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A61K 31/4375 (2006.01)	***A61P 25/04 (2006.01)***
A61K 31/519 (2006.01)	***A61P 25/22 (2006.01)***
A61P 3/04 (2006.01)	***A61P 25/24 (2006.01)***
A61P 3/10 (2006.01)	***A61P 27/02 (2006.01)***
A61P 9/12 (2006.01)	***A61P 35/00 (2006.01)***

Norwegian Industrial Property Office

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(54) Title **PYRIDAZINONES AND METHODS OF USE THEREOF**

(56) References Cited:

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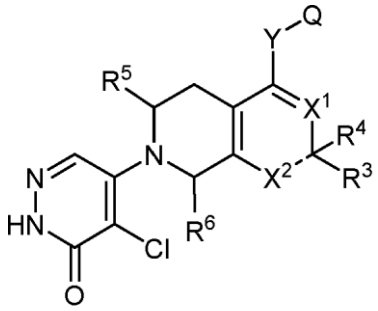
MILLER et al.: "Identification of ML204, a Novel Potent Antagonist That Selectively Modulates Native TRPC4/C5 Ion Channels", Journal of Biological Chemistry, vol. 286, 27 July 2011 (2011-07-27), pages 33436-33446, XP055053586, DOI: 10.1074/jbc.M111.274167

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 strukturell formel I:



(I),

eller et farmasøytisk akseptabelt salt derav; hvor:

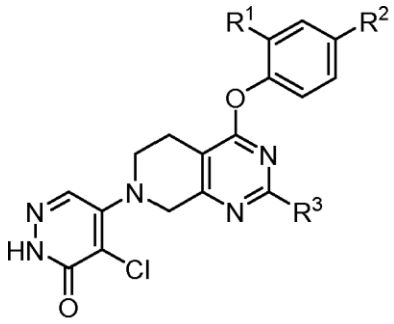
"---" er en dobbeltbinding eller en enkeltbinding;
X^1 er N eller CH;
når "---" er en dobbeltbinding, X^2 er N eller CH;
når "---" er en enkeltbinding, X^2 er $N(CH_3)$,

når X^1 er CH, X^2 er N eller $N(CH_3)$;

Y er -O-, $-N(CH_3)$-, $-N(CH_2CH_2OH)$-, syklopropan-1,1-diyl eller $-CH(CH_3)$-;
Q er 2-trifluormetyl-4-fluorfenyl, 2-difluormetyl-4-fluorfenyl, 2-trifluormetylfenyl, 2-metyl-4-fluor-ofenyl, 2-klor-4-fluorfenyl, 2-klorfenyl, 1-(benzyl)-4-metylpiperidin-3-yl, 4-trifluormetylpyridin-3- yl, 2-trifluormetyl-6-fluorfenyl, 2-trifluormetyl-3-cyanofenyl, 2-etyl-3-fluorfenyl, 2-klor-3-cyano- fenyl, 2-trifluormetyl-5-fluorfenyl eller 2-difluormetylfenyl;
R^3 er hydrogen, $-CH_2OH$, $-CH(OH)-CH_2OH$, $-NH_2$, $-CH(OH)CH_3$, $-OCH_3$ eller $-NH-(CH_{2)2}OH$; og når "---" er en dobbeltbinding, R^4 er fraværende;
og når "---" er en enkeltbinding, R^3 og R^4 tas sammen for å danne =O; og
hver av R^5 og R^6 uavhengig er hydrogen eller $-CH_3$,

forutsatt at hvis X^1 er N, X^2 er N, Y er -O- eller $-N(CH_3)$- og Q er 2-trifluormetylfenyl, da er minst én av R^3, R^5 og R^6 ikke hydrogen.

2. Forbindelse ifølge krav 1, representert ved strukturell formel II:



(II),

eller et farmasøytisk akseptabelt salt derav; hvor:

R^1 er klor, $-CF_3$, $-CHF_2$ eller $-CH_3$;
R^2 er hydrogen eller fluor; og
R^3 er hydrogen, $-NH_2$, $-CH_2OH$ eller $CH(OH)-CH_2OH$.

