

CLAIMS

1. A compound represented by the following formula [1] or a pharmaceutically acceptable salt thereof:

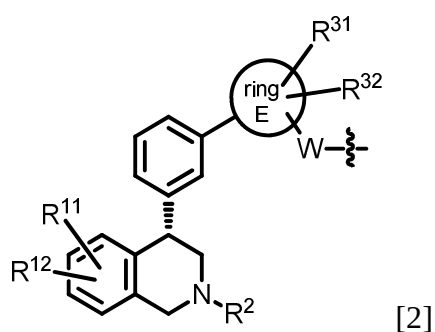
[Formula 1]



wherein

A represents a structure represented by the following formula [2]:

[Formula 2]



wherein

R^{11} and R^{12} are the same or different and each represent a hydrogen atom or a halogen atom,

R^2 represents a hydrogen atom or C_{1-6} alkyl,

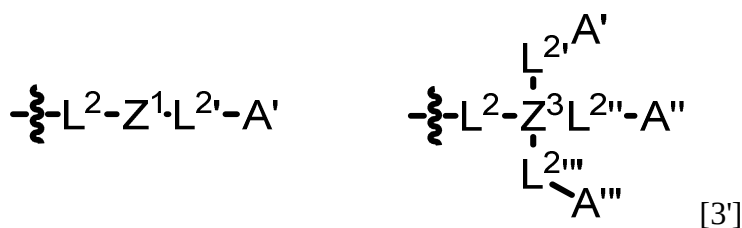
ring E represents pyrrole, furan, pyrazole, imidazole, isoxazole, oxazole, isothiazole, triazole, oxadiazole, tetrazole, pyridine, pyridazine, pyrimidine, or pyrazine,

R^{31} and R^{32} are the same or different and each represent a hydrogen atom, cyano, C_{1-6} alkyl, C_{1-6} alkoxy, or mono- C_{1-6} alkylamino, and

W represents a single bond, the formula -NH-, the formula -O-, or the formula -CONH-, and

Y represents a hydrogen atom or any structure of the following formulas [3]:

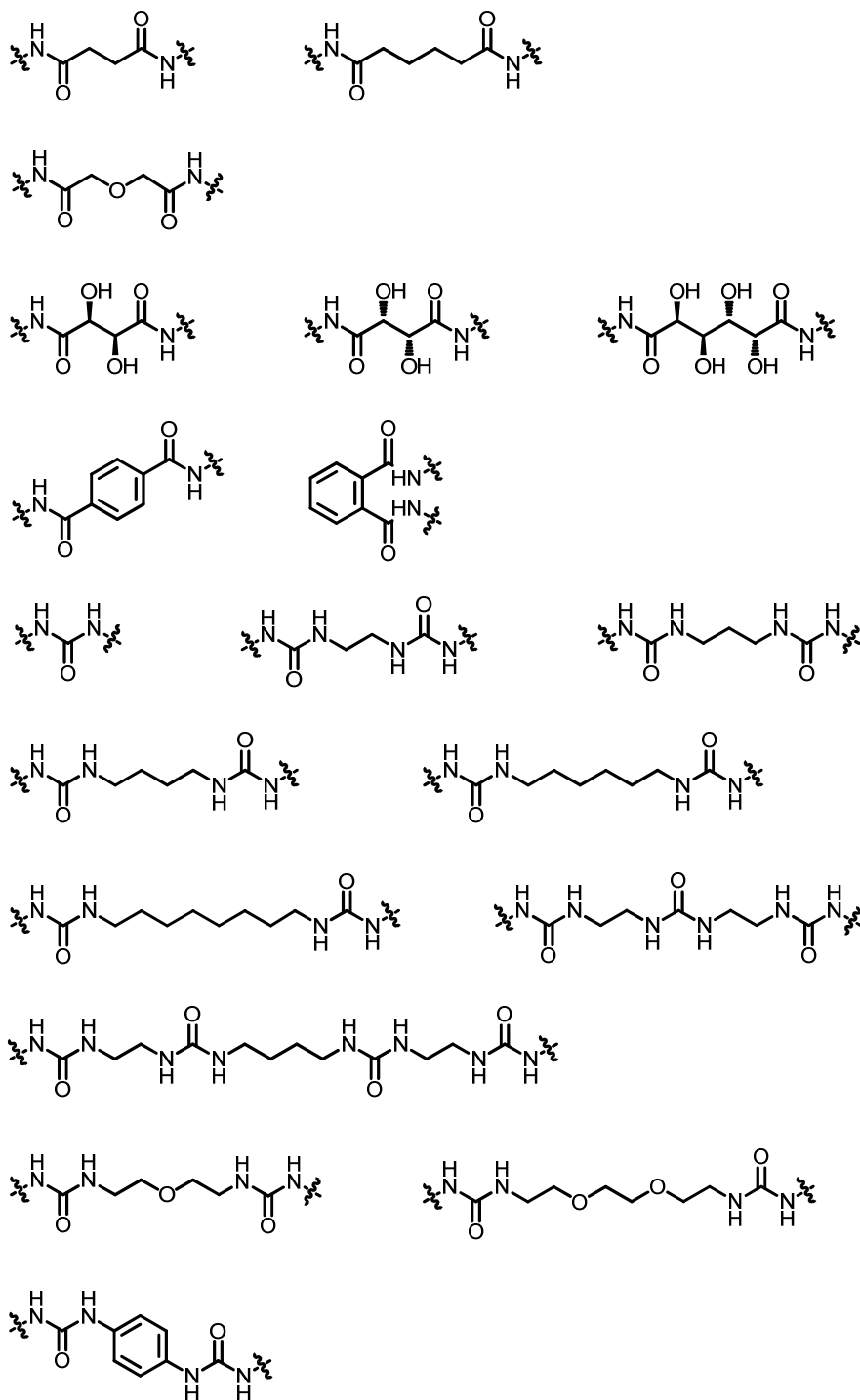
[Formula 3]



