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(73)	Proprietor	Biocryst Pharmaceuticals, Inc., 4505 Emperor Blvd. Suite 200, Durham, North Carolina 27703, USA

(72) Inventor

KOTIAN, Pravin L., 1139 Magnolia Run, Hoover, AL 35226, USA
BABU, Yarlagadda S., 4836 Southlake Parkway, Birmingham, AL 35244, USA
ZHANG, Weihe, 2645 Manchester Court, Vestavia Hills, AL 35226, USA
LU, Peng-Cheng, 1816 Altadena Ridge Place, Vestavia Hills, AL 35243, USA
WU, Minwan, 2709 Paden trail, Vestavia Hills, AL 35226, USA
LV, Wei, 5373 Park Side Circle, Hoover, AL 35244, USA
NGUYEN, Trung Xuan, 5066 Park Side Circle, Hoover, AL 35244, USA
DANG, Zhao, 1226 Parliament Lane, Vestavia Hills, AL 35244, USA
CHINTAREDDY, Venkat R., 1334 Renfro Road, Vestavia Hills, AL 35216, USA
KUMAR, V. Satish, 809 Mayapple Court, Birmingham, AL 35244, USA
RAMAN, Krishnan, 3739 Spearman Drive, Birmingham, AL 35216, USA

(74) Agent or Attorney

Budde Schou A/S, Dronningens Tværgade 30, 1302 KØBENHAVN K, Danmark

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(54) Title

SUBSTITUTED BENZOFURAN, BENZOPYRROLE, BENZOTHIOPHENE, AND STRUCTURALLY RELATED COMPLEMENT INHIBITORS

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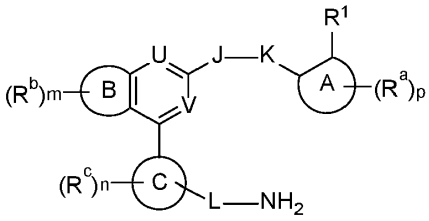
DATABASE Pubchem COMPOUND 9 February 2007 (2007-02-09), "Pubchem COMPOUND SUMMARY CID14528241| C21H13N5O5", XP055642360, retrieved from NCBI Database accession no. CID14528241
SHAGUFTA et al.: "An insight into the therapeutic potential of quinazoline derivatives as anticancer agents", MedChemComm, vol. 8, 7 April 2017 (2017-04-07), pages 871-885, XP055642358,

Enclosed is a translation of the patent claims in Norwegian. Please note that as per the Norwegian Patents Acts, section 66i the patent will receive protection in Norway only as far as there is agreement between the translation and the language of the application/patent granted at the EPO. In matters concerning the validity of the patent, language of the application/patent granted at the EPO will be used as the basis for the decision. The patent documents published by the EPO are available through Espacenet (http://worldwide.espacenet.com) or via the search engine on our website here: https://search.patentstyret.no/

Patentkrav

1. Forbindelse med formel (I), eller et farmasøytisk akseptabelt salt derav:



(I);

hvori:

ring

er aryl, heteroaryl, sykloalkyl eller heterosykloalkyl;

ring

er furyl;

ring

er aryl eller heteroaryl;

R^a, uavhengig for hver forekomst, velges fra gruppen bestående av halogen, cyano, hydroksy,-NH_2-NH(Ac), -NH(alkyl), -N alkyl)$_2$,-NHC(O) -CH(alkyl),$_2$NHC(O (alkyl), -C(O)NH_2, -C(O)(alkyl), eventuelt substituert aryl, eventuelt substituert heteroaryl, sykloalkyl, alkoksy, alkyl, (sykloalkyl)alkyl, hydroksyalkyl, aminoalkyl og haloalkyl;

R^b, uavhengig for hver forekomst, velges fra gruppen bestående av halogen, cyano, -NR^jR^k, alkyl, halogenalkyl, hydroksyalkyl, alkoksyalkyl, (hydroksy)halogenalkyl, hydroksy(sykloalkyl)alkyl, (sykloalkyl)alkyl, (heterosykloalkyl)alkyl, arylalkyl, heteroarylalkyl, sykloalkyl, heterosykloalkyl, eventuelt substituert aryl, eventuelt substituert heteroaryl, -alkylen-NR^jR^k, tosyl, -SO_2(alkyl), -SO_2(sykloalkyl)-CO(alkyl), -CO(sykloalkyl), -CONH(alkyl), -CON(alkyl)$_2$ og -CONH(sykloalkyl);

R^cuavhengig ved hver forekomst, velges fra gruppen bestående av halogen, -OH, $-NR^jR^k$, alkoksy og alkyl;

R^1 velges fra gruppen bestående av $-NH_2$, $-CH_2COOH$, -CH(NH(CO)(alkyl))COOH, -CH(NH(CO) (arylalkyl)) COOH, -CH(NH(CO)(sykloalkyl))COOH, -CH(NH(CO)(aryl substituert sykloalkyl)COOH, -CO(NH)CH_2aryl, -CO(NH)CH_2heteroaryl, -CO(NH)aryl og -CO(NH) heteroaryl;

n er 0, 1 eller 2;

m er 0, 1 eller 2;

p er 0, 1 eller 2;

J er -C(O)-, -NH-, $-CH_2-$, -O-, -S-, -S(O)-, $-SO_2-$, -N(alkyl) -, eller -CH (-alkyl) -;

K er -C(O)-, -NH-, $-CH_2-$, -O-, -S-, -S(O) -, $-SO_2-$, -N(alkyl) -, eller -CH(alkyl) -; hvori minst en av J og K er -C(O -, $-CH_2-$ eller -CH(alkyl) -;

L velges fra gruppen bestående av en binding, $-CH_2-$, $-CH_2$ CH_2-, $-CHR^2-$, $-CF_2-$, $-CPR^2-$, -C(O)-, $-C(=NR^L)-$, og $-C(=CHR^L)$ -;

hvori R^L er H eller alkyl;

eller hvori R^L og en forekomst av R^c tatt sammen med de mellomliggende atomer danner en substituert eller usubstituert heteroarylring;

R^2 er alkyl, hydroksyalkyl eller haloalkyl;

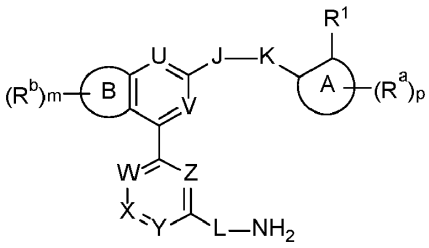
R^j og R^k velges uavhengig av hverandre fra gruppen bestående av H, alkyl, aminoalkyl, (heterosykloalkyl)alkyl, og heterosykloalkyl;

U er N eller CR^3;

R^3 er H, halogen, alkyl, alkoksy eller halogenalkyl; og

V er N eller CH.