3. Forbindelse ifølge krav 2 hvor, når R^1 er $-CHF_2$, R^2 ikke er hydrogen.

4. Forbindelse ifølge krav 1, valgt fra en hvilken som helst av de følgende forbindelser, eller et farmasøytisk akseptabelt salt derav:

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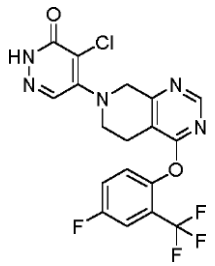
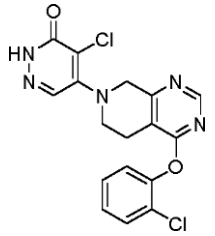
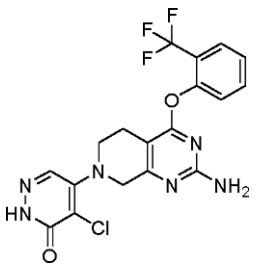
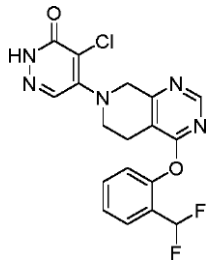
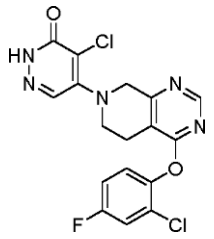
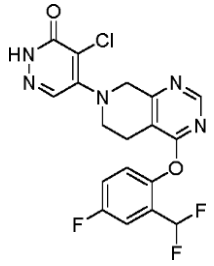
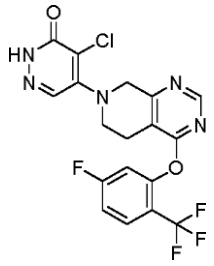
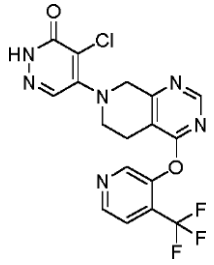
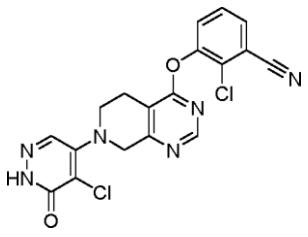
100	
101	
102	

Forbindelse	Struktur
103	
104	
105	
106	
107	
108	

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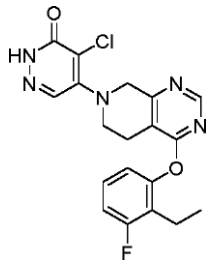
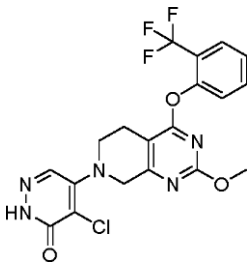
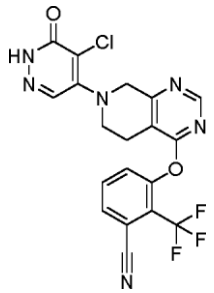
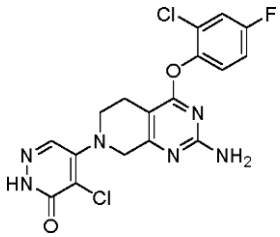
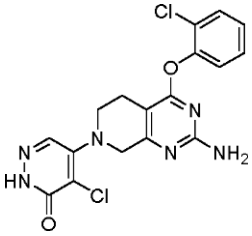
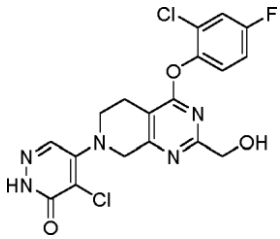
109	
110	
111	
112	
113	
114	

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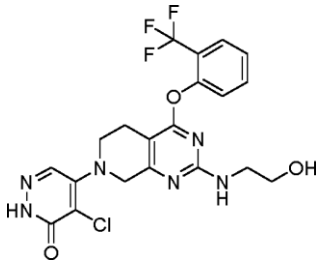
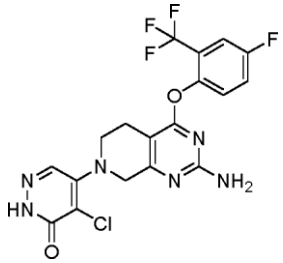
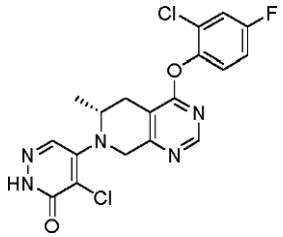
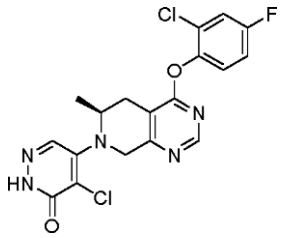
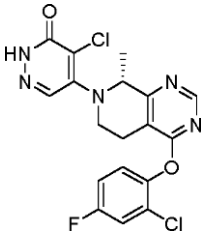
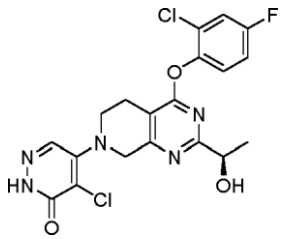
115	
116	
117	
117a	
118	
119	

