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(54) **Compounds for treating and/or preventing diseases associated with bone loss**

Verbindungen zur Behandlung und/oder Verhinderung von mit Erkrankungen zusammenhängendem Knochenschwund

Composés utiles pour le traitement et/ou la prévention de maladies liées à la perte osseuse

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(56) References cited:

- **BRAZIER HÉLÈNE ET AL: "Expression profile of RhoGTPases and RhoGEFs during RANKL-stimulated osteoclastogenesis: identification of essential genes in osteoclasts.", JOURNAL OF BONE AND MINERAL RESEARCH : THE OFFICIAL JOURNAL OF THE AMERICAN SOCIETY FOR BONE AND MINERAL RESEARCH SEP 2006, vol. 21, no. 9, September 2006 (2006-09), pages 1387-1398, XP002499977, ISSN: 0884-0431**
- **GIROTRA MONICA ET AL: "The use of parathyroid hormone in the treatment of osteoporosis.", REVIEWS IN ENDOCRINE & METABOLIC DISORDERS JUN 2006, vol. 7, no. 1-2, June 2006 (2006-06), pages 113-121, XP019467895, ISSN: 1389-9155**
- **HA BYUNG GEUN ET AL: "Proteomic profile of osteoclast membrane proteins: identification of Na+/H+ exchanger domain containing 2 and its role in osteoclast fusion.", PROTEOMICS JUL 2008, vol. 8, no. 13, July 2008 (2008-07), pages 2625-2639, XP002499978, ISSN: 1615-9861**

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(Cont. next page)

- FUKUDA AKIRA ET AL: "Regulation of osteoclast apoptosis and motility by small GTPase binding protein Rac1.", JOURNAL OF BONE AND MINERAL RESEARCH : THE OFFICIAL JOURNAL OF THE AMERICAN SOCIETY FOR BONE AND MINERAL RESEARCH DEC 2005, vol. 20, no. 12, December 2005 (2005-12), pages 2245-2253, XP002499979, ISSN: 0884-0431
- RAZZOUK S ET AL: "Rac-GTPase, osteoclast cytoskeleton and bone resorption", EUROPEAN JOURNAL OF CELL BIOLOGY, WISSENSCHAFLICHE VERLAGSGESELLSCHAFT, STUTTGART, DE, vol. 78, no. 4, 1 April 1999 (1999-04-01), pages 249-255, XP009107270, ISSN: 0171-9335
- VAANANEN ET AL: "Mechanism of osteoclast mediated bone resorption-rationale for the design of new therapeutics", ADVANCED DRUG DELIVERY REVIEWS, ELSEVIER, AMSTERDAM, NL, vol. 57, no. 7, 25 May 2005 (2005-05-25), pages 959-971, XP027771429, ISSN: 0169-409X [retrieved on 2005-05-25]

Description

Field of the invention

[0001] The invention relates to the field of diseases associated with bone loss, and more specifically to a new method for identifying compounds useful for treating and/or preventing diseases associated with bone loss.

Background of the Invention

[0002] Bone is a dynamic tissue that is continually remodeled throughout life depending on factors such as nutrition and the load the bone must carry. Normal bone formation depends on the delicate balance between new bone addition and old bone resorption. Bone formation is based on the deposition of bone matrix by osteoblasts and bone resorption and more specifically mineralized tissue, chiefly calcium carbonate and calcium phosphate resorption in vertebrates is achieved by osteoclasts. Typically, in a normal adult, about 5-10% of bone is replaced by these processes annually.

[0003] These osteoclasts are multinucleated cells of up to 400μm related to macrophage and other cells that develop from monocyte cells, which are actively motile cells that migrate along the surface of bone. Like macrophage, osteoclasts are derived from haematopoietic progenitor cells. The bone resorption is initiated when an osteoclast attaches to the surface of mineralized bone, forms a tight "sealing zone" and secretes necessary acids and proteases that initiate the resorption of mineralized tissue from the bone. After a period of several hours to days, the osteoclast detaches from the bone, leaving a pit on the bone surface. Under normal conditions, the pit is a target for osteoblasts, which deposit a material that ultimately becomes new bone.

[0004] Bone loss can result when the bone resorptive process is dominant over the bone formative process. Diseases associated with bone loss are usually accompanied by increased osteoclast activation. Such diseases include any bone loss resulting notably from an estrogen deficiency after the menopause but not only and comprise osteoporosis, osteopenia due to bone metastases, periarticular erosions in rheumatoid arthritis, primary hyperparathyroidism, hypercalcemia of malignancy, Paget's disease of bone, periodontal disease, immobilization induced osteopenia, and glucocorticoid treatment.

[0005] As an example, there are currently 20 million people with detectable fractures of the vertebrae due to osteoporosis in the United States. In addition, there are 250,000 hip fractures per year attributed to osteoporosis. This clinical situation is associated with a 12% mortality rate within the first two years, while 30% of the patients require nursing home care after the fracture.

[0006] Since diseases of bone loss are associated with increased activity of osteoclast, it is important to understand the mechanisms by which ostcoclasts are activated in these disease states, and to devise rational and therapeutic means to inhibit or reduce this activation.

[0007] Thus, the aim of the present invention is to elaborate new screening methods which can be useful for treating and/or preventing bone loss diseases, and to use such compounds to prepare a drug for treating and/or preventing bone loss diseases.

Description of the invention

[0008] The inventors have presently identified the DOCK5 protein is implicated in sealing zone formation and consequently in bone resorption. Thus, DOCK5 corresponds to a new therapeutic target for treating and/or preventing bone loss diseases. Finally, the inventors have used yeast exchange assay (YEA) for identifying inhibitors of DOCK5, which inhibitors can be useful for treating and/or preventing bone loss diseases.

[0009] The present description is directed to a method for identifying a compound which inhibits the activation of RAC GTPase, more specifically RAC1/2 GTPase, by DOCK5 protein comprising the steps of:

- coexpressing the DOCK5 and the RAC proteins in a cell, wherein said DOCK5 protein induces the conversion of inactive RAC, which inactive RAC is bound to GDP, to active RAC, which active RAC is bound to GTP,
- contacting or not said cell with said compound,
- determining the conversion of inactive RAC to active RAC, more specifically the conversion of inactive RAC1/2 to active RAC1/2, in the presence or absence of said compound, and
- selecting the compound inhibiting the conversion of inactive RAC to active RAC, more specifically the conversion of inactive RAC1/2 to active RAC1/2.

[0010] The selected compound is useful for treating disease associated with bone loss. In fact, the inventors have established that the conversion of inactive RAC to active RAC by DOCK5 is associated with the sealing zone formation.

[0011] In the present description "RAC1/2" means "RAC1 and/or RAC2". In fact, the inhibition of the activation of RAC1 GTPase and/or of RAC2 GTPase give rise to the same kind of results, while both RAC1 and RAC2 are involved in (and thus necessary for) the osteoclast differenciation and resorption functions.

[0012] The present description also relates to a method for identifying a compound which inhibits the activation of RAC1/2 GTPase and which is useful for treating disease associated with bone loss by DOCK5 protein comprising the steps of:

- coexpressing the DOCK5 and the RAC proteins in a cell, wherein said DOCK5 protein induces the conversion of inactive RAC, which inactive RAC is bound to GDP, to active RAC, which active RAC is bound to GTP.
- contacting or not said cell with said compound,
- determining the conversion of inactive RAC to active RAC in the presence or absence of said compound,
- selecting the compound inhibiting the conversion of inactive RAC to active RAC since this conversion is associated with the sealing zone formation, and
- testing the inhibition of bone resorption, corresponding to the testing of mineralised matrix resorption by osteoclasts, by the selected compounds.

[0013] As an example of disease associated with bone loss, one can cites menopause, osteoporosis, osteopenia due to bone metastases, periarticular erosions in rheumatoid arthritis, primary hyperparathyroidism, hypercalcemia of malignancy, Paget's disease of bone, periodontal disease, immobilization induced osteopenia, or in glucocorticoid treatment. Preferably, said disease associated with bone loss is osteoporosis.

[0014] Results from the cellular and bone resorption assay systems used herein are widely accepted in the art as predictive of in vivo effects. As the bone resorption assay uses material that includes bone marrow isolated cells, it is an ex vivo assay. Thus, the showing that the inhibition of RAC activation by DOCK5 inhibits bone resorption in these assays is evidence of the clinical utility of inhibitors of this specific activation for treating osteoporosis. Various scientific publications, such as Carano et al. (1990); Blair & Schlesinger (1992); Schlesinger & Blair (1992); Vaananen et al., 1990; all support the fact that such assays are accepted as being predictive of in vivo activity.

[0015] Methods for determining the conversion of inactive RAC to active RAC are well known from the skilled person. As an example of such methods, one can cites the methods disclosed in the examples and in COTE & VUORI (J. Cell. Sci., vol. 115, p: 4901-4913, 2002).

[0016] The method as described further comprises the step of testing the inhibition of bone resorption by the selected compound.

[0017] This method also includes a further step of comparing the conversion of inactive RAC to active RAC in presence of the tested compound and in the absence of said compound. Said inhibition of bone resorption can be simply tested by method well known from the skilled person, such as the one disclosed in the examples, wherein mineralised matrix resorption by osteoclasts is tested by culturing said osteoclasts on calcium phosphate substrates and mineralised matrix resorption is determined by VON KOSSA staining.

[0018] As used herein, the term "compound" refers to a natural or synthetic compound, such as chemical or peptidic compound.

[0019] Thus, in a first object, the present invention is directed to a compound chosen in the group consisting in:

- 4-[5-(4-bromophenyl)-3-(4-nitrophenyl)-4,5-dihydro-1H-pyrazol-1-yl]-4-oxobutanoic acid;
- 2,2,2-trichloro-N-(1,1-dioxido-2,3-dihydro-3-thienyl)-N-(4-methylphenyl)acetamide;
- 3-(3-chlorophenyl)-7-methyl-4-methylene-3,4-dihydro-2(1H)-quinazolinone;
- 3-[4-(3-bromobenzylidene)-3-methyl-5-oxo-4,5-dihydro-1H-pyrazol-1-yl]benzoic acid;
- N-2,1,3-benzothiadiazol-4-yl-5-bromo-2-furamide;
- 1-acetyl-4-(2-chloro-4-nitrophenyl)-2-methylpiperazine;

- 3-(3-methoxybenzylidene)-5-(4-methylphenyl)-2(3H)-furanone;
- 3-[5-(3,4-dichlorophenyl)-2-furyl]acrylic acid;
- (2-chloro-4-{[5-(2-chlorophenyl)-6-(ethoxycarbonyl)-7-methyl-3-oxo-H-[1,3]thiazolo[3,2-a]pyrimidin-2(3H)-ylidene]methyl}-6-methoxyphenoxy)acetic acid;
- 4-1[4-(diphenylmethyl)-1-piperazinyl]sulfonyl]-2,1,3-benzothiadiazole;
- 4-[4-phenyl-5-(2-thienyl)-1H-imidazol-2-yl]-1,2-benzenediol;
- N-(3,4-dimethoxyphenyl)-4-[methyl(phenylsulfonyl)amino]benzamide;
- 1-[(2-hydroxyphenyl)carbonothioyl]-3-phenyl-5-(trifluoromethyl)-4,5-dihydro-1H-pyrazol-5-ol;
- 2-methoxyethyl 4-[(4-tert-butylbenzoyl)amino]benzoate;
- N-(2,3-dichlorophenyl)-3-(5-methyl-2-furyl)acrylamide;
- N-(4-fluorophenyl)-3-[3-(trifluoromethyl)phenyl]acrylamide;
- 3-(2-furylmethyl)-2-(2-hydroxyphenyl)-2,3-dihydro-4(1H)-quinazolinone;
- N-(4-ethoxyphenyl)-2-{[5-(4-methoxyphenyl)-1,3,4-oxadiazol-2-yl]thio}acetamide;
- 5-(4-nitrobenzylidene)-2-thioxo-3-[3-(trifluoromethyl)phenyl]-1,3-thiazolidin-4-one;
- (3,5-dichlorophenyl)[(phenylsulfonyl)carbonyl]amine;
- N-(2-bromophenyl)-3-(5-methyl-2-furyl)acrylamide;
- 2-(2-chlorophenoxy)-N-[2-chloro-5-(trifluoromethyl)phenyl]acetamide;
- N-[4-(4-acetyl-1-piperazinyl)phenyl]propanamide;
- 8-[(dimethylamino)methyl]-9-hydroxy-2-rnethyl-4H-pyrido[1,2-a]pyrimidin-4-one;
- 4-tert-butyl-N-[1-{[(2-methoxyphenyl)amino]carbonyl}-2-(2-thienyl)vinyl]benzamide;
- 2-chloro-N-(3-chloro-4-methoxyphenyl)benzamide;
- 2,6-di-tert-butyl-4-(2,3-dihydro-1H-perimidin-2-yl)phenol;
- 3-benzyl-2-(2,6-dichlorophenyl)-2,3-dihydro-4(1H)-quinazolinone;
- 1-(3,4-dichlorobenzyl)-1H-indole-3-carbaldehyde;
- N-[5-(1-adamantyl)-1,3,4-thiadiazol-2-yl]-N'-phenylurea;
- N-(3,4-dichlorophenyl)-N'-{5-[(4-methylphenoxy)methyl]-1,3,4-thiadiazol-2-yl}urea;
- N-(2,3-dihydro-1,4-benzodioxin-6-yl)-2-(1-naphthyloxy)acetamide;
- N-[4-(4-acetyl-1-piperazinyl)phenyl]-4-ethoxy-3-nitrobenzamide;
- N-(2-chlorophenyl)-3-(4-fluorophenyl)acrylamide;
- 1-[(dimethyl-lambda~4~-sulfanylidene)amino]-2-methoxy-4-nitrobenzene;

- 5-benzylidene-1-(2-chlorophenyl)-2,4,6(1H,3H,5H)-pyrimidinetrione;
- 4-ethyl-5,6-dimethyl-2-phenylpyrimidine;
- 2-(3-chlorobenzylidene)-1H-indene-1,3(2H)-dione;
- 5-{5-[(3-methyl-5-oxo-1-phenyl-1,5-dihydro-4H-pyrazol-4-ylidene)methyl]-2-furyl}-1H-isoindole-1,3(2H)-dione;
- N-(2,5-dimethylphenyl)-3-(4-methoxyphenyl)acrylamide;
- 2-({2-[(4-nitrophenyl)amino]ethyl}amino)ethanol;
- N-(3-methoxyphenyl)-4-propoxybenzamide;
- 2-(4-hydroxyphenyl)-3-phenyl-2,3-dihydro-4(1H)-quinazolinone;
- 4-methyl-1-(2-nitrobenzoyl)piperidine;
- 2-hydroxy-N'-[(2-methylphenyl)sulfonyl]benzohydrazide;
- 4-(1,3-benzothiazol-2-yl)butanoic acid;
- 4-(3-methylbenzylidene)-1-phenyl-3,5-pyrazolidinedione;
- 4-(2,4-dichlorophenoxy)-N-(2-ethoxyphenyl)butanamide;
- N-(2-methoxyphenyl)-N'-(phenylsulfonyl)benzenecarboximidamide;
- N-[2-(2-chloro-5-iodophenyl)-1,3-benzoxazol-5-yl]-2-methylpropanamide;
- 5-(4-butoxyphenyl)-3-cyclohexyl-1,2,4-oxadiazole;
- N-(3,4-dichlorophenyl)-N'-4H-1,2,4-triazol-4-yl urea;
- 6-chloro-4-phenyl-3-[3-(3,4,5-trimethoxyphenyl)acryloyl]-2(1H)-quinolinone;
- 6-bromo-4-phenyl-3-[3-(3,4,5-trimethoxyphenyl)acryloyl]-2(1H)-quinolinone; and
- N-(1H-1,2,3-benzotriazol-1-ylmethyl)-4-nitro-1,2,5-oxadiazol-3-amine for use in the treatement and/or the prevention of bone loss diseases in a subject in need thereof.

[0020] More preferably, the compounds are chosen in the group consisting in:

- 4-[5-(4-bromophenyl)-3-(4-nitrophenyl)-4,5-dihydro-1H-pyrazol-1-yl]-4-oxobutanoic acid
- 2,2,2-trichloro-N-(1,1-dioxido-2,3-dihydro-3-thienyl)-N-(4-methylphenyl)acetamide
- 3-(3-chlorophenyl)-7-methyl-4-methylene-3,4-dihydro-2(1H)-quinazolinonc
- 3-[4-(3-bromobenzylidene)-3-methyl-5-oxo-4,5-dihydro-1H-pyrazol-1-yl]benzoic acid
- N-2,1,3-benzothiadiazol-4-yl-5-bromo-2-furamide
- 1-acetyl-4-(2-chloro-4-nitrophenyl)-2-methylpiperazine
- 3-(3-methoxybenzylidene)-5-(4-methylphenyl)-2(3H)-furanone
- 3-[5-(3,4-dichlorophenyl)-2-furyl]acrylic acid

- (2-chloro-4-{[5-(2-chlorophenyl)-6-(ethoxycarbonyl)-7-methyl-3-oxo-5H-[1,3]thiazolo[3,2-a]pyrimidin-2(3H)-ylidene]methyl}-6-methoxyphenoxy)acetic acid
- 4-{[4-(diphenylmethyl)-1-piperazinyl]sulfonyl}-2,1,3-benzothiadiazole
- 4-[4-phenyl-5-(2-thienyl)-1H-imidazol-2-yl]-1,2-benzenediol
- N-(3,4-dimethoxyphenyl)-4-[methyl(phenylsulfonyl)amino]benzamide
- 1-[(2-hydroxyphenyl)carbonothioyl]-3-phenyl-5-(trifluoromethyl)-4,5-dihydro-1H-pyrazol-5-ol
- 2-methoxyethyl 4-[(4-tert-butylbenzoyl)amino]benzoate
- N-(2,3-dichlorophenyl)-3-(5-methyl-2-furyl)acrylamide
- N-(4-fluorophenyl)-3-[3-(trifluoromethyl)phenyl]acrylamide
- 3-(2-furylmethyl)-2-(2-hydroxyphenyl)-2,3-dihydro-4(1H)-quinazolinone
- 2,6-di-tert-butyl-4-(2,3-dihydro-1H-perimidin-2-yl)phenol
- 3-benzyl-2-(2,6-dichlorophenyl)-2,3-dihydro-4(1H)-quinazolinone
- 1-(3,4-dichlorobenzyl)-1H-indole-3-carbaldehyde
- N-(4-ethoxyphenyl)-2-{[5-(4-methoxyphenyl)-1,3,4-oxadiazol-2-yl]thio}acetamide
- 5-(4-nitrobenzylidene)-2-thioxo-3-[3-(trifluoromethyl)phenyl]-1,3-thiazolidin-4-one
- (3,5-dichlorophenyl)[(phenylsulfonyl)carbonyl]amine
- N-(2-bromophenyl)-3-(5-methyl-2-furyl)acrylamide
- 2-(2-chlorophenoxy)-N-[2-chloro-5-(trifluoromethyl)phenyl]acetamide
- N-[4-(4-acetyl-1-piperazinyl)phenyl]propanamide
- 8-[(dimethylamino)methyl]-9-hydroxy-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-one
- 4-tert-butyl-N-[1-{[(2-methoxyphenyl)amino]carbonyl}-2-(2-thienyl)vinyl]benzamide
- 2-chloro-N-(3-chloro-4-methoxyphenyl)benzamide
- N-[5-(1-adamantyl)-1,3,4-thiadiazol-2-yl]-N'-phenylurea
- N-(3,4-dichlorophenyl)-N'-{5-[(4-methylphenoxy)methyl]-1,3,4-thiadiazol-2-yl}urea
- N-(2,3-dihydro-1,4-benzodioxin-6-yl)-2-(1-naphthyloxy)acetamide
- N-[4-(4-acetyl-1-piperazinyl)phenyl]-4-ethoxy-3-nitrobenzamide
- N-(2-chlorophenyl)-3-(4-fluorophenyl)acrylamide
- 1-[(dimethyl-lambda~4~-sulfanylidene)amino]-2-methoxy-4-nitrobenzene
- 5-benzylidene-1-(2-chlorophenyl)-2,4,6(1H,3H,5H)-pyrimidinetrione; and
- 4-ethyl-5,6-dimethyl-2-phenylpyrimidine.

[0021] As used herein, the expression "DOCK5 protein" refers to a polypeptide comprising at least the DHR2 domain of the protein DOCK5 corresponding to the amino acid 1132 to 1661 of the DOCK5 protein from *Mus musculus* SEQ ID NO:1 and derivatives thereof.

[0022] The present description is also directed to a method for identifying a compound which inhibits the activation of RAC GTPase, more specifically RAC1/2 GTPase, by DOCK5 protein comprising the steps of:

- coexpressing a polypeptide comprising at least the DHR2 domain of the protein DOCK5 and the RAC proteins in a cell, wherein said polypeptide induces the conversion of inactive RAC, which inactive RAC is bound to GDP, to active RAC, which active RAC is bound to GTP,
- contacting or not said cell with said compound,
- determining the conversion of inactive RAC to active RAC, more specifically the conversion of inactive RAC1/2 to active RAC1/2, in the presence or absence of said compound, and
- selecting the compound inhibiting the conversion of inactive RAC to active RAC, more specifically the conversion of inactive RAC1/2 to active RAC1/2.

[0023] The full length Dock5 protein has an aminoterminal SH3 domain, between aminoacids K11 and E68, followed by the DHR1 domain, between aminoacids G440 and E682, and the DHR2 domain between aminoacids M1132 and Y1661 (Figure 3E).

[0024] Preferably, said DOCK5 protein corresponds to SEQ ID NO:1.

[0025] Again preferably, said DOCK5 protein corresponds to SEQ ID NO:4 corresponding to *Homo sapiens* DOCK5 protein.

[0026] As used herein, the expression "RAC protein" refers to SEQ ID NO:2 and derivatives thereof.

[0027] Particularly, said cell is an eukaryotic cell, preferably a yeast cell.

[0028] Advantageously, said method comprises the expression of any protein, capable to interact with the active RAC protein and not with inactive RAC protein. One skilled in the art knows such protein known as a GTPase effector. Particularly, the protein capable to interact with the active RAC protein is chosen in the group comprising PAK1 protein.

[0029] As used herein, the expression "PAK1 protein" refers to the SEQ ID NO:3 and derivatives thereof.

[0030] As used herein, the term "derivatives"' refer to a polypeptide having a percentage of identity of at least 80% with amino acid 1132 to 1661 of SEQ ID NO: 1, SEQ ID NO: 2, EQ ID NO:3, SEQ ID NO:4 or SEQ ID NO:9, or orthologs thereof, preferably of at least 90%, as an example of at least 95%, and more preferably of at least 99%.

[0031] As used herein, "percentage of identity" between two amino acids sequences or two nucleic sequences, means the percentage of identical amino-acids or nucleotides, between the two sequences to be compared, obtained with the best alignment of said sequences, this percentage being purely statistical and the differences between these two sequences being randomly spread over the amino acids sequences. As used herein, "best alignment" or "optimal alignment", means the alignment for which the determined percentage of identity (see below) is the highest. Sequences comparison between two sequences are usually realized by comparing these sequences that have been previously align according to the best alignment; this comparison is realized on segments of comparison in order to identify and compared the local regions of similarity. The best sequences alignment to perform comparison can be realized, beside by a manual way, by using the global homology algorithm developed by SMITH and WATERMAN (Ad. App. Math., vol.2, p:482, 1981), by using the local homology algorithm developed by NEDDLEMAN and WUNSCH (J. Mol. Biol., vol.48, p:443, 1970), by using the method of similarities developed by PEARSON and LIPMAN (Proc. Natl. Acd. Sci. USA, vol.85, p:2444, 1988), by using computer softwares using such algorithms (GAP, BESTFIT, BLAST P, BLAST N, FASTA, TFASTA in the Wisconsin Genetics software Package, Genetics Computer Group, 575 Science Dr., Madison, WI USA), by using the MUSCLE multiple alignment algorithms (Edgar, Robert C., Nucleic Acids Research, vol. 32, p:1792, 2004). To get the best local alignment, one can preferably used BLAST software, with the BLOSUM 62 matrix, or the PAM 30 matrix. The identity percentage between two sequences of amino acids two nucleic sequence is determined by comparing these two sequences optimally aligned, the amino acids sequences being able to comprise additions or deletions in respect to the reference sequence in order to get the optimal alignment between these two sequences. The percentage of identity is calculated by determining the number of identical position between these two sequences, and dividing this number by the total number of compared positions, and by multiplying the result obtained by 100 to get the percentage of identity between these two sequences.

[0032] Advantageously, said cell further comprises a reporter gene under the control of a promoter sequence, and said RAC and PAK1 proteins are each fused either with a transactivation domain or with a DNA binding domain specific of said promoter sequence, wherein the interaction of RAC with PAK1 results in the induction of expression of the reporter gene.

[0033] The method corresponds to the Yeast Exchange Assay (YEA) as disclosed in DE TOLEDO et al. (FEBS, vol.480, p:287-292, 200) and International Patent application PCT WO 2005/064007 using the DOCK5 and the RAC protein.

[0034] The term "reporter gene" is well known from the skilled person and can correspond to an auxotrophic marker or to a gene coding for a protein which can be simply detected such as GFP, luciferase or β-gal.

[0035] The determination of the conversion of inactive RAC to active RAC is done by determining the expression of the reporter gene. The inhibition of the expression of the reporter gene corresponding to an inhibition of the conversion of inactive RAC to active RAC.

[0036] The present description also relates to a method for the selection of compounds, which permit to decrease the level of expression of a DOCK5 gene (SEQ ID N°10) in diseases associated with bone loss comprising the step of:

a) contacting a test compound with an host cell expressing a reporter nucleic acid comprising a nucleic acid sequence coding for a reporter placed under the control of
a promoter, which promoter comprises all or part of the promoter sequence of DOCK5 gene or a derivative thereof, and

b) measuring the level of expression of the reporter.

[0037] As used herein, the term "derivatives'" refer to a nucleic sequence having a percentage of identity of at least 80% with the sequence of DOCK5 promoter, preferably of at least 90%, as an example of at least 95%, and more preferably of at least 99%. The percentage of identity is as defined above.

[0038] By "compound" or "test compound", one should understand compounds of different nature, structure and origin, particularly biological compounds, nuclear factors, cofactors, and the like, chemical, synthetic compounds and the like, which are tested for their capacity of enhancing the level of expression of said gene implicated in antimicrobial defence.