2. Forbindelsen ifølge krav 1, med strukturen med formel (Ia):



(Ia);

hvori:

W er N, CH eller CR^c;

X er N, CH, eller CR^c;

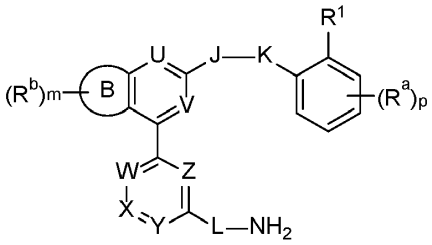
Y er N, CH eller CR^c; og

Z er N, CH eller CR^c.

3. Forbindelsen ifølge krav 1 eller 2, hvori ringen

er fenyl, tiofenyl eller pyridinyl.

4. Forbindelsen ifølge et hvilket som helst av kravene 1-3 som har strukturen av formel (Ib):



(Ib).

5. Forbindelsen ifølge et hvilket som helst av kravene 1-4, hvor p er 0.

6. Forbindelsen ifølge et hvilket som helst av kravene 1-5, hvori R^1 er -CH_2COOH.

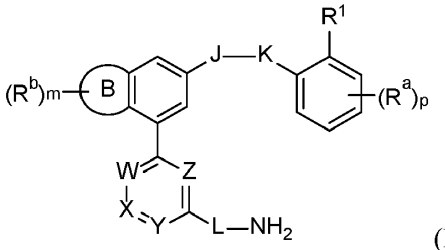
7. Forbindelsen ifølge et-hvilket som helst av kravene 1-6, hvori -J-K- velges fra gruppen bestående av -C(O)-NH-, -NH-C(O)-, og -CH_2O-.

8. Forbindelsen ifølge et hvilket som helst av kravene 1-7, hvori -J-K- er -CH_2-O-.

9. Forbindelsen ifølge et hvilket som helst av kravene 1-8, hvori U er CH.

10. Forbindelsen ifølge et hvilket som helst av kravene 1-9, hvori V er CH.

11. Forbindelsen følge et hvilket som helst av kravene 1-8, som har strukturen av formel (Ic)



(Ic).

12. Forbindelsen ifølge et hvilket som helst av kravene 1-11, hvori m er 0.

13. Forbindelsen ifølge et hvilket som helst av kravene 1-12, hvori minst én av W, X, Y og Z er $CR^{c.}$

14. Forbindelsen ifølge krav 13, hvori Z er CR^{c}.

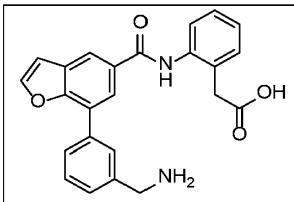
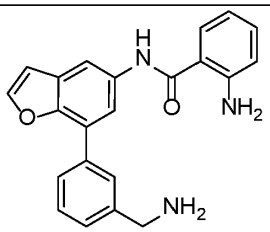
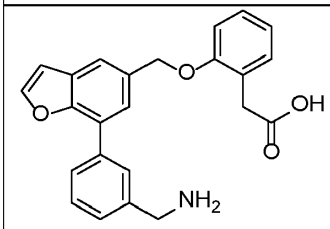
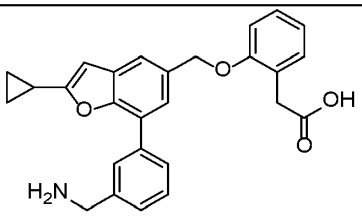
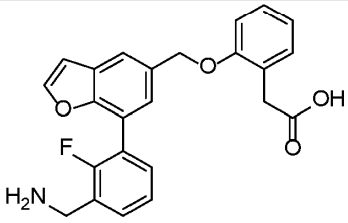
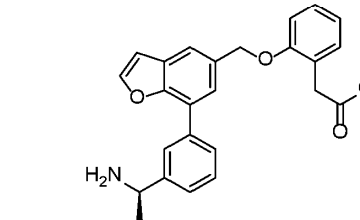
15. Forbindelsen ifølge et hvilket som helst av kravene 13-14, hvori R^{c} er halogen, f.eks. fluorid.

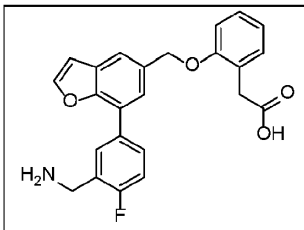
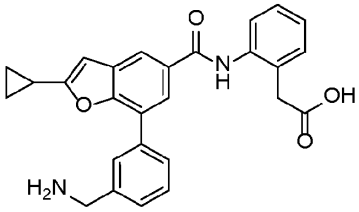
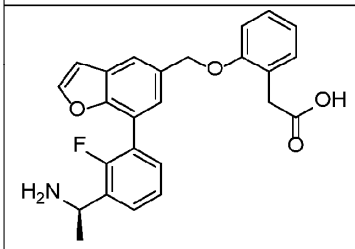
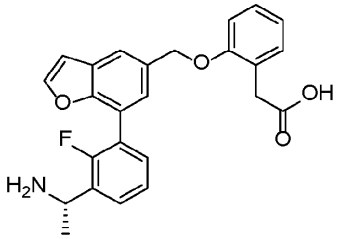
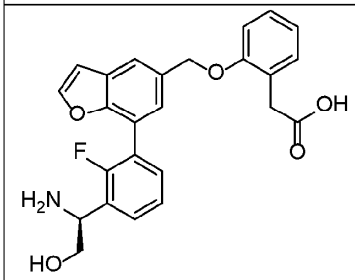
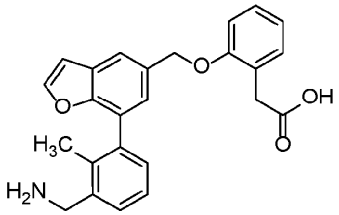
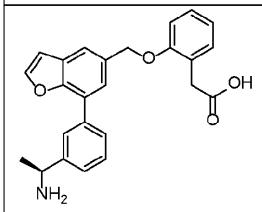
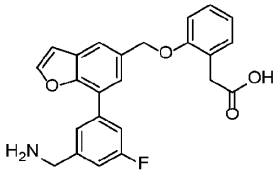
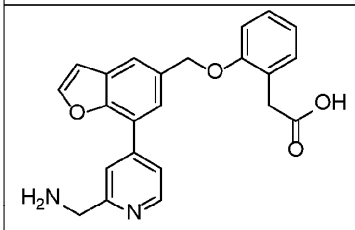
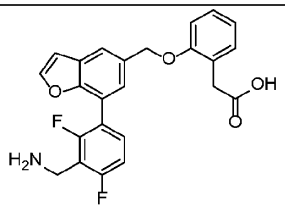
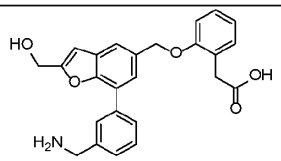
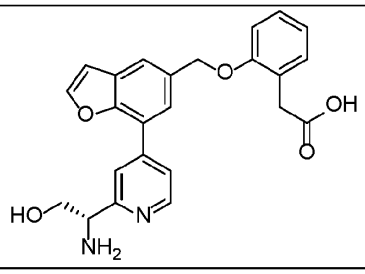
16. Forbindelsen ifølge et hvilket som helst av kravene 1-13, hvori minst én av W, X, Y og Z er N.