wherein

Z¹ represents any structure of the following formula group [4']:

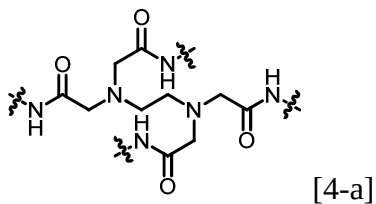
[Formula 4]



[4']

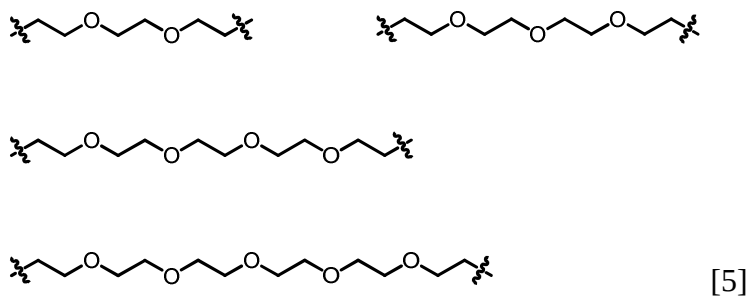
Z³ represents a structure of the following formula [4-a]:

[Formula 5]



L^2 , $L^{2'}$, $L^{2''}$, and $L^{2'''}$ are the same or different and each represent any structure of the following formula group [5]:

[Formula 6]



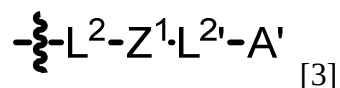
and

A' , A'' , and A''' each represent the same structure as the structure represented by A .

2. The compound according to claim 1 or a pharmaceutically acceptable salt thereof, wherein

Y is a hydrogen atom or a structure represented by the following formula [3]:

[Formula 7]



wherein

Z^1 is any structure of the following formula group [4]:

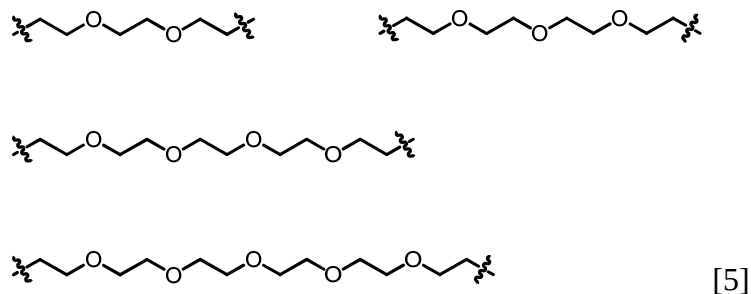
The figure displays 12 chemical structures, each with wavy lines indicating attachment points. The structures are:

- 1. NC(=O)CC(=O)N (Glycine)
- 2. NC(=O)CCCC(=O)N (Epsilon-aminocaproic acid)
- 3. NC(=O)COCC(=O)N (1,3-bis(carbamoyloxy)propane)
- 4. NC(=O)[C@H](O)[C@@H](O)C(=O)N (Tartaric acid)
- 5. NC(=O)[C@H](O)[C@@H](O)[C@H](O)C(=O)N (Sorbitic acid)
- 6. NC(=O)[C@H](O)[C@@H](O)[C@@H](O)C(=O)N (Mannitol)
- 7. NC(=O)c1ccc(cc1)C(=O)N (4,4'-diaminodiphenyl ether)
- 8. NC(=O)c1ccccc1C(=O)N (Phthalic acid)
- 9. NC(=O)N (Carbonyl diurea)
- 10. NC(=O)NCCNC(=O)N (1,3-bis(carbamoylamino)propane)
- 11. NC(=O)NCCCNCCNC(=O)N (1,3-bis(carbamoylamino)butane)
- 12. NC(=O)NCCCCCCCCCNC(=O)N (1,3-bis(carbamoylamino)decane)
- 13. NC(=O)NCCCCCCCCCCCCCNC(=O)N (1,3-bis(carbamoylamino)dodecane)
- 14. NC(=O)NCCOCCOCCOCCNC(=O)N (1,3-bis(carbamoylamino)tetraethylene glycol)
- 15. NC(=O)NCCOCCOCCOCCOCCNC(=O)N (1,3-bis(carbamoylamino)pentaethylene glycol)
- 16. NC(=O)Nc1ccc(cc1)Nc2ccccc2C(=O)N (4,4'-diaminodiphenyl ether with a carboxylic acid group)

and

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[Formula 9]



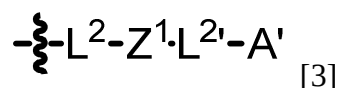
and

A' is the same structure as the structure represented by A.

3. The compound according to claim 1 or 2 or a pharmaceutically acceptable salt thereof, wherein

Y is a structure represented by the following formula [3]:

[Formula 10]



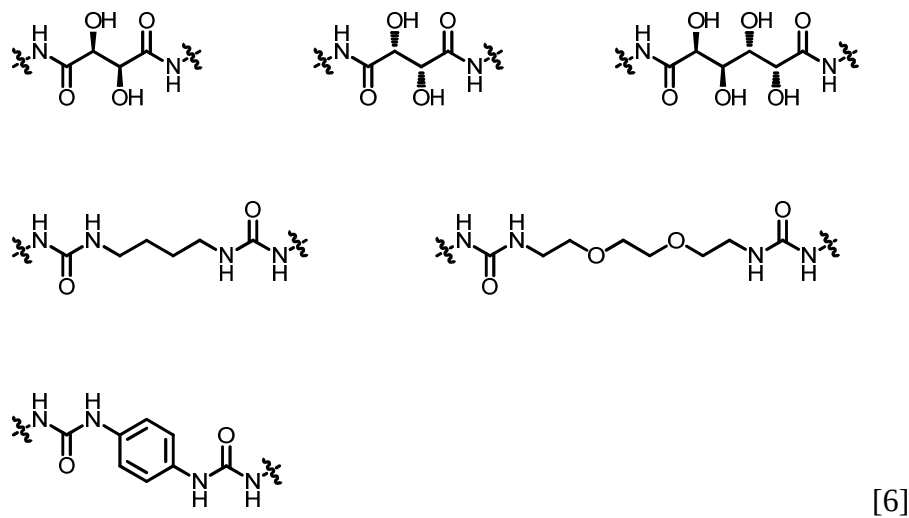
wherein

L², L^{2'}, Z¹, and A' are as defined above.

4. The compound according to any one of claims 1 to 3 or a pharmaceutically acceptable salt thereof, wherein

Z¹ is any structure of the following formula group [6]:

[Formula 11]

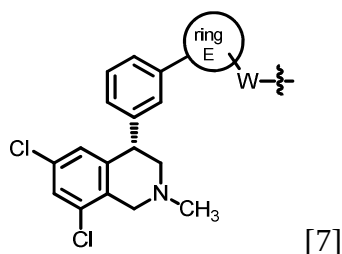


5. The compound according to claim 4 or a pharmaceutically acceptable salt thereof, wherein

the structure represented by the formula [2] is a structure of the following formula

[7]:

[Formula 12]



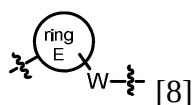
wherein

ring E and W are as defined above.