[0039] The concentration of said test compound can be adjusted by the skilled person according to the characteristics of said compound (its toxicity, ability to penetrate cells, etc.), the number of cells, the length of the incubation period, etc. Generally, the cells are exposed to concentrations of test compounds ranging from 1 nM to 1 mM. Of course it is possible to test other concentrations, and also to test simultaneously different test compound concentrations.

[0040] Different adjuvants and/or vectors and/or products facilitating the penetration of the test compounds into the host cell such as liposomes, cationic lipids or polymers can also be used, when necessary.

[0041] By "decreasing the level of expression of a DOCK5 gene", one should understand that the expression level of DOCK5 gene is diminished or inhibited compared to a control level.

[0042] It should be noticed that said expression level of the DOCK5 gene is correlated to the expression level of the reporter gene in the method of the description. In fact, one of skilled in the art can deduce that a test compound can decrease the expression level of the DOCK5 gene from the capacity of said compound to obtain an diminished expression level of the reporter gene in the method of the description.

[0043] In the present description, the control level can be determined, by example, by measuring the expression level of the reporter gene in the absence of the test compound.

[0044] Particularly, the method described herein further comprises a step c) of comparing the level of expression of the reporter gene as measured in step b) with the level of expression of the reporter gene in the absence of said test compound.

[0045] The present description also relates to a method for identifying a compound which inhibits the activation of RAC1/2 GTPaseby inhibiting the binding of ELMO1 protein (SEQ ID N°9) to the SH3 domain of DOCK5 comprising the steps of:

a) contacting a test compound with the ELMO1 protein or a derivative thereof;
b) determining the possible binding of said test compound to the ELMO1 protein or the derivative thereof; and optionally
c) selecting the compound inhibiting the conversion of inactive RAC1/2 to active RAC1/2.

[0046] As used herein, the expression "ELMO1 protein" refers to SEQ ID N°9 and derivatives thereof.
The binding between said ELMO1 protein and the tested compound can be measured by methods well known from one skilled in the art.
If the binding between said ELMO1 protein and said test compound is observed, it can thus be conclude that the compound is an inhibitor of the binding of ELMO1 and the SH3 domain of DOCK5, and that this compound is useful to inhibit the conversion of inactive RAC1/2 to active RAC1/2.
Optionally, said method can include a further step after step b) of contacting a polypeptide comprising at least the SH3 domain of DOCK5 or the derivative thereof with said test compound and ELMO1 protein, and comparing the binding between said ELMO1 protein and said polypeptide in the presence or in the absence of said compound.

[0047] Alternatively, the present description relates to a method for identifying a compound which inhibits the activation of RAC1/2 GTPase by inhibiting the binding of ELMO1 to the SH3 domain of DOCK5 comprising the steps of:

a) contacting a test compound with the ELMO1 protein or the derivative thereof and a polypeptide comprising at least the SH3 domain of DOCK5 or the derivative thereof;
b) measuring the binding between said ELMO1 protein and said polypeptide in the presence or in the absence of said compound; and optionally
c) selecting the compound inhibiting the conversion of inactive RAC1/2 to active RAC1/2.

The binding between said ELMO1 protein and said polypeptide can be measured by methods well known from one skilled in the art. If the binding between said ELMO1 protein and said polypeptide in the presence of the tested compound is lower than the one measured in absence of said compound, it can thus be conclude that the compound is an inhibitor of the binding of ELMO1 to the SH3 domain of DOCK5, and that this compound is useful to inhibit the conversion ofinactive RAC1/2 to active RAC1/2.

[0048] Optionally, the compounds as described above are coupled with a bisphosphonate radical. The bisphosphonate radical permits a fast incorporation of the compound after its administration.

[0049] Another object of the present invention is a compound as described above for treating and/or preventing bone loss diseases in a subject in need thereof.

[0050] Therefore, the present invention relates to the use of at least one compound as described above in preparing a drug for treating and/or preventing bone loss disease in a subject in need thereof.

[0051] Another object of the present invention is a pharmaceutical composition comprising at least one compound as described above and, optionally, a pharmaceutically acceptable support for treating and/or preventing bone loss diseases in a subject in need thereof.

[0052] Therefore, the present invention relates to the use of a pharmaceutical composition comprising at least one compound as described above in preparing a drug for treating and/or preventing bone loss diseases in a subject in need thereof.

[0053] As examples of pharmaceutically acceptable supports, the composition can include emulsions, microemulsions, oil in water emulsions, anhydrous lipids and water in oil emulsions or other types of emulsions.

[0054] The inventive composition can further include one or more additives such as diluents, excipients, stabilizers and preservatives. Such additives are well known to those skilled in the art and are described notably in "Ullmann's Encyclopedia of Industrial Chemistry, 6th Ed." (various editors, 1989-1998, Marcel Dekker) and in "Pharmaceutical Dosage Forms and Drug Delivery Systems" (ANSEL et al., 1994, WILLIAMS & WILKINS).

[0055] As used in the present application, the term "subject" refers to a mammal such as a rodent, cat, dog, primate or human, preferably said subject is a human.

[0056] The present description relates to a therapeutic method for treating a subject and/or preventing bone loss diseases, comprising the administration of a therapeutically effective quantity of a pharmaceutical composition as described above.

[0057] A "therapeutically effective quantity" means a quantity that inhibits or reduces the osteoclats activation. Those skilled in the art will be able to determine said therapeutically effective quantity based on their general knowledge and on the methods described in the examples.

[0058] The compounds can be administered by any mode of administration such as, for example, by intramuscular, intravenous or oral route, etc.

[0059] The inventive compounds preferably will be administered at a concentration chosen by those skilled in the art according to the state of advancement of the disease and the targeting mode used, the age and the weight of the subject. Preferably, the compound will be administrated at a concentration of between 5 and 200μM, preferably at a concentration comprised between 10 and 100 μM.

[0060] In the following, the invention is described in more detail with reference to amino acid sequences, nucleic acid sequences and the examples. Yet, no limitation of the invention is intended by the details of the examples.

EXAMPLES

1) Dock 5 mRNA expression

[0061] The expression of Dock5 was established in different mouse tissue. For this, DNaseI-treated total RNA was extracted using the High pure RNA isolation kit (ROCHE DIAGNOSTICS). To generate cDNA, RNA was primed with 10-mer random primers and reverse transcription catalysed using SUPERSCRIPT II reverse transcriptase (INVITROGEN). Quantitative PCR was performed with a Light Cycler (ROCHE DIAGNOSTICS) or a Mx3000p PCR system (STRATAGENE) using the PLATINIUM *Tag* DNA polymerase (INVITROGEN) and SYBR GREEN I (BIOWITAKKER)

as in described in COELHO et al. (Proc. Natl. Acad. Sci. U.S.A., vol.102, p:1 1917-11922, 2005) with the primers Dock5-Up (TGGTGACACAGGGACAGTGG, SEQ ID NO:5) and Dock5-Do (CACCCCAACTAGCACGTGG, SEQ ID NO: 6) for Dock5, and Gapdh-Up (ACAGTCCATGCCATCACTGCC, SEQ ID NO: 7) and Gapdh-Do (GCCTGCTTCACCACCT-TCTT, SEQ ID NO: 8) for Gapdh as a control.

[0062] The specificity was assessed by purification and sequencing of the PCR product. All real-time PCR measures to quantify cDNA were done in triplicate, and the 95% confidence limits of the ratios to Gapdh were determined by Student's *t*-test.The figure 1A and B show the expression of Dock5 in different mouse tissues In figure 1A, said expression has been normalised according to Dock5 osteoclasts' expression (i.e., Dock5 osteoclasts' expression corresponding to 100% level).

[0063] The analysed tissues of figure 1A are as follow: Muscle 1 (M1), Muscle 2 (M2), heart (H), mammary gland at 10.5 days of embryo's development (GM 10.5), mammary gland at 13.5 days of embryo's development (GM 13.5), mammary gland at 15.5 days of embryo's development (GM 15.5), mammary gland at 18.5 days of embryo's development (GM 18.5), mammary gland of juvenile mouse (GM j), mammary gland at lactation (GM l), brain (Br), kidney (Kd), uterus (Ut), liver (Lv), macrophage (Mac), Testis 1 (T1), Testis 2 (T2), spleen (Sp), colon (Co), bone marrow (Bm), placenta at 13.5 days of embryo's development (Pl 13.5), placenta at 15.5 days of embryo's development (GM 15.5), and osteoclasts (Os).

[0064] Furthermore, total RNA of bone marrow macrophages (ND), induced for osteoclastic differentitation (OC) or dendritic cell differentiation (DC) and from mensenchymal stem cells (MSC J0) induced for osteoblastic differentiation (MSC J4) were extracted and level of Dock5 mRNA relative to Gapdh mRNA was determined by RT-PCR.

[0065] The results of figure 1B show that Dock5 mRNA is not expressed in dendritic cells and osteoblasts.

[0066] The results show that Dock5 is predominantly expressed in osteoclats, but an important expression of Dock5 is also found in placenta (i.e., nearly 50%) and testis. The expression of Dock5 is reduced in bone marrow, colon, spleen and testis compared to osteoclasts (i.e., nearly 20%), whereas its expression in the other tested tissues is fewer (i.e., nearly 10%). Thus, the results established that the expression of Dock5 is very specific from the osteoclats.

2) obtaining of DOCK5 polyclonal antibody

[0067] A rabbit polyclonal antibody was raised to a mouse DOCK5 C-terminus peptide corresponding to amino acids 1658-1869 from mouse DOCK5 and purified by immunoaffinity. In fact, the amino acids sequences significantly differ between the differents members of the subgroup DOCK-A.

[0068] Osteoclastogenesis was induced by RANKL-stimulation in purified mouse bone marrow macrophages were purified and in RAW264.7 cell line as described in BRAZIER *et al.* (abovementioned, 2006), which cells were maintained in culture. At 0, 3 or 5 days of stimulation, the cells were subjected to SDS-PAGE and blotted on polyvinyl difluoride membrane (MILLIPORE IMMOBILON-P pore size 0.45 μm). After transfer, the membrane was incubated in TBS-T (Tris buffered saline containing 0.1% TWEEN) with 2% skim millk at room temperature for 30 min and then with rabbit antisera diluted 1:1000 in TBS-T overnight at 4°C. The bound antibodies were detected by peroxidase labelled anti-rabbit immunoglobulin chemoluminescence system (AMERSHAM) and LAS-1000 image analyser (FUJI FILM). As a control, the membrane was further incubated with GAPDH antibodies, the bound antibodies being detected as previously.

[0069] The Figure 2A and B show the expression of DOCK5 and GAPDH proteins in purified mouse bone marrow macrophages at 0, 3 and 5 days from the RANKL-stimulated osteoclastogenesis.

[0070] The results established that a protein of 215 kDa was induced during RANKL-stimulated osteoclastogenesis of purified mouse bone marrow macrophages (figure 2) and of RAW264.7 cell line (data not shown). This size is compatible with the size of the DOCK5 protein deduced from its mRNA.

[0071] Furthermore, total proteins were extracted from mouse tissues and subjected to western blot with antibodies against Dock5 and against tubulin for normalization.

[0072] The analysed tissues of figure 2C are as follow Ey: Eye, Sp: Spleen, St: Stomac, Te: Testis, P1: Placenta, Lu: Lung, Br: Brain, He: Heart, Li: Liver, Ki: Kidney; Mu: Muscle.

[0073] The results of figure 2A confirm that Dock 5 is predominantly expressed in osteoclasts, testis and placenta.

3) DOCK5 polyclonal antibody specificity

[0074] ShRNA target sequences were selected in mouse *Dock5* open reading frames, and the 65-mer sense and antisense strands of DNA oligonucleotides were designed according to the CLONTECH BIOINFORMATICS DATA server and are described in BRAZIER *et al.* (abovementioned, 2006). The oligonucleotide was then synthetised by INVITROGEN annealed and cloned in pSINREN-RETROQ vector containing a puromycin resistance selection marker according to the manufacturer's instructions (CLONTECH). The pSIREN-RETROQ-Luc vector (CLONTECH) targeting firefly luciferase was used as a control. Retrovirus packaging was done by co-transfection of pSIREN-RETROQ vectors, the Friend MLV-based Gag-Pol expression vector pC57GP (LASSAUX et al., J. Virol., vol.79, p:6560-6564, 2005), and

the VSV-G envelope glycoprotein expression vector pCSIG (BATTINI et al., Proc. Natl. Acad Sci., vol.96, p:1385-1390, 1999) into 293T cells using Jet PI (QBIOGEN) according to manufacturer's instructions. Viral supernatants were harvested 3 days after transfection and filtered through a 0.45 μm pore size filter.

[0075] For infections, RAW264.7 cells were plated at 2.10^5 cells per 6-cm dish. The next day, the medium was replaced for 4h with 1.5 ml of viral supernatant and 0.5 ml of growth medium containing 8μg/ml polybrene. Cells were left to recover in growth medium for 24 h, and infected cells were selected by addition of puromycin (3 μg/ml) for another 24h. Infected RAW264.7 were scrapped and reseeded in growth medium at 5.10^4 cells/well of a 6-well plate for RANKL-stimulated osteoclastogenesis as described in BRAZIER *et al.* (abovementioned, 2006).

[0076] Then, the detection of the DOCK5 protein was realized with the rabbit polyclonal anti-DOCK5 as described previously.

[0077] The Figure 2A shows the expression of DOCK5 and GAPDH proteins in RAW264.7 cell lines infected with retrovirus coding for either small hairpin RNA directed against firefly luciferase (shLuc) or dock5 (shDock5) at 0, 3 and 5 days from the RANKL-stimulated osteoclastogenesis.

[0078] As described previously, the results established that a protein of 215 kDa was induced during RANKL-stimulated osteoclastogenesis of RAW264.7 cell line infected with a retrovirus coding for a small hairpin RNA directed against firefly luciferase. For RAW264.7 cell line infected with a retrovirus coding for a small hairpin RNA directed against Dock5, no protein of 215 kDa was detected during RANKL-stimulated osteoclastogenesis. Finally, the results confirmed that the protein DOCK5, such as its corresponding RNA, is induced during osteoclastogenesis, and that the obtained rabbit polyclonal anti-DOCK5 antibody is specific of the DOCK5 protein.

4) Dock5 mediates Rac activation *in vivo*

[0079] We therefore examined whether the DOCK5 protein, and more specifically its DHR2 domain, could activate small GTPases of the Rho-family-i.e., RAC1/2 and cdc42-.

[0080] To this end a GFP protein fused to the DHR2 domain of DOCK5 (see Figure 3A) was generated.

[0081] *In vivo* GTP loading of Rac and cdc42 was analysed as previously described in COTE & VUORI (J. Cell. Sci., vol.115, p: 4901-4913, 2002).

[0082] Briefly, 293-T cells were transfected in six-wells plates with a vector coding for the GFP fusion protein comprising the DHR2 domain of DOCK5 (DHR2) or with a vector coding for GFP (GFP). 48 hours after transfection, cells were lysed in MLB buffer (25mM HEPES, pH 7.5, 150 mM NaCl, 1% NP-40, 10 mM MgCl2, 1 mM EDTA and 10% glycerol). The clarified lysates were incubated for 30 minutes with the GST-PAK-PBD fusion protein bound to Glutathione sepharose. The beads were washed extensively with MLB buffer and the bound GTP-loaded Rac and cdc-42 were detected by immunoblotting. Equal amount of input lysate were analysed by immunoblotting to verify the expression levels of Rac, cdc42, GFP-DHR2 and GFP proteins. GST-PAK-PBD was expressed and purified for these experiments as described previously in ABASSI & VUORI (EMBO J., vol.21, p:4571-4582, 2002).

[0083] The figure 3B shows the expression levels of Rac, cdc42, GFP-DHR2 and GFP proteins in total cell lysates (total) and the protein detected after GTP-trapping.

[0084] The results show that the expression of the DHR2 domain in 293-T cells induces the activation of endogeneous Rac but has no effect on cdc42 (figure 3B). Finally, the results established that the DHR2 domain of DOCK5 is able to activate the Rac GTPase, whereas it has no effect on cdc42.

5) ELMO1 binds to the SH3 domain of DOCK5

[0085] 293-T cells were cotransfected as described previously with a vector coding for the ELMO1 protein or deleted from the C-terminus (ΔT625) - (GUMIENNY et al., Cell, vol.107, p:27-41, 2001) and a vector coding GFP fusion proteins comprising the Full length DOCK5 protein (FL), the DHR2 domain, the DOCK5 protein sequence deleted from (i) the amino acids 1 to 559 of its N-terminus extremity (ΔNter), including the SH3 domain and half of the DHR1 domain, or the DOCK5 protein sequence deleted from (ii) the amino acids 1 to 82 comprising the SH3 domain (ΔSH3) (see figure 3 E).

[0086] 48 hours after transfection, cells were lysed in MLB buffer (25mM HEPES, pH 7.5, 150 mM NaCl, 1% NP-40, 10 mM MgCl2, 1 mM EDTA and 10% glycerol). The clarified lysates were immunoprecipitated with anti-GFP antibody and the bound ELMO1 protein was detected by immunoblotting. Equal amount of input lysate were analysed by immunoblotting to verify the expression levels of ELMO1 protein.

[0087] The figure 3C and 3F show the expression levels of ELMO1 protein in total cell lysates (total) and after immunopreciptation with anti-GFOP antibody (IP GFP), in cells cotransfeted with a vector coding for ELMO1 protein and full length DOCK5 (FL), the DHR2 domain (DHR2), DOCK5 deleted from its SH3 domain (ΔSH3) or from its N-term domain (ΔNter).

[0088] The results show that deletion if Dock5 SH3 domain or coexpression of full lengh ELMO1 with full length Dock5 greatly increased its exchange activity on Rac thus establishing that the N-term domain of DOCK5, and more specifically

its SH3 domain, is necessary for the binding of ELMO1 to DOCK5 (Figure 3C). Figure 3F shows that Dock5 N-terminal domain binds Elmo1 C-terminus.

6) The SH3 domain of DOCK5 inhibits Rac activation *in vivo*

[0089] *In vivo* GTP loading of Rac was determined as previously in the presence of different domains of the DOCK5 protein and, eventually, the simultaneous presence of the ELMO1 protein.

[0090] The figure 3D shows the expression levels of Rac in total cell lysates (total) and the RAC-GTP protein detected after GTP trapping in the cells transfected with a vector coding for the GFP protein (GFP), for the DHR2 domain of DOCK5 (DHR2), for the DOCK5 protein deleted from its SH3 domain (ΔSH3), for the DOCK protein (FL), eventually cotransfected with a vector coding for the ELMO1 protein (FL+Elmo1).

[0091] The results show as previously that the expression of the DHR2 domain is able to activate the Rac GTPase and that the SH3 domain inhibits this activation (Figure 3D). In fact, the deletion of the SH3 domain results in the activation of the Rac GTPase by the deleted DOCK5 protein. Finally, the binding of ELMO1 to the SH3 domain results in the activation of the Rac GTPase.

7) DOCK5 is a major activator of Rac in osteoclats.

[0092] RAW264.7 cell lines stimulated with RANKL were infected as described previously with a retrovirus coding for either small hairpin RNA directed against firefly luciferase (shLuc) or dock5 (shDock5).

[0093] Furthermore, the levels of active Rac in TCL from $Dock5^{+/+}$ and $Dock5^{-/-}$ osteoclasts were determined. $Dock5^{-/-}$ mice were obtained by gene trap (Laurin et al. 2008) to generate Dock5 deficient osteoclasts.

[0094] The *in vivo* GTP loading of Rac was determined as disclosed previously.

[0095] The figure 4 shows the average of three independent experiments with active Rac levels set to 1 in control shLuc and $Dock5^{+/+}$ osteoclasts. Error bars : SD.

[0096] The figure 4A show the expression levels of Rac in total cell lysates (total Rac) and the RAC-GTP protein detected after GTP trapping in the cells infected with a retrovirus coding for either small hairpin RNA directed against firefly luciferase (shLuc) or dock5 (shDock5).

[0097] The figure 4B shows that $Dock5^{-/-}$ osteoclasts have reduced active Rac levels compared to the control level of $Dock5^{+/+}$ osteoclasts.

[0098] The results established that the inhibition of DOCK5 expression results in a decrease of the levels of active RAC (i.e., 40%) in osteoclasts expressing Dock5 shRNAs and osteoclasts derived from Dock5 KO BMMs as compared to controls. Thus, DOCK5 is an essential exchange factor of RAC in osteoclasts.

8) DOCK5 is necessary for mineralised matrix resorption

[0099] RAW264.7 cell lines were infected as described previously with a retrovirus coding for either small hairpin RNA directed against firefly luciferase (shLuc) or dock5 (shDock5), and then osteoclastogenesis was stimulated with RANKL. The obtained cells were then cultured on calcium phosphate substrates to induce the formation of the actin ring. After 48 hours, cells were fixed and stained for actin using rhodamine-labeled Phalloidin to reveal the sealing zone (figure 5).

[0100] The figure 6 shows the polymerisation of actin in RAW264.7 cell lines stimulated with RANKL which have been infected with a retrovirus coding for either small hairpin RNA directed against firefly luciferase (shLuc) or dock5 (shDock5) and the mineralised matrix resorption in the presence of said osteoclasts.

[0101] The results show that in the osteoclasts, the DOCK5 protein is associated with the podosome and with the sealing zone (data not shown). The osteoclasts wherein DOCK5 expression was inhibited show a default of contraction and of sealing zone formation. The measure of mineralised matrix resorption surface by VON KOSSA staining shows a strong decrease of the resorption by osteoclasts wherein DOCK5 expression was decreased.

9) Confirmation by osteoclasts from $Dock5^{-/-}$ mice

[0102] BMMs (bone marrow macrophages) isolated from $Dock5^{+/+}$ and $Dock5^{-/-}$ mice were differentiated into osteoclasts in the presence of 100 ng/ml RANKL and 10 ng/ml M-CSF. TCL (total cell extracts) were prepared at days 0, 3 and 4 and subjected to western blot with antibodies against Dock5 and β-gal and against tubulin for normalization.

[0103] Osteoclasts derived from $Dock5^{-/-}$ BMMs express Dock5 truncated after aminoacid 1115, between DHR1 and DHR2 domains, and fused to a β-geo cassette (Figure 7A).

[0104] Furthermore, the differentiated osteoclasts were fixed and stained with TRAP and Hoeschst at day 5 to determine the number of MNCs (multinucleated cells). Figure 7B (average and SD from four independent experiments **: significant difference, $p<0.01$, Mann & Whitney test) shows that the efficiency of TRAP positive MNCs formation was reduced in

Dock$^{-/-}$ BMMs as compared to Dock5$^{+/+}$ and osteoclasts were smaller.

[0105] Furthermore, in order to show that osteoclasts differentiated from Dock5$^{-/-}$ BMMs can't assemble a sealing zone, they were seeded on calcium-phosphate substrate to induce the formation of the actin ring. After 48 hours, cells were fixed and stained for actin using rhodamine-labeled Phalloidin (green) to reveal the sealing zone and with Hoeschst dye to stain nuclei (blue) (data not shown). It was observed that on calcium-phosphate substrates, sealing zone assembly and resorption was defective in Dock5$^{-/-}$ osteoclasts.

[0106] Finally, to demonstrate that Dock5$^{-/-}$ osteoclasts can't form resorption pit, derived from Dock5$^{-/-}$ BMMs were differentiated on bone sliced for 5 days, fixed and observed by scanning electron microscopy.

The results show that when seeded on bone slices, Dock5$^{-/-}$ osteoclasts did not form resorption pits.

Moreover, in order to show that Dock5$^{-/-}$ osteoclasts are defective for bone resorption, the levels of collagen degradation peptide (CTx) were determined in the medium of Dock5$^{+/+}$ and Dock5$^{-/-}$ osteoclasts after 5 days of differentiation and bone slices were stained. Figure 7C shows average and SD of three osteoclast-seeded wells from one experiment, representative of three independent experiments.

The measurement of collagen telopeptide (CTx) confirmed that the resorbing activity of Dock5$^{-/-}$ osteoclasts was defective (Figure 7C).

10) Suppression of Dock5 impairs RAC activation in osteoclasts.

[0107] The levels of osteoclastic markers in wild type and Dock5 deficient osteoclasts derived from BMM of Dock5$^{+/+}$ or Dock5$^{-/-}$ animals or from control and Dock5 shRNA expressing RAW264.7 cells. Total RNA was prepared from Dock5$^{+/+}$ and Dock5$^{-/-}$ BMMs grown for 5 days in the presence of M-CSF only (black bars) or in the presence of RANKL and M-CSF to obtain osteoclasts (white bars). The levels of indicated gene mRNAs relative to Gapdh mRNA were determined by RT-PCR.

[0108] The results of figure 8A show that the expression of osteoclast differentiation markers is normal in osteoclasts differentiated from Dock5$^{-/-}$ BMMs. This indicated osteoclast maturation was not affected and suggested Dock5 deficiency did not impair the capacity of osteoclasts to respond to M-CSF and RANKL in vitro.

[0109] Moreover, the ability of Dock5$^{-/-}$ preosteoclasts to respond to M-CSF and RANKL was not the result of a compensatory increase in Dock1 or Dock2 expression as their mRNA levels were identical as in Dock5$^{+/+}$ (Figure 8B).

[0110] Preosteoclasts prepared from Dock5$^{+/+}$ and Dock5$^{-/-}$ BMMs were stimulated with M-CSF or RANKL for the inducated amount of time. The levels of ERK, p38 and Akt phosphorylation in TCL were determined by western blot.

[0111] The results show that M-CSF-driven phosphorylation ERK and p38MAP kinase (Figure 8C) and RANKL-driven phosphorylation of Akt (Figure 8D) were unaffected in Dock5$^{-/-}$ preosteoclasts as compared to controls.

[0112] Finally, these results established that DOCK5 is a new therapeutic target for limiting bone loss in menopause, osteoporosis, osteopenia due to bone metastases, periarticular erosions in rheumatoid arthritis, primary hyperparathyroidism, hypercalcemia of malignancy, Paget's disease of bone, periodontal disease, immobilization induced osteopenia, or in glucocorticoid treatment. Because of the specific osteoclasts DOCK5 expression, the targeting of DOCK5 may limit side effects such as the ones observed with drugs for treating bone loss.

11) Identification of DOCK5 inhibitor

[0113] In order to identify DOCK5 inhibitors, which inhibitors can be useful for treating bone loss associated disease, we use the Yeast Exchange Assay (YEA) as disclosed in DE TOLEDO et al. (FEBS, vol.480, p:287-292, 200) and International Patent application PCT WO 2005/064007.