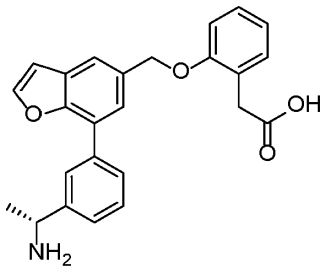
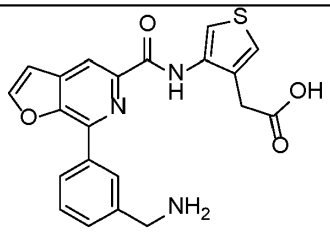
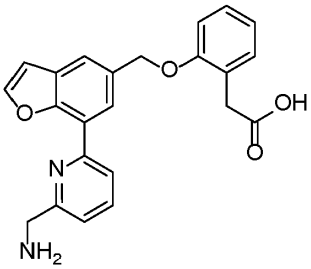
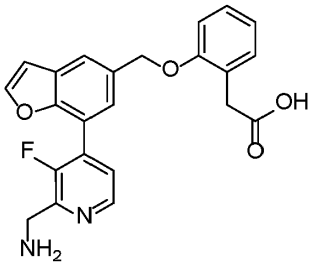
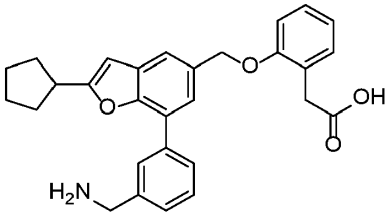
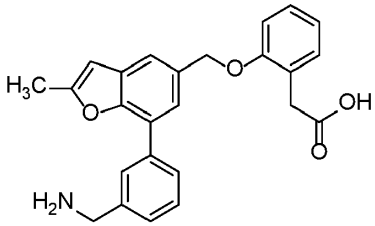
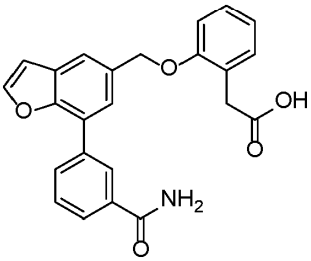
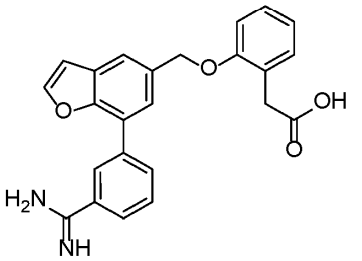
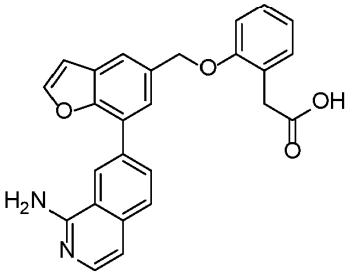
17. Forbindelsen ifølge krav 16, hvori Y er N:

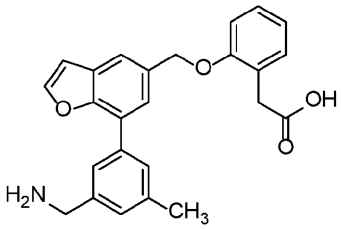
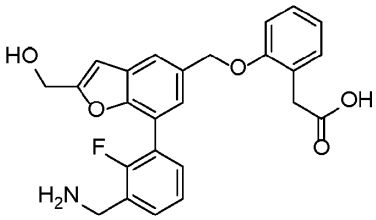
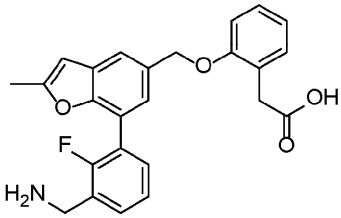
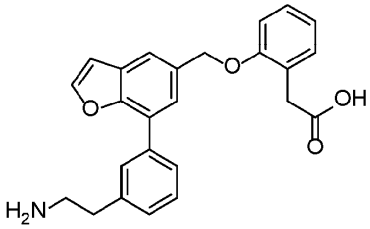
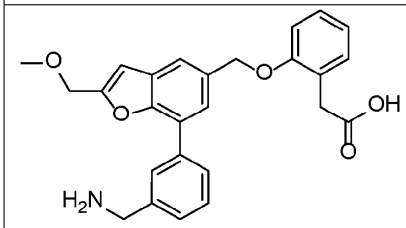
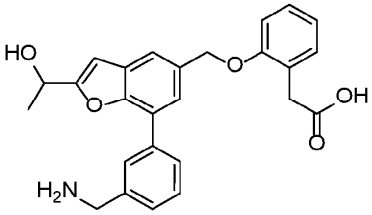
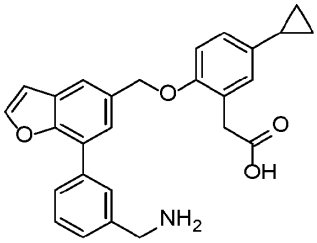
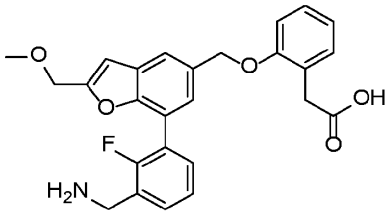
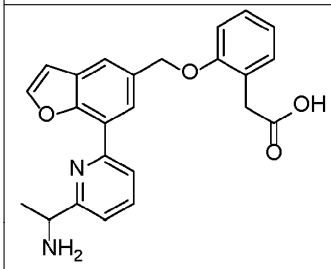
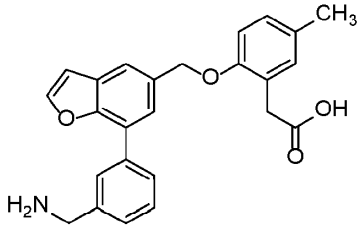
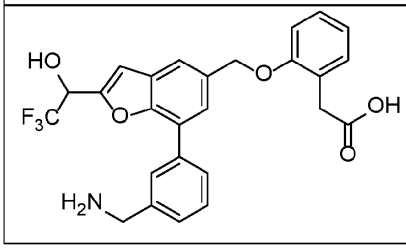
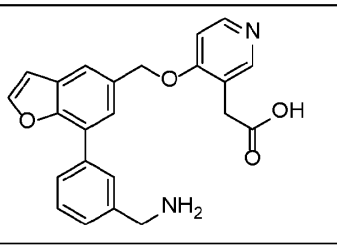
18. Forbindelsen ifølge hvilket som helst av kravene 1-17, hvori L er $-CH_2-$.

