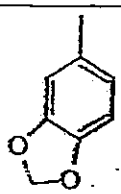
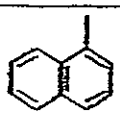
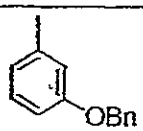
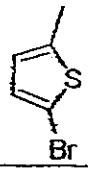
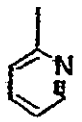
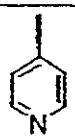
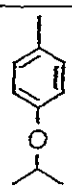
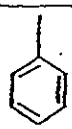
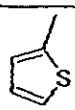


(I)

Substituents on the pyrrole ring in (I)				n	M	
R^1	R^2	R^3	R^4		Na^+ salts Example no.	Ca^{++} salts Example no.
CH_3	H	CH_3	H	2	150	151.
C_2H_5	H	H	H	2	152.	153.
CHO	H	H	H	2	154.	155.
$COCH_3$	H	H	H	2	156.	157.

CH_3	H	H	CH_2CH_3	2	158.	159.
CH_3	H	H	$(CH_2)_2CH_3$	2	160.	161.
CH_3	H	H	$(CH_2)_3CH_3$	2	162.	163.
CH_3	H	H		2	164.	165.
CH_3	H	H		2	166.	167.
CH_3	H	H		2	168.	169.
CH_3	H	H		2	170.	171.
CH_3	H	H		2	172.	173.
CH_3	H	H		2	174.	175.
CH_3	H		H	2	176.	177.
CH_3	H			2	178.	179.
i-Pr	H	H	i-Pr	2	180.	181.
i-Pr	H	H		2	182.	183.
i-Pr		H		2	184.	185.
SCH_3	H	H	H	2	186.	187.
C_2H_5	H	H	C_2H_5	2	188.	189.
C_2H_5	H	H	C_2H_5	2	190.	191.
CH_3	H	H		2	192.	193.
CH_3	H	H		2	194.	195.
CH_3	H	H		2	196.	197.
CH_3	H	H		2	198.	199.

CH_3	H	H		2	200.	201.
CH_3	H	H		2	202.	203.
CH_3	H	H		2	204.	205.
CH_3	H	H		2	206.	207.
CH_3	H	H		2	208.	209.
CH_3	H	H		2	210.	211.
CH_3	H	H		2	212.	213.
CH_3	H	H		2	214.	215.
CH_3	H	H		2	216.	217.
CH_3	H	H		2	218.	219.
CH_3	H	H		2	220.	221.
CH_3	H	H		2	222.	223.
CH_3	H	H		2	224.	225.
CH_3	H	H		2	226.	227.
CH_3	H	H		2	228.	229.
COPh	H	H	H	2	230.	231.
CH_3	H	H		2	232.	233.

CH_3	H	H		2	234.	235.
CH_3	H	H		2	236.	237.
CH_3	$COOCH_3$	H		2	238.	239.
CH_3	COOH	H		2	240.	241.
CH_3	H	H		2	242.	243.
CH_3	H	H		2	244.	245.
CH_3	H	H		3	246.	247.
CH_3	H	H		2	248.	249.
CH_3	H	H		2	250.	251.
CH_3	H	H		2	252.	253.
CH_3	H	H		2	254.	255.
CH_3	H	CH_3			256.	257.
CH_3	H	H		2	258.	259.
CH_3	H	H		2	260.	261.

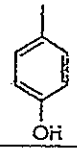
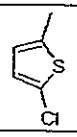
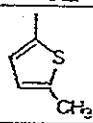
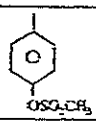
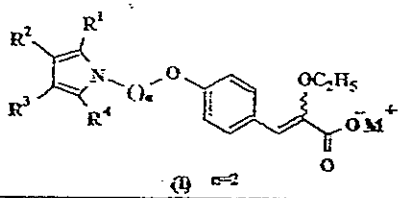
CH_3	H	H		2	262.	263.
H	H	H		2	264.	265.
CH_3	H	H		2	266.	267.
CH_3	H	H		2	268.	269.
CH_3	H	H		2	270.	271.
CH_3	CH_3	H	C_6H_5	2	272.	273.
CH_3	H	H		2	274.	275.

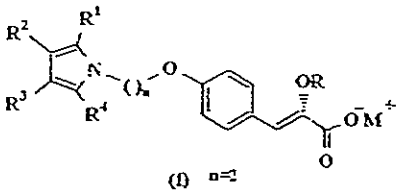
Table 20:



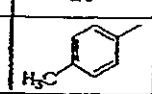
(I) n=2

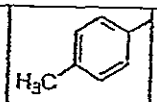
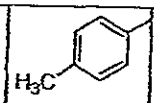
Substituents on the pyrrole ring in (I)				n	M	
					Na^+ salts Example no.	Ca^{++} salts Example no.
R^1	R^2	R^3	R^4			
CH_3	H	H		2 E-isomer	276.	277.
CH_3	H	H		2 Z-isomer	278.	279.

Table 21:



(I) n=2

Ex. No.	Substituents on the pyrrole ring				R'	M		
	R^1	R^2	R^3	R^4				
280.	CH_3	H	H		CH_3	Na	Mol. Wt. = 401	Yield = 100%
	^{1}H: 2.37 (3H, s); 2.93 - 3.03 (2H, m); 3.37 (3H, s); 3.90 - 3.96 (3H, m); 4.28 (2H, t, J = 6.57 Hz); 5.96 (1H, d, J = 3.33 Hz); 6.10 (1H, d, J = 3.36 Hz); 6.61 (2H, d, J = 8.58 Hz); 7.08 (2H, d, J = 8.55 Hz); 7.26 - 7.41 (5H, m).							