[0114] Briefly, we transform a yeast strain TAT7 (Mata, trpl, his3, leu2, ura3, ade2, LYS:: (LexAop)4-HIS3, URA3:: (LexAop)8-lacZ) provided by J. CAMONIS) with vectors expressing the DHR2 domain of DOCK5 fused to a myc-tag (SEQ ID NO: ...), the wild type Rac GTPase fused to LexA and its effector PAK fused to the transactivation domain of GAL4.

[0115] In the obtained transformed yeast, the expression of the DHR2 domain of DOCK5 induces the activation of Rac, which activated Rac interacts with its effector PAK resulting in the expression of reporter genes β-Gal and His3 (see Figure 6).

[0116] In order to modify yeast cell membrane permeability, a mutation in the Erg6 gene has been introduced as disclosed in BLANGY et al. (Biol. Cell., vol.98(9), p:511-22, 2006). This mutation of the Erg6 gene increases the entry of the screened compounds in the yeast cells, and thus enables to limit the concentration of the screened compounds.

[0117] For screening DOCK5 inhibitors, which can be useful for treating bone loss diseases, the transformed yeast is contacted with several chemical or peptidic molecules, and the chemical or peptidic molecules inhibiting the expression of reporter genes β-Gal and His3 are selected for further testing in the bone loss model disclosed in 8 and then in bone loss diseases models.

[0118] The yeast strain TAT7 was used to identify DOCK5 inhibitors. The strain was seeded, in a 96-well culture plate in a selective medium devoid of histidine or in a non selective medium where histidine is added. 2560 compounds were

screened to select the ones which inhibit the growth of the strains in a selective medium without having effect on the growth in a non selective medium. DMSO was used as a control.

[0119] The compounds were tested at a concentration of 200μM in presence of 1% DMSO. The growth of the yeasts was measured by optical density at 600 nm at t= 2 hours, 15 hours, 20 hours and 24 hours after seeding. The inhibiting compounds were defined as follows:

- At time n, the growth derivative Cr (medium) = (OD600Tn-OD600T2)/Tn-T2 in test medium (-HIS) and in toxic medium (+HIS).
- At each time and for each plate, the Cr (-HIS) and Cr (+HIS) medium control was calculated on the control.
- the ratio R(compound)= Cr (-HIS) and Cr(+HIS) and R was calculated for each plate
- the inhibition rate was determined by dividing by the control ratio I(compound)= R(compound)/R(control) *
- the selected compounds are those showing a ratio I(compound) < 0.9 at each time.

[0120] Results are shown in table 2.

[0121] 55 compounds were thus selected as inhibiting the activation of RAC1/2 by Dock5.

12) Toxicity test on osteoclast precursors.

[0122] The selected compounds were then tested for their toxicity on osteoclast precursors. Since these cells do not express Dock5, a Dock5 inhibitor should not affect their growth. RAW264.7 cells used as osteoclasts inhibitors were allowed to grow for 72 hours with 10 to 100μM of compound. The growth of the cells was compared to control cells which were grown with 0.5% DMSO.

[0123] The results are presented in table 2. The optimal concentration was the determined for the compounds which were not toxic (the concentration which does not affect the growth of the cells).

13) Toxicity test on differentiated osteoclasts.

[0124] The compounds were tested for their toxicity on differentiated osteoclasts at the concentration determined above. RAW264.7 cells differentiated in osteoclasts were allowed to grow for 72 hours in presence of the tested compounds. The tartrate-resistant acid phosphatase (TRAP) was then revealed in osteoclasts by coloration (SUDA et al., 1997). This osteoclasts specific labeling permits to visualize the cell morphology. The cell morphology was then compared to control cells which were allowed to grow in presence of 0.5% DMSO. The compounds were then classified in 3 categories:

- compounds which induce the death of all the osteoclasts after 72 hours (-)
- compounds which induce morphological anomalies and/or death of part of the osteoclasts (+/-)
- Compounds which do not induce visible modifications of the osteoclasts.

[0125] The results are shown in table 2.

14) Resorption inhibition test

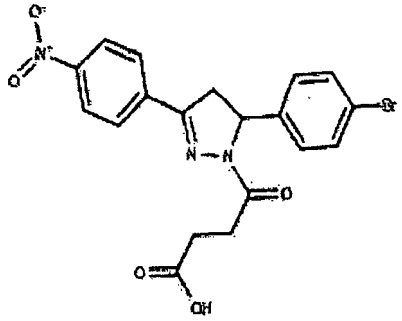
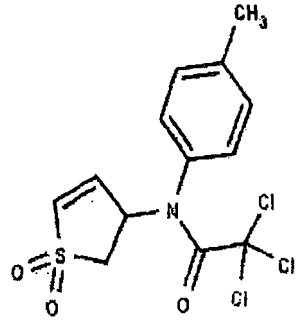
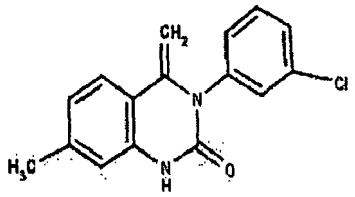
[0126] The identified compounds were used at the same concentration as defined above on osteoclats seeded on miner0alised matrix resorption surface of calcium phosphate (Osteologic Biocoat Clontech Reference 354609) during 72 hours. Then the mineralised matrix was coloured with silver nitrate in order to show the resorbed areas. The compounds were classified in 3 categories:

- Compounds that totally prevent resorption in 72 hours (-)
- Compounds that induce an attenuated resorption compared to the control (+/-)
- Compounds that do not visibly modify the osteoclats resorption activity compared to the control. (+)

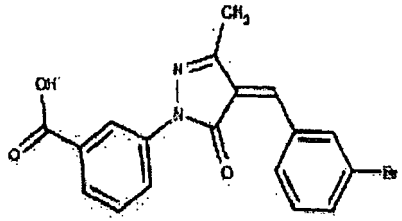
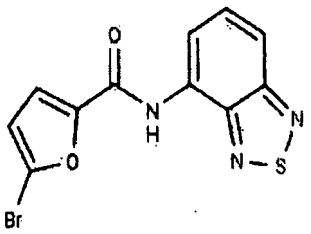
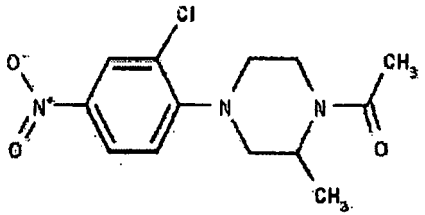
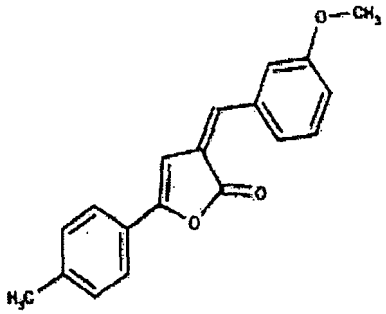
[0127] The compounds of the resorption categories (+/-) and (-) represent new inhibitors of the bone resorption. They were used at a concentration of 10 to 100 μM.

[0128] To confirm the results, the compounds were then tested *in vivo* in a mouse which presents osteoporose.

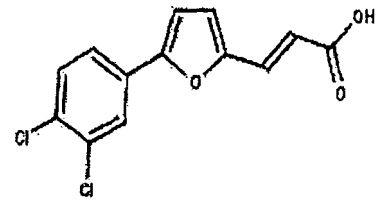
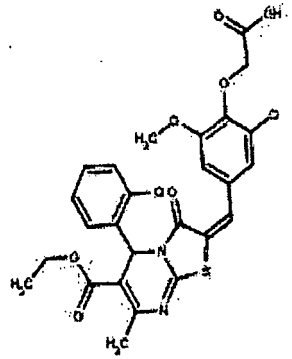
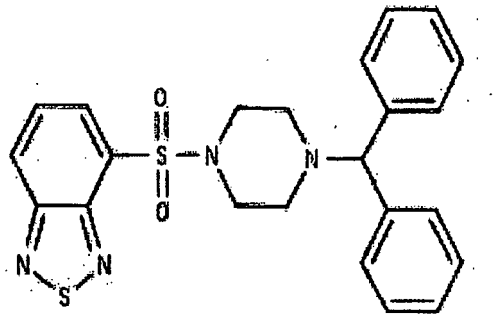
Table 1: compound identified by the screening method of the present invention

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	446,3	C19 H16 Br N3 O5	4-[5-(4-bromophenyl)-3-(4-nitrophenyl)-4,5-dihydro-1H-pyrazol-1-yl]-4-oxobutanoic acid	4
	368,7	C13 H12 Cl3 N O3 S	2,2,2-trichloro-N-(1,1-dioxido-2,3-dihydro-3-thienyl)-N-(4-methylphenyl)acetamide	5
	284,7	C16 H13 Cl N2 O	3-(3-chlorophenyl)-7-methyl-4-methylene-3,4-dihydro-2(1H)-quinazolinone	11

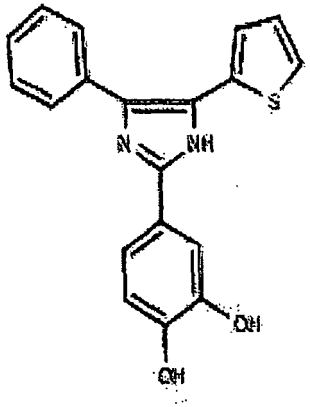
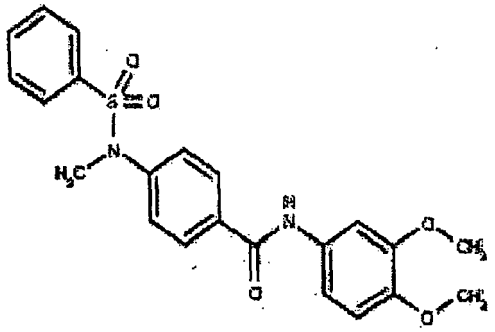
(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	385,2	C18 H13 Br N2 O3	3-[4-(3-bromobenzylidene)-3-methyl-5-oxo-4,5-dihydro-1H-pyrazol-1-yl]benzoic acid	18
	324,2	C11 H6 Br N3 O2 S	N-2,1,3-benzothiadiazol-4-yl-5-bromo-2-furamide	20
	297,7	C13 H16 Cl N3 O3	1-acetyl-4-(2-chloro-4-nitrophenyl)-2-methylpiperazine	22
	292,3	C19 H16 O3	3-(3-methoxybenzylidene)-5-(4-methylphenyl)-2(3H)-furanone	23

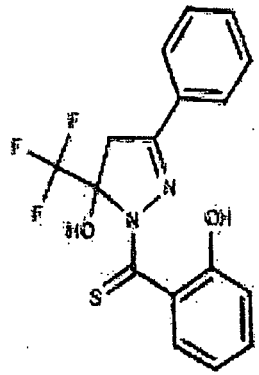
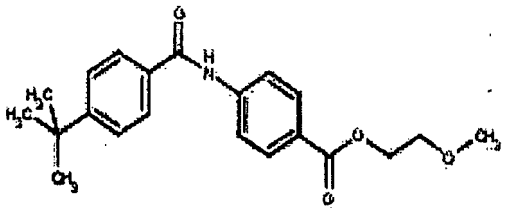
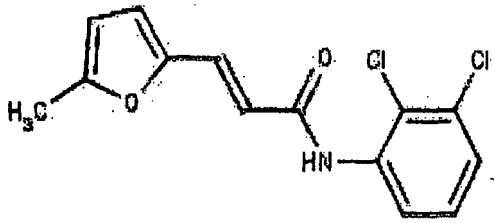
(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	283,1	C13 H8 Cl2 O3	3-[5-(3,4-dichlorophenyl)-2-furyl]acrylic acid	24
	577,4	C26 H22 Cl2 N2 O7 S	(2-chloro-4- {[5-(2-chlorophenyl)-6-(ethoxycarbonyl)-7-methyl-3-oxo-5H-[1,3]thiazolo[3,2-a]pyrimidin-2(3H)-ylidene]methyl} -6-methoxyphenoxy)acetic acid	25
	450,6	C23 H22 N4 O2 S2	4- {[4-(diphenylmethyl)-1-piperazinyl]sulfonyl}-2,1,3-benzothiadiazole	26

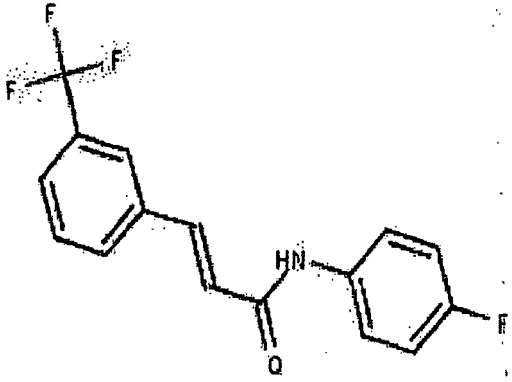
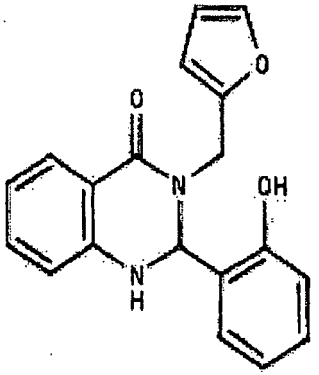
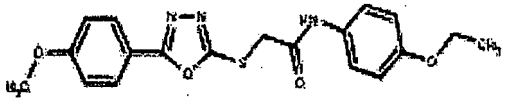
(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	334,4	C19 H14 N2 O2 S	4-[4-phenyl-5-(2-thienyl)-1H-imidazol-2-yl]-1,2-benzenediol	34
	426,5	C22 H22 N2 O5 S	N-(3,4-dimethoxyphenyl)-4-[methyl(phenylsulfonyl)amino]benzamide	37

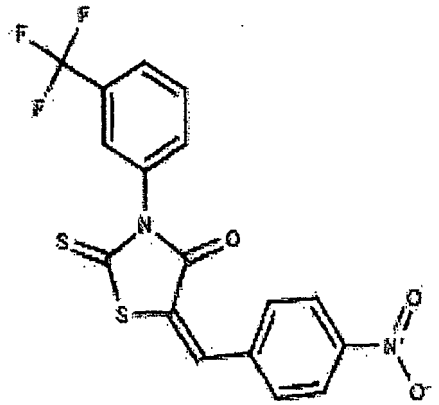
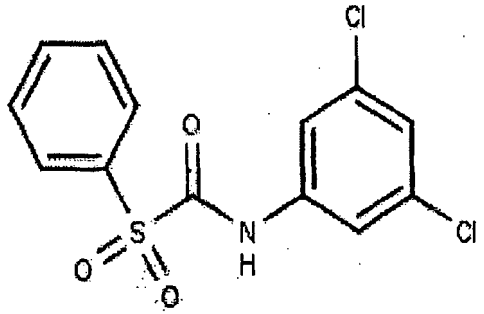
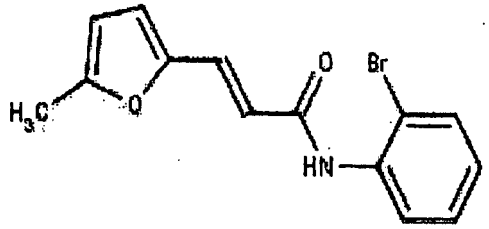
(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	366,4	C17 H13 F3 N2 O2 S	1-[(2-hydroxyphenyl)carbonothioyl]-3-phenyl-5-(trifluoromethyl)-4,5-dihydro-1H-pyrazol-5-ol	42
	355,4	C21 H25 N O4	2-methoxyethyl 4-[(4-tert-butylbenzoyl)amino]benzoate	44
	296,2	C14 H11 Cl2 N O2	N-(2,3-dichlorophenyl)-3-(5-methyl-2-furyl)acrylamide	47

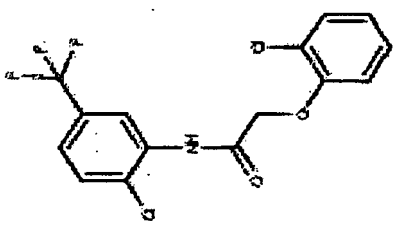
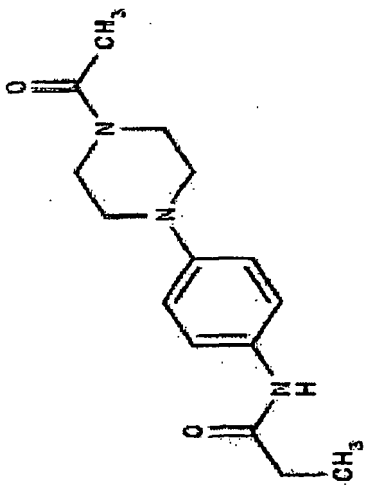
(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	309,3	C16 H11 F4 N O	N-(4-fluorophenyl)-3-[3-(trifluoromethyl)phenyl]acrylamide	54
	320,3	C19 H16 N2 O3	3-(2-furylmethyl)-2-(2-hydroxyphenyl)-2,3-dihydro-4(1H)-quinazolinone	55
	385,4	C19 H19 N3 O4 S	N-(4-ethoxyphenyl)-2-{(5-(4-methoxyphenyl)-1,3,4-oxadiazol-2-yl]thio}acetamide	3

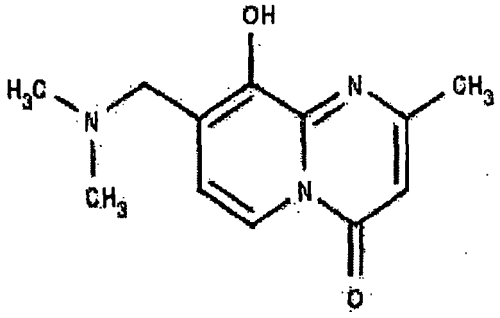
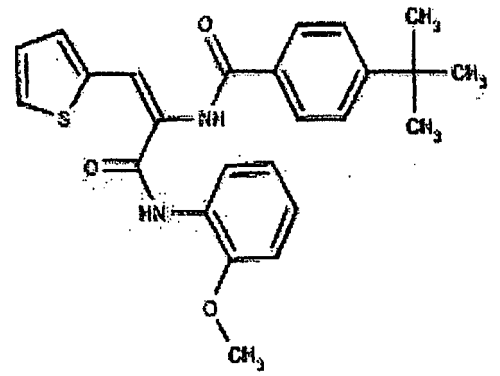
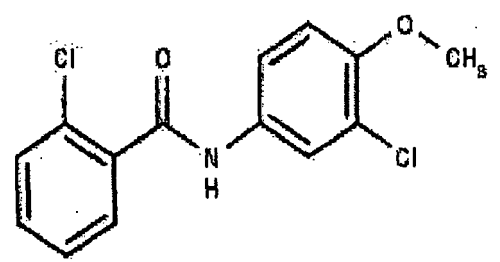
(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	410,4	C17 H9 F3 N2 O3 S2	5-(4-nitrobenzylidene)-2-thioxo-3-[3-(trifluoromethyl)phenyl]-1,3-thiazolidin-4-one	16
	330,2	C13 H9 Cl2 N O3 S	(3,5-dichlorophenyl)[(phenylsulfonyl)carbonyl]amine	21
	306,2	C14 H12 Br N O2	N-(2-bromophenyl)-3-(5-methyl-2-furyl)acrylamide	6

(continued)

compound n°	Mol Name	Mol Formula	Mol Weight	Structure
12	2-(2-chlorophenoxy)-N-[2-chloro-5-(trifluoromethyl)phenyl]acetamide	C15 H10 Cl2 F3 N O2	364,1	
13	N-[4-(4-acetyl-1-piperazinyl)phenyl]propanamide	C15 H21 N3 O2	275,3	

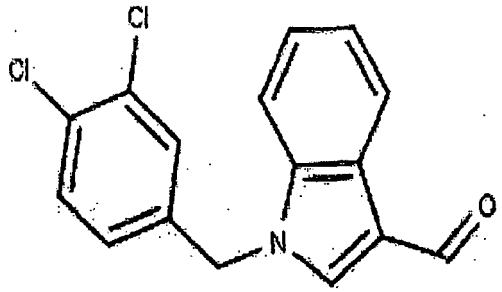
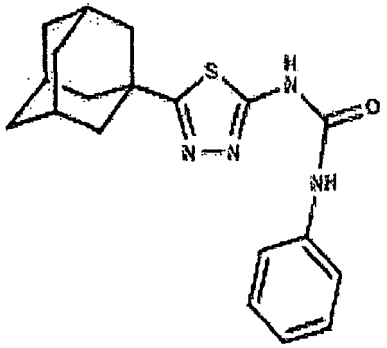
(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	233,3	C12 H15 N3 O2	8-[(dimethylamino)methyl]-9-hydroxy-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-one	14
	434,6	C25 H26 N2 O3 S	4-tert-butyl-N-[1-{[(2-methoxyphenyl)amino]carbonyl}-2-(2-thienyl)vinyl]benzamide	46
	296,2	C14 H11 Cl2 N O2	2-chloro-N-(3-chloro-4-methoxyphenyl)benzamide	51

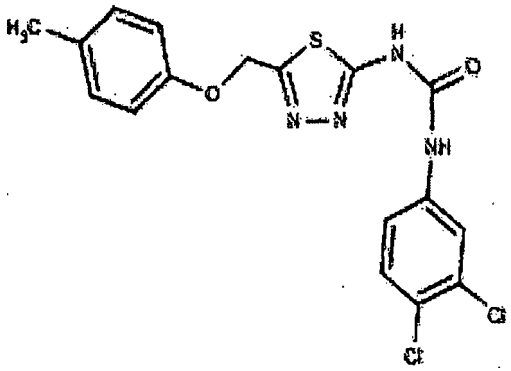
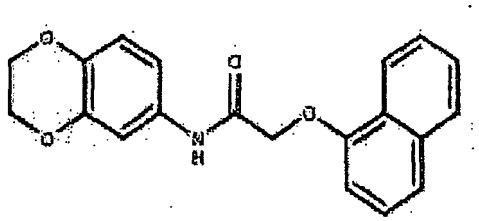
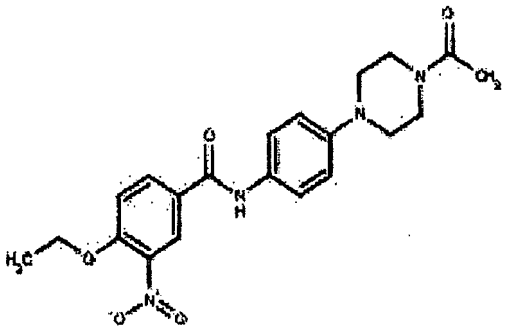
(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	374,5	C25 H30 N2 O	2,6-di-tert-butyl-4-(2,3-dihydro-1H-perimidin-2-yl)phenol	30
	383,3	C21 H16 Cl2 N2 O	3-benzyl-2-(2,6-dichlorophenyl)-2,3-dihydro-4(1H)-quinazolinone	33

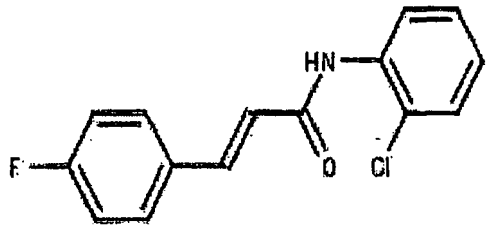
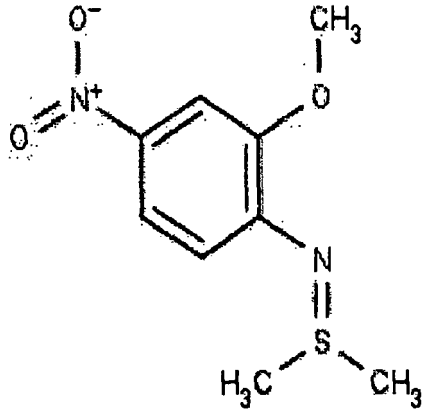
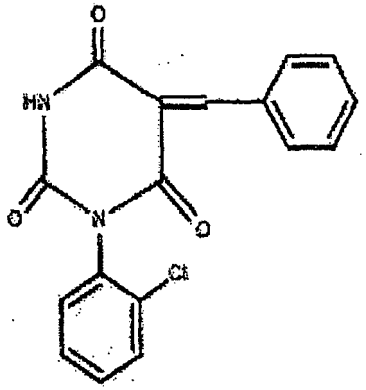
(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	304,2	C16 H11 Cl2 N O	1-(3,4-dichlorobenzyl)-1H-indole-3-carbaldehyde	35
	354,5	C19 H22 N4 O S	N-[5-(1-adamantyl)-1,3,4-thiadiazol-2-yl]-N'-phenylurea	49

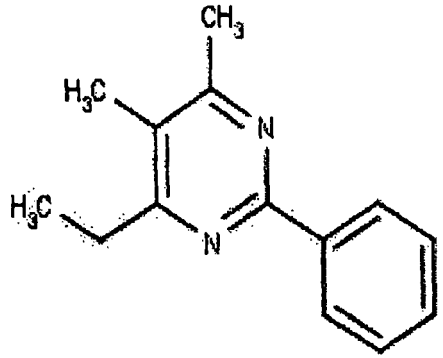
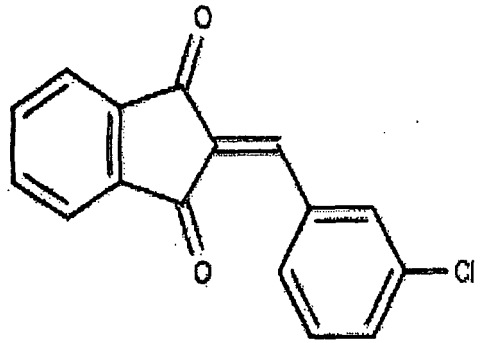
(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	409,3	C17 H14 Cl2 N4 O2 S	N-(3,4-dichlorophenyl)-N'-{5-[(4-methylphenoxy)methyl]-1,3,4-thiadiazol-2-yl}urea	53
	335,4	C20 H17 N O4	N-(2,3-dihydro-1,4-benzodioxin-6-yl)-2-(1-naphthyloxy)acetamide	10
	412,4	C21 H24 N4 O5	N-[4-(4-acetyl-1-piperazinyl)phenyl]-4-ethoxy-3-nitrobenzamide	27