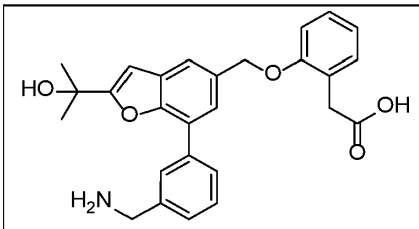
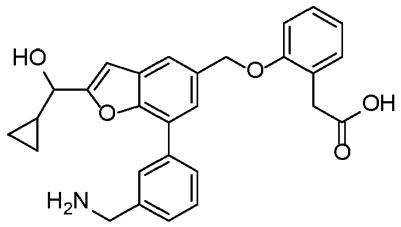
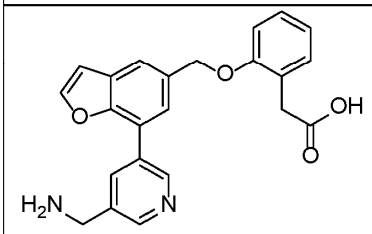
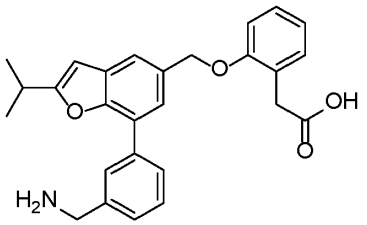
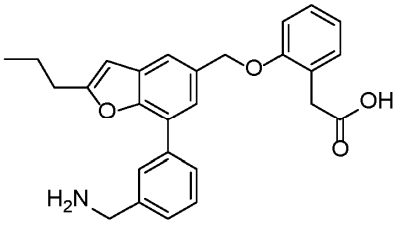
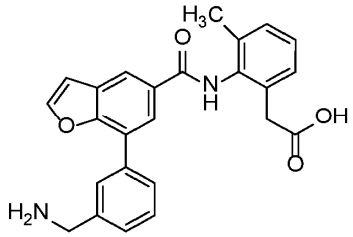
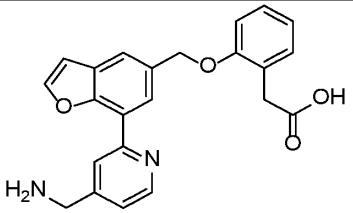
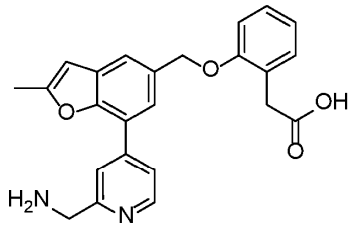
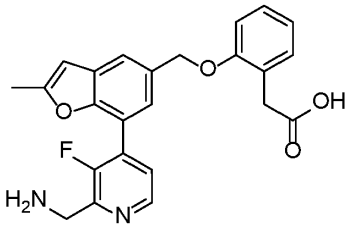
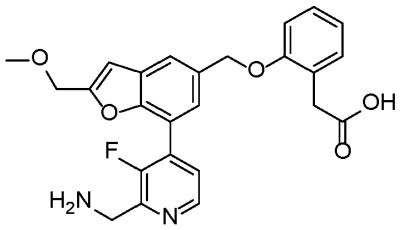
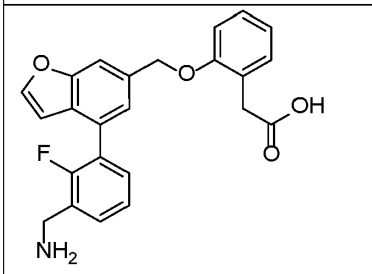
19. Forbindelsen ifølge krav 1, valgt fra den følgende tabellen:

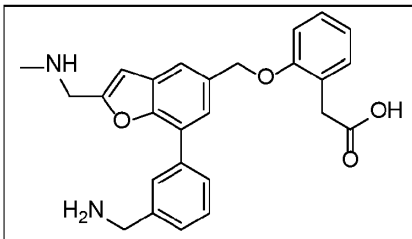
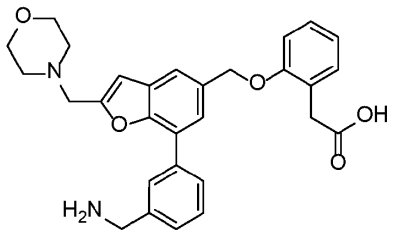
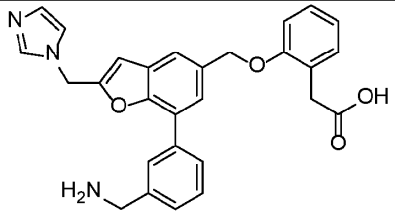
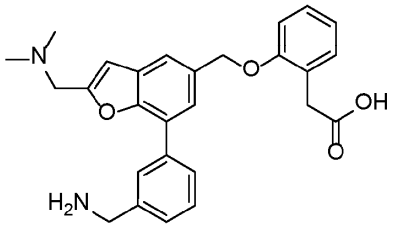
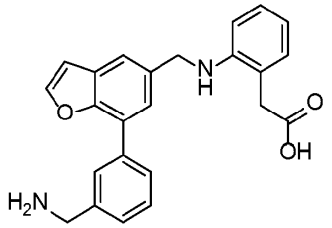
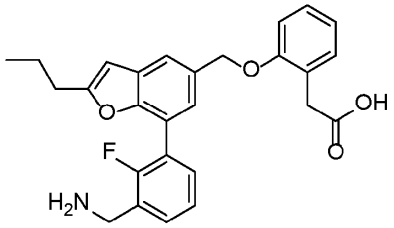
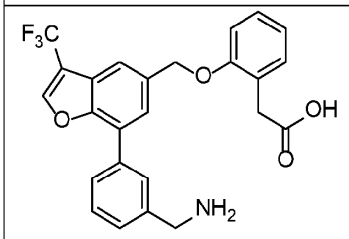
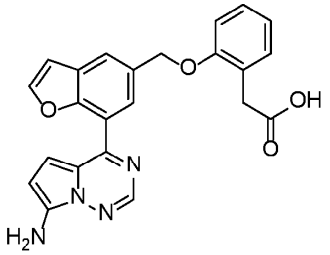
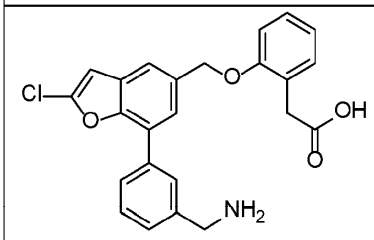
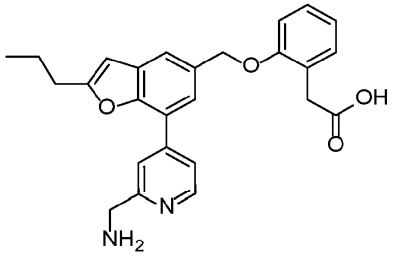
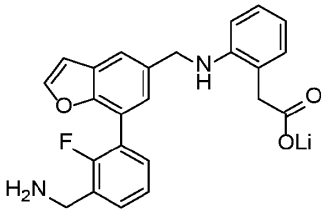
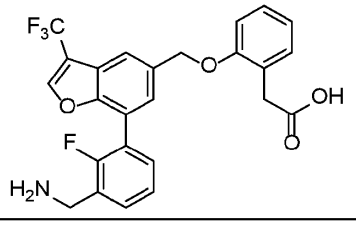
	