281.	CH_3	H	H		CH_3	Ca	Mol. Wt. = 796	Yield = 44%
	^1H: 0.83 (3H, t, J = 7.4 Hz); 0.89 (3H, t, J = 7.4 Hz); 1.53 - 1.63 (4H, m); 2.37 (3H, s); 2.91(2H, d, J = 5.54 Hz); 3.20 - 3.48 (2H, m); 3.92 (6H, t, J = 6.59 Hz); 4.06 (2H, t, J = 6.67 Hz); 4.28 (2H, t, J = 6.61 Hz) 5.97 (1H, d, J = 3.33 Hz); 6.11 (1H, d, J = 3.40 Hz); 6.59 (2H, d, J = 8.64 Hz); 7.07 (2H, d, J = 8.63 Hz); 7.25 - 7.40 (5H, m).							
282.	CH_3	H	H		C_3H_7	Ca	Mol. Wt. = 852	Yield = 42%
	^1H: 0.77 (3H, t, J = 7.41 Hz); 1.47 - 1.49 (4H, m); 2.34 (3H, s); 2.60 - 2.63 (2H, s) 3.07 - 3.38 (2H, m); 3.90 (2H, t, J = 6.01 Hz); 4.31 (2H, t, J = 6.61 Hz) 5.87 (1H, d, J = 3.36 Hz); 5.99 (1H, d, J = 3.39 Hz); 6.58 (2H, d, J = 8.52 Hz); 7.10 (2H, d, J = 8.52 Hz); 7.29 - 7.40 (5H, m).							

The compounds of the present invention lowered triglyceride, total cholesterol, LDL, VLDL and increased HDL and lowered serum glucose levels. This was demonstrated by *in vivo* animal experiments.

A) Demonstration of *in vitro* efficacy of compounds:

i) Determination of hPPARα activity:

A chimeric expression vectors constructs containing the translational sequences of PPARα and amino acid sequences of DNA binding domains were fused and inserted into PGL3 basic vector. The expression and sequence were verified through immunobloting and sequence analysis (ABI DNA analyzer). These chimeric vectors containing ligand binding as well as DNA binding domain and a reporter plasmid containing the luciferase gene driven by SV40 promoter were transfected into CV-1 cell using the transfectin (Gibco BRL, USA). A control reporter plasmid was also transfected to monitor the transfection efficiency. After 48 hrs of transfection, The test compound was added in various concentration and incubated overnight. The luciferase activity was analyzed as a function of compound binding/activation capacity of PPARα, by luciferase assay system (promega, USA).

ii) Determination of hPPARγ activity:

A chimeric expression vectors constructs containing the translational sequences of PPARγ and amino acid sequences of DNA binding domains were fused and inserted into PGL3 basic vector. The expression and sequence were verified through immunobloting and sequence analysis (ABI DNA analyzer). These chimeric vectors containing ligand binding as well as DNA binding domain and a reporter plasmid containing the luciferase gene driven by SV40 promoter were transfected into CV-1 cell using the transfectin (Gibco BRL, USA). A control reporter plasmid was also transfected to monitor the transfection efficiency. After 48 hrs of transfection, The test compound was added in various concentration and incubated overnight. The luciferase activity was analyzed as a function of compound binding/activation capacity of PPARγ, by luciferase assay system (promega, USA).

B) Demonstration of *in vivo* efficacy of compounds:

i) Serum triglyceride and total cholesterol lowering activity in Swiss albino mice:

Male Swiss albino mice (SAM) were bred in Zydus animal house. All these animals were maintained under 12 hour light and dark cycle at 25 ± 1 °C. Animals were given standard laboratory chow (NIN, Hyderabad, India) and water ad libitum. SAM of 20-30 g body weight range were used.

The test compounds were administered orally to Swiss albino mice at 0.001 to 50 mg / kg/ day dose for 6 days. The compound was administered after suspending it 0.25 % CMC or dissolving it in water, when compound is water-soluble. Control mice were treated with vehicle (0.25% of Carboxymethylcellulose; dose 10 ml/kg).

The blood samples were collected on 0th day and in fed state 1 hour after drug administration on 6th day of the treatment. The blood was collected in non heparinised capillary and the serum was analyzed for triglyceride and total cholesterol (Wieland, O. Methods of Enzymatic analysis. Bergermeyer, H., O., Ed., 1963. 211-214; Trinder, P. Ann. Clin. Biochem. 1969. 6: 24-27). Measurement of serum triglyceride and total cholesterol was done using commercial kits (Zydus-Cadila, Pathline, Ahmedabad, India).

Formula for calculation:

Percentage reduction in triglycerides/total cholesterol were calculated according to the formula :

Percentage reduction (%) =

$$1 - \left[\frac{TT/OT}{TC/OC} \right] \times 100$$

OC = Zero day control group value OT = Zero day treated group value

TC = Test day control group TT = Test day treated group

Table 1:

Triglyceride lowering activity in Swiss albino mice:

Example No.	Dose (mg/kg/day)	% Triglyceride lowering
66	3	26
265	3	54
235	3	55
209	3	57

ii) Cholesterol lowering activity in hypercholesterolemic rat models

Male Sprague Dawley rats stock bred in Zydus animal house were maintained under 12 hour light and dark cycle at 25±1 °C. Rats of 100-150 g body weight range were used for the experiment. Animals were made hypercholesterolemic by feeding 1 % cholesterol and 0.5 % sodium cholate mixed with standard laboratory chow (NIN, Hyderabad, India) and water ad libitum for 5 days. The animals were maintained on the same diet throughout the experiment [Petit D., Bonnefis M. T., Rey C and Infante R., Effects of ciprofibrate on liver lipids and lipoprotein synthesis in normal and hyperlipidemic rats, *Atherosclerosis*, 74, 215-225(1988)].

The test compounds were administered orally at a dose 0.03 to 50 mg/ kg/ day for 4 days, after suspending it in 0.25 % CMC or dissolving it in water when compound is water-soluble. Control group was treated with vehicle alone (0.25% of Carboxymethylcellulose; dose 10 ml/kg).

The blood samples were collected in fed state on 0th and 1 hour after drug administration on 6th day of the treatment. The blood was collected from the retro-orbital sinus through non-heparinised capillary and the serum samples were analyzed for triglyceride and total cholesterol using commercial kits (Zydus-Cadila, Pathline, Ahmedabad, India). LDL and HDL by commercial kits (Point Scientific, USA). LDL and VLDL cholesterol were calculated from the data obtained for total cholesterol, HDL and triglyceride.