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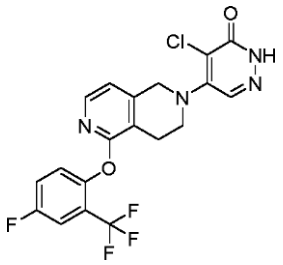
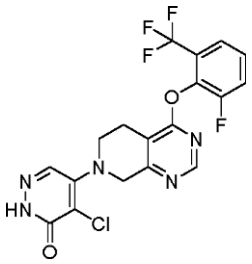
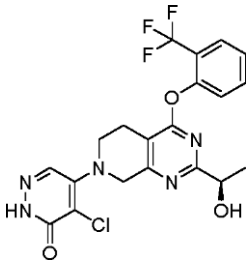
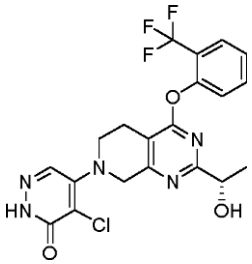
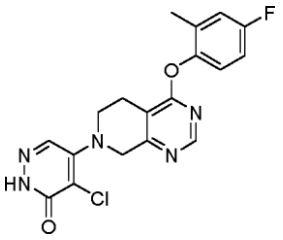
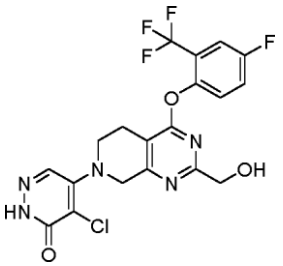
120	
121	
122	
123	
124	
125	

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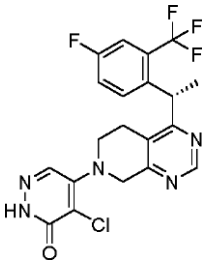
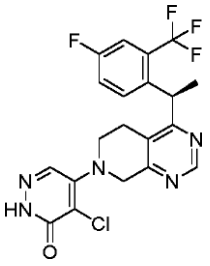
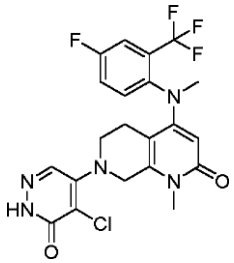
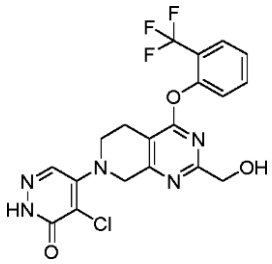
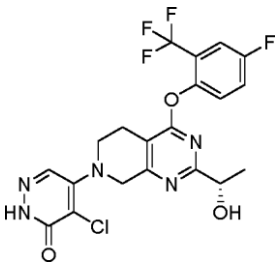
126	
126a	
127	
128	
129	