	
	

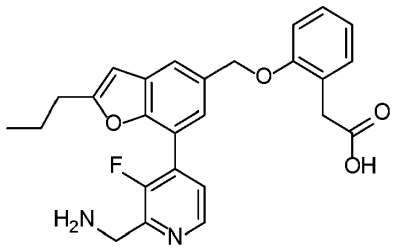
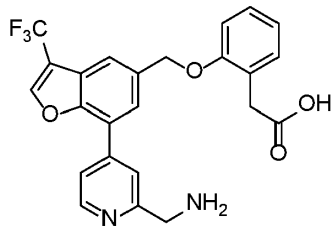
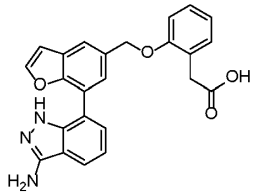
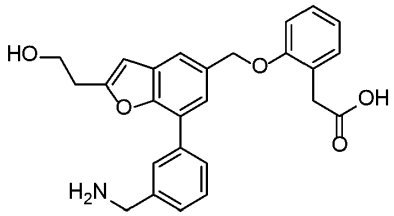
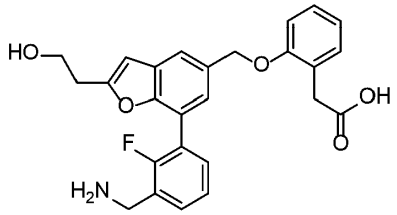
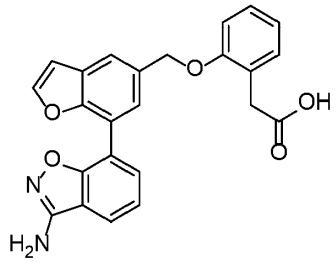
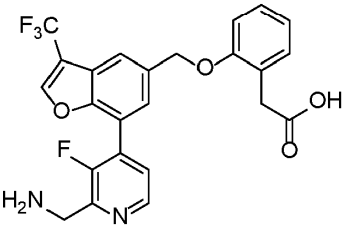
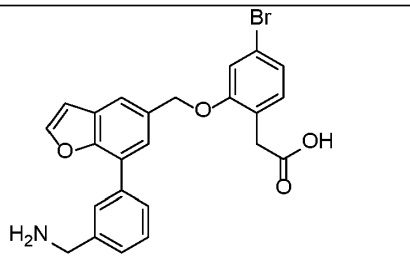
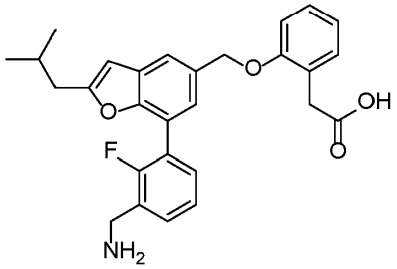
	
	
	
	
	
	

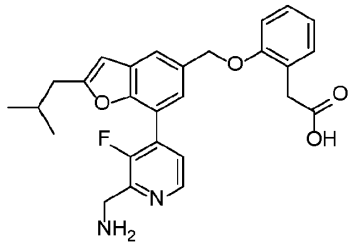
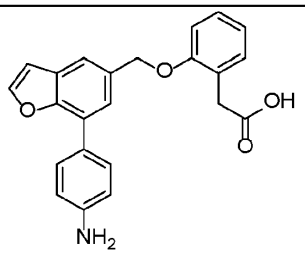
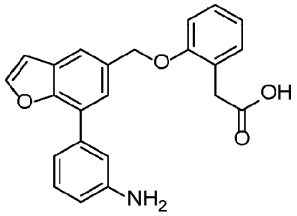
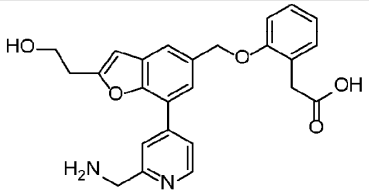
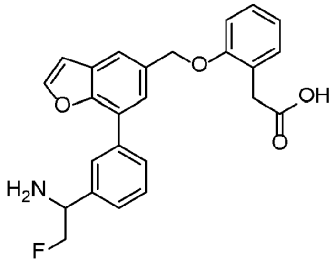
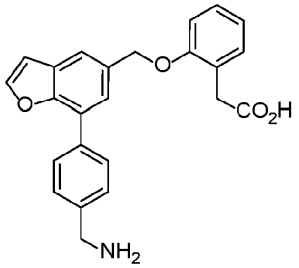
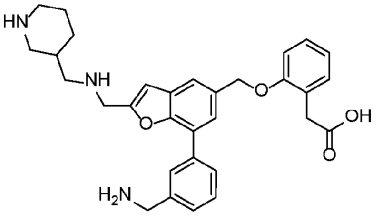
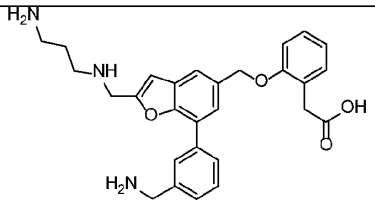
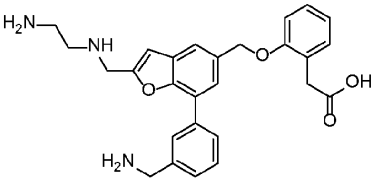
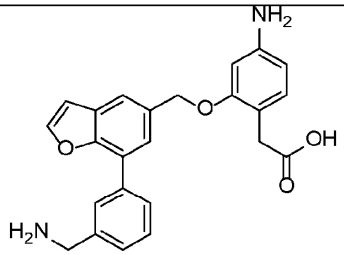
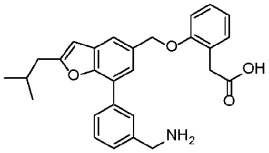
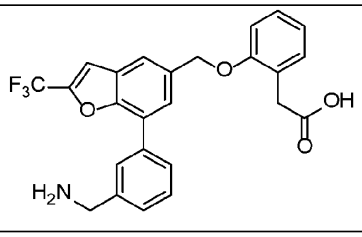
	
	
	
	
	