The reduction in VLDL cholesterol is calculated according to the formula.

VLDL cholesterol in mg/dl = Total cholesterol – HDL cholesterol - LDL cholesterol

Example No.	Dose (mg/kg/day)	Total cholesterol reduction (%)
205	3	59
108	3	53
255	3	62

iii) Serum glucose lowering activity in db/db mice models

Homozygous animal C_{57}BL/KsJ-db/db mice are obese, hyperglycemic, hyperinsulinemic and insulin resistant (J. Clin. Invest., 85, 962-967, 1990), whereas heterozygous are lean and normoglycemic. The homozygous animals very closely mimic the human type II diabetes when blood sugar levels are not sufficiently controlled. Since this type of model resembles human type II diabetes mellitus, the compounds of the invention were tested for their antidiabetic activity in this model.

The compounds of the present invention showed serum glucose and triglycerides lowering activities.

Male C_{57} BL/KsJ-db/db mice of 8 to 14 weeks age, having body weight range of 40 to 60 grams, procured from the Jackson Laboratory, USA, were used in the experiment.

Test compounds were suspended on 0.25% carboxymethyl cellulose or dissolved in water when the compound is water soluble and administered to test group containing 6 animals at a dose of 0.001

mg to 50 mg/kg through oral gavage daily for 6 days. The control group received vehicle (dose 10 ml/kg). On the 6th day, one hour after the drug dosing, blood was collected from retro-orbital sinus and the serum was analyzed for glucose and triglycerides were measured using commercial kits (Zydus-Cadila, Pathline, Ahmedabad, India). The plasma glucose and triglyceride lowering activities of the test compound was calculated according to the formula:

Percentage reduction (%) =

$$1 - \left[\frac{TT/OT}{TC/OC} \right] \times 100$$

OC = Zero day control group value OT = Zero day treated group value

TC = Test day control group TT = Test day treated group

Example No.	Dose (mg/kg/day)	Serum Glucose reduction (%)	Serum TG reduction (%)
237	1	62	11
261	1	67	27

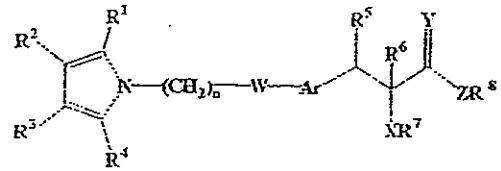
iv) Serum triglyceride /cholesterol/body weight lowering effect in Golden Syrian hamsters :

Male Golden Syrian hamsters were fed with a standard diet mixed with 1 % cholesterol and 0.5 % sodium cholate for 5 days. On 6th day test compounds in dose ranging from 1 mg to 10 mg /kg/day were administered as CMC suspension, and the same diet was maintained for the next 15 days. On the 15th day the blood samples were collected in fed state, one hour after drug administration from retro-orbital sinus and the serum was analyzed for triglyceride and cholesterol using commercial kits (Zydus-Cadila, Pathline, Ahmedabad, India). The body weight was measured with respect to untreated group on hypercholesteremic diet. The compounds of the present invention reduced triglycerides, cholesterol and body weight in this animal model.

No adverse effects were observed for any of the mentioned compounds of invention. The compounds of the present invention showed good serum lowering and lipid and cholesterol lowering activity in the experimental animals used. These compounds are useful for the testing / prophylaxis of diseases caused by hyperlipidemia, hypercholesterolemia, hyperinsulinemia, hyperglycemia such as NIDDM, cardiovascular diseases, stroke, hypertension, obesity since such diseases are interlinked to each other.

We claim,

1. A compound of formula (I) :



(I)

their derivatives, their analogs, their tautomeric forms, their stereoisomers, their polymorphs, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates, wherein R^2 and R^3 represent hydrogen, and R^1, R^4 may be same or different, and represent hydrogen, haloalkyl, perhaloalkyl, nitro, cyano, formyl, or substituted or unsubstituted groups selected from linear or branched (C_1-C_6)alkyl, linear or branched (C_2-C_6)alkenyl, linear or branched (C_2-C_6)alkynyl, (C_3-C_7)cycloalkyl, (C_3-C_7)cycloalkenyl, aryl, aralkyl, heterocyclyl, heteroaryl, heterocyclyl(C_1-C_6)alkyl, heteroar(C_1-C_6)alkyl, acyl, acyloxy, carboxylic acid and its derivatives such as esters and amides, hydroxyalkyl, aminoalkyl, mono-substituted or di-substituted aminoalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, (C_1-C_6)alkylthio, thio(C_1-C_6)alkyl, arylthio, derivatives of sulfenyl and sulfonyl groups, sulfonic acid and its derivatives; n represents an integer 2, W represents O, S or NR^9, where R^9 represents hydrogen, (C_1-C_6)alkyl or aryl groups;

Ar represents a substituted or unsubstituted divalent single or fused aromatic, heteroaromatic group; R^5 and R^6 represent both hydrogen or together represent a bond; X represent O or S; R^7 represents hydrogen, perfluoro(C_1-C_{12})alkyl, substituted or unsubstituted groups selected from linear or branched (C_1-C_{12})alkyl, cyclo(C_3-C_6)alkyl, aryl, ar(C_1-C_{12})alkyl, heteroaryl, heteroar(C_1-C_{12})alkyl, heterocyclyl, alkoxyalkyl, aryloxyalkyl, alkoxycarbonyl, aryloxycarbonyl, cycloalkyloxycarbonyl, alkylaminocarbonyl, arylaminocarbonyl or acyl groups; Y represents O or S; Z represents O, S or NR^{10} where R^{10} represents hydrogen or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, aryl, ar(C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, heteroaryl or heteroar(C_1-C_6)alkyl groups; R^8 represents hydrogen, substituted or unsubstituted groups selected from linear or branched (C_1-C_6)alkyl, aryl, ar(C_1-C_6)alkyl, heteroaryl, heteroar(C_1-C_6)alkyl, heterocylyl, heterocyclylalkyl, hydroxyalkyl, alkoxyalkyl or alkylaminoalkyl groups; R^{10} and R^8 together may form 5 or 6 membered substituted or unsubstituted heterocyclic ring structure containing one or more heteroatoms selected from O, N or S.