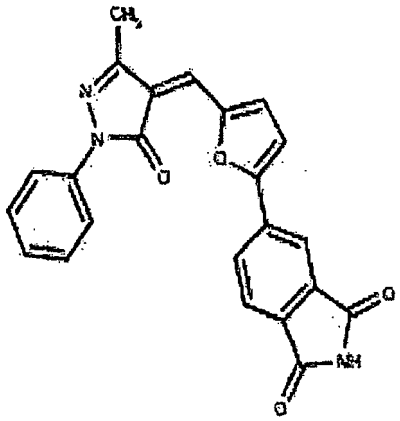
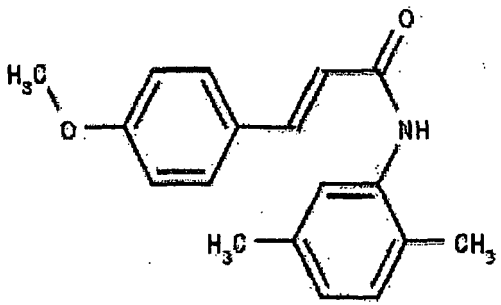
(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	275,7	C15 H11 Cl F N O	N-(2-chlorophenyl)-3-(4-fluorophenyl)acrylamide	40
	228,3	C9 H12 N2 O3 S	1-[(dimethyl-lambda~4~-sulfanylidene)amino]-2-methoxy-4-nitrobenzene	43
	326,7	C17 H11 Cl N2 O3	5-benzylidene-1-(2-chlorophenyl)-2,4,6(1H,3H,5H)-pyrimidinetrione	48

(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	212,3	C14 H16 N2	4-ethyl-5,6-dimethyl-2-phenylpyrimidine	50
	268,7	C16 H9 Cl O2	2-(3-chlorobenzylidene)-1H-indene-1,3(2H)-dione	1

(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	397,4	C23 H15 N3 O4	5-{5-[(3-methyl-5-oxo-1-phenyl-1,5-dihydro-4H-pyrazol-4-ylidene)methyl]-2-furyl}-1H-isoindole-1,3(2H)-dione	7
	281,4	C18 H19 N O2	N-(2,5-dimethylphenyl)-3-(4-methoxyphenyl)acrylamide	8

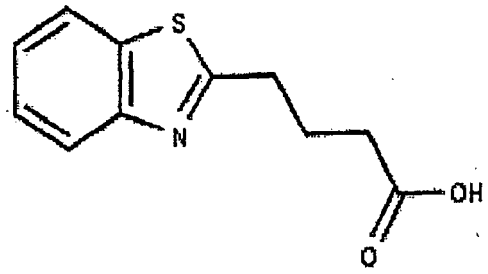
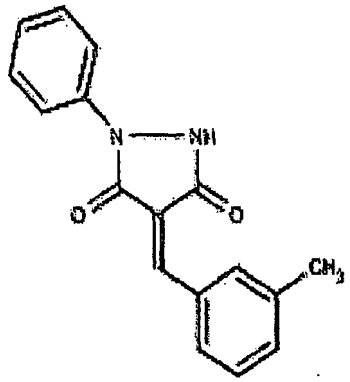
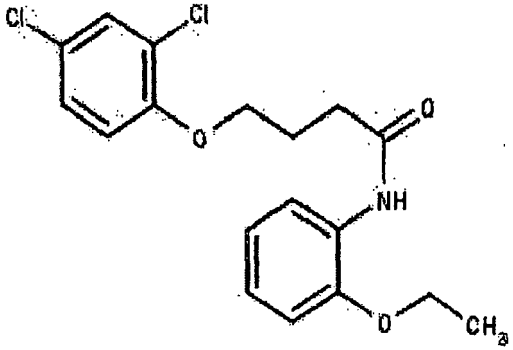
(continued)

compound n°	Mol Name	Mol Formula	Mol Weight	Structure
15	2-({2-[(4-nitrophenyl)amino]ethyl}amino)ethanol	C10 H15 N3 O3	225,2	
17	N-(3-methoxyphenyl)-4-propoxybenzamide	C17 H19 N O3	285,3	
19	2-(4-hydroxyphenyl)-3-phenyl-2,3-dihydro-4(1H)-quinazolinone	C20 H16 N2 O2	316,4	

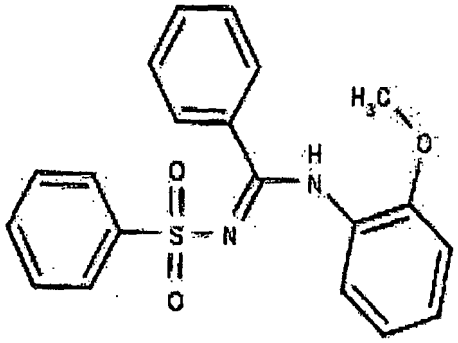
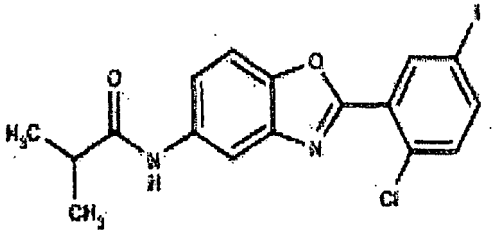
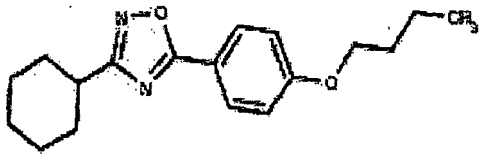
(continued)

compound n°	Mol Name	Mol Formula	Mol Weight	Structure
28	4-methyl-1-(2-nitrobenzoyl)piperidine	C13 H16 N2 O3	248,3	
31	2-hydroxy-N'-[(2-methylphenyl)sulfonyl]benzohydrazide	C14 H14 N2 O4 S	306,3	

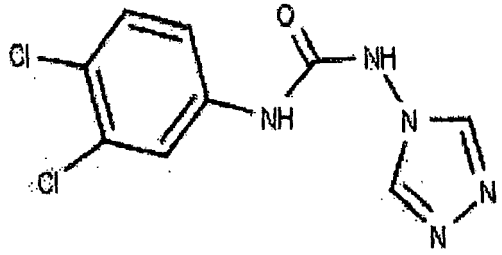
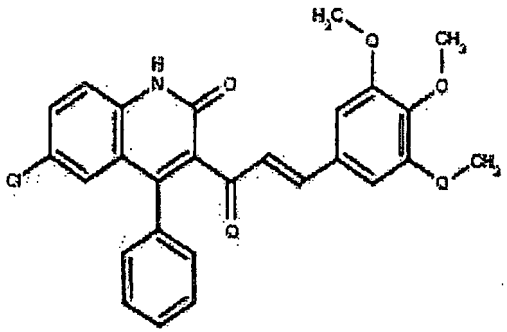
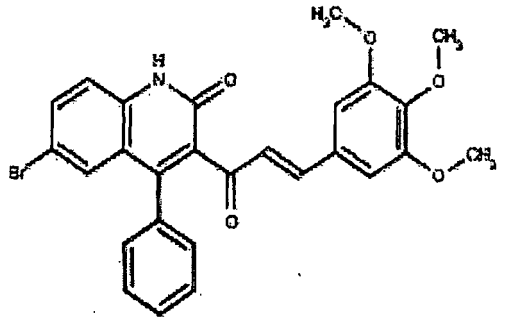
(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	221,3	C11 H11 N O2 S	4-(1,3-benzothiazol-2-yl)butanoic acid	39
	278,3	C17 H14 N2 O2	4-(3-methylbenzylidene)-1-phenyl-3,5-pyrazolidinedione	41
	368,3	C18 H19 Cl2 N O3	4-(2,4-dichlorophenoxy)-N-(2-ethoxyphenyl)butanamide	2

(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	366,4	C20 H18 N2 O3 S	N-(2-methoxyphenyl)-N'-(phenylsulfonyl)benzenecarboximidamide	9
	440,7	C17 H14 Cl I N2 O2	N-[2-(2-chloro-5-iodophenyl)-1,3-benzoxazol-5-yl]-2-methylpropanamide	32
	300,4	C18 H24 N2 O2	5-(4-butoxyphenyl)-3-cyclohexyl-1,2,4-oxadiazole	38

(continued)

Structure	Mol Weight	Mol Formula	Mol Name	compound n°
	272,1	C9 H7 Cl2 N5 O	N-(3,4-dichlorophenyl)-N'-4H-1,2,4-triazol-4-ylurea	52
	475,9	C27 H22 Cl N O5	6-chloro-4-phenyl-3-[3-(3,4,5-trimethoxyphenyl)acryloyl]-2(1H)-quinolinone	29
	520,4	C27 H22 Br N O5	6-bromo-4-phenyl-3-[3-(3,4,5-trimethoxyphenyl)acryloyl]-2(1H)-quinolinone	36

(continued)

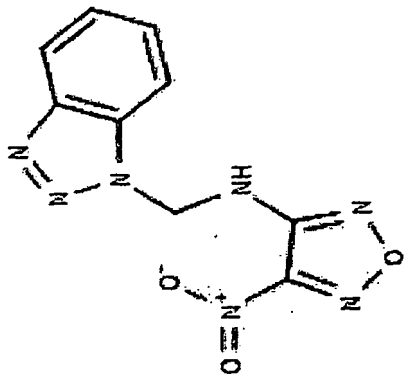
compound n°	Mol Name	Mol Formula	Mol Weight	Structure
45	N-(1H-1,2,3-benzotriazol-1-ylmethyl)-4-nitro-1,2,5-oxadiazol-3-amine	C9 H7 N7 O3	261,2	

Table 2

Mol Name	Compound N°	Concentration μM	Survival at 72 hours	Resorption
4-[5-(4-bromophenyl)-3-(4-nitrophenyl)-4,5-dihydro-1H-pyrazol-1-yl]-4-oxobutanoic acid	4	100μM	-	-
2,2,2-trichloro-N-(1,1-dioxido-2,3-dihydro-3-thienyl)-N-(4-methylphenyl)acetamide	5	100μM	-	-
3-(3-chlorophenyl)-7-methyl-4-methylene-3,4-dihydro-2(1H)-quinazolinone	11	100μM	-	-
3-[4-(3-bromobenzylidene)-3-methyl-5-oxo-4,5-dihydro-1H-pyrazol-1-yl]benzoic acid	18	100μM	-	-
N-2,1,3-benzothiadiazol-4-yl-5-bromo-2-fyramide	20	100μM	-	-
1-acetyl-4-(2-chloro-4-nitrophenyl)-2-methylpiperazine	22	100μM	-	-
3-(3-methoxybenzylidene)-5-(4-methylphenyl)-2(3H)-furanone	23	100μM	-	-
3-[5-(3,4-dichlorophenyl)-2-furyl]acrylic acid	24	100μM	-	-
(2-chloro-4-{[5-(2-chlorophenyl)-6-(ethoxycarbonyl)-7-methyl-3-oxo-5H-[1,3]thiazolo[3,2-a]pyrimidin-2(3H)-ylidene]methyl}-6-methoxyphenoxy)acetic acid	25	25μM	-	-
4-{[4-(diphenylmethyl)-1-piperazinyl]sulfonyl}-2,1,3-benzothiadiazole	26	100μM	-	-
4-[4-phenyl-5-(2-thienyl)-1H-imidazol-2-yl]-1,2-benzenediol	34	10μM	-	-
N-(3,4-dimethoxyphenyl)-4-[methyl(phenylsulfonyl)amino]benzamide	37	50μM	-	-
1-[(2-hydroxyphenyl)carbonothioyl]-3-phenyl-5-(trifluoromethyl)-4,5-dihydro-1H-pyrazol-5-0l	42	25μM	-	-
2-methoxyethyl 4-[(4-tert-butylbenzoyl)amino]benzoate	44	10μM	-	-
N-(2,3-dichlorophenyl)-3-(5-methyl-2-furyl)acrylamide	47	100μM	-	-
N-(4-fluorophenyl)-3-[3-(trifluoromethyl)phenyl]acrylamide	54	50μM	-	-
3-(2-furylmethyl)-2-(2-hydroxyphenyl)-2,3-dihydro-4(1H)-quinazolinone	55	100μM	-	-
2,6-di-tert-butyl-4-(2,3-dihydro-1H-perimidin-2-yl)phenol	30	100μM	-	+/-
3-benzyl-2-(2,6-dichlorophenyl)-2,3-dihydro-4(1H)-quinazolinone	33	100μM	-	+/-
1-(3,4-dichlorobenzyl)-1H-indole-3-carbaldehyde	35	50μM	-	+/-
N-(4-ethoxyphenyl)-2- {[5-(4-methoxyphenyl)-1,3,4-oxadiazol-2-yl]thio}acetamide	3	100μM	+/-	-
5-(4-nitrobenzylidene)-2-thioxo-3-[3-(trifluoromethyl)phenyl]-1,3-thiazolidin-4-one	16	100μM	+/-	-
(3,5-dichlorophenyl)[(phenylsulfonyl)carbonyl]amine	21	50μM	+/-	-
N-(2-bromophenyl)-3-(5-methyl-2-furyl)acrylamide	6	25μM	+	-

(continued)

Mol Name	Compound N°	Concentration μM	Survival at 72 hours	Resorption
2-(2-chlorophenoxy)-N-[2-chloro-5-(trifluoromethyl)phenyl]acetamide	12	100μM	+	-
N-[4-(4-acetyl-1-piperazinyl)phenyl]propanamide	13	50μM	+	-
8-[(dimethylamino)methyl]-9-hydroxy-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-one	14	100μM	+	-
4-tert-butyl-N-[1-{[(2-methoxyphenyl)amino]carbonyl}-2-(2-thienyl)vinyl]benzamide	46	100μM	+	-
2-chloro-N-(3-chloro-4-methoxyphenyl)benzamide	51	50μM	+	-
N-[5-(1-adamantyl)-1,3,4-thiadiazol-2-yl]-N'-phenylurea	49	50μM	+/-	+/-
N-(3,4-dichlorophenyl)-N'- {5-[(4-methylphenoxy)methyl]-1,3,4-thiadiazol-2-yl} urea	53	100μM	+/-	+/-
N-(2,3-dihydro-1,4-benzodioxin-6-yl)-2-(1-naphthyloxy)acetamide	10	50μM	+	+/-
N-[4-(4-acetyl-1-piperazinyl)phenyl]-4-ethoxy-3-nitrobenzamide	27	100μM	+	+/-
N-(2-chlorophenyl)-3-(4-fluorophenyl)acrylamide	40	100μM	+	+/-
1-[(dimethyl-lambda~4~-sulfanylidene)amino]-2-methoxy-4-nitrobenzene	43	100μM	+	+/-
5-benzylidene-1-(2-chlorophenyl)-2,4,6(1H,3H,5H)-pyrimidinetrione	48	100μM	+	+/-
4-ethyl-5,6-dimethyl-2-phenylpyrimidine	50	100μM	+	+/-

SEQUENCE LISTING

[0129]

<110> CNRS BLANGY, ANNE

<120> NEW METHOD FOR IDENTIFYING COMPOUNDS USEFUL FOR TREATING AND/OR PREVENTING DISEASE - ASSOCIATED BONE LOSS

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<151> 2008-08-18

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<170> PatentIn version 3.5

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            20                  25                  30

Asp Thr Val His Ile Leu Glu Met Tyr Glu Gly Trp Tyr Arg Gly Tyr
        35                  40                  45

Ala Leu Gln Asn Arg Ser Lys Lys Gly Ile Phe Pro Glu Thr Tyr Ile
    50                  55                  60

His Leu Lys Glu Ala Thr Val Glu Asp Gly Gly Gln His Glu Thr Val
65                  70                  75                  80

Ile Pro Gly Glu Leu Pro Leu Val Gln Glu Leu Thr Asn Thr Leu Arg
                85                  90                  95

Glu Trp Ala Val Ile Trp Arg Lys Leu Tyr Val Asn Asn Lys Val Thr
            100                 105                 110

Leu Phe Arg Gln Leu Gln Gln Met Thr Tyr Ser Leu Ile Glu Trp Arg
        115                 120                 125

Ser Gln Ile Leu Ser Gly Thr Leu Pro Lys Asp Glu Leu Ala Glu Leu
    130                 135                 140

Lys Lys Lys Val Thr Ala Lys Ile Asp His Gly Asn Arg Met Leu Gly
145                 150                 155                 160
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Leu Asp Leu Val Val Arg Asp Asp Asn Gly Asn Ile Leu Asp Pro Asp
                165                 170                 175

Glu Thr Ser Thr Val Ala Leu Phe Arg Ala His Glu Val Ala Ser Lys
            180                 185                 190

Arg Ile Glu Glu Lys Ile Gln Glu Glu Lys Ser Ile Leu Gln Asn Leu
        195                 200                 205

Asp Leu Arg Gly Gln Ala Ile Phe Ser Thr Val His Thr Tyr Gly Leu
    210                 215                 220

Tyr Val Asn Phe Lys Asn Phe Val Cys Asn Ile Gly Glu Asp Ala Glu
225                 230                 235                 240

Leu Phe Ile Ala Leu Tyr Asp Pro Asp Gln Ser Thr Phe Ile Ser Glu
                245                 250                 255

Asn Tyr Leu Ile Arg Trp Gly Ser Asn Gly Met Pro Lys Glu Ile Glu
            260                 265                 270

Lys Leu Asn Asn Leu Gln Ala Val Phe Thr Asp Leu Ser Ser Thr Asp
        275                 280                 285

Leu Ile Arg Pro Arg Ile Ser Leu Val Cys Gln Ile Val Arg Val Gly
    290                 295                 300

Arg Met Glu Leu Lys Glu Gly Lys Lys His Thr Cys Gly Leu Arg Arg
305                 310                 315                 320

Pro Phe Gly Val Ala Val Met Asp Ile Ser Asp Ile Val His Gly Lys
                325                 330                 335

Val Asp Asp Glu Glu Lys Gln His Phe Ile Pro Phe Gln Gln Ile Ala
            340                 345                 350

Met Glu Thr Tyr Ile Arg Gln Arg Gln Leu Ile Met Ser Pro Leu Ile
        355                 360                 365

Thr Ser His Val Ile Gly Glu Asn Glu Pro Leu Thr Ser Val Leu Asn
    370                 375                 380

Lys Val Ile Ala Ala Lys Glu Val Asn His Lys Gly Gln Gly Leu Trp
385                 390                 395                 400

Val Ser Leu Lys Leu Leu Pro Gly Asp Leu Thr Gln Val Gln Lys Asn
                405                 410                 415
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Phe Ser His Leu Val Asp Arg Ser Thr Ala Ile Ala Arg Lys Met Gly
            420                 425                 430

Phe Pro Glu Ile Ile Leu Pro Gly Asp Val Arg Asn Asp Ile Tyr Val
        435                 440                 445

Thr Leu Ile His Gly Glu Phe Asp Lys Gly Lys Lys Lys Thr Pro Lys
    450                 455                 460

Asn Val Glu Val Thr Met Ser Val Phe Asp Glu Glu Gly Asn Leu Leu
465                 470                 475                 480

Glu Lys Ala Ile His Pro Gly Ala Gly Tyr Glu Gly Val Ser Glu Tyr
                485                 490                 495

Lys Ser Val Val Tyr Tyr Gln Val Lys Gln Pro Cys Trp Tyr Glu Thr
            500                 505                 510

Val Lys Val Phe Ile Ala Ile Glu Glu Val Thr Arg Cys His Ile Arg
        515                 520                 525

Phe Thr Phe Arg His Arg Ser Ser Gln Glu Ser Arg Asp Lys Ser Glu
    530                 535                 540

Arg Ala Phe Gly Val Ala Phe Val Lys Leu Met Asn Ala Asp Gly Thr
545                 550                 555                 560

Thr Leu Gln Asp Gly Arg His Asp Leu Val Val Tyr Lys Gly Asp Asn
                565                 570                 575

Lys Lys Met Glu Asp Ala Lys Tyr Tyr Leu Thr Leu Pro Gly Thr Lys
            580                 585                 590

Ala Glu Leu Glu Glu Lys Glu Leu Gln Ala Ser Lys Asn Pro Ser Val
        595                 600                 605

Phe Thr Pro Ser Lys Asp Ser Thr Lys Asp Ser Phe Gln Ile Ala Thr
    610                 615                 620

Leu Ile Cys Ser Thr Lys Leu Thr Gln Asn Val Asp Leu Leu Gly Leu
625                 630                 635                 640

Leu Asn Trp Arg Ser Asn Ser Gln Asn Ile Lys His Asn Leu Lys Lys
                645                 650                 655

Leu Met Glu Val Asp Gly Gly Glu Ile Val Lys Phe Leu Gln Asp Thr
            660                 665                 670
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Leu Asp Ala Leu Phe Asn Ile Met Met Glu Met Ser Asp Asn Glu Thr
        675                 680                 685

Tyr Asp Phe Leu Val Phe Asp Ala Leu Val Phe Ile Ile Ser Leu Ile
    690                 695                 700

Gly Asp Ile Lys Phe Gln His Phe Asn Pro Val Leu Glu Thr Tyr Ile
705                 710                 715                 720

Tyr Lys His Phe Ser Ala Thr Leu Ala His Val Lys Leu Ser Lys Val
                725                 730                 735

Leu Asn Phe Tyr Val Ala Asn Ala Glu Asp Pro Ser Lys Thr Glu Leu
            740                 745                 750

Leu Phe Ala Ala Leu Lys Ala Leu Lys Tyr Leu Phe Arg Phe Ile Ile
        755                 760                 765

Gln Ser Arg Val Leu Tyr Leu Arg Phe Tyr Gly Gln Ser Glu Asp Gly
    770                 775                 780

Asp Glu Phe Asn Asp Ser Ile Arg Gln Leu Phe Leu Ala Phe Asn Thr
785                 790                 795                 800

Leu Met Asp Arg Pro Leu Glu Glu Ala Val Lys Ile Lys Gly Ala Ala
                805                 810                 815

Leu Lys Tyr Leu Pro Ser Ile Ile Asn Asp Val Lys Leu Val Phe Asp
            820                 825                 830

Pro Met Glu Leu Ser Val Leu Phe Cys Lys Phe Ile Gln Ser Ile Pro
        835                 840                 845

Asp Asn Gln Leu Val Arg Gln Lys Leu Asn Cys Met Thr Lys Ile Val
    850                 855                 860

Glu Ser Ser Leu Phe Gln Gln Ala Glu Cys Arg Glu Val Leu Leu Pro
865                 870                 875                 880

Leu Leu Thr Asp Gln Leu Ser Gly Gln Leu Asp Asp His Ser Thr Lys
                885                 890                 895

Pro Asp His Glu Ala Ser Ser Gln Leu Leu Ser Asn Ile Leu Glu Val
            900                 905                 910

Leu Asp Arg Thr Asp Val Gly Pro Thr Ser Ala His Val Gln Leu Ile
        915                 920                 925
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Met Glu Arg Leu Leu Arg Arg Ile Asn Arg Thr Val Ile Gly Met Ser
    930                 935                 940

Arg Gln Ser Pro His Ile Gly Ser Phe Val Ala Cys Met Ile Ala Val
945                 950                 955                 960

Leu Arg Gln Met Glu Asp Ser His Tyr Ser His Tyr Ile Ser Thr Phe
                965                 970                 975

Lys Thr Arg Gln Asp Ile Ile Asp Phe Leu Met Glu Thr Phe Ile Met
            980                 985                 990

Phe Lys Asp Leu Ile Gly Lys Asn  Val Tyr Ala Lys Asp  Trp Met Val
        995                 1000                1005

Met Asn  Met Thr Gln Asn Arg  Val Phe Leu Arg Ala  Ile Asn Gln
    1010                1015                1020

Phe Ala  Glu Val Leu Thr Lys  Ser Phe Met Asp Gln  Ala Ser Phe
    1025                1030                1035

Glu Leu  Gln Leu Trp Asn Asn  Tyr Phe His Leu Ala  Val Ala Phe
    1040                1045                1050

Leu Thr  His Glu Ser Leu Gln  Leu Glu Thr Phe Ser  Glu Ala Lys
    1055                1060                1065

Arg Asn  Lys Ile Val Lys Lys  Tyr Gly Asp Met Arg  Lys Glu Ile
    1070                1075                1080

Gly Phe  Arg Ile Arg Asp Met  Trp Tyr Asn Leu Gly  Pro His Lys
    1085                1090                1095

Ile Lys  Phe Ile Pro Ser Met  Val Gly Pro Ile Leu  Glu Val Thr
    1100                1105                1110

Leu Thr  Pro Glu Val Glu Leu  Arg Lys Ala Thr Ile  Pro Ile Phe
    1115                1120                1125

Phe Asp  Met Met Gln Cys Glu  Phe Asn Leu Ser Gly  Asn Gly Asn
    1130                1135                1140

Phe His  Met Phe Glu Asn Glu  Leu Ile Thr Lys Leu  Asp Gln Glu
    1145                1150                1155

Val Glu  Gly Gly Arg Gly Asp  Glu Gln Tyr Lys Val  Leu Leu Glu
    1160                1165                1170
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Lys Leu  Leu Leu Glu His Cys  Arg Lys His Lys Tyr  Leu Ala Asn
    1175                 1180                 1185

Ser Gly  Glu Ala Phe Ala Phe  Leu Val Ser Ser Leu  Leu Glu Asn
    1190                 1195                 1200

Leu Leu  Asp Tyr Arg Thr Ile  Ile Ile His Asp Glu  Ser Lys Glu
    1205                 1210                 1215

Asn Arg  Met Ser Cys Thr Val  Asn Val Leu Asn Phe  Tyr Lys Asp
    1220                 1225                 1230

Lys Lys  Arg Glu Asp Ile Tyr  Ile Arg Tyr Leu Tyr  Lys Leu Arg
    1235                 1240                 1245

Asp Leu  His Arg Asp Cys Glu  Asn Tyr Thr Glu Ala  Ala Tyr Thr
    1250                 1255                 1260

Leu Leu  Leu His Ala Glu Leu  Leu Gln Trp Ser Asp  Lys Pro Cys
    1265                 1270                 1275

Val Pro  His Leu Leu Gln Arg  Asp Ser Tyr Tyr Val  Tyr Thr Gln
    1280                 1285                 1290

Gln Glu  Leu Lys Glu Lys Leu  Tyr Gln Glu Ile Ile  Ser Tyr Phe
    1295                 1300                 1305

Asp Lys  Gly Lys Met Trp Glu  Lys Ala Ile Lys Leu  Ser Lys Glu
    1310                 1315                 1320

Leu Ala  Glu Thr Tyr Glu Ser  Lys Val Phe Asp Tyr  Glu Gly Leu
    1325                 1330                 1335

Gly Ser  Leu Leu Lys Lys Arg  Ala Leu Phe Tyr Glu  Asn Ile Ile
    1340                 1345                 1350

Lys Ala  Met Arg Pro Gln Pro  Glu Tyr Phe Ala Val  Gly Tyr Tyr
    1355                 1360                 1365

Gly Gln  Gly Phe Pro Ser Phe  Leu Arg Asn Lys Ile  Phe Ile Tyr
    1370                 1375                 1380