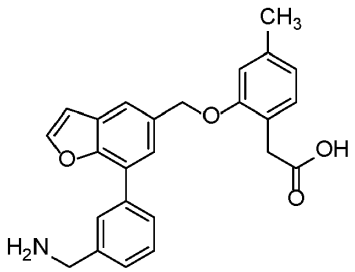
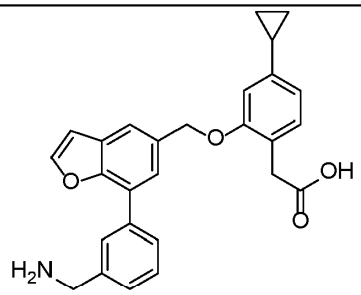
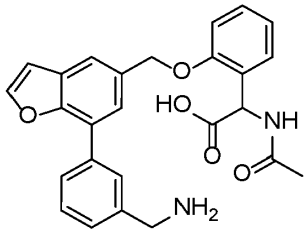
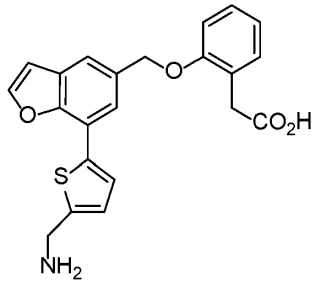
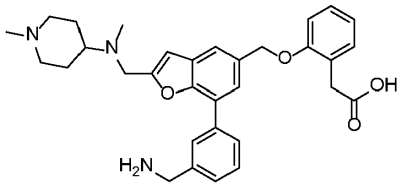
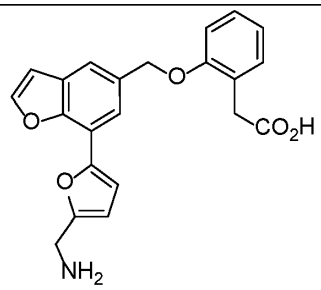
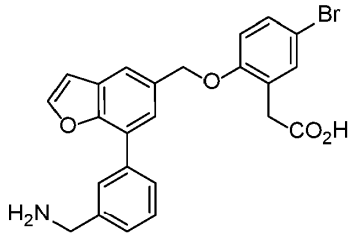
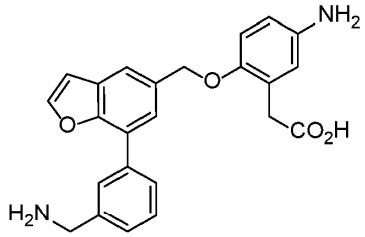
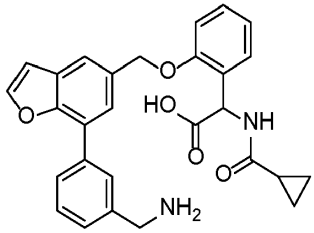
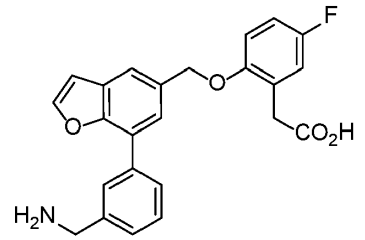
	
	
	
	
	
	

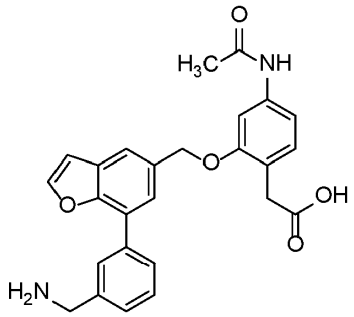
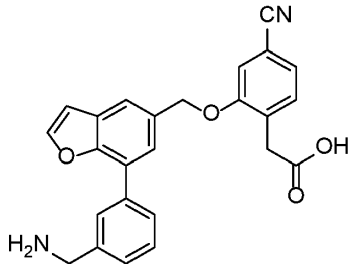
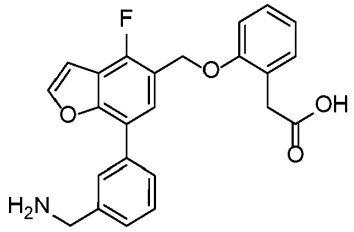
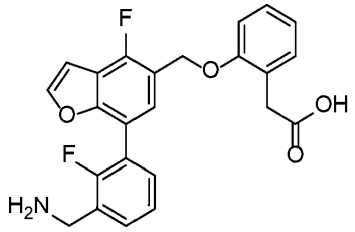
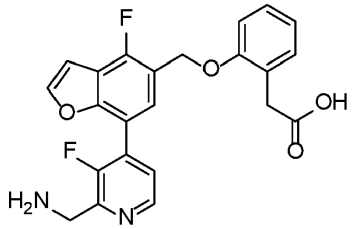
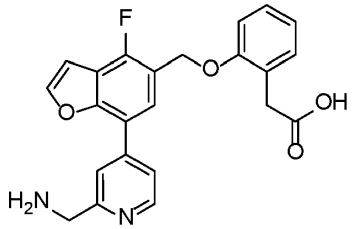
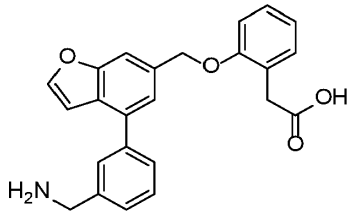
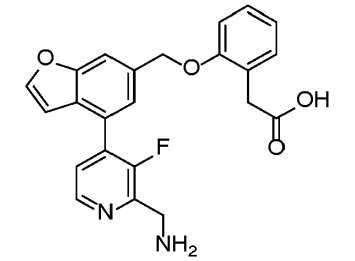
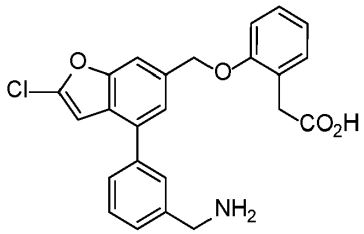
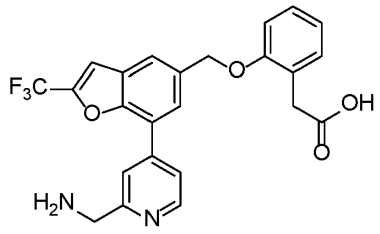
	
	
	
	
	
	