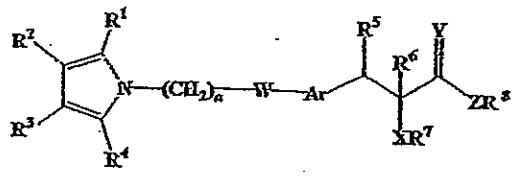
2. A compound according to claim 1, wherein the substituents on the groups R^1, and R^4 are selected from hydroxyl, oxo, halo, thio, nitro, amino, cyano, formyl, amidino, guanidino, hydrazino, alkyl, haloalkyl, perhaloalkyl, alkoxy, haloalkoxy, perhaloalkoxy, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, bicycloalkyl, bicycloalkenyl, alkoxy, alkenoxy, cycloalkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocylyl, heteroaryl, heterocyclylalkyl, heteroaralkyl, heteroaryloxy, heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, heterocyclylalkoxyacyl, acyl, acyloxy, acylamino, monosubstituted or disubstituted amino, arylamino, aralkylamino, carboxylic acid and its derivatives such as esters and amides, carbonylamino, hydroxyalkyl, aminoalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, thioalkyl, arylthio, alkoxycarbonylamino, aryloxycarbonylamino, aralkyloxycarbonylamino, aminocarbonylamino, alkylaminocarbonylamino, alkoxyamino, hydroxyl amino, sulfenyl derivatives, sulfonyl derivatives, sulfonic acid and its derivatives.

3. A compound according to claim 1, wherein the group Ar represents a divalent phenyl or naphthyl group.

4. A compound according to claim 1, wherein the substituents on the group represented by Ar represents substituted or unsubstituted linear or branched alkyl, linear or branched alkoxy, and halogen.

5. A compound according to claim 1, wherein the pharmaceutically acceptable salt is a Li, Na, Ca, Mg, lysine, arginine, guanidine and its derivatives, tromethamine, diethanolamine, choline, ammonium, substituted ammonium salts, or a aluminium salts.

6. A pharmaceutical composition which comprises a compound of formula (I),



(I)

as defined in the claim 1 and a pharmaceutically acceptable carrier, diluent, excipients or solvate.

7. A pharmaceutical composition according to claim 6, in the form of a tablet, capsule, powder, granules, syrup, solution or suspension.

8. A pharmaceutical composition according to claim 6, in combination with sulfonyl urea, biguanide, angiotensin II inhibitor, aspirin, α-glycosidase inhibitor, insulin secretagogue, insulin, β-sitosterol inhibitor, HMG CoA reductase inhibitor, fibrate, nicotinic acid, cholestyramine, cholestipol or probucol, which may be administered together or within such a period as to act synergistically together to a patient in need thereof.

9. The use of a compound of formula (I) according to claims 1 or a pharmaceutically acceptable carrier, diluent, excipients or solvate for the preparation of a medicament for

reducing plasma glucose, triglycerides, total cholesterol, LDL, VLDL or free fatty acids in the plasma, while optionally elevating HDL cholesterol levels.

10. The use according to claim 9 wherein the compound of formula (I) is in combination with HMG CoA reductase inhibitor, fibrate, nicotinic acid, cholestyramine, cholestipol or probucol to act synergistically.

11. A pharmaceutical composition which comprises, a compound according to claim 5, as an active ingredient and a pharmaceutically acceptable carrier, diluent, excipients or solvate.

12. A pharmaceutical composition which comprises, a compound according to claim 5, in the form of a tablet, capsule, powder, granules, syrup, solution or suspension.

13. A pharmaceutical composition according to claim 5, in combination with sulfonyl urea, biguanide, angiotensin II inhibitor, aspirin, α-glycosidase inhibitor, insulin secretagogue, insulin, β-sitosterol inhibitor, HMG CoA reductase inhibitor, fibrate, nicotinic acid, cholestyramine, cholestipol or probucol, which may be administered together or within such a period as to act synergistically together to a patient in need thereof.

14. The use of a compound according to claim 5 or a pharmaceutically acceptable carrier, diluent, excipients or solvate for the preparation of a medicament for reducing blood glucose, triglycerides, cholesterol, or free fatty acids in the plasma.

15. The use according to claim 14 wherein the compound of formula (I) is in combination with HMG CoA reductase inhibitor, fibrate, nicotinic acid, cholestyramine, cholestipol or probucol to act synergistically.

16. The use of compound of formula (I) according to claim 1 for the preparation of a medicament used in hyperlipidaemia, hypercholesteremia, hyperglycemia, obesity, impaired glucose intolerance, leptin resistance, insulin resistance, diabetic complications.

17. The use according to claim 16 in type 2 diabetes, impaired glucose tolerance, dyslipidaemia, hypertension, obesity, atherosclerosis, hyperlipidaemia, coronary artery disease, cardiovascular disorders, renal diseases, microalbuminuria, glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, diabetic retinopathy, diabetic nephropathy, endothelial cell dysfunction, psoriasis, polycystic ovarian syndrome (PCOS), dementia, end-stage renal disease, osteoporosis, inflammatory bowel diseases, myotonic dystrophy, pancreatitis, arteriosclerosis, xanthoma or cancer.

18. The use of a compound of formula (I) according to claim 1 or a pharmaceutically acceptable carrier, diluent, excipients or solvate for the preparation of a medicament used in hyperlipidaemia, hypercholesteremia, hyperglycemia, obesity, impaired glucose intolerance,

leptin resistance, insulin resistance or diseases in which insulin resistance is the underlying pathophysiological mechanism, diabetic complications.

19. The use according to claim 18 in type 2 diabetes, impaired glucose tolerance, dyslipidaemia, hypertension, obesity, atherosclerosis, hyperlipidaemia, coronary artery disease, cardiovascular disorders, renal diseases, microalbuminuria, glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, diabetic retinopathy, diabetic nephropathy, endothelial cell dysfunction, psoriasis, polycystic ovarian syndrome (PCOS), dementia, end-stage renal disease, osteoporosis, inflammatory bowel diseases, myotonic dystrophy, pancreatitis, arteriosclerosis, xanthoma orcancer.

