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(54) Title **BILE ACID DERIVATIVES AS FXR/TGR5 AGONISTS AND METHODS OF USE THEREOF**

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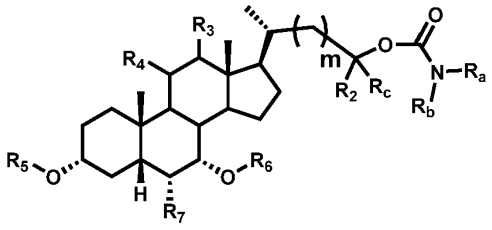
Patentkrav

1. En forbindelse representert ved formel I, eller et farmasøytisk akseptabelt salt derav:



(I)

hvori:

R_a er valgt fra gruppen som består av:
1) Hydrogen;
2) Substituert eller usubstituert -C_1-C_6 alkoksy;
3) Substituert eller usubstituert -C_1-C_8 alkyl;
4) Substituert eller usubstituert -C_2-C_8 alkenyl;
5) Substituert eller usubstituert -C_2-C_8 alkynyl;
6) Substituert eller usubstituert -C_3-C_6 -cykloalkyl;
7) Substituert eller usubstituert arylalkyl;
8) Substituert eller usubstituert aryl; og
9) heteroaryl;

R_b er valgt fra gruppen som består av:
1) -SO_2R_1;
2) -$C(O)R_1$;
3) -$C(O)NHSO_2R_1$;
4) -$C(O)NR_{10}R_{11}$;
5) Hydrogen;
6) Substituert eller usubstituert -C_1-C_8 alkyl;
7) Substituert eller usubstituert -C_2-C_8 alkenyl;
8) Substituert eller usubstituert -C_2-C_8 alkynyl;
9) Substituert eller usubstituert arylalkyl; og
10) Substituert eller usubstituert aryl;

eller R_a og R_b er tatt sammen med nitrogenatomet som de er bundet til for å danne en heterosyklisk; R_1 er valgt fra gruppen som består av:
1) Halogen;
2) Hydroksyl;
3) Substituert eller usubstituert -C_1-C_8 alkyl;
4) Substituert eller usubstituert -C_2-C_8 alkenyl;
5) Substituert eller usubstituert -C_2-C_8 alkynyl;
6) Substituert eller usubstituert -C_3-C_8 cykloalkyl;
7) Substituert eller usubstituert aryl;
8) Substituert eller usubstituert arylalkyl;
9) Substituert eller usubstituert heterosykloalkyl;
10) Substituert eller usubstituert heteroaryl;
11) Substituert eller usubstituert heteroarylalkyl; og
12) -$NR_{10}R_{11}$;

R_2 er valgt fra gruppen som består av:
1) Hydrogen;
2) Substituert eller usubstituert -C_1-C_8 alkyl;
3) Substituert eller usubstituert -C_2-C_8 alkenyl;

4) Substituert eller usubstituert -C_2-C_8 alkynyl;
5) Substituert eller usubstituert arylalkyl; og
6) Substituert eller usubstituert aryl;

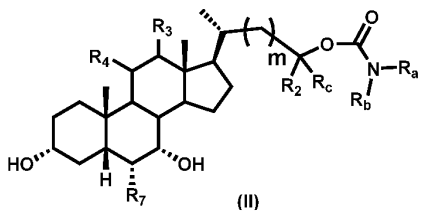
R_c er valgt fra gruppen som består av:
1) Hydrogen;
2) Substituert eller usubstituert -C_1-C_8 alkyl;
3) Substituert eller usubstituert -C_2-C_8 alkenyl;
4) Substituert eller usubstituert -C_2-C_8 alkynyl;
5) Substituert eller usubstituert arylalkyl; og
6) Substituert eller usubstituert aryl;