Arg Gly  Lys Glu Tyr Glu Arg  Arg Glu Asp Phe Ser  Leu Arg Leu
    1385                 1390                 1395

Leu Thr  Gln Phe Pro Asn Ala  Glu Lys Met Thr Ser  Thr Thr Pro
    1400                 1405                 1410
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Pro Gly Glu Asp Ile Lys Ser Ser Pro Lys Gln Tyr Leu Gln Cys
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Phe Thr Val Lys Pro Val Met Ser Leu Pro Pro Ser Tyr Lys Asp
    1430                1435                1440

Lys Pro Val Pro Glu Gln Ile Leu Asn Tyr Tyr Arg Ala Asn Glu
    1445                1450                1455

Val Gln Gln Phe Ser Tyr Ser Arg Pro Phe Arg Lys Gly Glu Lys
    1460                1465                1470

Asp Pro Glu Asn Glu Phe Ala Thr Met Trp Ile Glu Arg Thr Thr
    1475                1480                1485

Tyr Arg Thr Ala Tyr Thr Phe Pro Gly Ile Leu Lys Trp Phe Glu
    1490                1495                1500

Ala Lys Glu Ile Ser Val Glu Glu Ile Ser Pro Leu Glu Asn Ala
    1505                1510                1515

Ile Glu Thr Met Glu Leu Thr Asn Glu Arg Val Ser Asn Cys Val
    1520                1525                1530

Gln Gln His Ala Trp Asp His Ser Leu Ser Val His Pro Leu Ser
    1535                1540                1545

Met Leu Leu Ser Gly Ile Val Asp Pro Ala Val Met Gly Gly Phe
    1550                1555                1560

Ser Asn Tyr Glu Lys Ala Phe Phe Thr Glu Lys Tyr Leu Gln Glu
    1565                1570                1575

His Pro Glu Asp Gln Glu Lys Val Glu Leu Leu Lys Arg Leu Ile
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Ala Leu Gln Ile Pro Leu Leu Thr Glu Gly Ile Arg Ile His Gly
    1595                1600                1605

Glu Lys Leu Thr Glu Gln Leu Lys Pro Leu His Ala Arg Leu Ser
    1610                1615                1620

Ser Cys Phe Arg Glu Leu Lys Glu Lys Val Glu Lys Leu Tyr Gly
    1625                1630                1635

Val Ile Thr Leu Pro Pro Ser Met Thr Glu Arg Lys Pro Ser Arg
    1640                1645                1650
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Ala Gly Ser Met Val Leu Pro Tyr Ile Leu Ser Ser Thr Leu Arg
1655                1660                1665

Arg Leu Ser Val Thr Ser Val Ala Ser Ser Val Ile Ser Thr Ser
1670                1675                1680

Ser Asn Ser Ser Asp Asn Ala Ser Ser Arg Pro Gly Ser Asp Gly
1685                1690                1695

Ser Ile Leu Glu Pro Leu Phe Glu Arg Arg Ala Ser Ser Gly Ala
1700                1705                1710

Arg Val Glu Asp Leu Pro Pro Lys Glu Asp Ser Glu Asn Arg Ile
1715                1720                1725

Ser Lys Phe Lys Arg Lys Asp Trp Asn Leu Ser Lys Ser Gln Val
1730                1735                1740

Ile Ala Glu Lys Ala Pro Glu Pro Asp Val Met Ser Pro Gly Lys
1745                1750                1755

Lys Thr Gln Arg Pro Lys Ser Leu Gln Leu Val Asp Ser Arg Leu
1760                1765                1770

Thr Pro Phe His Ser Pro Ser Pro Leu Gln Ser Thr Ala Leu Ser
1775                1780                1785

Pro Pro Pro Leu Thr Pro Lys Ala Thr Arg Thr Leu Ser Ser Pro
1790                1795                1800

Ser Leu Gln Thr Asp Gly Leu Thr Ala Ser Val Pro Pro Pro Pro
1805                1810                1815

Pro Pro Lys Ser Lys Pro Tyr Glu Ser Ser Gln Arg Asn Ser Ala
1820                1825                1830

Glu Ile Ala Pro Pro Leu Pro Val Arg Arg Asp Ser Lys Ala Pro
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Glu Pro Gly Ser Gln
1865
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            20                  25                  30

Ile Pro Thr Val Phe Asp Asn Tyr Ser Ala Asn Val Met Val Asp Gly
        35                  40                  45

Lys Pro Val Asn Leu Gly Leu Trp Asp Thr Ala Gly Gln Glu Asp Tyr
    50                  55                  60

Asp Arg Leu Arg Pro Leu Ser Tyr Pro Gln Thr Asp Val Phe Leu Ile
65                  70                  75                  80

Cys Phe Ser Leu Val Ser Pro Ala Ser Phe Glu Asn Val Arg Ala Lys
                85                  90                  95

Trp Tyr Pro Glu Val Arg His His Cys Pro Asn Thr Pro Ile Ile Leu
            100                 105                 110

Val Gly Thr Lys Leu Asp Leu Arg Asp Asp Lys Asp Thr Ile Glu Lys
        115                 120                 125

Leu Lys Glu Lys Lys Leu Thr Pro Ile Thr Tyr Pro Gln Gly Leu Ala
    130                 135                 140

Met Ala Lys Glu Ile Gly Ala Val Lys Tyr Leu Glu Cys Ser Ala Leu
145                 150                 155                 160

Thr Gln Arg Gly Leu Lys Thr Val Phe Asp Glu Ala Ile Arg Ala Val
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Leu Cys Pro Pro Pro Val Lys Lys Arg Lys Arg Lys Ser Leu Leu Leu
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            20                  25                  30

Thr Leu Asn His Gly Ser Lys Pro Leu Pro Pro Asn Pro Glu Glu Lys
        35                  40                  45

Lys Lys Lys Asp Arg Phe Tyr Arg Ser Ile Leu Pro Gly Asp Lys Thr
    50                  55                  60

Asn Lys Lys Lys Glu Lys Glu Arg Pro Glu Ile Ser Leu Pro Ser Asp
65                  70                  75                  80

Phe Glu His Thr Ile His Val Gly Phe Asp Ala Val Thr Gly Glu Phe
                85                  90                  95

Thr Gly Met Pro Glu Gln Trp Ala Arg Leu Leu Gln Thr Ser Asn Ile
            100                 105                 110

Thr Lys Ser Glu Gln Lys Lys Asn Pro Gln Ala Val Leu Asp Val Leu
        115                 120                 125

Glu Phe Tyr Asn Ser Lys Lys Thr Ser Asn Ser Gln Lys Tyr Met Ser
    130                 135                 140

Phe Thr Asp Lys Ser Ala Glu Asp Tyr Asn Ser Ser Asn Ala Leu Asn
145                 150                 155                 160

Val Lys Ala Val Ser Glu Thr Pro Ala Val Pro Pro Val Ser Glu Asp
                165                 170                 175

Glu Asp Asp Asp Asp Asp Asp Ala Thr Pro Pro Pro Val Ile Ala Pro
            180                 185                 190

Arg Pro Glu His Thr Lys Ser Val Tyr Thr Arg Ser Val Ile Glu Pro
        195                 200                 205

Leu Pro Val Thr Pro Thr Arg Asp Val Ala Thr Ser Pro Ile Ser Pro
    210                 215                 220

Thr Glu Asn Asn Thr Thr Pro Pro Asp Ala Leu Thr Arg Asn Thr Glu
225                 230                 235                 240

Lys Gln Lys Lys Lys Pro Lys Met Ser Asp Glu Glu Ile Leu Glu Lys
                245                 250                 255

Leu Arg Ser Ile Val Ser Val Gly Asp Pro Lys Lys Lys Tyr Thr Arg
            260                 265                 270
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Phe Glu Lys Ile Gly Gln Gly Ala Ser Gly Thr Val Tyr Thr Ala Met
        275                 280                 285

Asp Val Ala Thr Gly Gln Glu Val Ala Ile Lys Gln Met Asn Leu Gln
    290                 295                 300

Gln Gln Pro Lys Lys Glu Leu Ile Ile Asn Glu Ile Leu Val Met Arg
305                 310                 315                 320

Glu Asn Lys Asn Pro Asn Ile Val Asn Tyr Leu Asp Ser Tyr Leu Val
                325                 330                 335

Gly Asp Glu Leu Trp Val Val Met Glu Tyr Leu Ala Gly Gly Ser Leu
            340                 345                 350

Thr Asp Val Val Thr Glu Thr Cys Met Asp Glu Gly Gln Ile Ala Ala
        355                 360                 365

Val Cys Arg Glu Cys Leu Gln Ala Leu Glu Phe Leu His Ser Asn Gln
    370                 375                 380

Val Ile His Arg Asp Ile Lys Ser Asp Asn Ile Leu Leu Gly Met Asp
385                 390                 395                 400

Gly Ser Val Lys Leu Thr Asp Phe Gly Phe Cys Ala Gln Ile Thr Pro
                405                 410                 415

Glu Gln Ser Lys Arg Ser Thr Met Val Gly Thr Pro Tyr Trp Met Ala
            420                 425                 430

Pro Glu Val Val Thr Arg Lys Ala Tyr Gly Pro Lys Val Asp Ile Trp
        435                 440                 445

Ser Leu Gly Ile Met Ala Ile Glu Met Ile Glu Gly Glu Pro Pro Tyr
    450                 455                 460

Leu Asn Glu Asn Pro Leu Arg Ala Leu Tyr Leu Ile Ala Thr Asn Gly
465                 470                 475                 480

Thr Pro Glu Leu Gln Asn Pro Glu Lys Leu Ser Ala Ile Phe Arg Asp
                485                 490                 495

Phe Leu Asn Arg Cys Leu Glu Met Asp Val Glu Lys Arg Gly Ser Ala
            500                 505                 510

Lys Glu Leu Leu Gln Val Arg Lys Leu Arg Phe Gln Val Phe Ser Asn
        515                 520                 525
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Phe Ser Met Ile Ala Ala Ser Ile Pro Glu Asp Cys Gln Ala Pro Leu
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Gln Pro His Ser Thr Asp Cys Cys Ser
545 550

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Met Ala Arg Trp Ile Pro Thr Lys Arg Gln Lys Tyr Gly Val Ala Ile
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Tyr Asn Tyr Asn Ala Ser Gln Asp Val Glu Leu Ser Leu Gln Ile Gly
20 25 30