20. A compound according to claim 1 which is selected from :

[(2R)-N(1S)]-2-Ethoxy-3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-N-(2-hydroxy-1-phenylethyl)propanamide

[(2S)-N(1S)]-2-Ethoxy-3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-N-(2-hydroxy-1-phenylethyl) propanamide

(±) 3-{4-[2-(2-ethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-ethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-ethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-formylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-formylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-formylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-acetylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-acetylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-acetylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-ethyl-5-methylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-ethyl-5-methylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-ethyl-5-methylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-propylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-propylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-propylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-*n*-butylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-*n*-butylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-*n*-butylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-methoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-methoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-methoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-propoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-propoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-propoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-3-phenylpyrrol-1-yl)ethoxy]phenyl}-2- ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-3-phenylpyrrol-1-yl)ethoxy]phenyl}-2- ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-3-phenylpyrrol-1-yl)ethoxy]phenyl}-2- ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(3-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(3-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(3-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(2-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(2-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(2-methylphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-methoxyphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-methoxyphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-methoxyphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-bromophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-bromophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-bromophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-fluorophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-fluorophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-fluorophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-chlorophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-chlorophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-chlorophenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2,5-diisopropylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2,5-diisopropylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2,5-diisopropylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-isopropyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-isopropyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-isopropyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-(4-{2-[2-(4-fluorophenyl)-5-isopropyl-4-phenylcarbamoylpyrrol-1-yl]ethoxy}phenyl)-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-(4-{2-[2-(4-fluorophenyl)-5-isopropyl-4-phenylcarbamoylpyrrol-1-yl]ethoxy}phenyl)-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-(4-{2-[2-(4-fluorophenyl)-5-isopropyl-4-phenylcarbamoylpyrrol-1-yl]ethoxy}phenyl)-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-methylthiopyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-methylthiopyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-methylthiopyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2,5-diethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2,5-diethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2,5-diethylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-ethyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-ethyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-ethyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-ethyl-2-(2-phenylethyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-ethyl-2-(2-phenylethyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-ethyl-2-(2-phenylethyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(3-methoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(3-methoxyphenyl)pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(3-methoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-cyclohexyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-cyclohexyl-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-cyclohexyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-biphenyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-biphenyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-biphenyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(furan-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-furan-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(furan-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(5-methyl furan-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+)3-{4-[2-(5-methyl-2-(5-methyl furan-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(5-methyl furan-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-thiomethyl phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-thiomethyl phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-thiomethyl phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-cyanophenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-cyanophenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-cyanophenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-phenoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-phenoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-phenoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-1'-(toluene-4-sulfonyl)-1'H-[2,2']bipyrrolyl-1-yl])ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-1'-(toluene-4-sulfonyl)-1'H-[2,2']bipyrrolyl-1-yl])ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-1'-(toluene-4-sulfonyl)-1'H-[2,2']bipyrrolyl-1-yl])ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(3,4-dimethoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(3,4-dimethoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(3,4-dimethoxyphenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-methanesulfinyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-methanesulfinyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-methanesulfinyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-acetylamino-phenyl) pyrrol-1-yl)ethoxy]plienyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-acetylamino-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-acetylamino-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-(2-piperidin-1-yl-ethoxy)-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-(2-piperidin-1-yl-ethoxy)-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-(2-piperidin-1-yl-ethoxy)-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-vinyloxy-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-vinyloxy-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-vinyloxy-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-phenylsulfonyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-phenylsulfonyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-phenylsulfonyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-phenylsulfinyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-phenylsulfinyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-phenylsulfinyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-methanesulfonyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-methanesulfonyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-methanesulfonyl-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-cyclohexylmethoxy-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-cyclohexylmethoxy-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-cyclohexylmethoxy-phenyl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-benzoyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-benzoyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-benzoyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-cyclopropyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-cyclopropyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-cyclopropyl pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(benzofuran-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(benzofuran-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(benzofuran-2-yl) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(Benzo[1,3]dioxol-5-yl-) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(Benzo[1,3]dioxol-5-yl-) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(Benzo[1,3]dioxol-5-yl-) pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(naphthalen-1-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(naphthalen-1-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(naphthalen-1-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(3-benzyloxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(3-benzyloxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(3-benzyloxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(5-bromo-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(5-bromo-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(5-bromo-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-isopropoxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-isopropoxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-isopropoxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-benzyloxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-benzyloxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-benzyloxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-hydroxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-hydroxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-hydroxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(2-phenyl-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(2-phenyl-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(2-phenyl-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(5-chloro-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(5-chloro-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(5-chloro-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(4-ethoxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(4-ethoxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(4-ethoxy-phenyl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(5-methyl-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(5-methyl-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(5-methyl-thiophen-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(quinolin-2-yl-)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(quinolin-2-yl-)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(quinolin-2-yl-)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(pyridin-4-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(pyridin-4-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(pyridin-4-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(pyridin-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(pyridin-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(pyridin-2-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(±) 3-{4-[2-(5-methyl-2-(pyridin-3-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(+) 3-{4-[2-(5-methyl-2-(pyridin-3-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(-) 3-{4-[2-(5-methyl-2-(pyridin-3-yl)-pyrrol-1-yl)ethoxy]phenyl}-2-ethoxypropanoic acid and its pharmaceutically acceptable salts and its esters;

(E/Z) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxyprop-2-enoic acid and its pharmaceutically acceptable salts and its esters;

(E) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxyprop-2-enoic acid and its pharmaceutically acceptable salts and its esters;

(Z) 3-{4-[2-(5-methyl-2-phenylpyrrol-1-yl)ethoxy]phenyl}-2-ethoxyprop-2-enoic acid and its pharmaceutically acceptable salts and its esters.

21. A compound according to claim 20 wherein the ester is preferably a methyl or an ethyl ester.

22. A compound according to claim 20, wherein the pharmaceutically acceptable salt is a Li, Na, K, Ca, Mg, lysine, arginine, guanidine and its derivatives, tromethamine, diethanolamine, choline, ammonium, substituted ammonium salts or aluminium salts.