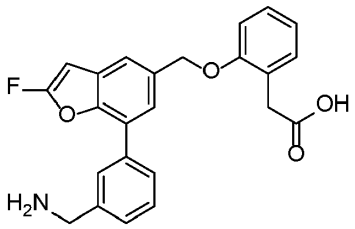
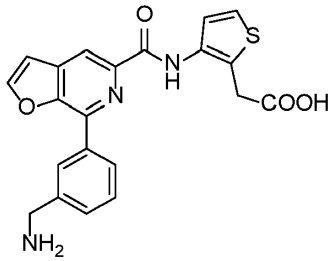
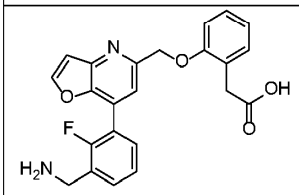
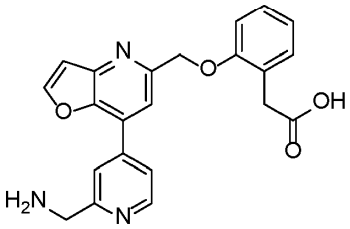
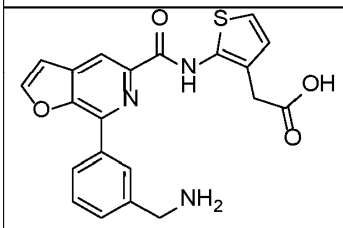
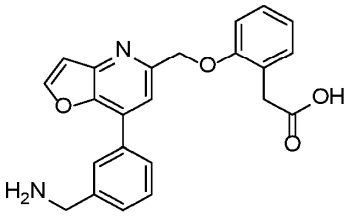
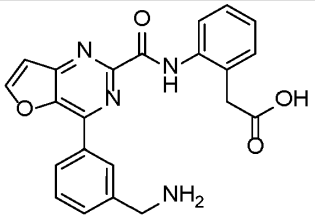
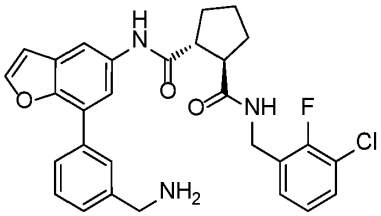
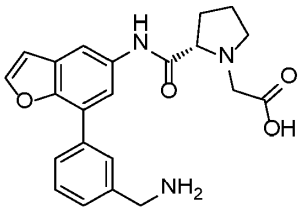
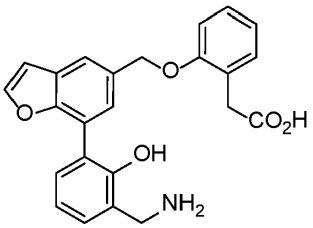
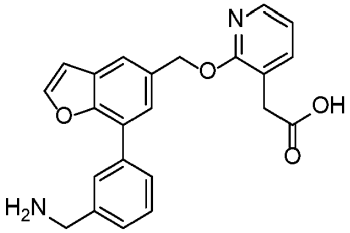
	
	
	
	
	
	

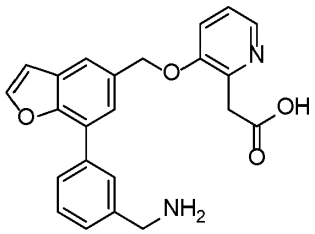
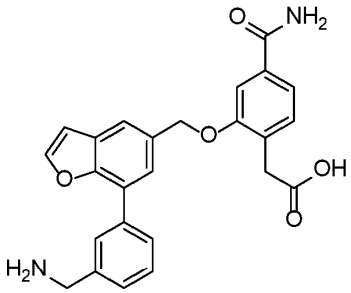
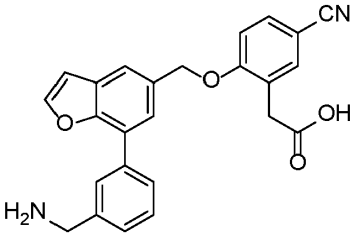
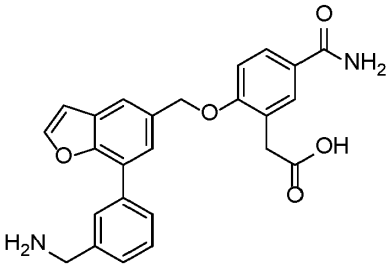
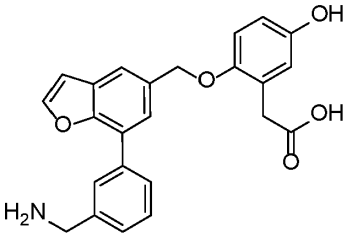
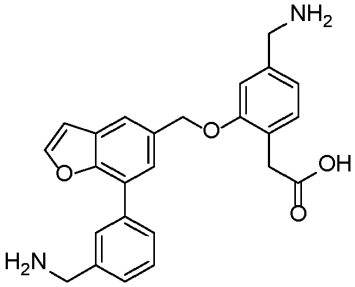
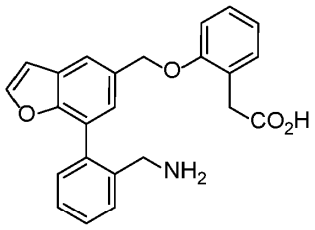
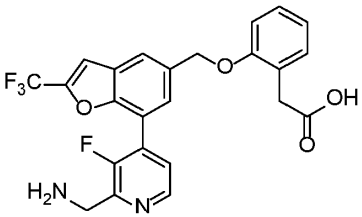
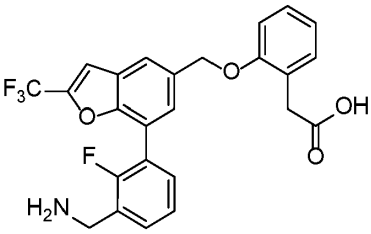
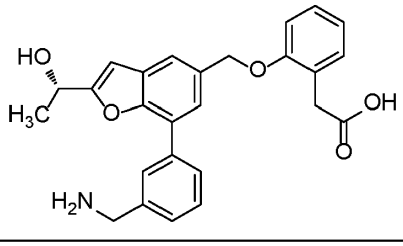
	
	
	
	
	