6. The compound according to claim 5 or a pharmaceutically acceptable salt thereof, wherein

in the formula [7], the structure represented by the following formula [8] is any structure of the following formula group [9]:

[Formula 13]



[Formula 14]

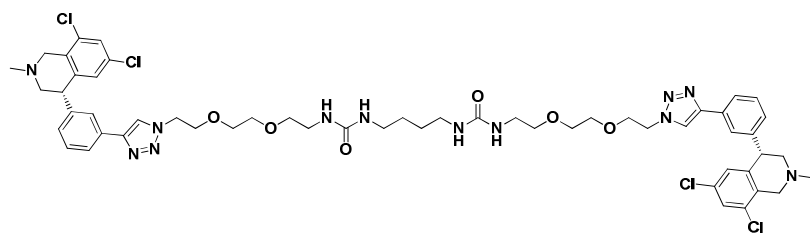


7. The compound according to claim 1 or a pharmaceutically acceptable salt thereof which is selected from the group consisting of the following compounds:

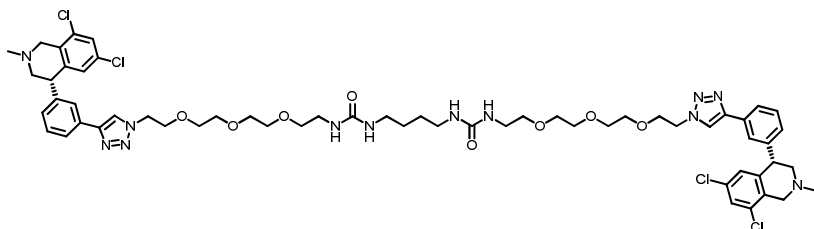
Chemical structures of compounds 10a-f, 11a-f, and 12a-f. These are symmetrical molecules consisting of two 2,6-dichloro-4-(2,4,6-trichlorophenyl)-1,2,3,4-tetrahydropyridine units linked by various polyether chains and functional groups like hydrazide, amide, and hydroxy-ketone.

Chemical structures of compounds 10a, 10b, 10c, 10d, 10e, 10f, and 10g are shown. These structures are variations of the 10a structure, featuring different linker and terminal group combinations. The structures are arranged in a vertical column, with 10a at the top and 10g at the bottom. Each structure consists of a 2,6-dichloro-4-methyl-1,2,3,4-tetrahydroisoquinoline core linked to various functional groups, including pyridine, imidazole, and triazole rings, connected by flexible ether and amide linkers.

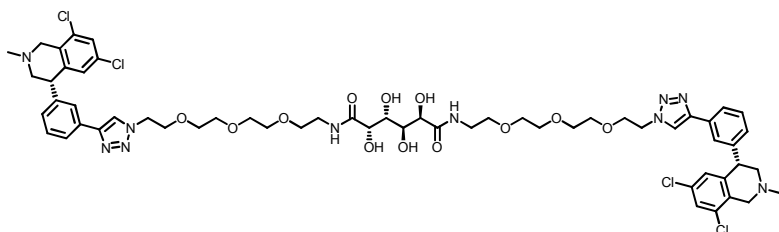
[Formula 17]



[Formula 18]



[Formula 19]



14. A prophylactic or therapeutic drug for constipation comprising a compound according to any one of claims 1 to 10 or a pharmaceutically acceptable salt thereof as an active ingredient.

16. A prophylactic or therapeutic drug for hypertension comprising a compound according to any one of claims 1 to 10 or a pharmaceutically acceptable salt thereof as an active ingredient.

17. A prophylactic or therapeutic drug for nephropathy comprising a compound according to any one of claims 1 to 10 or a pharmaceutically acceptable salt thereof as an active ingredient.

18. A prophylactic or therapeutic drug for body fluid retention comprising a compound according to any one of claims 1 to 10 or a pharmaceutically acceptable salt thereof as an active ingredient.

19. A phosphorus absorption inhibitor comprising a compound according to any one of claims 1 to 10 or a pharmaceutically acceptable salt thereof as an active ingredient.

20. A prophylactic or therapeutic drug for hyperphosphatemia comprising a compound according to any one of claims 1 to 10 or a pharmaceutically acceptable salt thereof as an active ingredient.

21. A prophylactic or therapeutic drug for CKD-MBD comprising a compound according to any one of claims 1 to 10 or a pharmaceutically acceptable salt thereof as an active ingredient.