23. A pharmaceutical composition, which comprises a compound as defined in claim 20, and a pharmaceutically acceptable carrier, diluents or excipients or solvate.

24. A pharmaceutical composition as claimed in claim 23, in the form of a tablet, capsule, powder, granules, syrup, solution or suspension.

25. A pharmaceutical composition, which comprises a compound as defined in claim 22, and a pharmaceutically acceptable carrier, diluents or excipients or solvate.

26. A pharmaceutical composition as claimed in claim 25, in the form of a tablet, capsule, powder, granules, syrup, solution or suspension.

27. The use of a compound of formula (I) according to claim 20 or a pharmaceutically acceptable carrier, diluent, excipients or solvate for the preparation of a medicament for reducing plasma glucose, triglycerides, total cholesterol, LDL, VLDL or free fatty acids in the plasma, while optionally elevating HDL cholesterol levels.

28. The use of a compound of formula (I) according to claim 22 or a pharmaceutically acceptable carrier, diluent, excipients or solvate for the preparation of a medicament for reducing plasma glucose, triglycerides, total cholesterol, LDL, VLDL or free fatty acids in the plasma, while optionally elevating HDL cholesterol levels.

29. The use of a compound of formula (I) according to claim 20 or a pharmaceutically acceptable carrier, diluent, excipients or solvate for use in hyperlipidaemia, hypercholesteremia, hyperglycemia, obesity, impaired glucose intolerance, leptin resistance, insulin resistance or diseases in which insulin resistance is the underlying pathophysiological mechanism, diabetic complications.

30. The use according to claim 29 in type 2 diabetes, impaired glucose tolerance, dyslipidaemia, hypertension, obesity, atherosclerosis, hyperlipidaemia, coronary artery disease, cardiovascular disorders, renal diseases, microalbuminuria, glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, diabetic retinopathy, diabetic nephropathy, endothelial cell dysfunction, psoriasis, polycystic ovarian syndrome (PCOS), dementia, end-stage renal disease, osteoporosis, inflammatory bowel diseases, myotonic dystrophy, pancreatitis, arteriosclerosis, xanthoma orcancer.

31. The use according to claim 29 wherein the compound of formula (I) is in combination with sulfonyl urea, biguanide, angiotensin II inhibitor, aspirin, α-glycosidase inhibitor, insulin secretagogue, insulin, β-sitosterol inhibitor, HMG CoA reductase inhibitor, fibrate, nicotinic acid, cholestyramine, cholestipol or probucol to act synergistically.

32. The use of a compound formula (I) according to claim 22 in the presence of conditions like hyperlipidaemia, hypercholesteremia, hyperglycemia, obesity, impaired glucose intolerance, leptin resistance, insulin resistance or diseases in which insulin resistance is the underlying pathophysiological mechanism, diabetic complications.

33. The use of according to claim 32 in type 2 diabetes, impaired glucose tolerance, dyslipidaemia, hypertension, obesity, atherosclerosis, hyperlipidaemia, coronary artery disease, cardiovascular disorders, renal diseases, microalbuminuria, glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, diabetic retinopathy,

diabetic nephropathy, endothelial cell dysfunction, psoriasis, polycystic ovarian syndrome (PCOS), dementia, end-stage renal disease, osteoporosis, inflammatory bowel diseases, myotonic dystrophy, pancreatitis, arteriosclerosis, xanthoma orcancer.

34. The use according to claim 32 wherein the compound of formula (I) is in combination with sulfonyl urea, biguanide, angiotensin II inhibitor, aspirin, α-glycosidase inhibitor, insulin secretagogue, insulin, β-sitosterol inhibitor, HMG CoA reductase inhibitor, fibrate, nicotinic acid, cholestyramine, cholestipol or probucol to act synergistically.

35. A medicine for reducing plasma glucose, triglycerides, total cholesterol, LDL, VLDL or free fatty acids in the plasma, while optionally elevating HDL cholesterol levels comprises administering a compound of formula (I), as defined in the claim 1 and a pharmaceutically acceptable carrier, diluent, excipients or solvate to a patient in need thereof.

36. A medicine according to claim 35, wherein the compound of formula (I) is given in combination with HMG CoA reductase inhibitor, fibrate, nicotinic acid, cholestyramine, cholestipol or probucol, which may be administered together or within such a period as to act synergistically together to a patient in need thereof.

37. A medicine for reducing blood glucose, triglycerides, cholesterol, or free fatty acids in the plasma, comprising administering a compound as defined in the claim 5 and a pharmaceutically acceptable carrier, diluent or excipients or solvate to a patient in need thereof.

38. A medicine according to claim 37, wherein the compound of formula (I) is given in combination with HMG CoA reductase inhibitor, fibrate, nicotinic acid, cholestyramine, cholestipol or probucol, which may be administered together or within such a period as to act synergistically together to a patient in need thereof.

39. A medicine for preventing or treating diseases caused by hyperlipidaemia, hypercholesteremia, hyperglycemia, obesity, impaired glucose intolerance, leptin resistance, insulin resistance, diabetic complications, comprising administering an effective, non-toxic amount of compound of formula (I) as defined in claim 1 to a patient in need thereof.

40. A medicine according to claim 39 useful in the treatment of complications which includes type 2 diabetes, impaired glucose tolerance, dyslipidaemia, hypertension, obesity, atherosclerosis, hyperlipidaemia, coronary artery disease, cardiovascular disorders, renal diseases, microalbuminuria, glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, diabetic retinopathy, diabetic nephropathy, endothelial cell dysfunction, psoriasis, polycystic ovarian syndrome (PCOS), dementia, end-stage renal disease, osteoporosis, inflammatory bowel diseases, myotonic dystrophy, pancreatitis, arteriosclerosis, xanthoma or cancer.