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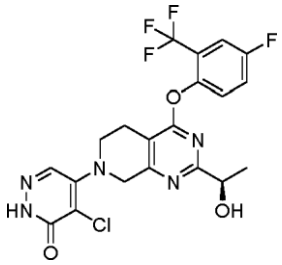
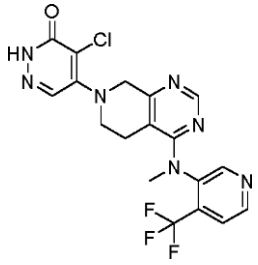
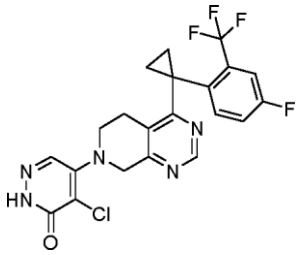
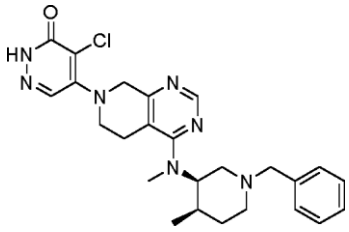
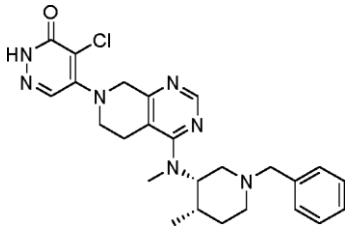
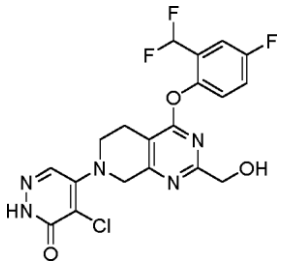
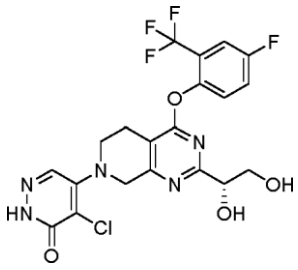
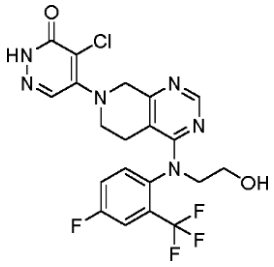
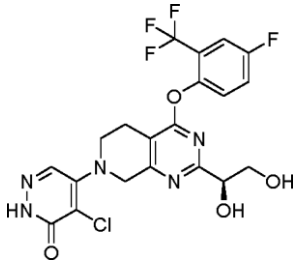
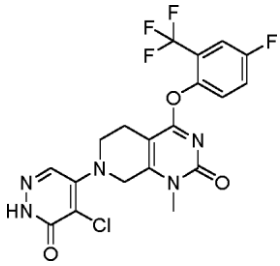
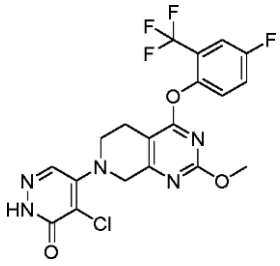
130	
131	
132	
133	
133a	
134	

Forbindelse	Struktur
135	
136	
137	
138	
139	

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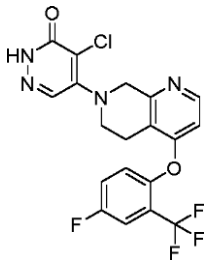
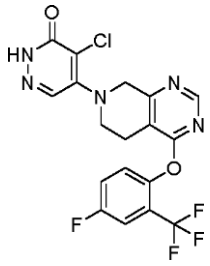
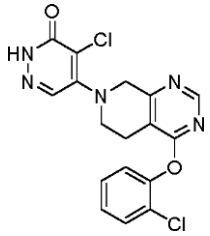
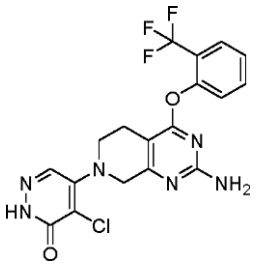
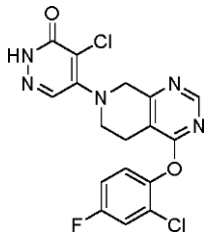
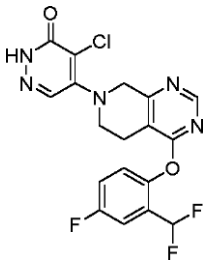
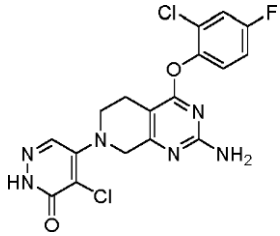
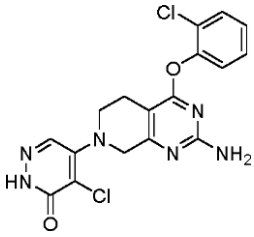
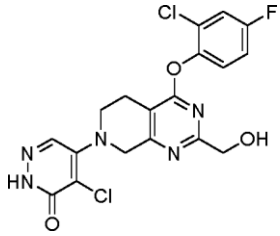
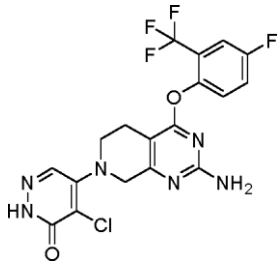
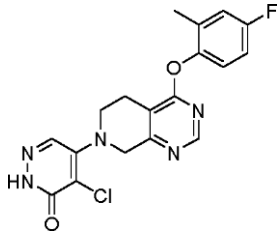
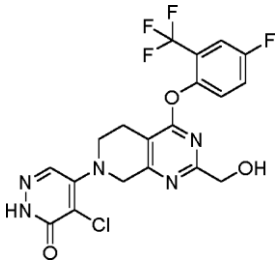
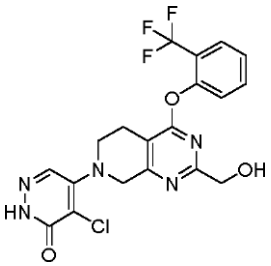
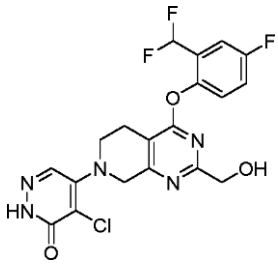
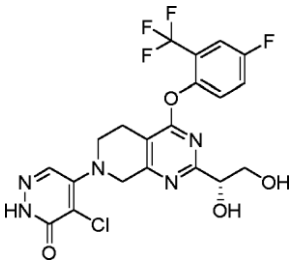
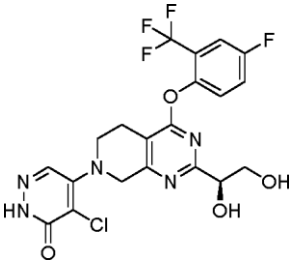
140	