Asp Thr Val His Ile Leu Glu Met Tyr Glu Gly Trp Tyr Arg Gly Tyr
35 40 45

Thr Leu Gln Asn Lys Ser Lys Lys Gly Ile Phe Pro Glu Thr Tyr Ile
50 55 60

His Leu Lys Glu Ala Thr Val Glu Asp Leu Gly Gln His Glu Thr Val
65 70 75 80

Ile Pro Gly Glu Leu Pro Leu Val Gln Glu Leu Thr Ser Thr Leu Arg
85 90 95

Glu Trp Ala Val Ile Trp Arg Lys Leu Tyr Val Asn Asn Lys Leu Thr
100 105 110

Leu Phe Arg Gln Leu Gln Gln Met Thr Tyr Ser Leu Ile Glu Trp Arg
115 120 125

Ser Gln Ile Leu Ser Gly Thr Leu Pro Lys Asp Glu Leu Ala Glu Leu
130 135 140

Lys Lys Lys Val Thr Ala Lys Ile Asp His Gly Asn Arg Met Leu Gly
145 150 155 160

Leu Asp Leu Val Val Arg Asp Asp Asn Gly Asn Ile Leu Asp Pro Asp
165 170 175

Glu Thr Ser Thr Ile Ala Leu Phe Lys Ala His Glu Val Ala Ser Lys
180 185 190

```
Arg Ile Glu Glu Lys Ile Gln Glu Glu Lys Ser Ile Leu Gln Asn Leu
        195                 200                 205

Asp Leu Arg Gly Gln Ser Ile Phe Ser Thr Ile His Thr Tyr Gly Leu
    210                 215                 220

Tyr Val Asn Phe Lys Asn Phe Val Cys Asn Ile Gly Glu Asp Ala Glu
225                 230                 235                 240

Leu Phe Met Ala Leu Tyr Asp Pro Asp Gln Ser Thr Phe Ile Ser Glu
                245                 250                 255

Asn Tyr Leu Ile Arg Trp Gly Ser Asn Gly Met Pro Lys Glu Ile Glu
            260                 265                 270

Lys Leu Asn Asn Leu Gln Ala Val Phe Thr Asp Leu Ser Ser Met Asp
        275                 280                 285

Leu Ile Arg Pro Arg Val Ser Leu Val Cys Gln Ile Val Arg Val Gly
    290                 295                 300

His Met Glu Leu Lys Glu Gly Lys Lys His Thr Cys Gly Leu Arg Arg
305                 310                 315                 320

Pro Phe Gly Val Ala Val Met Asp Ile Thr Asp Ile Ile His Gly Lys
                325                 330                 335

Val Asp Asp Glu Glu Lys Gln His Phe Ile Pro Phe Gln Gln Ile Ala
            340                 345                 350

Met Glu Thr Tyr Ile Arg Gln Arg Gln Leu Ile Met Ser Pro Leu Ile
        355                 360                 365

Thr Ser His Val Ile Gly Glu Asn Glu Pro Leu Thr Ser Val Leu Asn
    370                 375                 380

Lys Val Ile Ala Ala Lys Glu Val Asn His Lys Gly Gln Gly Leu Trp
385                 390                 395                 400

Val Ser Leu Lys Leu Leu Pro Gly Asp Leu Thr Gln Val Gln Lys Asn
                405                 410                 415

Phe Ser His Leu Val Asp Arg Ser Thr Ala Ile Ala Arg Lys Met Gly
            420                 425                 430

Phe Pro Glu Ile Ile Leu Pro Gly Asp Val Arg Asn Asp Ile Tyr Val
        435                 440                 445
```

```
Thr Leu Ile His Gly Glu Phe Asp Lys Gly Lys Lys Lys Thr Pro Lys
    450                 455                 460

Asn Val Glu Val Thr Met Ser Val His Asp Glu Glu Gly Lys Leu Leu
465                 470                 475                 480

Glu Lys Ala Ile His Pro Gly Ala Gly Tyr Glu Gly Ile Ser Glu Tyr
                485                 490                 495

Lys Ser Val Val Tyr Tyr Gln Val Lys Gln Pro Cys Trp Tyr Glu Thr
            500                 505                 510

Val Lys Val Ser Ile Ala Ile Glu Glu Val Thr Arg Cys His Ile Arg
        515                 520                 525

Phe Thr Phe Arg His Arg Ser Ser Gln Glu Thr Arg Asp Lys Ser Glu
    530                 535                 540

Arg Ala Phe Gly Val Ala Phe Val Lys Leu Met Asn Pro Asp Gly Thr
545                 550                 555                 560

Thr Leu Gln Asp Gly Arg His Asp Leu Val Val Tyr Lys Gly Asp Asn
                565                 570                 575

Lys Lys Met Glu Asp Ala Lys Phe Tyr Leu Thr Leu Pro Gly Thr Lys
            580                 585                 590

Met Glu Met Glu Glu Lys Glu Leu Gln Ala Ser Lys Asn Leu Val Thr
        595                 600                 605

Phe Thr Pro Ser Lys Asp Ser Thr Lys Asp Ser Phe Gln Ile Ala Thr
    610                 615                 620

Leu Ile Cys Ser Thr Lys Leu Thr Gln Asn Val Asp Leu Leu Gly Leu
625                 630                 635                 640

Leu Asn Trp Arg Ser Asn Ser Gln Asn Ile Lys His Asn Leu Lys Lys
                645                 650                 655

Leu Met Glu Val Asp Gly Gly Glu Ile Val Lys Phe Leu Gln Asp Thr
            660                 665                 670

Leu Asp Ala Leu Phe Asn Ile Met Met Glu Met Ser Asp Ser Glu Thr
        675                 680                 685

Tyr Asp Phe Leu Val Phe Asp Ala Leu Val Phe Ile Ile Ser Leu Ile
    690                 695                 700
```

```
Gly Asp Ile Lys Phe Gln His Phe Asn Pro Val Leu Glu Thr Tyr Ile
705                 710                 715                 720

Tyr Lys His Phe Ser Ala Thr Leu Ala Tyr Val Lys Leu Ser Lys Val
                725                 730                 735

Leu Asn Phe Tyr Val Ala Asn Ala Asp Asp Ser Ser Lys Thr Glu Leu
            740                 745                 750

Leu Phe Ala Ala Leu Lys Ala Leu Lys Tyr Leu Phe Arg Phe Ile Ile
        755                 760                 765

Gln Ser Arg Val Leu Tyr Leu Arg Phe Tyr Gly Gln Ser Lys Asp Gly
    770                 775                 780

Asp Glu Phe Asn Asn Ser Ile Arg Gln Leu Phe Leu Ala Phe Asn Met
785                 790                 795                 800

Leu Met Asp Arg Pro Leu Glu Glu Ala Val Lys Ile Lys Gly Ala Ala
                805                 810                 815

Leu Lys Tyr Leu Pro Ser Ile Ile Asn Asp Val Lys Leu Val Phe Asp
            820                 825                 830

Pro Val Glu Leu Ser Val Leu Phe Cys Lys Phe Ile Gln Ser Ile Pro
        835                 840                 845

Asp Asn Gln Leu Val Arg Gln Lys Leu Asn Cys Met Thr Lys Ile Val
    850                 855                 860

Glu Ser Thr Leu Phe Arg Gln Ser Glu Cys Arg Glu Val Leu Leu Pro
865                 870                 875                 880

Leu Leu Thr Asp Gln Leu Ser Gly Gln Leu Asp Asp Asn Ser Asn Lys
                885                 890                 895

Pro Asp His Glu Ala Ser Ser Gln Leu Leu Ser Asn Ile Leu Glu Val
            900                 905                 910

Leu Asp Arg Lys Asp Val Gly Ala Thr Ala Val His Ile Gln Leu Ile
        915                 920                 925

Met Glu Arg Leu Leu Arg Arg Ile Asn Arg Thr Val Ile Gly Met Asn
    930                 935                 940

Arg Gln Ser Pro His Ile Gly Ser Phe Val Ala Cys Met Ile Ala Leu
945                 950                 955                 960
```

```
Leu Gln Gln Met Asp Asp Ser His Tyr Ser His Tyr Ile Ser Thr Phe
                965                 970                 975

Lys Thr Arg Gln Asp Ile Ile Asp Phe Leu Met Glu Thr Phe Ile Met
            980                 985                 990

Phe Lys Asp Leu Ile Gly Lys Asn  Val Tyr Ala Lys Asp  Trp Met Val
        995                 1000                1005

Met Asn  Met Thr Gln Asn Arg  Val Phe Leu Arg Ala  Ile Asn Gln
    1010                1015                1020

Phe Ala  Glu Val Leu Thr Arg  Phe Phe Met Asp Gln  Ala Ser Phe
    1025                1030                1035

Glu Leu  Gln Leu Trp Asn Asn  Tyr Phe His Leu Ala  Val Ala Phe
    1040                1045                1050

Leu Thr  His Glu Ser Leu Gln  Leu Glu Thr Phe Ser  Gln Ala Lys
    1055                1060                1065

Arg Asn  Lys Ile Val Lys Lys  Tyr Gly Asp Met Arg  Lys Glu Ile
    1070                1075                1080

Gly Phe  Arg Ile Arg Asp Met  Trp Tyr Asn Leu Gly  Pro His Lys
    1085                1090                1095

Ile Lys  Phe Ile Pro Ser Met  Val Gly Pro Ile Leu  Glu Val Thr
    1100                1105                1110

Leu Thr  Pro Glu Val Glu Leu  Arg Lys Ala Thr Ile  Pro Ile Phe
    1115                1120                1125

Phe Asp  Met Met Gln Cys Glu  Phe Asn Phe Ser Gly  Asn Gly Asn
    1130                1135                1140

Phe His  Met Phe Glu Asn Glu  Leu Ile Thr Lys Leu  Asp Gln Glu
    1145                1150                1155

Val Glu  Gly Gly Arg Gly Asp  Glu Gln Tyr Lys Val  Leu Leu Glu
    1160                1165                1170

Lys Leu  Leu Leu Glu His Cys  Arg Lys His Lys Tyr  Leu Ser Ser
    1175                1180                1185

Ser Gly  Glu Val Phe Ala Leu  Leu Val Ser Ser Leu  Leu Glu Asn
    1190                1195                1200
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Leu Leu Asp Tyr Arg Thr Ile Ile Met Gln Asp Glu Ser Lys Glu
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Asn Arg Met Ser Cys Thr Val Asn Val Leu Asn Phe Tyr Lys Glu
1220 1225 1230

Lys Lys Arg Glu Asp Ile Tyr Ile Arg Tyr Leu Tyr Lys Leu Arg
1235 1240 1245

Asp Leu His Arg Asp Cys Glu Asn Tyr Thr Glu Ala Ala Tyr Thr
1250 1255 1260

Leu Leu Leu His Ala Glu Leu Leu Gln Trp Ser Asp Lys Pro Cys
1265 1270 1275

Val Pro His Leu Leu Gln Arg Asp Ser Tyr Tyr Val Tyr Thr Gln
1280 1285 1290

Gln Glu Leu Lys Glu Lys Leu Tyr Gln Glu Ile Ile Ser Tyr Phe
1295 1300 1305

Asp Lys Gly Lys Met Trp Glu Lys Ala Ile Lys Leu Ser Lys Glu
1310 1315 1320

Leu Ala Glu Thr Tyr Glu Ser Lys Val Phe Asp Tyr Glu Gly Leu
1325 1330 1335

Gly Asn Leu Leu Lys Lys Arg Ala Ser Phe Tyr Glu Asn Ile Ile
1340 1345 1350

Lys Ala Met Arg Pro Gln Pro Glu Tyr Phe Ala Val Gly Tyr Tyr
1355 1360 1365

Gly Gln Gly Phe Pro Ser Phe Leu Arg Asn Lys Ile Phe Ile Tyr
1370 1375 1380

Arg Gly Lys Glu Tyr Glu Arg Arg Glu Asp Phe Ser Leu Arg Leu
1385 1390 1395

Leu Thr Gln Phe Pro Asn Ala Glu Lys Met Thr Ser Thr Thr Pro
1400 1405 1410

Pro Gly Glu Asp Ile Lys Ser Ser Pro Lys Gln Tyr Met Gln Cys
1415 1420 1425

Phe Thr Val Lys Pro Val Met Ser Leu Pro Pro Ser Tyr Lys Asp
1430 1435 1440

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Lys Pro  Val Pro Glu Gln Ile  Leu Asn Tyr Tyr Arg  Ala Asn Glu
    1445                 1450                 1455

Val Gln  Gln Phe Arg Tyr Ser  Arg Pro Phe Arg Lys  Gly Glu Lys
    1460                 1465                 1470

Asp Pro  Asp Asn Glu Phe Ala  Thr Met Trp Ile Glu  Arg Thr Thr
    1475                 1480                 1485

Tyr Thr  Thr Ala Tyr Thr Phe  Pro Gly Ile Leu Lys  Trp Phe Glu
    1490                 1495                 1500

Val Lys  Gln Ile Ser Thr Glu  Glu Ile Ser Pro Leu  Glu Asn Ala
    1505                 1510                 1515

Ile Glu  Thr Met Glu Leu Thr  Asn Glu Arg Ile Ser  Asn Cys Val
    1520                 1525                 1530

Gln Gln  His Ala Trp Asp Arg  Ser Leu Ser Val His  Pro Leu Ser
    1535                 1540                 1545

Met Leu  Leu Ser Gly Ile Val  Asp Pro Ala Val Met  Gly Gly Phe
    1550                 1555                 1560

Ser Asn  Tyr Glu Lys Ala Phe  Phe Thr Glu Lys Tyr  Leu Gln Glu
    1565                 1570                 1575

His Pro  Glu Asp Gln Glu Lys  Val Glu Leu Leu Lys  Arg Leu Ile
    1580                 1585                 1590

Ala Leu  Gln Met Pro Leu Leu  Thr Glu Gly Ile Arg  Ile His Gly
    1595                 1600                 1605

Glu Lys  Leu Thr Glu Gln Leu  Lys Pro Leu His Glu  Arg Leu Ser
    1610                 1615                 1620

Ser Cys  Phe Arg Glu Leu Lys  Glu Lys Val Glu Lys  His Tyr Gly
    1625                 1630                 1635

Val Ile  Thr Leu Pro Pro Asn  Leu Thr Glu Arg Lys  Gln Ser Arg
    1640                 1645                 1650

Thr Gly  Ser Ile Val Leu Pro  Tyr Ile Met Ser Ser  Thr Leu Arg
    1655                 1660                 1665

Arg Leu  Ser Ile Thr Ser Val  Thr Ser Ser Val Val  Ser Thr Ser
    1670                 1675                 1680
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Ser Asn  Ser Ser Asp Asn Ala  Pro Ser Arg Pro Gly  Ser Asp Gly
    1685                 1690                 1695

Ser Ile  Leu Glu Pro Leu Leu  Glu Arg Arg Ala Ser  Ser Gly Ala
    1700                 1705                 1710

Arg Val  Glu Asp Leu Ser Leu  Arg Glu Glu Asn Ser  Glu Asn Arg
    1715                 1720                 1725

Ile Ser  Lys Phe Lys Arg Lys  Asp Trp Ser Leu Ser  Lys Ser Gln
    1730                 1735                 1740

Val Ile  Ala Glu Lys Ala Pro  Glu Pro Asp Leu Met  Ser Pro Thr
    1745                 1750                 1755

Arg Lys  Ala Gln Arg Pro Lys  Ser Leu Gln Leu Met  Asp Asn Arg
    1760                 1765                 1770

Leu Ser  Pro Phe His Gly Ser  Ser Pro Pro Gln Ser  Thr Pro Leu
    1775                 1780                 1785

Ser Pro  Pro Pro Leu Thr Pro  Lys Ala Thr Arg Thr  Leu Ser Ser
    1790                 1795                 1800

Pro Ser  Leu Gln Thr Asp Gly  Ile Ala Ala Thr Pro  Val Pro Pro
    1805                 1810                 1815

Pro Pro  Pro Pro Lys Ser Lys  Pro Tyr Glu Gly Ser  Gln Arg Asn
    1820                 1825                 1830

Ser Thr  Glu Leu Ala Pro Pro  Leu Pro Val Arg Arg  Glu Ala Lys
    1835                 1840                 1845

Ala Pro  Pro Pro Pro Pro Pro  Lys Ala Arg Lys Ser  Gly Ile Pro
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Thr Ser  Glu Pro Gly Ser Gln
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<213> Homo sapiens

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Ala Tyr Pro Lys Leu Met Glu Ile Asp Gln Lys Lys Pro Leu Ser Ala
            20                  25                  30

Ile Ile Lys Glu Val Cys Asp Gly Trp Ser Leu Ala Asn His Glu Tyr
        35                  40                  45

Phe Ala Leu Gln His Ala Asp Ser Ser Asn Phe Tyr Ile Thr Glu Lys
    50                  55                  60

Asn Arg Asn Glu Ile Lys Asn Gly Thr Ile Leu Arg Leu Thr Thr Ser
65                  70                  75                  80

Pro Ala Gln Asn Ala Gln Gln Leu His Glu Arg Ile Gln Ser Ser Ser
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Met Asp Ala Lys Leu Glu Ala Leu Lys Asp Leu Ala Ser Leu Ser Arg
100 105 110

Asp Val Thr Phe Ala Gln Glu Phe Ile Asn Leu Asp Gly Ile Ser Leu
115 120 125

Leu Thr Gln Met Val Glu Ser Gly Thr Glu Arg Tyr Gln Lys Leu Gln
130 135 140

Lys Ile Met Lys Pro Cys Phe Gly Asp Met Leu Ser Phe Thr Leu Thr
145 150 155 160

Ala Phe Val Glu Leu Met Asp His Gly Ile Val Ser Trp Asp Thr Phe
165 170 175

Ser Val Ala Phe Ile Lys Lys Ile Ala Ser Phe Val Asn Lys Ser Ala
180 185 190

Ile Asp Ile Ser Ile Leu Gln Arg Ser Leu Ala Ile Leu Glu Ser Met
195 200 205

Val Leu Asn Ser His Asp Leu Tyr Gln Lys Val Ala Gln Glu Ile Thr
210 215 220

Ile Gly Gln Leu Ile Pro His Leu Gln Gly Ser Asp Gln Glu Ile Gln
225 230 235 240

Thr Tyr Thr Ile Ala Val Ile Asn Ala Leu Phe Leu Lys Ala Pro Asp
245 250 255

Glu Arg Arg Gln Glu Met Ala Asn Ile Leu Ala Gln Lys Gln Leu Arg
260 265 270

Ser Ile Ile Leu Thr His Val Ile Arg Ala Gln Arg Ala Ile Asn Asn
275 280 285

Glu Met Ala His Gln Leu Tyr Val Leu Gln Val Leu Thr Phe Asn Leu
290 295 300

Leu Glu Asp Arg Met Met Thr Lys Met Asp Pro Gln Asp Gln Ala Gln
305 310 315 320

Arg Asp Ile Ile Phe Glu Leu Arg Arg Ile Ala Phe Asp Ala Glu Ser
325 330 335

Glu Pro Asn Asn Ser Ser Gly Ser Met Glu Lys Arg Lys Ser Met Tyr

340 345 350

Thr Arg Asp Tyr Lys Lys Leu Gly Phe Ile Asn His Val Asn Pro Ala
355 360 365

Met Asp Phe Thr Gln Thr Pro Pro Gly Met Leu Ala Leu Asp Asn Met
370 375 380

Leu Tyr Phe Ala Lys His His Gln Asp Ala Tyr Ile Arg Ile Val Leu
385 390 395 400

Glu Asn Ser Ser Arg Glu Asp Lys His Glu Cys Pro Phe Gly Arg Ser
405 410 415

Ser Ile Glu Leu Thr Lys Met Leu Cys Glu Ile Leu Lys Val Gly Glu
420 425 430

Leu Pro Ser Glu Thr Cys Asn Asp Phe His Pro Met Phe Phe Thr His