41. A medicine for preventing or treating diseases caused by hyperlipidaemia, hypercholesteremia, hyperglycemia, obesity, impaired glucose intolerance, leptin resistance, insulin resistance or the

diseases in which insulin resistance is the underlying pathophysiological mechanism, treating diabetic complications, comprising administering an effective, non-toxic amount of compound of formula (I) as defined in claim 1 and a pharmaceutically acceptable carrier, diluent, excipients or solvate.

42. A medicine according to claim 41, wherein the disease is type 2 diabetes, impaired glucose tolerance, dyslipidaemia, hypertension, obesity, atherosclerosis, hyperlipidaemia, coronary artery disease, cardiovascular disorders, renal diseases, microalbuminuria, glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, diabetic retinopathy, diabetic nephropathy, endothelial cell dysfunction, psoriasis, polycystic ovarian syndrome (PCOS), dementia, end-stage renal disease, osteoporosis, inflammatory bowel diseases, myotonic dystrophy, pancreatitis, arteriosclerosis, xanthoma or cancer.

43. A medicine for reducing plasma glucose, triglycerides, total cholesterol, LDL, VLDL or free fatty acids in the plasma, while optionally elevating HDL cholesterol levels comprises administering a compound of formula (I), as defined in the claim 20 and a pharmaceutically acceptable carrier, diluent, excipients or solvate to a patient in need thereof.

44. A medicine for reducing plasma glucose, triglycerides, total cholesterol, LDL, VLDL or free fatty acids in the plasma, while optionally elevating HDL cholesterol levels comprises administering a compound of formula (I), as defined in the claim 22 and a pharmaceutically acceptable carrier, diluent, excipients or solvate to a patient in need thereof.

45. A medicine for preventing or treating diseases caused by hyperlipidaemia, hypercholesteremia, hyperglycemia, obesity, impaired glucose intolerance, leptin resistance, insulin resistance or the diseases in which insulin resistance is the underlying pathophysiological mechanism, treating diabetic complications, comprising administering an effective, non-toxic amount of compound of formula (I) as defined in claim 20 and a pharmaceutically acceptable carrier, diluent, excipients or solvate.

46. The medicine according to claim 45, wherein the disease is type 2 diabetes, impaired glucose tolerance, dyslipidaemia, hypertension, obesity, atherosclerosis, hyperlipidaemia, coronary artery disease, cardiovascular disorders, renal diseases, microalbuminuria, glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, diabetic retinopathy, diabetic nephropathy, endothelial cell dysfunction, psoriasis, polycystic ovarian syndrome (PCOS), dementia, end-stage renal disease, osteoporosis, inflammatory bowel diseases, myotonic dystrophy, pancreatitis, arteriosclerosis, xanthoma or cancer.

47. The medicine according to claim 45, wherein the therapy includes co-administration of compound of formula (I) with sulfonyl urea, biguanide, angiotensin II inhibitor, aspirin, α-glycosidase inhibitor, insulin secretagogue, insulin, β-sitosterol inhibitor, HMG CoA reductase inhibitor, fibrate, nicotinic acid, cholestyramine, cholestipol or probucol, which may be administered together or within such a period as to act synergistically together to a patient in need thereof.

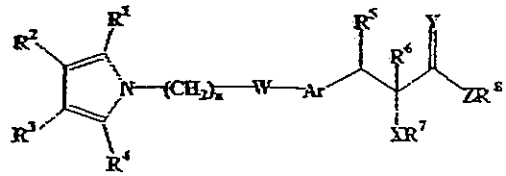
48. A medicine for preventing or treating diseases in presence of conditions like hyperlipidaemia, hypercholesteremia, hyperglycemia, obesity, impaired glucose intolerance, leptin resistance, insulin resistance or the diseases in which insulin resistance is the underlying pathophysiological mechanism, treating diabetic complications, comprising administering an effective, non-toxic amount of compound of formula (I) as defined in claim 22 to a patient in need thereof.

49. A medicine according to claim 48, wherein the disease is type 2 diabetes, impaired glucose tolerance, dyslipidaemia, hypertension, obesity, atherosclerosis, hyperlipidaemia, coronary artery disease, cardiovascular disorders, renal diseases, microalbuminuria, glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, diabetic retinopathy, diabetic nephropathy, endothelial cell dysfunction, psoriasis, polycystic ovarian syndrome (PCOS), dementia, end-stage renal disease, osteoporosis, inflammatory bowel diseases, myotonic dystrophy, pancreatitis, arteriosclerosis, xanthoma or cancer.

50. A medicine according to claim 48, wherein the therapy includes co-administration of compound of formula (I) with sulfonyl urea, biguanide, angiotensin II inhibitor, aspirin, α-glycosidase inhibitor, insulin secretagogue, insulin, β-sitosterol inhibitor, HMG CoA reductase inhibitor, fibrate, nicotinic acid, cholestyramine, cholestipol or probucol, which may be administered together or within such a period as to act synergistically together to a patient in need thereof

51. The use of the compounds, pharmaceutical compositions and medicines as claimed in claims 1, 5, 6, 7, 8, 20, 21, 22, 23, 24, 25, 26, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50 for the prevention or treatment of diseases caused by hyperlipidaemia, hypercholesteremia, hyperglycemia, obesity, impaired glucose intolerance, leptin resistance, insulin resistance, diabetic complications.