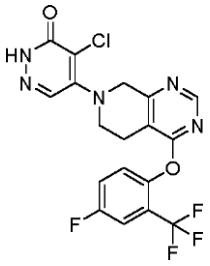
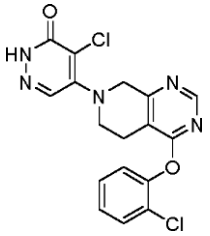
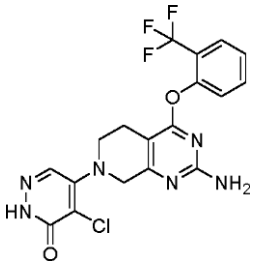
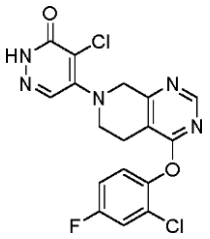
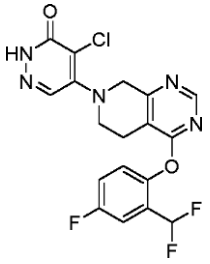
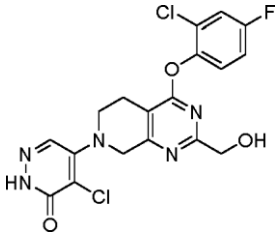
5. Forbindelse ifølge krav 4, valgt fra en hvilken som helst av de følgende forbindelser, eller et farmasøytisk akseptabelt salt derav:

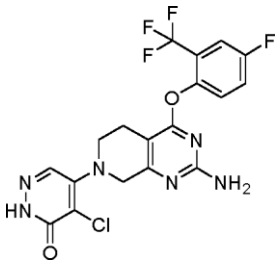
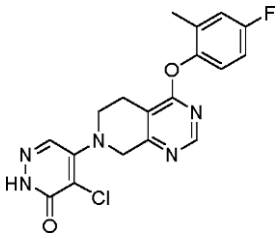
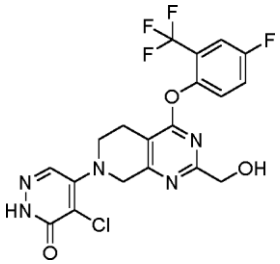
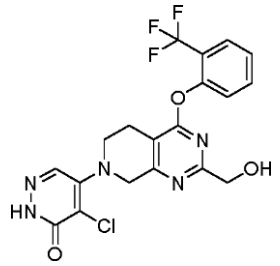
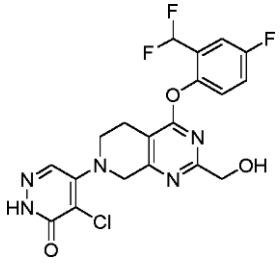
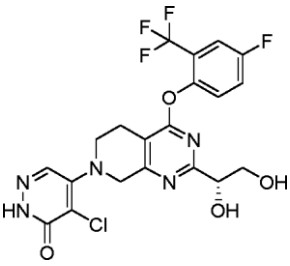
Forbindelse	Struktur
100	
101	
102	
104	