435 440 445

Asp Arg Ser Phe Glu Glu Phe Phe Cys Ile Cys Ile Gln Leu Leu Asn
450 455 460

Lys Thr Trp Lys Glu Met Arg Ala Thr Ser Glu Asp Phe Asn Lys Val
465 470 475 480

Met Gln Val Val Lys Glu Gln Val Met Arg Ala Leu Thr Thr Lys Pro
485 490 495

Ser Ser Leu Asp Gln Phe Lys Ser Lys Leu Gln Asn Leu Ser Tyr Thr
500 505 510

Glu Ile Leu Lys Ile Arg Gln Ser Glu Arg Met Asn Gln Glu Asp Phe
515 520 525

Gln Ser Arg Pro Ile Leu Glu Leu Lys Glu Lys Ile Gln Pro Glu Ile
530 535 540

Leu Glu Leu Ile Lys Gln Gln Arg Leu Asn Arg Leu Val Glu Gly Thr
545 550 555 560

Cys Phe Arg Lys Leu Asn Ala Arg Arg Arg Gln Asp Lys Phe Trp Tyr
565 570 575

Cys Arg Leu Ser Pro Asn His Lys Val Leu His Tyr Gly Asp Leu Glu
580 585 590

Glu Ser Pro Gln Gly Glu Val Pro His Asp Ser Leu Gln Asp Lys Leu

595 600 605

Pro Val Ala Asp Ile Lys Ala Val Val Thr Gly Lys Asp Cys Pro His
610 615 620

Met Lys Glu Lys Gly Ala Leu Lys Gln Asn Lys Glu Val Leu Glu Leu
625 630 635 640

Ala Phe Ser Ile Leu Tyr Asp Ser Asn Cys Gln Leu Asn Phe Ile Ala
645 650 655

Pro Asp Lys His Glu Tyr Cys Ile Trp Thr Asp Gly Leu Asn Ala Leu
660 665 670

Leu Gly Lys Asp Met Met Ser Asp Leu Thr Arg Asn Asp Leu Asp Thr
675 680 685

Leu Leu Ser Met Glu Ile Lys Leu Arg Leu Leu Asp Leu Glu Asn Ile
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Gln Ile Pro Asp Ala Pro Pro Pro Ile Pro Lys Glu Pro Ser Asn Tyr
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Asp Phe Val Tyr Asp Cys Asn
725

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Claims

1. A compound chosen in the group consisting in:

- 2,2,2-trichloro-N-(1,1-dioxido-2,3-dihydro-3-thienyl)-N-(4-methylphenyl)acetamide;
- 4-[5-(4-bromophenyl)-3-(4-nitrophenyl)-4,5-dihydro-1H-pyrazol-1-yl]-4-oxobutanoic acid;
- 3-(3-chlorophenyl)-7-methyl-4-methylene-3,4-dihydro-2(1H)-quinazolinone;
- 3-[4-(3-bromobenzylidene)-3-methyl-5-oxo-4,5-dihydro-1H-pyrazol-1-yl]benzoic acid;
- N-2,1,3-benzothiadiazol-4-yl-5-bromo-2-furamide;
- 1-acetyl-4-(2-chloro-4-nitrophenyl)-2-methylpiperazine;
- 3-(3-methoxybenzylidene)-5-(4-methylphenyl)-2(3H)-furanone;
- 3-[5-(3,4-dichlorophenyl)-2-furyl]acrylic acid;
- (2-chloro-4-{[5-(2-chlorophenyl)-6-(ethoxycarbonyl)-7-methyl-3-oxo-5H-[1,3]thiazolo[3,2-a]pyrimidin-2(3H)-ylidene]methyl}-6-methoxyphenoxy)acetic acid;
- 4-{[4-(diphenylmethyl)-1-piperazinyl]sulfonyl}-2,1,3-benzothiadiazole;
- 4-[4-phenyl-5-(2-thienyl)-1H-imidazol-2-yl]-1,2-benzenediol;
- N-(3,4-dimethoxyphenyl)-4-[methyl(phenylsulfonyl)amino]benzamide;
- 1-[(2-hydroxyphenyl)carbonothioyl]-3-phenyl-5-(trifluoromethyl)-4,5-dihydro-1H-pyrazol-5-ol;
- 2-methoxyethyl 4-[(4-tert-butylbenzoyl)amino]benzoate;
- N-(2,3-dichlorophenyl)-3-(5-methyl-2-furyl)acrylamide;
- N-(4-fluorophenyl)-3-[3-(trifluoromethyl)phenyl]acrylamide;
- 3-(2-furylmethyl)-2-(2-hydroxyphenyl)-2,3-dihydro-4(1H)-quinazolinone;
- N-(4-ethoxyphenyl)-2-{[5-(4-methoxyphenyl)-1,3,4-oxadiazol-2-yl]thio}acetamide;
- 5-(4-nitrobenzylidene)-2-thioxo-3-[3-(trifluoromethyl)phenyl]-1,3-thiazolidin-4-one;

- (3,5-dichlorophenyl)[(phenylsulfonyl)carbonyl]amine;
- N-(2-bromophenyl)-3-(5-methyl-2-furyl)acrylamide;
- 2-(2-chlorophenoxy)-N-[2-chloro-5-(trifluoromethyl)phenyl]acetamide;
- N-[4-(4-acetyl-1-piperazinyl)phenyl]propanamide;
- 8-[(dimethylamino)methyl]-9-hydroxy-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-one;
- 4-tert-butyl-N-[1-{[(2-methoxyphenyl)amino]carbonyl}-2-(2-thienyl)vinyl]benzamide;
- 2-chloro-N-(3-chloro-4-methoxyphenyl)benzamide;
- 2,6-di-tert-butyl-4-(2,3-dihydro-1H-perimidin-2-yl)phenol;
- 3-benzyl-2-(2,6-dichlorophenyl)-2,3-dihydro-4(1H)-quinazolinone;
- 1-(3,4-dichlorobenzyl)-1H-indole-3-carbaldehyde;
- N-[5-(1-adamantyl)-1,3,4-thiadiazol-2-yl]-N'-phenylurea;
- N-(3,4-dichlorophenyl)-N'-{5-[(4-methylphenoxy)methyl]-1,3,4-thiadiazol-2-yl}urea;
- N-(2,3-dihydro-1,4-benzodioxin-6-yl)-2-(1-naphthyloxy)acetamide;
- N-[4-(4-acetyl-1-piperazinyl)phenyl]-4-ethoxy-3-nitrobenzamide;
- N-(2-chlorophenyl)-3-(4-fluorophenyl)acrylamide;
- 1-[(dimethyl-lambda-4--sutfanylidene)amino]-2-methoxy-4-nitrobenzene;
- 5-benzylidene-1-(2-chlorophenyl)-2,4,6(1H,3H,5H)-pyrimidinetrione;
- 4-ethyl-5,6-dimethyl-2-phenylpyrimidine;
- 2-(3-chlorobenzylidene)-1H-indene-1,3(2H)-dione;
- 5-{5-[(3-methyl-5-oxo-1-phenyl-1,5-dihydro-4H-pyrazol-4-ylidene)methyl]-2-furyl}-1H-isoindole-1,3(2H)-dione;
- N-(2,5-dimethylphenyl)-3-(4-methoxyphenyl)acrylamide;
- 2-({2-[(4-nitrophenyl)amino]ethyl}amino)ethanol;
- N-(3-methoxyphenyl)-4-propoxybenzamide;
- 2-(4-hydroxyphenyl)-3-phenyl-2,3-dihydro-4(1H)-quinazolinone;
- 4-methyl-1-(2-nitrobenzoyl)piperidine;
- 2-hydroxy-N'-[(2-methylphenyl)sulfonyl]benzohydrazide;
- 4-(1,3-benzothiazol-2-yl)butanoic acid;
- 4-(3-methylbenzylidene)-1-phenyl-3,5-pyrazolidinedione;
- 4-(2,4-dichlorophenoxy)-N-(2-ethoxyphenyl)butanamide;
- N-(2-methoxyphenyl)-N'-(phenylsulfonyl)benzenecarboximidamide;
- N-[2-(2-chloro-5-iodophenyl)-1,3-benzoxazol-5-yl]-2-methylpropanamide;
- 5-(4-butoxyphenyl)-3-cyclohexyl-1,2,4-oxadiazole;
- N-(3,4-dichlorophenyl)-N'-4H-1,2,4-triazol-4-yl urea;
- 6-chloro-4-phenyl-3-[3-(3,4,5-trimethoxyphenyl)acryloyl]-2(1 H)-quinolinone;
- 6-bromo-4-phenyl-3-[3-(3,4,5-trimethoxyphenyl)acryloyl]-2(1H)-quinolinone; and
- N-(1H-1,2,3-benzotriazol-1-ylmethyl)-4-nitro-1,2,5-oxadiazol-3-amine for use in the treatment and/or prevention of bone loss diseases in a subject in need thereof.

2. A pharmaceutical composition comprising at least one compound chosen in the group consisting in:

- 2,2,2-trichloro-N-(1,1-dioxido-2,3-dihydro-3-thienyl)-N-(4-methylphenyl)acetamide;
- 4-[5-(4-bromophenyl)-3-(4-nitrophenyt)-4,5-dihydro-1H-pyrazol-1-yl]-4-oxobutanoic acid;
- 3-(3-chlorophenyl)-7-methyl-4-methylene-3,4-dihydro-2(1H)-quinazolinone;
- 3-[4-(3-bromobenzylidene)-3-methyl-5-oxo-4,5-dihydro-1H-pyrazol-1-yl]benzoic acid;
- N-2,1,3-benzothiadiazol-4-yl-5-bromo-2-furamide;
- 1-acetyl-4-(2-chloro-4-nitrophenyl)-2-methylpiperazine;
- 3-(3-methoxybenzylidene)-5-(4-methylphenyl)-2(3H)-furanone;
- 3-[5-(3,4-dichlorophenyl)-2-furyl]acrylic acid;
- (2-chloro-4-{[5-(2-chlorophenyl)-6-(ethoxycarbonyl)-7-methyl-3-oxo-5H-[1,3]thiazolo[3,2-a]pyrimidin-2(3H)-ylidene]methyl}-6-methoxyphenoxy)acetic acid;
- 4-{[4-(diphenylmethyl)-1-piperazinyl]sulfonyl}-2,1,3-benzothiadiazole;
- 4-[4-phenyl-5-(2-thienyl)-1H-imidazol-2-yl]-1,2-benzenediol;
- N-(3,4-dimethoxyphenyl)-4-[methyl(phenylsulfonyl)amino]benzamide;
- 1-[(2-hydroxyphenyl)carbonothioyl]-3-phenyl-5-(trifluoromethyl)-4,5-dihydro-1H-pyrazol-5-ol;
- 2-methoxyethyl 4-[(4-tert-butylbenzoyl)amino]benzoate;
- N-(2,3-dichlorophenyl)-3-(5-methyl-2-furyl)acrylamide;
- N-(4-fluorophenyl)-3-[3-(trifluoromethyl)phenyl]acrylamide;

- 3-(2-furylmethyl)-2-(2-hydroxyphenyl)-2,3-dihydro-4(1H)-quinazolinone;
- N-(4-ethoxyphenyl)-2-{[5-(4-methoxyphenyl)-1,3,4-oxadiazol-2-yl]thio}acetamide;
- 5-(4-nitrobenzylidene)-2-thioxo-3-[3-(trifluoromethyl)phenyl]-1,3-thiazolidin-4-one;
- (3,5-dichlorophenyl)[(phenylsulfonyl)carbonyl]amine;
- N-(2-bromophenyl)-3-(5-methyl-2-furyl)acrylamide;
- 2-(2-chlorophenoxy)-N-[2-chloro-5-(trifluoromethyl)phenyl]acetamide;
- N-[4-(4-acetyl-1-piperazinyl)phenyl]propanamide;
- 8-[(dimethylamino)methyl]-9-hydroxy-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-one;
- 4-tert-butyl-N-[1-{[(2-methoxyphenyl)amino]carbonyl}-2-(2-thienyl)vinyl]benzamide;
- 2-chloro-N-(3-chloro-4-methoxyphenyl)benzamide;
- 2,6-di-tert-butyl-4-(2,3-dihydro-1H-perimidin-2-yl)phenol;
- 3-benzyl-2-(2,6-dichlorophenyl)-2,3-dihydro-4(1H)-quinazolinone;
- 1-(3,4-dichlorobenzyl)-1H-indole-3-carbaldehyde;
- N-[5-(1-adamantyl)-1,3,4-thiadiazol-2-yl]-N'-phenylurea;
- N-(3,4-dichlorophenyl)-N'-{5-[(4-methylphenoxy)methyl]-1,3,4-thiadiazol-2-yl}urea;
- N-(2,3-dihydro-1,4-benzodioxin-6-yl)-2-(1-naphthyloxy)acetamide;
- N-[4-(4-acetyl-1-piperazinyt)phenyl]-4-ethoxy-3-nitrobenzamide;
- N-(2-chlorophenyl)-3-(4-ftuorophenyl)acrylamide;
- 1-[(dimethyl-lambda~4~-sulfanylidene)amino]-2-methoxy-4-nitrobenzene;
- 5-benzylidene-1-(2-chlorophenyl)-2,4,6(1H,3H,5H)-pyrimidinetrione;
- 4-ethyl-5,6-dimethyl-2-phenylpyrimidine;
- 2-(3-chlorobenzylidene)-1H-indene-1,3(2H)-dione;
- 5-{5-[(3-methyl-5-oxo-1-phenyl-1,5-dihydro-4H-pyrazol-4-ytidene)methyl]-2-furyl}-1 H-isoindole-1,3(2H)-dione;
- N-(2,5-dimethylphenyl)-3-(4-methoxyphenyl)acrylamide;
- 2-({2-[(4-nitrophenyl)amino]ethyl}amino)ethanol;
- N-(3-methoxyphenyl)-4-propoxybenzamide;
- 2-(4-hydroxyphenyl)-3-phenyl-2,3-dihydro-4(1H)-quinazolinone;
- 4-methyl-1-(2-nitrobenzoyl)piperidine;
- 2-hydroxy-N'-[(2-methylphenyl)sulfonyl]benzohydrazide;
- 4-(1,3-benzothiazol-2-yl)butanoic acid;
- 4-(3-methylbenzylidene)-1-phenyl-3,5-pyrazolidinedione;
- 4-(2,4-dichlorophenoxy)-N-(2-ethoxyphenyl)butanamide;
- N-(2-methoxyphenyl)-N'-(phenylsulfonyl)benzenecarboximidamide;
- N-[2-(2-chloro-5-iodophenyl)-1,3-benzoxazol-5-yl]-2-methylpropanamide;
- 5-(4-butoxyphenyl)-3-cyclohexyl-1,2,4-oxadiazole;
- N-(3,4-dichlorophenyl)-N'-4H-1,2,4-triazol-4-yl urea;
- 6-chloro-4-phenyl-3-[3-(3,4,5-trimethoxyphenyl)acryloyl]-2(1 H)-quinolinone;
- 6-bromo-4-phenyl-3-[3-(3,4,5-trimethoxyphenyl)acryloyl]-2(1H)-quinolinone; and
- N-(1H-1,2,3-benzotriazol-1-ylmethyl)-4-nitro-1,2,5-oxadiazol-3-amine and, optionally, a pharmaceutically acceptable support, for use in the treatment and/or prevention of bone loss diseases in a subject in need thereof.

3. Compound or composition for use according to any of claims 1 or 2, wherein the bone loss diseases is chosen in the group consisting of: osteoporosis, osteopenia due to bone metastases, periarticular erosions in rheumatoid arthritis, primary hyperparathyroidism, hypercalcemia of malignancy, Paget's disease of bone, periodontal disease, immobilization induced osteopenia and glucocorticoid treatment.

4. Compound or composition for use according to claim 3, wherein the bone loss disease is osteoporosis.

5. Compound or composition for use according to any of claims 1 to 4, wherein said compound is administered at a concentration of between 5 and 200μM.

6. Compound or composition for use according to claim 5, wherein said compound is administered at a concentration of between 10 and 100μM.

Patentansprüche

1. Verbindung, ausgewählt aus der Gruppe bestehend aus:

- 2,2,2-Trichloro-N-(1,1-dioxido-2,3-dihydro-3-thienyl)-N-(4-methylphenyl)acetamid;
- 4-[5-(4-Bromophenyl)-3-(4-nitrophenyl)-4,5-dihydro-1H-pyrazol-1-yl]-4-oxobuttersäure;
- 3-(3-Chlorophenyl)-7-methyl-4-methylen-3,4-dihydro-2(1H)-chinazolinon;
- 3-[4-(3-Bromobenzyliden)-3-methyl-5-oxo-4,5-dihydro-1H-pyrazol-1-yl]benzoesäure;
- N-2,1,3-Benzothiadiazol-4-yl-5-bromo-2-furamid;
- 1-Acetyl-4-(2-chloro-4-nitrophenyl)-2-methylpiperazin;
- 3-(3-Methoxybenzyliden)-5-(4-methylphenyl)-2(3H)-furanon;
- 3-[5-(3,4-Dichlorophenyl)-2-furyl]acrylsäure;
- (2-Chloro-4-{[5-(2-chlorophenyl)-6-(ethoxycarbonyl)-7-methyl-3-oxo-5H-[1,3]thiazolo[3,2-a]pyrimidin-2(3H)-yliden]methyl}-6-methoxyphenoxy)essigsäure;
- 4-{[4-(Diphenylmethyl)-1-piperazinyl]sulfonyl}-2,1,3-benzothiadiazol;
- 4-[4-Phenyl-5-(2-thienyl)-1H-imidazol-2-yl]-1,2-benzoldiol;
- N-(3,4-Dimethoxyphenyl)-4-[methyl(phenylsulfonyl)amino]benzamid;
- 1 -[(2-Hydroxyphenyl)carbonothioyl]-3-phenyl-5-(trifluormethyl)-4,5-dihydro-1H-pyrazol-5-ol;
- 2-Methoxyethyl-4-[(4-tert-butylbenzoyl)amino]benzoat;
- N-(2,3-Dichlorophenyl)-3-(5-methyl-2-furyl)acrylamid;
- N-(4-Fluorophenyl)-3-[3-(trifluoromethyl)phenyl]acrylamid;
- 3-(2-Furylmethyl)-2-(2-hydroxyphenyl)-2,3-dihydro-4(1H)-chinazolinon;
- N-(4-Ethoxyphenyl)-2-{[5-(4-methoxyphenyl)-1,3,4-oxadiazol-2-yl]thio}acetamid;
- 5-(4-Nitrobenzyliden)-2-thioxo-3-[3-(trifluoromethyl)phenyl]-1,3-thiazolidin-4-on;
- (3,5-Dichlorophenyl)[(phenylsulfonyl)carbonyl]amin;
- N-(2-Bromophenyl)-3-(5-methyl-2-furyl)acrylamid;
- 2-(2-Chlorophenoxy)-N-[2-chloro-5-(trifluoromethyl)phenyl]acetamid;
- N-[4-(4-Acetyl-1-piperazinyl)phenyl]propanamid;
- 8-[(Dimethylamino)methyl]-9-hydroxy-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-on;
- 4-tert-Butyl-N-[1-{[(2-methoxyphenyl)amino]carbonyl}-2-(2-thienyl)vinyl]benzamid;
- 2-Chloro-N-(3-chloro-4-methoxyphenyl)benzamid;
- 2,6-di-tert-Butyl-4-(2,3-dihydro-1H-perimidin-2-yl)phenol;
- 3-Benzyl-2-(2,6-dichlorophenyl)-2,3-dihydro-4(1H)-chinazolinon;
- 1-(3,4-Dichlorobenzyl)-1H-indol-3-carbaldehyd;
- N-[5-(1-Adamantyl)-1,3,4-thiadiazol-2-yl]-N'-phenylharnstoff;
- N-(3,4-Dichlorophenyl)-N'-{5-[(4-methylphenoxy)methyl]-1,3,4-thiadiazol-2-yl}harnstoff;
- N-(2,3-Dihydro-1,4-benzodioxin-6-yl)-2-(1-naphthyloxy)acetamid;
- N-[4-(4-Acetyl-1-piperazinyl)phenyl]-4-ethoxy-3-nitrobenzamid;
- N-(2-Chlorophenyl)-3-(4-fluorophenyl)acrylamid;
- 1-[(Dimethyl-lambda-4--sulfanyliden)amino]-2-methoxy-4-nitrobenzol;
- 5-Benzyliden-1-(2-chlorophenyl)-2,4,6(1H,3H,5H)-pyrimidintrion;
- 4-Ethyl-5,6-dimethyl-2-phenylpyrimidin;
- 2-(3-Chlorobenzyliden)-1H-inden-1,3(2H)-dion;
- 5-{5-[(3-Methyl-5-oxo-1-phenyl-1,5-dihydro-4H-pyrazol-4-yliden)methyl]-2-furyl}-1H-isoindol-1,3(2H)-dion;
- N-(2,5-Dimethylphenyl)-3-(4-methoxyphenyl)acrylamid;
- 2-({2-[(4-Nitrophenyl)amino]ethyl}amino)ethanol;
- N-(3-Methoxyphenyl)-4-propoxybenzamid;
- 2-(4-Hydroxyphenyl)-3-phenyl-2,3-dihydro-4(1H)-chinazolinon;
- 4-Methyl-1-(2-nitrobenzoyl)piperidin;
- 2-Hydroxy-N'-[(2-methylphenyl)sulfonyl]benzohydrazid;
- 4-(1,3-Benzothiazol-2-yl)buttersäure;
- 4-(3-Methylbenzyliden)-1-phenyl-3,5-pyrazolidindion;
- 4-(2,4-Dichlorophenoxy)-N-(2-ethoxyphenyl)butanamid;
- N-(2-Methoxyphenyl)-N'-(phenylsulfonyl)benzolcarboximidamid;
- N-[2-(2-Chloro-5-iodophenyl)-1,3-benzoxazol-5-yl]-2-methylpropanamid;
- 5-(4-Butoxyphenyl)-3-cyclohexyl-1,2,4-oxadiazol;
- N-(3,4-Dichlorophenyl)-N'-4H-1,2,4-triazol-4-yl-harnstoff;
- 6-Chloro-4-phenyl-3-[3-(3,4,5-trimethoxyphenyl)acryloyl]-2(1H)-chinolinon;

- 6-Bromo-4-phenyl-3-[3-(3,4,5-trimethoxyphenyl)acryloyl]-2(1H)-chinolinon; und
- N-(1H-1,2,3-Benzotriazol-1-ylmethyl)-4-nitro-1,2,5-oxadiazol-3-amin zur Verwendung bei der Behandlung und/oder Prävention von Knochenschwunderkrankungen in einem behandlungsbedürftigen Subjekt.

2. Pharmazeutische Zusammensetzung, umfassend mindestens eine Verbindung, ausgewählt aus der Gruppe bestehend aus:

- 2,2,2-Trichloro-N-(1,1-dioxido-2,3-dihydro-3-thienyl)-N-(4-methylphenyl)acetamid;
- 4-[5-(4-Bromophenyl)-3-(4-nitrophenyl)-4,5-dihydro-1H-pyrazol-1-yl]-4-oxobuttersäure;
- 3-(3-Chlorophenyl)-7-methyl-4-methylen-3,4-dihydro-2(1H)-chinazolinon;
- 3-[4-(3-Bromobenzyliden)-3-methyl-5-oxo-4,5-dihydro-1H-pyrazol-1-yl]benzoesäure;
- N-2,1,3-Benzothiadiazol-4-yl-5-bromo-2-furamid;
- 1-Acetyl-4-(2-chloro-4-nitrophenyl)-2-methylpiperazin;
- 3-(3-Methoxybenzyliden)-5-(4-methylphenyl)-2(3H)-furanon;
- 3-[5-(3,4-Dichlorophenyl)-2-furyl]acrylsäure;
- (2-Chloro-4-{[5-(2-chlorophenyl)-6-(ethoxycarbonyl)-7-methyl-3-oxo-5H-[1,3]thiazolo[3,2-a]pyrimidin-2(3H)-yliden]methyl}-6-methoxyphenoxy)essigsäure;
- 4-{[4-(Diphenylmethyl)-1-piperazinyl]sulfonyl}-2,1,3-benzothiadiazol;
- 4-[4-Phenyl-5-(2-thienyl)-1H-imidazol-2-yl]-1,2-benzoldiol;
- N-(3,4-Dimethoxyphenyl)-4-[methyl(phenylsulfonyl)amino]benzamid;
- 1-[(2-Hydroxyphenyl)carbonothioyl]-3-phenyl-5-(trifluoromethyl)-4,5-dihydro-1H-pyrazol-5-ol;
- 2-Methoxyethyl-4-[(4-tert-butylbenzoyl)amino]benzoat;
- N-(2,3-Dichlorophenyl)-3-(5-methyl-2-furyl)acrylamid;
- N-(4-Fluorophenyl)-3-[3-(trifluoromethyl)phenyl]acrylamid;
- 3-(2-Furylmethyl)-2-(2-hydroxyphenyl)-2,3-dihydro-4(1H)-chinazolinon;
- N-(4-Ethoxyphenyl)-2-{[5-(4-methoxyphenyl)-1,3,4-oxadiazol-2-yl]thio}acetamid;
- 5-(4-Nitrobenzyliden)-2-thioxo-3-[3-(trifluoromethyl)phenyl]-1,3-thiazolidin-4-on;