52. A process for the preparation of a compound of formula (I) as claimed in claim 1,



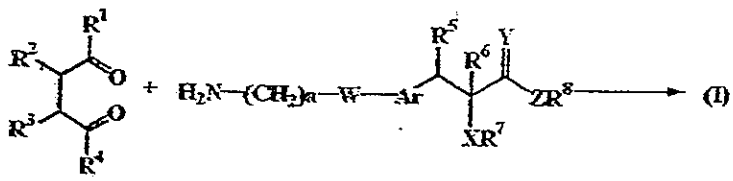
(I)

their derivatives, their analogs, their tautomeric forms, their stereoisomers, their polymorphs, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates, wherein R^2 and R^3 represent hydrogen, and R^1, R^4 may be same or different, and represent hydrogen, haloalkyl, perhaloalkyl, nitro, cyano, formyl, or substituted or unsubstituted groups selected from linear or branched (C_1-C_6)alkyl, linear or branched (C_2-C_6)alkenyl, linear or branched (C_2-C_6)alkynyl, (C_3-C_7)cycloalkyl, (C_3-C_7)cycloalkenyl, aryl, aralkyl, heterocyclyl, heteroaryl, heterocyclyl(C_1-C_6)alkyl, heteroar(C_1-C_6)alkyl, acyl, acyloxy, carboxylic acid and its derivatives such as esters and amides, hydroxyalkyl, aminoalkyl, mono-substituted or di-substituted aminoalkyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, (C_1-C_6)alkylthio, thio(C_1-

C_6)alkyl, arylthio, derivatives of sulfenyl and sulfonyl groups, sulfonic acid and its derivatives; n represents an integer 2, W represents O, S or NR^9, where R^9 represents hydrogen, (C_1-C_6)alkyl or aryl groups;

Ar represents a substituted or unsubstituted divalent single or fused aromatic, heteroaromatic group; R^5 and R^6 represent both hydrogen or together represent a bond; X represent O or S; R^7 represents hydrogen, perfluoro(C_1-C_{12})alkyl, substituted or unsubstituted groups selected from linear or branched (C_1-C_{12})alkyl, cyclo(C_3-C_6)alkyl, aryl, ar(C_1-C_{12})alkyl, heteroaryl, heteroar(C_1-C_{12})alkyl, heterocyclyl, alkoxyalkyl, aryloxyalkyl, alkoxycarbonyl, aryloxycarbonyl, cycloalkyloxycarbonyl, alkylaminocarbonyl, arylaminocarbonyl or acyl groups; Y represents O or S; Z represents O, S or NR^{10} where R^{10} represents hydrogen or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, aryl, ar(C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, heteroaryl or heteroar(C_1-C_6)alkyl groups; R^8 represents hydrogen, substituted or unsubstituted groups selected from linear or branched (C_1-C_6)alkyl, aryl, ar(C_1-C_6)alkyl, heteroaryl, heteroar(C_1-C_6)alkyl, heterocylyl, heterocyclylalkyl, hydroxyalkyl, alkoxyalkyl or alkylaminoalkyl groups; R^{10} and R^8 together may form 5 or 6 membered substituted or unsubstituted heterocyclic ring structure containing one or more heteroatoms selected from O, N or S, which comprises:

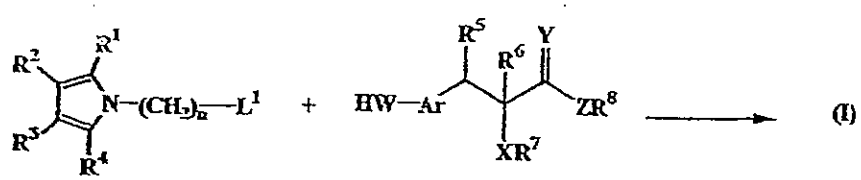
a. reacting a compound of formula (1a), where all symbols are as defined above,



(1a) (1b) (I)

with a compound of formula (1b) which may be racemic or chiral, where all symbols are as defined earlier to yield a compound of general formula (I);

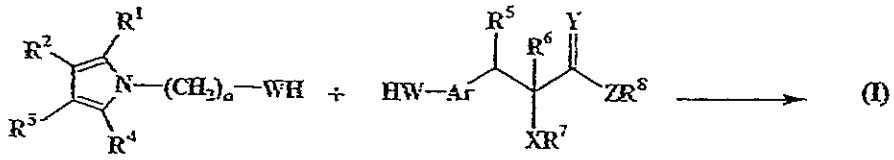
b. reacting a compound of formula (1c)



(1c) (1d) (I)

with a compound of formula (1d) which may be racemic or chiral, where all symbols are as defined earlier to yield a compound of general formula (I);

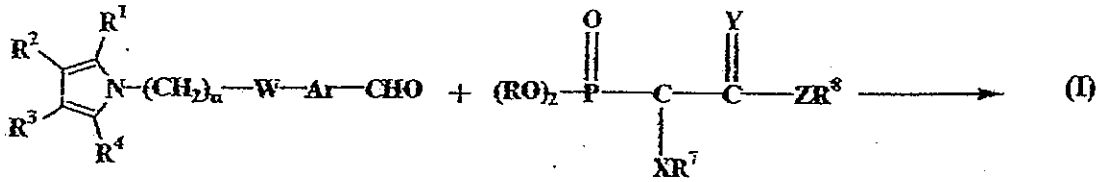
c. reacting the compound of formula (1e)



(1e) (1d)

with a compound of general formula (1d) which may be racemic or chiral, where W is particularly O or S and all other symbols are as defined earlier;

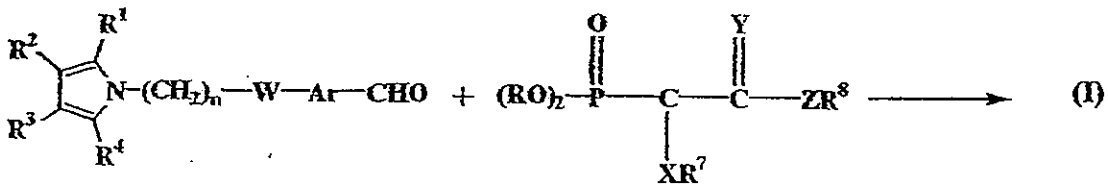
d. reacting a compound of general formula (1h)



(1h) (1i)

where all the symbols are as defined earlier, with a compound of formula (1i) which may be chiral or racemic, where R represents (C_1-C_8) alkyl and other symbols are as defined earlier and to afford a compound of formula (I) where R^5 and R^6 together form a bond and other symbols are as defined earlier and; and

e. reacting a compound of general formula (1h)



(1h) (1i)

where all the symbols are as defined earlier, with a compound of formula (1i) which may be chiral or racemic, where all the symbols are as defined earlier and R represents (C_1-C_8) alkyl to afford a compound of formula (I) wherein all symbols are as defined earlier and R^5 and R^6 together form a bond followed by

reduction of the double bond formed together by R^5 and R^6.