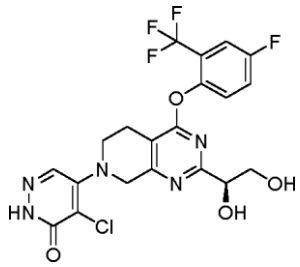
Forbindelse	Struktur
105	
112	
113	
114	
116	
124	

Forbindelse	Struktur
125	
128	
134	
135	
137	

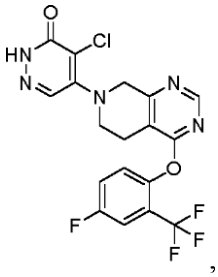
6. Forbindelse ifølge krav 5, valgt fra en hvilken som helst av de følgende forbindelser, eller et farmasøytisk akseptabelt salt derav:

Forbindelse	Struktur
100	
101	
102	
104	
105	
114	

Forbindelse	Struktur
116	
124	
125	
128	
134	
135	

Forbindelse	Struktur
137	

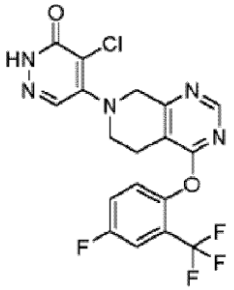
7. Forbindelse ifølge krav 1, hvor forbindelsen er forbindelse 100:



,

eller et farmasøytisk akseptabelt salt derav.

8. Forbindelse ifølge krav 1, hvor forbindelsen er



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9. Farmasøytisk sammensetning omfattende en forbindelse ifølge et hvilket som helst av kravene 1-8; og en farmasøytisk akseptabel bærer.

10. Forbindelse ifølge et hvilket som helst av kravene 1-8, eller farmasøytisk sammensetning ifølge krav 9, for bruk i en fremgangsmåte ved behandling, eller reduksjon av risikoen for å utvikle, en sykdom eller tilstand valgt fra nyresykdom, pulmonal arteriell hypertensjon, angst, depresjon, kreft, diabetisk retinopati eller smerte.

11. Forbindelse eller farmasøytisk sammensetning for bruk ifølge krav 10, hvor sykdommen eller tilstanden er nyresykdom valgt fra fokal segmental glomerulosklerose (FSGS), diabetisk nevropati, Alports syndrom, hypertensiv nyresykdom, nefrotisk syndrom, steroidresistent nefrotisk syndrom, minimal change-sykdom, membranøs nefropati, idiopatisk membranøs nefropati, membranproliferativ glomerulonefritt (MPGN), immunkompleksemediert MPGN, komplementmediert MPGN, lupusnefritt, postinfeksiøs glomerulonefrittt, tynn basalmembran-sykdom, mesangial proliferativ glomerulonefritt, amyloidose (primær), c1q-nefropati, raskt progredierende GN, anti-GBM-sykdom, C3-glomerulonefritt, hypertensiv nefrosklerose eller IgA-nevropati.

12. Forbindelse eller farmasøytisk sammensetning for bruk ifølge krav 10, hvor sykdommen eller tilstanden er angst.

13. Forbindelse eller farmasøytisk sammensetning for bruk ifølge krav 10, hvor sykdommen eller tilstanden er depresjon.

14. Forbindelse eller farmasøytisk sammensetning for bruk ifølge krav 10, hvor sykdommen eller tilstanden som skal behandles er smerte valgt fra nevropatisk smerte og visceral smerte.

15. Forbindelse eller farmasøytisk sammensetning for bruk ifølge krav 10, hvor sykdommen eller tilstanden er kreft valgt fra kjemoresistent brystkarsinom, adriamycin-resistent brystkreft, kjemoresistent kolorektal kreft, medulloblastom,og tumorangiogenese.

16. Forbindelse eller farmasøytisk sammensetning for bruk ifølge krav 10, hvor sykdommen eller tilstanden er transplantasjonsrelatert FSGS, transplantasjonsrelatert nefrotisk syndrom, transplantasjonsrelatert proteinuri, kolestatisk leversykdom, polycystisk nyresykdom, autosomal dominant polycystisk nyresykdom (ADPKD), fedme, insulinresistens, diabetes type II, prediabetes, metabolsk syndrom, ikke-alkoholisk fettleversykdom (NAFLD) eller ikke-alkoholisk steatohepatititt (NASH).