- (3,5-Dichlorophenyl)[(phenylsulfonyl)carbonyl]amin;
- N-(2-Bromophenyl)-3-(5-methyl-2-furyl)acrylamid;
- 2-(2-Chlorophenoxy)-N-[2-chloro-5-(trifluoromethyl)phenyl]acetamid;
- N-[4-(4-Acetyl-1-piperazinyl)phenyl]propanamid;
- 8-[(Dimethylamino)methyl]-9-hydroxy-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-on;
- 4-tert-Butyl-N-[1-{[(2-methoxyphenyl)amino]carbonyl}-2-(2-thienyl)vinyl]benzamid;
- 2-Chloro-N-(3-chloro-4-methoxyphenyl)benzamid;
- 2,6-di-tert-Butyl-4-(2,3-dihydro-1H-perimidin-2-yl)phenol;
- 3-Benzyl-2-(2,6-dichlorophenyl)-2,3-dihydro-4(1H)-chinazolinon;
- 1-(3,4-Dichlorobenzyl)-1H-indol-3-carbaldehyd;
- N-[5-(1-Adamantyl)-1,3,4-thiadiazol-2-yl]-N'-phenylharnstoff;
- N-(3,4-Dichlorophenyl)-N'-{5-[(4-methylphenoxy)methyl]-1,3,4-thiadiazol-2-yl}harnstoff;
- N-(2,3-Dihydro-1,4-benzodioxin-6-yl)-2-(1-naphthyloxy)acetamid;
- N-[4-(4-Acetyl-1-piperazinyl)phenyl]-4-ethoxy-3-nitrobenzamid;
- N-(2-Chlorophenyl)-3-(4-fluorophenyl)acrylamid;
- 1-[(Dimethyl-lambda-4--sulfanyliden)amino]-2-methoxy-4-nitrobenzol;
- 5-Benzyliden-1-(2-chlorophenyl)-2,4,6(1H,3H,5H)-pyrimidintrion;
- 4-Ethyl-5,6-dimethyl-2-phenylpyrimidin;
- 2-(3-Chlorobenzyliden)-1H-inden-1,3(2H)-dion;
- 5-{5-[(3-Methyl-5-oxo-1-phenyl-1,5-dihydro-4H-pyrazol-4-yliden)methyl]-2-furyl}-1H-isoindol-1,3(2H)-dion;
- N-(2,5-Dimethylphenyl)-3-(4-methoxyphenyl)acrylamid;
- 2-({2-[(4-Nitrophenyl)amino]ethyl}amino)ethanol;
- N-(3-Methoxyphenyl)-4-propoxybenzamid;
- 2-(4-Hydroxyphenyl)-3-phenyl-2,3-dihydro-4(1H)-chinazolinon;
- 4-Methyl-1-(2-nitrobenzoyl)piperidin;
- 2-Hydroxy-N'-[(2-methylphenyl)sulfonyl]benzohydrazid;
- 4-(1,3-Benzothiazol-2-yl)buttersäure;
- 4-(3-Methylbenzyliden)-1-phenyl-3,5-pyrazolidindion;
- 4-(2,4-Dichlorophenoxy)-N-(2-ethoxyphenyl)butanamid;
- N-(2-methoxyphenyl)-N'-(phenylsulfonyl)benzolcarboximidamid;
- N-[2-(2-Chloro-5-iodophenyl)-1,3-benzoxazol-5-yl]-2-methylpropanamid;

- 5-(4-Butoxyphenyl)-3-cyclohexyl-1,2,4-oxadiazol;
- N-(3,4-Dichlorophenyl)-N'-4H-1,2,4-triazol-4-yl-harnstoff;
- 6-Chloro-4-phenyl-3-[3-(3,4,5-trimethoxyphenyl)acryloyl]-2(1H)-chinolinon;
- 6-Bromo-4-phenyl-3-[3-(3,4,5-trimethoxyphenyl)acryloyl]-2(1H)-chinolinon; und
- N-(1H-1,2,3-Benzotriazol-1-ylmethyl)-4-nitro-1,2,5-oxadiazol-3-amin und

wahlweise einem pharmazeutisch akzeptablem Träger zur Verwendung bei der Behandlung und/oder Prävention von Knochenschwunderkrankungen in einem behandlungsbedürftigen Subjekt.

3. Verbindung oder Zusammensetzung zur Verwendung nach einem der Ansprüche 1 oder 2, wobei die Knochenschwunderkrankung ausgewählt ist aus der Gruppe bestehend aus: Osteoporose, Osteopenie aufgrund von Knochenmetastasen, periartikuläre Erosionen in rheumatoider Arthritis, primären Hyperparathyreoidismus, maligner Hyperkalzämie, Paget-Knochenerkrankung, periodontaler Erkrankung, immobilisierungsinduzierter Osteopenie und Glucocorticoidbehandlung.

4. Verbindung oder Zusammensetzung zur Verwendung nach Anspruch 3, wobei die Knochenschwunderkrankung Osteoporose ist.

5. Verbindung oder Zusammensetzung zur Verwendung nach einem der Ansprüche 1 bis 4, wobei die Verbindung in einer Konzentration von zwischen 5 und 200 μM verabreicht wird.

6. Verbindung oder Zusammensetzung zur Verwendung nach Anspruch 5, wobei die Verbindung in einer Konzentration von zwischen 10 und 100 μM verabreicht wird.

Revendications

1. Composé sélectionné dans le groupe consistant en :

- 2,2,2-trichloro-N-(1,1-dioxido-2,3-dihydro-3-thiényl)-N-(4-méthylphényl)acétamide ;
- acide 4-[5-(4-bromophényl)-3-(4-nitrophényl)-4,5-dihydro-1H-pyrazol-1-yl]-4-oxo-butanoïque ;
- 3-(3-chlorophényl)-7-méthyl-4-méthylène-3,4-dihydro-2(1H)-quinazolinone ;
- acide 3-[4-(3-bromobenzylidène)-3-méthyl-5-oxo-4,5-dihydro-1H-pyrazol-1-yl]benzoïque ;
- N-2,1,3-benzothiadiazol-4-yl-5-bromo-2-furamide ;
- 1-acétyl-4-(2-chloro-4-nitrophényl)-2-méthylpipérazine ;
- 3-(3-méthoxybenzylidène)-5-(4-méthylphényl)-2(3H)-furanone ;
- acide 3-[5-(3,4-dichlorophényl)-2-furyl]acrylique ;
- acide (2-chloro-4-{[5-(2-chlorophényl)-6-(éthoxycarbonyl)-7-méthyl-3-oxo-5H-[1,3]thiazolo[3,2-a]pyrimidin-2(3H)-ylidène]méthyl}-6-méthoxyphénoxy)acétique ;
- 4-{[4-(diphénylméthyl)-1-pipérazinyl]sulfonyl}-2,1,3-benzothiadiazole ;
- 4-[4-phényl-5-(2-thiényl)-1H-imidazol-2-yl]-1,2-benzènediol ;
- N-(3,4-diméthoxyphényl)-4-[méthyl(phénylsulfonyl)amino]benzamide ;
- 1-[(2-hydroxyphényl)carbonothioyl]-3-phényl-5-(trifluorométhyl)-4,5-dihydro-1H-pyrazol-5-ol ;
- 2-méthoxyéthyl 4-[(4-tert-butylbenzoyl)amino]benzoate ;
- N-(2,3-dichlorophényl)-3-(5-méthyl-2-furyl)acrylamide ;
- N-(4-fluorophényl)-3-[3-(trifluorométhyl)phényl]acrylamide ;
- 3-(2-furylméthyl)-2-(2-hydroxyphényl)-2,3-dihydro-4(1H)-quinazolinone ;
- N-(4-éthoxyphényl)-2-{[5-(4-méthoxyphényl)-1,3,4-oxadiazol-2-yl]thio}acétamide ;
- 5-(4-nitrobenzylidène)-2-thioxo-3-[3-(trifluorométhyl)phényl]-1,3-thiazolidin-4-one ;
- (3,5-dichlorophényl)[(phénylsulfonyl)carbonyl]amine ;
- N-(2-bromophényl)-3-(5-méthyl-2-furyl)acrylamide ;
- 2-(2-chlorophénoxy)-N-[2-chloro-5-(trifluorométhyl)phényl]acétamide ;
- N-[4-(4-acétyl-1-pipérazinyl)phényl]propanamide ;
- 8-[(diméthylamino)méthyl]-9-hydroxy-2-méthyl-4H-pyrido[1,2-a]pyrimidin-4-one ;
- 4-tert-butyl-N-[1-{[(2-méthoxyphényl)amino]carbonyl}-2-(2-thiényl)vinyl]benzamide ;
- 2-chloro-N-(3-chloro-4-méthoxyphényl)benzamide ;
- 2,6-di-tert-butyl-4-(2,3-dihydro-1H-périmidin-2-yl)phénol ;
- 3-benzyl-2-(2,6-dichlorophényl)-2,3-dihydro-4(1H)-quinazolinone ;
- 1-(3,4-dichlorobenzyl)-1H-indole-3-carbaldéhyde ;

- N-[5-(1-adamantyl)-1,3,4-thiadiazol-2-yl]-N'-phénylurée ;
- N-(3,4-dichlorophényl)-N'-{5-[(4-méthylphénoxy)méthyl]-1,3,4-thiadiazol-2-yl}urée ;
- N-(2,3-dihydro-1,4-benzodioxin-6-yl)-2-(1-naphtyloxy)acétamide ;
- N-[4-(4-acétyl-1-pipérazinyl)phényl]-4-éthoxy-3-nitrobenzamide ;
- N-(2-chlorophényl)-3-(4-fluorophényl)acrylamide ;
- 1-[(diméthyl-lambda-4-sulfanylidène)amino]-2-méthoxy-4-nitrobenzène ;
- 5-benzylidène-1-(2-chlorophényl)-2,4,6(1H,3H,5H)-pyrimidinetrione ;
- 4-éthyl-5,6-diméthyl-2-phénylpyrimidine ;
- 2-(3-chlorobenzylidène)-1H-indène-1,3(2H)-dione ;
- 5-{5-[(3-méthyl-5-oxo-1-phényl-1,5-dihydro-4H-pyrazol-4-ylidène)méthyl]-2-furyl}-1H-isoindole-1,3(2H)-dione ;
- N-(2,5-diméthylphényl)-3-(4-méthoxyphényl)acrylamide ;
- 2-({2-[(4-nitrophényl)amino]éthyl}amino)éthanol ;
- N-(3-méthoxyphényl)-4-propoxybenzamide ;
- 2-(4-hydroxyphényl)-3-phényl-2,3-dihydro-4(1H)-quinazolinone ;
- 4-méthyl-1-(2-nitrobenzoyl)pipéridine ;
- 2-hydroxy-N'-[(2-méthylphényl)sulfonyl]benzohydrazide ;
- acide 4-(1,3-benzothiazol-2-yl)butanoïque ;
- 4-(3-méthylbenzylidène)-1-phényl-3,5-pyrazolidinedione ;
- 4-(2,4-dichlorophénoxy)-N-(2-éthoxyphényl)butanamide ;
- N-(2-méthoxyphényl)-N'-(phénylsulfonyl)benzènecarboximidamide ;
- N-[2-(2-chloro-5-iodophényl)-1,3-benzoxazol-5-yl]-2-méthylpropanamide ;
- 5-(4-butoxyphényl)-3-cyclohexyl-1,2,4-oxadiazole ;
- N-(3,4-dichlorophényl)-N'-4H-1,2,4-triazol-4-yl urée ;
- 6-chloro-4-phényl-3-[3-(3,4,5-triméthoxyphényl)acryloyl]-2(1H)-quinolinone ;
- 6-bromo-4-phényl-3-[3-(3,4,5-triméthoxyphényl)acryloyl]-2(1H)-quinolinone ; et
- N-(1H-1,2,3-benzotriazol-1-ylméthyl)-4-nitro-1,2,5-oxadiazol-3-amine pour son utilisation dans le traitement et/ou la prévention de maladies de perte osseuse chez un sujet le nécessitant.

2. Composition pharmaceutique comprenant au moins un composé sélectionné dans le groupe consistant en :

- 2,2,2-trichloro-N-(1,1-dioxido-2,3-dihydro-3-thiényl)-N-(4-méthylphényl)acétamide ;
- acide 4-[5-(4-bromophényl)-3-(4-nitrophényl)-4,5-dihydro-1H-pyrazol-1-yl]-4-oxo-butanoïque ;
- 3-(3-chlorophényl)-7-méthyl-4-méthylène-3,4-dihydro-2(1H)-quinazolinone ;
- acide 3-[4-(3-bromobenzylidène)-3-méthyl-5-oxo-4,5-dihydro-1H-pyrazol-1-yl]benzoïque ;
- N-2,1,3-benzothiadiazol-4-yl-5-bromo-2-furamide ;
- 1-acétyl-4-(2-chloro-4-nitrophényl)-2-méthylpipérazine ;
- 3-(3-méthoxybenzylidène)-5-(4-méthylphényl)-2(3H)-furanone ;
- acide 3-[5-(3,4-dichlorophényl)-2-furyl]acrylique ;
- acide (2-chloro-4-{[5-(2-chlorophényl)-6-(éthoxycarbonyl)-7-méthyl-3-oxo-5H-[1,3]thiazolo[3,2-a]pyrimidin-2(3H)-ylidène]méthyl}-6-méthoxyphénoxy)acétique ;
- 4-{[4-(diphénylméthyl)-1-pipérazinyl]sulfonyl}-2,1,3-benzothiadiazole ;
- 4-[4-phényl-5-(2-thiényl)-1H-imidazol-2-yl]-1,2-benzènediol ;
- N-(3,4-diméthoxyphényl)-4-[méthyl(phénylsulfonyl)amino]benzamide ;
- 1-[(2-hydroxyphényl)carbonothioyl]-3-phényl-5-(trifluorométhyl)-4,5-dihydro-1H-pyrazol-5-ol ;
- 2-méthoxyéthyl 4-[(4-tert-butylbenzoyl)amino]benzoate ;
- N-(2,3-dichlorophényl)-3-(5-méthyl-2-furyl)acrylamide ;
- N-(4-fluorophényl)-3-[3-(trifluorométhyl)phényl]acrylamide ;
- 3-(2-furylméthyl)-2-(2-hydroxyphényl)-2,3-dihydro-4(1H)-quinazolinone ;
- N-(4-éthoxyphényl)-2-{[5-(4-méthoxyphényl)-1,3,4-oxadiazol-2-yl]thio}acétamide ;
- 5-(4-nitrobenzylidène)-2-thioxo-3-[3-(trifluorométhyl)phényl]-1,3-thiazolidin-4-one ;
- (3,5-dichlorophényl)[(phénylsulfonyl)carbonyl]amine ;
- N-(2-bromophényl)-3-(5-méthyl-2-furyl)acrylamide ;
- 2-(2-chlorophénoxy)-N-[2-chloro-5-(trifluorométhyl)phényl]acétamide ;
- N-[4-(4-acétyl-1-pipérazinyl)phényl]propanamide ;
- 8-[(diméthylamino)méthyl]-9-hydroxy-2-méthyl-4H-pyrido[1,2-a]pyrimidin-4-one ;
- 4-tert-butyl-N-[1-{[(2-méthoxyphényl)amino]carbonyl}-2-(2-thiényl)vinyl]benzamide ;
- 2-chloro-N-(3-chloro-4-méthoxyphényl)benzamide ;

- 2,6-di-tert-butyl-4-(2,3-dihydro-1H-périmidin-2-yl)phénol ;
- 3-benzyl-2-(2,6-dichlorophényl)-2,3-dihydro-4(1H)-quinazolinone ;
- 1-(3,4-dichlorobenzyl)-1H-indole-3-carbaldéhyde ;
- N-[5-(1-adamantyl)-1,3,4-thiadiazol-2-yl]-N'-phénylurée ;
- N-(3,4-dichlorophényl)-N'-{5-[(4-méthylphénoxy)méthyl]-1,3,4-thiadiazol-2-yl}urée ;
- N-(2,3-dihydro-1,4-benzodioxin-6-yl)-2-(1-naphtyloxy)acétamide ;
- N-[4-(4-acétyl-1-pipérazinyl)phényl]-4-éthoxy-3-nitrobenzamide ;
- N-(2-chlorophényl)-3-(4-fluorophényl)acrylamide ;
- 1-[(diméthyl-lambda-4-sulfanylidène)amino]-2-méthoxy-4-nitrobenzène ;
- 5-benzylidène-1-(2-chlorophényl)-2,4,6(1H,3H,5H)-pyrimidinetrione ;
- 4-éthyl-5,6-diméthyl-2-phénylpyrimidine ;
- 2-(3-chlorobenzylidène)-1H-indène-1,3(2H)-dione ;
- 5-{5-[(3-méthyl-5-oxo-1-phényl-1,5-dihydro-4H-pyrazol-4-ylidène)méthyl]-2-furyl}-1H-isoindole-1,3(2H)-dione ;
- N-(2,5-diméthylphényl)-3-(4-méthoxyphényl)acrylamide ;
- 2-({2-[(4-nitrophényl)amino]éthyl}amino)éthanol ;
- N-(3-méthoxyphényl)-4-propoxybenzamide ;
- 2-(4-hydroxyphényl)-3-phényl-2,3-dihydro-4(1H)-quinazolinone ;
- 4-méthyl-1-(2-nitrobenzoyl)pipéridine ;
- 2-hydroxy-N'-[(2-méthylphényl)sulfonyl]benzohydrazide ;
- acide 4-(1,3-benzothiazol-2-yl)butanoïque ;
- 4-(3-méthylbenzylidène)-1-phényl-3,5-pyrazolidinedione ;
- 4-(2,4-dichlorophénoxy)-N-(2-éthoxyphényl)butanamide ;
- N-(2-méthoxyphényl)-N'-(phénylsulfonyl)benzènecarboximidamide ;
- N-[2-(2-chloro-5-iodophényl)-1,3-benzoxazol-5-yl]-2-méthylpropanamide ;
- 5-(4-butoxyphényl)-3-cyclohexyl-1,2,4-oxadiazole ;
- N-(3,4-dichlorophényl)-N'-4H-1,2,4-triazol-4-yl urée ;
- 6-chloro-4-phényl-3-[3-(3,4,5-triméthoxyphényl)acryloyl]-2(1H)-quinolinone ;
- 6-bromo-4-phényl-3-[3-(3,4,5-triméthoxyphényl)acryloyl]-2(1H)-quinolinone ; et
- N-(1H-1,2,3-benzotriazol-1-ylméthyl)-4-nitro-1,2,5-oxadiazol-3-amine, et,

facultativement, un support pharmaceutiquement acceptable pour son utilisation dans le traitement et/ou la prévention de maladies de perte osseuse chez un sujet le nécessitant.

3. Composé ou composition pour leur utilisation selon l'une quelconque des revendications 1 et 2, dans lesquels la maladie de perte osseuse est sélectionnée dans le groupe consistant en : l'ostéoporose, l'ostéopénie due aux métastases osseuses, les érosions péri-articulaires dans la polyarthrite rhumatoïde, l'hyperparathyroïdie primaire, l'hypercalcémie maligne, la maladie de Paget des os, une parodontopathie, l'ostéopénie induite par l'immobilisation et un traitement par glucocorticoïdes.

4. Composé ou composition pour leur utilisation selon la revendication 3, dans lesquels la maladie associée à une perte osseuse est l'ostéoporose.

5. Composé ou composition pour leur utilisation selon l'une quelconque des revendications 1 à 4, dans lesquels ledit composé est administré à une concentration comprise entre 5 et 200 μM.

6. Composé ou composition pour leur utilisation selon la revendication 5, dans lesquels ledit composé est administré à une concentration comprise entre 10 et 100 μM.

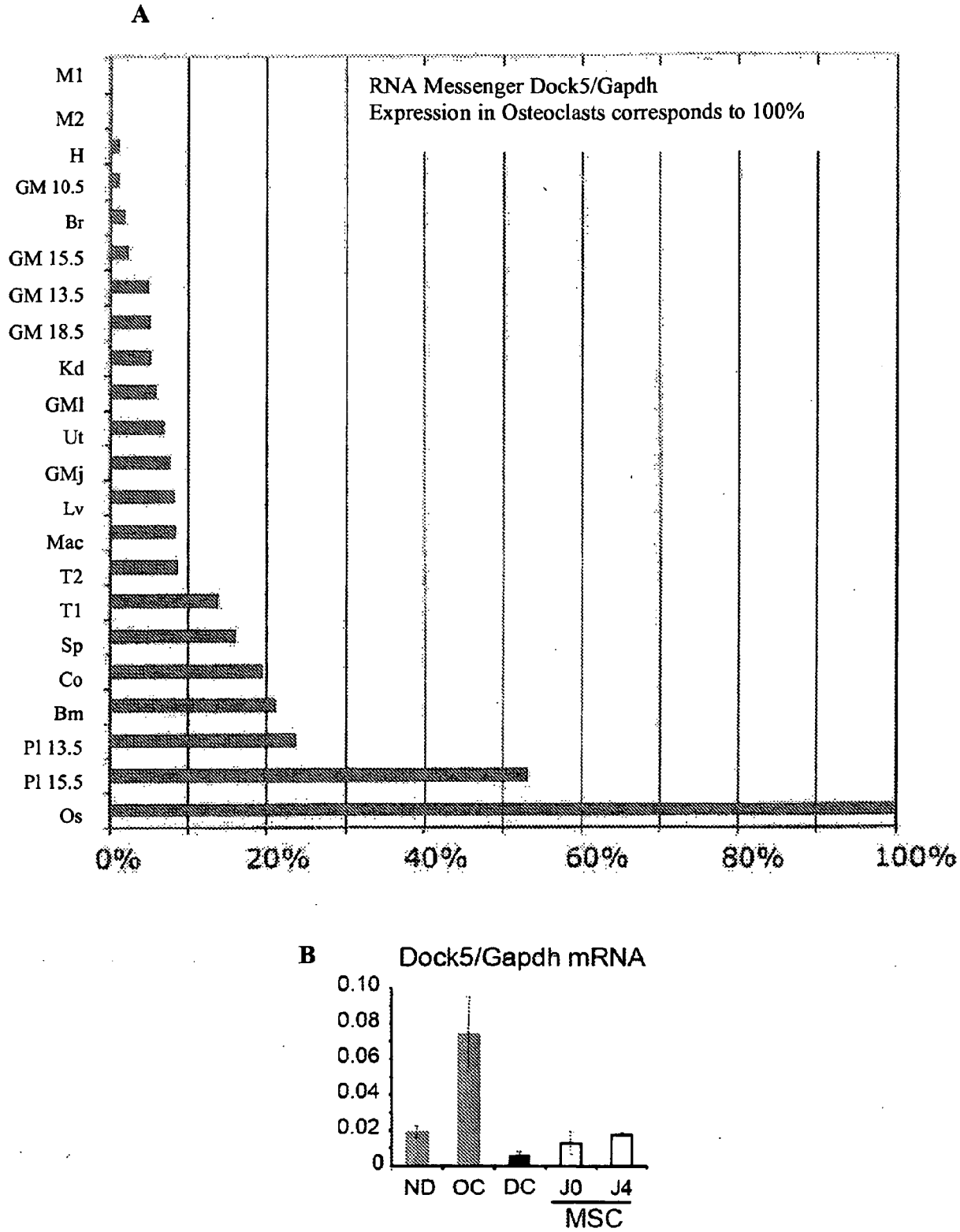

A
RNA Messenger Dock5/Gapdh
Expression in Osteoclasts corresponds to 100%
M1
M2
H
GM 10.5
Br
GM 15.5
GM 13.5
GM 18.5
Kd
GMl
Ut
GMj
Lv
Mac
T2
T1
Sp
Co
Bm
Pl 13.5
Pl 15.5
Os
0%
20%
40%
60%
80%
100%
B
Dock5/Gapdh mRNA
0.10
0.08
0.06
0.04
0.02
0
ND
OC
DC
J0
J4
MSC

Figure 1

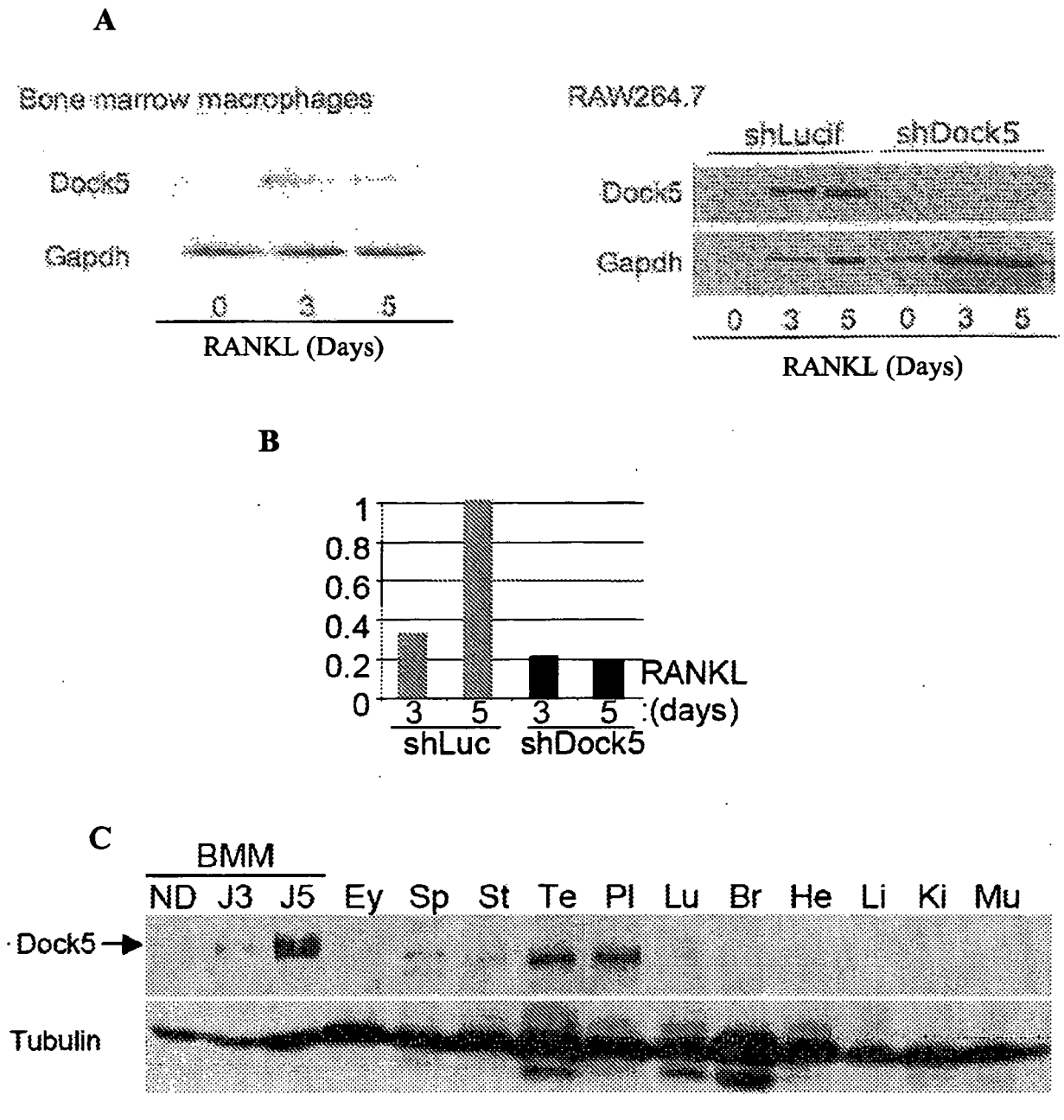

A
Bone marrow macrophages
Dock5
Gapdh
0 3 5
RANKL (Days)
RAW264.7
shLucif
shDock5
Dock5
Gapdh
0 3 5 0 3 5
RANKL (Days)
B
1
0.8
0.6
0.4
0.2
0
3 5 3 5
RANKL
(days)
shLuc
shDock5
C
BMM
ND J3 J5 Ey Sp St Te Pl Lu Br He Li Ki Mu
Dock5
Tubulin

Figure 2

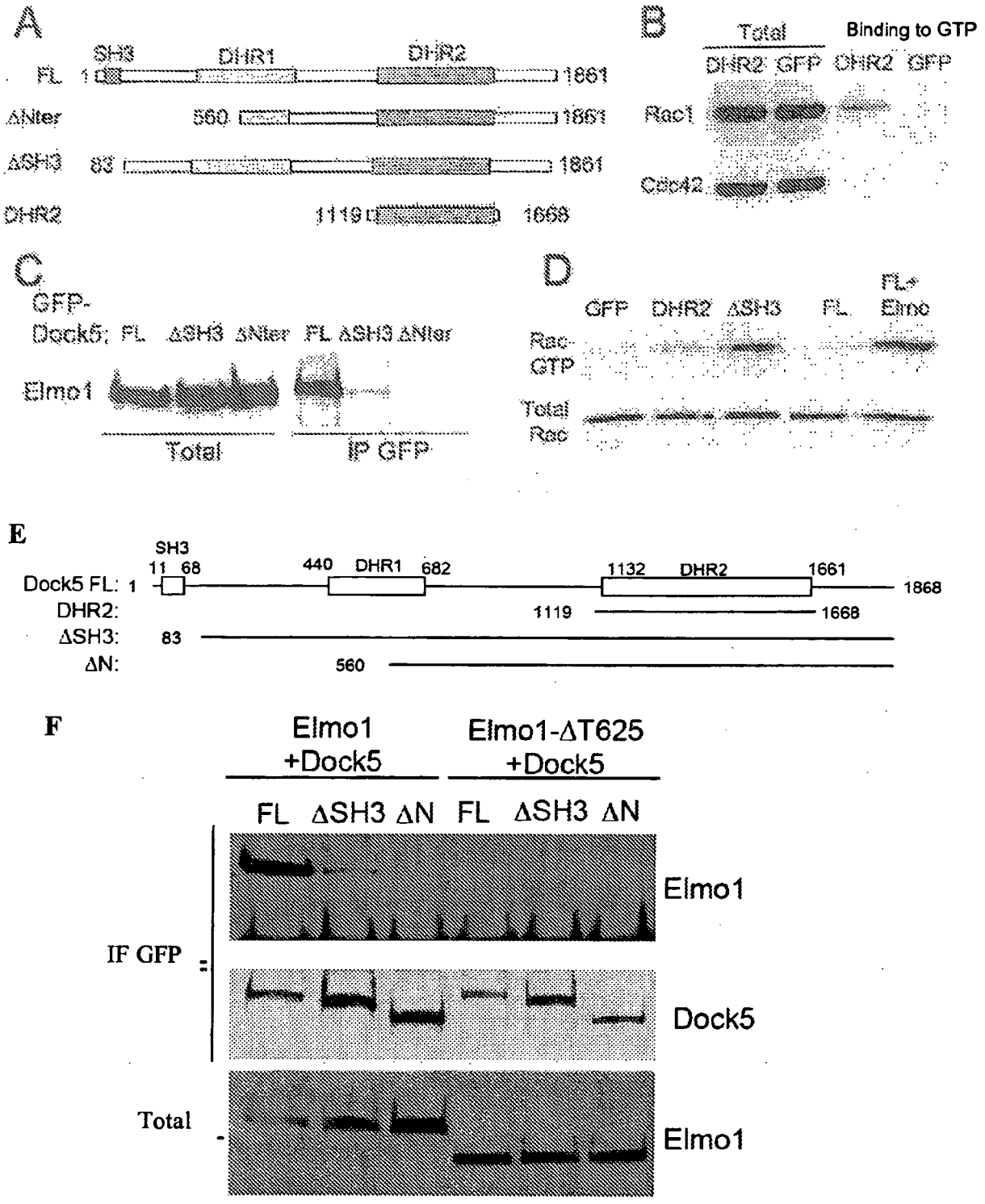
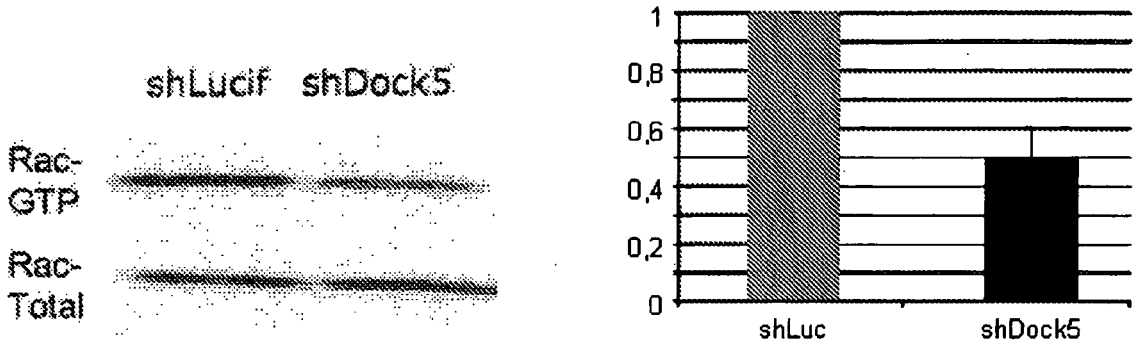

A
SH3
DHR1
DHR2
FL
1
1861
ΔNter
560
1861
ΔSH3
83
1861
DHR2
1119
1668
B
Total
Binding to GTP
DHR2 GFP DHR2 GFP
Rac1
Cdc42
C
GFP-
Dock5: FL ΔSH3 ΔNter FL ΔSH3 ΔNter
Elmo1
Total
IP GFP
D
GFP DHR2 ΔSH3 FL FL-Elmo
Rac-GTP
Total Rac
E
SH3
11 68
440 DHR1 682
1132 DHR2 1661
Dock5 FL: 1
1868
DHR2:
1119
1668
ΔSH3:
83
ΔN:
560
F
Elmo1 +Dock5
Elmo1-ΔT625 +Dock5
FL ΔSH3 ΔN FL ΔSH3 ΔN
IF GFP
Elmo1
Dock5
Total
Elmo1

Figure 3

A


shLucif
shDock5
Rac-GTP
Rac-Total
1
0,8
0,6
0,4
0,2
0
shLuc
shDock5

B

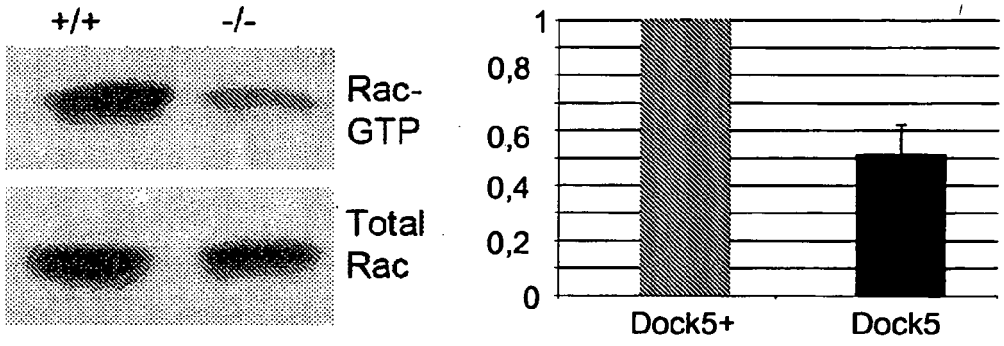

+/+
-/-
Rac-GTP
Total Rac
1
0,8
0,6
0,4
0,2
0
Dock5+
Dock5

Figure 4

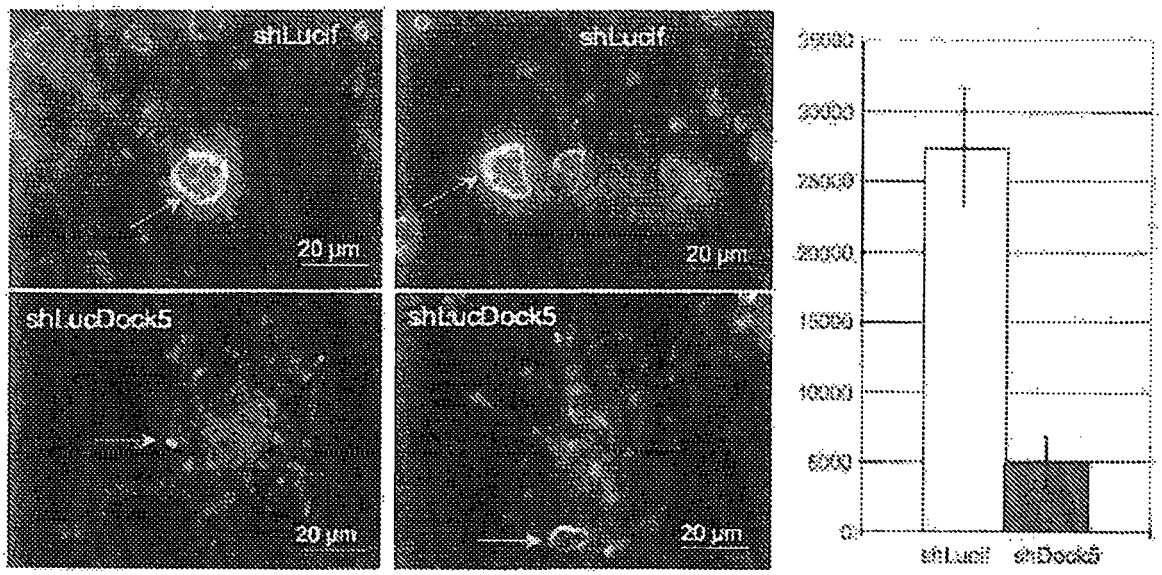


Figure 5

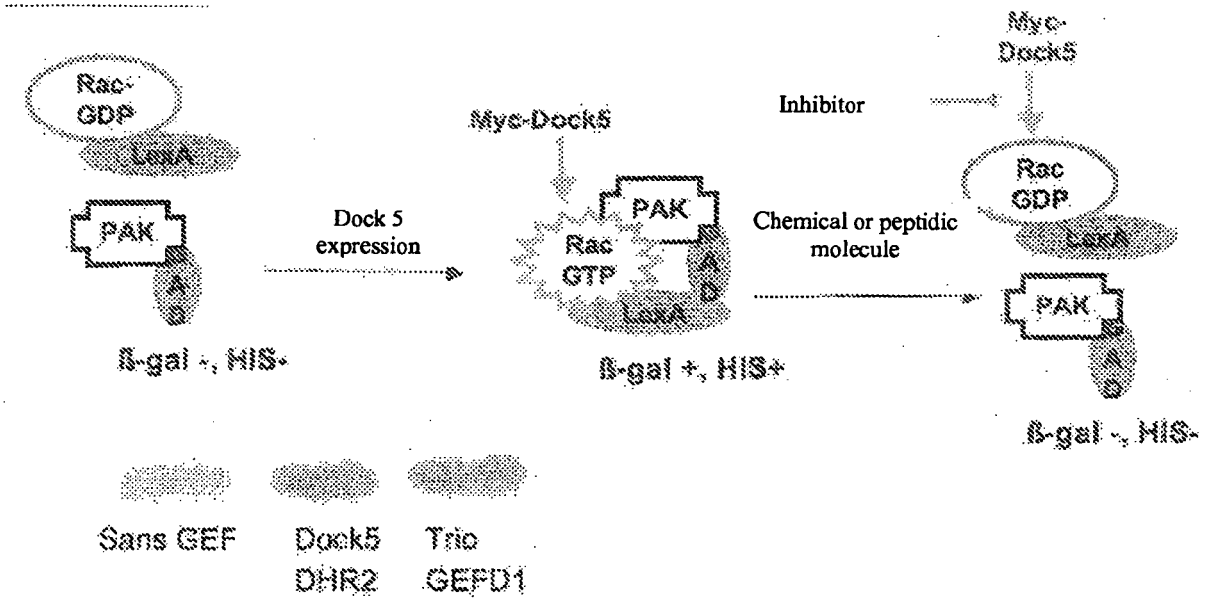


Figure 6

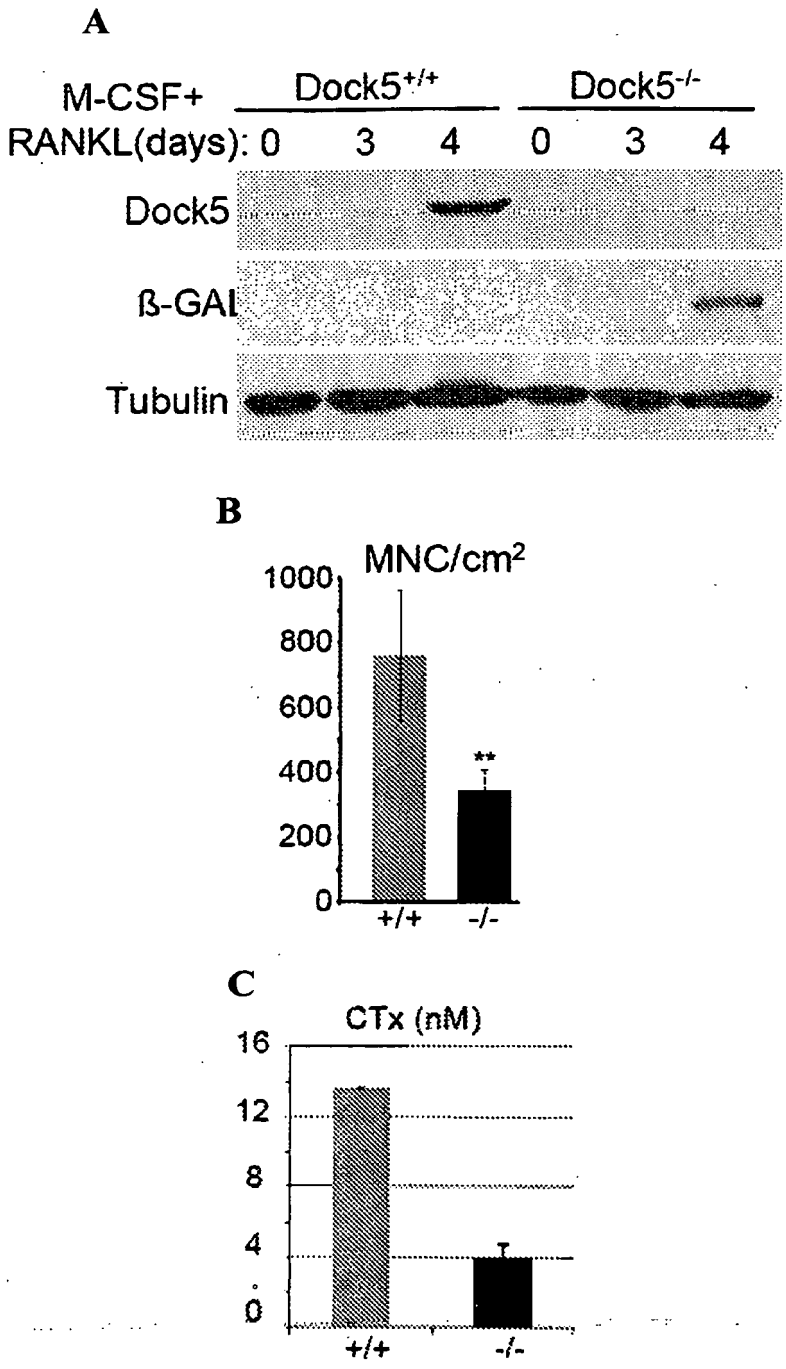
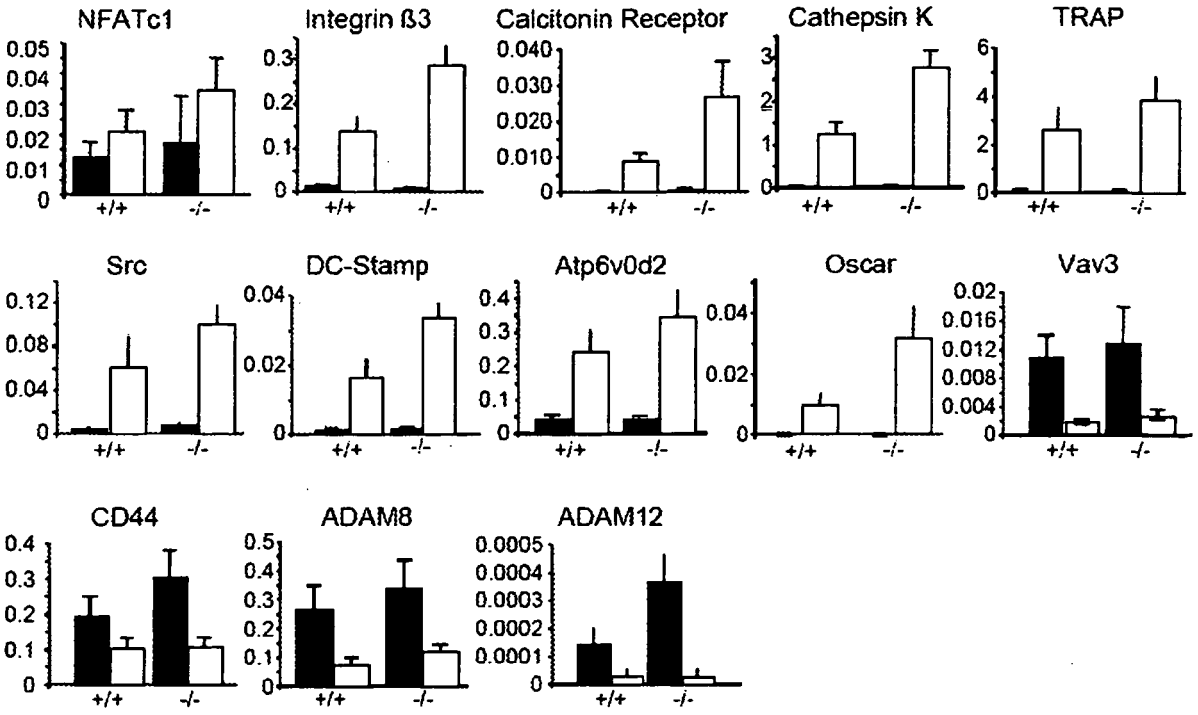
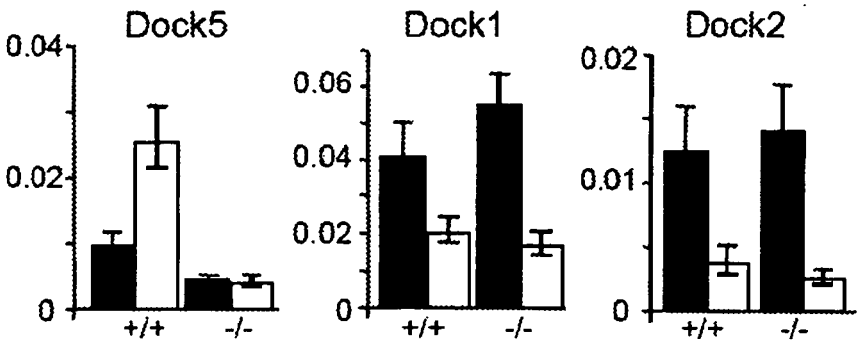

A
M-CSF+
Dock5+/+
Dock5-/-
RANKL(days): 0 3 4 0 3 4
Dock5
ß-GAL
Tubulin
B
MNC/cm2
1000
800
600
400
200
0
**
+/+
-/-
C
CTx (nM)
16
12
8
4
0
+/+
-/-

Figure 7

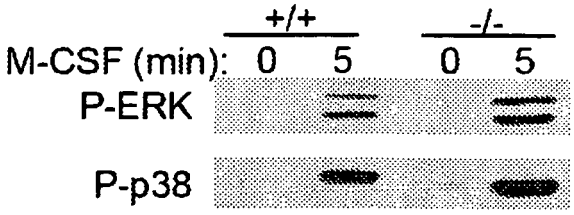
A


NFATc1
Integrin ß3
Calcitonin Receptor
Cathepsin K
TRAP
Src
DC-Stamp
Atp6v0d2
Oscar
Vav3
CD44
ADAM8
ADAM12
+/+
-/-

B


Dock5
Dock1
Dock2
+/+
-/-

C


+/+
-/-
M-CSF (min): 0 5 0 5
P-ERK
P-p38

D

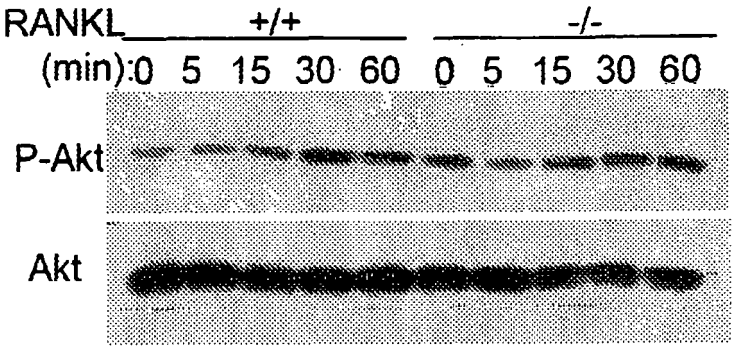


Figure 8

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- WO 2005064007 A **[0033] [0113]**
- EP 08290783 A **[0129]**

Non-patent literature cited in the description

- **COTE ; VUORI.** *J. Cell. Sci.,* 2002, vol. 115, 4901-4913 **[0015] [0081]**
- **SMITH ; WATERMAN.** *Ad. App. Math.,* 1981, vol. 2, 482 **[0031]**
- **NEDDLEMAN ; WUNSCH.** *J. Mol. Biol.,* 1970, vol. 48, 443 **[0031]**
- **PEARSON ; LIPMAN.** *Proc. Natl. Acd. Sci. USA,* 1988, vol. 85, 2444 **[0031]**
- **EDGAR, ROBERT C.** *Nucleic Acids Research,* 2004, vol. 32, 1792 **[0031]**
- **DE TOLEDO et al.** *FEBS,* vol. 480, 287-292 **[0033] [0113]**
- Ullmann's Encyclopedia of Industrial Chemistry. Marcel Dekker, 1989 **[0054]**
- **ANSEL et al.** Pharmaceutical Dosage Forms and Drug Delivery Systems. WILLIAMS & WILKINS, 1994 **[0054]**
- **COELHO et al.** *Proc. Natl. Acad. Sci. U.S.A.,* 2005, vol. 102, 1 1917-11922 **[0061]**
- **LASSAUX et al.** *J. Virol.,* 2005, vol. 79, 6560-6564 **[0074]**
- **BATTINI et al.** *Proc. Natl. Acad Sci.,* 1999, vol. 96, 1385-1390 **[0074]**
- **ABASSI ; VUORI.** *EMBO J.,* 2002, vol. 21, 4571-4582 **[0082]**
- **GUMIENNY et al.** *Cell,* 2001, vol. 107, 27-41 **[0085]**
- **BLANGY et al.** *Biol. Cell,* 2006, vol. 98 (9), 511-22 **[0116]**