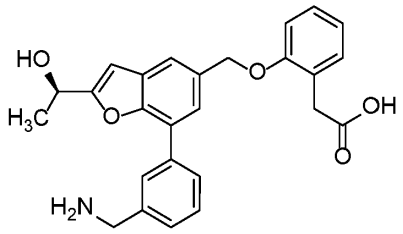
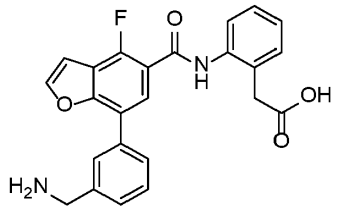
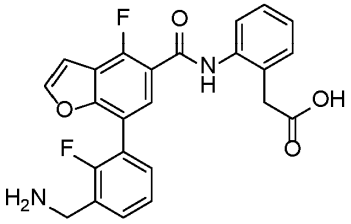
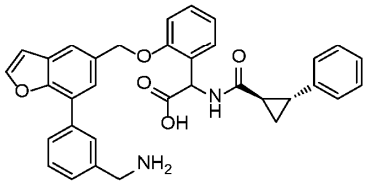
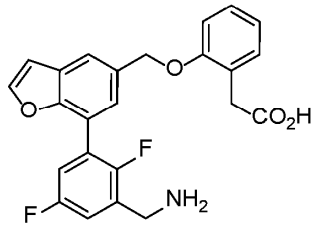
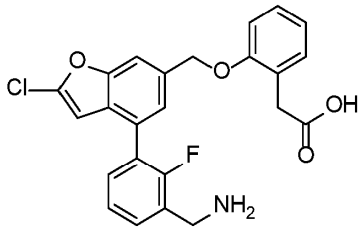
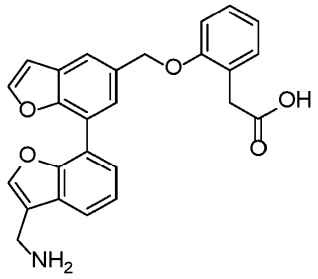
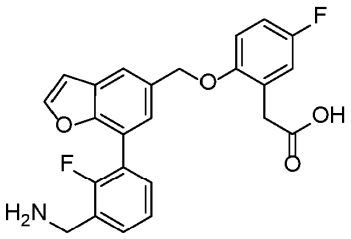
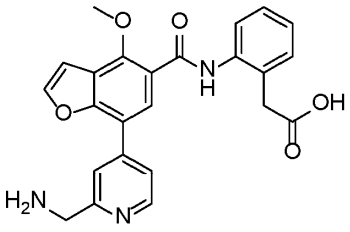
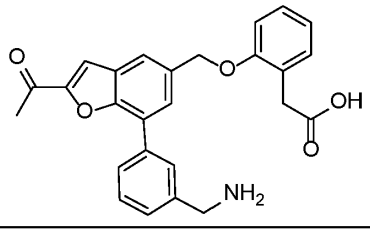
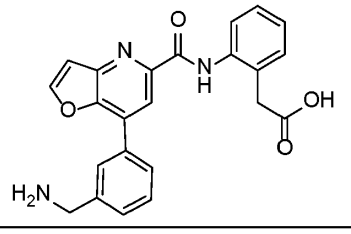
	
	
	
	
	
	

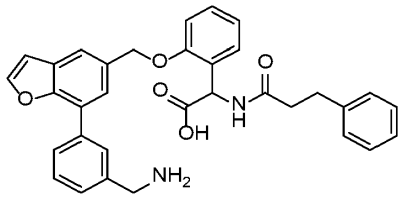
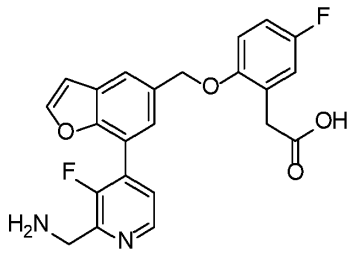
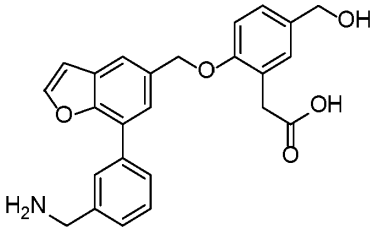
	
	
	
	
	

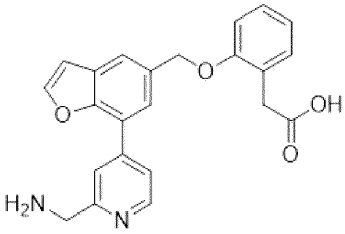
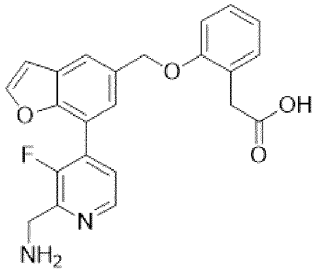
	
	
	
	
	
	

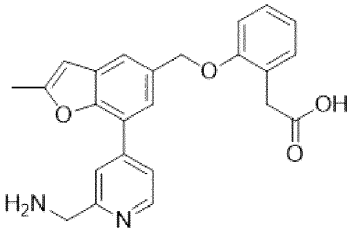
	
	
	
	
	
	

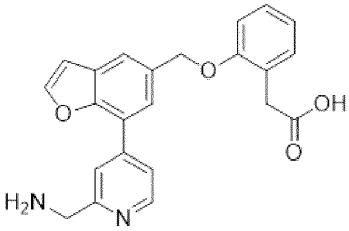
20. Forbindelsen ifølge krav 1, eller et farmasøytisk akseptabelt salt derav, valgt fra gruppen bestående av:


, 
,

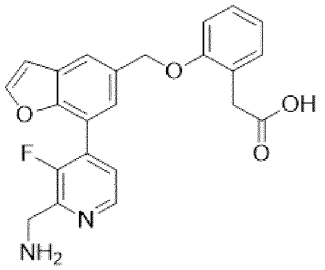
og


.

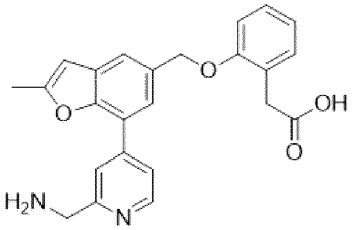
21. Forbindelse ifølge krav 20, som har den følgende formel eller et farmasøytisk akseptabelt salt derav:


.

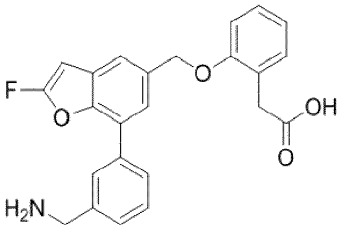
22. Forbindelse ifølge krav 20, som har den følgende formel eller et farmasøytisk akseptabelt salt derav:



23. Forbindelse ifølge krav 20, som har den følgende formelen eller et farmasøytisk akseptabelt salt derav:



24. Forbindelsen ifølge krav 1, eller et farmasøytisk akseptabelt salt derav, som har den følgende formel:



25. Farmasøytisk sammensetning, omfattende en forbindelse ifølge et hvilket som helst av kravene 1- 24, eller et farmasøytisk akseptabelt salt derav, og en farmasøytisk akseptabel bærer.

26. Sammensetning ifølge et hvilket som helst av kravene 1-24, eller et farmasøytisk akseptabelt salt derav, for anvendelse ved en fremgangsmåte for behandling eller forebygging av en sykdom eller tilstand **karakterisert ved** avvikende komplement-systemaktivitet.

27. Sammensetningen, for anvendelse ifølge krav 26, hvori sykdommen eller tilstanden **karakterisert ved** avvikende komplement-systemaktivitet er en immunologisk lidelse, en sykdom i sentralnervesystemet, en nevrodegenerativ sykdom eller nevrologisk sykdom, en nyresykdom eller en kardiovaskulær sykdom.

28. Forbindelsen for anvendelse ifølge krav 26, hvori sykdommen eller tilstanden **karakterisert ved** avvikende komplement-systemaktivitet velges fra gruppen bestående av paroksysmal nattlig hemoglobinuri, atypisk hemolytisk uremisk syndrom, avstøtning av organtransplantasjon, myasthenia gravis, neuromyelitt optica, membranoproliferativ glomerulonefritt, tett avleiringssykdom, kald agglutininsykdom og katastrofalt antifosfolipidsyndrom.