eller R_2 og R_c er tatt sammen med karbonatomet som de er bundet til for å danne en syklisk ring; m er valgt fra 0, 1, 2 og 3;
R_3 er hydrogen, hydroksyl, -OSO_3H, -OSO_3-, -OAc, -OPO_3H_2 eller -OPO_3^{2-};
R_4 er hydrogen, halogen, CN, N_3, hydroksyl, -OSO_3H, -OSO_3-, -OAc, -OPO_3H_2, -OPO_3^{2-}, - SR_2 eller -NHR_2;
eller R_3 og R_4 er tatt sammen med karbonene de fester fra -CH = CH- eller cykloalkylring eller heterocy- cloalkylring;
R_5 og R_6 er uavhengig hydrogen eller hydroksyl beskyttelsesgruppe; R_7 er valgt fra gruppen som består av:

1) Halogen;
2) Substituert eller usubstituert -C_1-C_8 alkyl;
3) Substituert eller usubstituert -C_2-C_8 alkenyl;
4) Substituert eller usubstituert -C_2-C_8 alkynyl; og
5) Substituert eller usubstituert -C_3-C_8 cykloalkyl; og

R_{10} og R_{11} er hver uavhengig valgt fra hydrogen, substituert eller usubstituert -C_1-C_8 alkyl, substituert eller usubstituert -C_2-C_8 alkenyl, substituert eller usubstituert -C_2-Cs alkynyl, substituert eller usubstituert -C_3-C_8 cykloalkyl, eller R_{10} og R_{11} er tatt sammen med nitrogenatomet som de er bundet til for å danne en heterosyklisk ring.

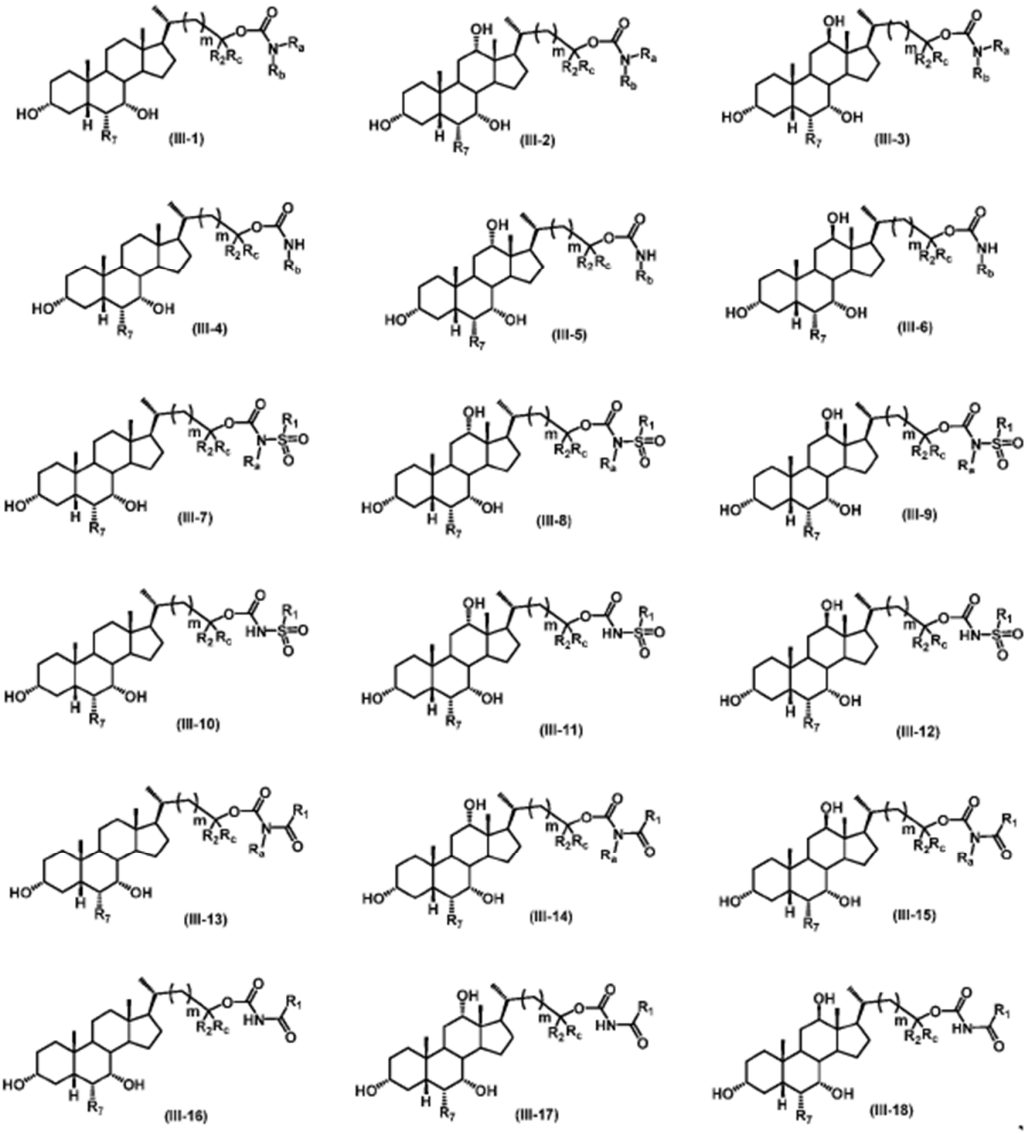
2. Forbindelsen ifølge patentkrav 1, representert ved formel II eller et farmasøytisk akseptabelt salt derav:



(II)

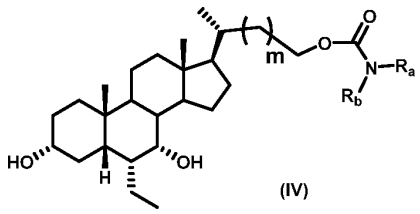
hvori R_a, R_b, R_c, R_2, R_3, R_4, R_7 og m er som definert i patentkrav 1.

3. Forbindelsen ifølge patentkrav 1, representert ved en av formlene (III-1~III-18) eller et farmasøytisk akseptabelt salt derav:



hvori, R_a, R_b, R_c, R_1, R_2, R_7 og m er som definert i patentkrav 1.

4. Forbindelsen ifølge patentkrav 1, representert ved formel IV eller et farmasøytisk akseptabelt salt derav:



hvori, R_a, R_b og m er som definert i patentkrav 1.

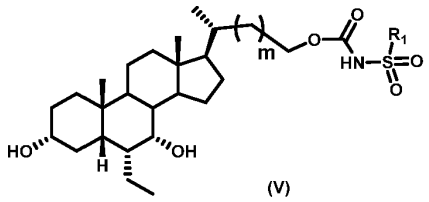
5. Forbindelse ifølge patentkrav 4, valgt fra forbindelser med formel IV hvori, R_a, R_b og m er avgrenset for hver forbindelse i tabell 1 eller et farmasøytisk akseptabelt salt derav:

Tabell 1

Eksempel	m	R_a	R_b	Eksempel	m	R_a	R_b	Eksempel	m	R_a	R_b
1	0	Metyl	H	34	1	Metyl	H	67	2	Metyl	H
2	0	Etyl	H	35	1	Etyl	H	68	2	Etyl	H
3	0	Klorprofam	H	36	1	Klorprofam	H	69	2	Klorprofam	H
4	0	Butyl	H	37	1	Butyl	H	70	2	Butyl	H
5	0	t-Butyl	H	38	1	t-Butyl	H	71	2	t-Butyl	H
6	0	Propyl	H	39	1	Propyl	H	72	2	Propyl	H
7	0	Benzyl	H	40	1	Benzyl	H	73	2	Benzyl	H
8	0	Vinyl	H	41	1	Vinyl	H	74	2	Vinyl	H
9	0	Allyl	H	42	1	Allyl	H	75	2	Allyl	H
10	0	CF_3	H	43	1	CF_3	H	76	2	CF_3	H
11	0		H	44	1		H	77	2		H
12	0		H	45	1		H	78	2		H
13	0		H	46	1		H	79	2		H
14	0		H	47	1		H	80	2		H
15	0	Metyl	Me	48	1	Metyl	Me	81	2	Metyl	Me
16	0	Etyl	Me	49	1	Etyl	Me	82	2	Etyl	Me
17	0	Klorprofam	Me	50	1	Klorprofam	Me	83	2	Klorprofam	Me
18	0	t-Butyl	Me	51	1	t-Butyl	Me	84	2	t-Butyl	Me
19	0	Propyl	Me	52	1	Propyl	Me	85	2	Propyl	Me
20	0	Benzyl	Me	53	1	Benzyl	Me	86	2	Benzyl	Me
21	0	Vinyl	Me	54	1	Vinyl	Me	87	2	Vinyl	Me
22	0	Allyl	Me	55	1	Allyl	Me	88	2	Allyl	Me
23	0	CF_3	Me	56	1	CF_3	Me	89	2	CF_3	Me
24	0		Me	57	1		Me	90	2		Me
25	0		Me	58	1		Me	91	2		Me
26	0		Me	59	1		Me	92	2		Me
27	0			60	1			93	2		
28	0			61	1			94	2		
29	0			62	1			95	2		
30	**0**			**63**	**1**			96	2		

Eksempel	m	R_a	R_b	Eksempel	m	R_a	R_b	Eksempel	m	R_a	R_b
31	0			64	1			97	2		
32	0			65	1			98	2		
33	0			66	1			99	2		

6. Forbindelsen ifølge patentkrav 1, representert ved formel V



(V)

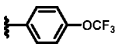
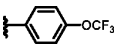
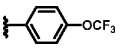
,

eller et farmasøytisk akseptabelt salt derav.

7. Forbindelse ifølge krav 6, som er valgt fra forbindelser med formel V, eller et farmasøytisk akseptabelt salt derav hvori, R_1 og m er avgrenset for hver forbindelse i tabell 2:

Tabell 2

Eksempel	m	R_1	Eksempel	m	R_1	Eksempel	m	R_1
100	0	Metyl	127	1	Metyl	154	2	Metyl
101	0	Etyl	128	1	Etyl	155	2	Etyl
102	0	Klorprofam	129	1	Klorprofam	156	2	Klorprofam
103	0	Butyl	130	1	Butyl	157	2	Butyl
104	0	t-Butyl	131	1	t-Butyl	158	2	t-Butyl
105	0	Propyl	132	1	Propyl	159	2	Propyl
106	0	Benzyl	133	1	Benzyl	160	2	Benzyl
107	0	Vinyl	134	1	Vinyl	161	2	Vinyl
108	0	Allyl	135	1	Allyl	162	2	Allyl
109	0	CF_3	136	1	CF_3	163	2	CF_3
110	0		137	1		164	2	
111	0		138	1		165	2	

Eksempel	m	R_1	Eksempel	m	R_1	Eksempel	m	R_1
112	0		139	1		166	2	
113	0		140	1		167	2	
114	0		141	1		168	2	
115	0		142	1		169	2	
116	0		143	1		170	2	
117	0		144	1		171	2	
118	0	NH_2	145	1	NH_2	172	2	NH_2
119	0		146	1		173	2	
120	0		147	1		174	2	
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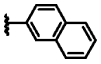
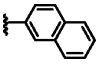
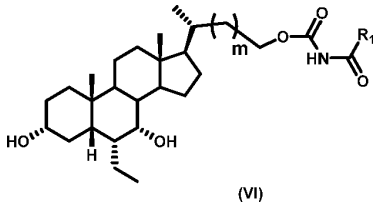
122	0		149	1		176	2	
123	0		150	1		177	2	
124	0		151	1		178	2	
125	0		152	1		179	2	
126	0	F	153	1	F	180	2	F

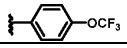
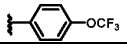
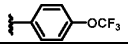
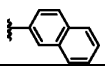
8. En forbindelsen ifølge patentkrav 1, valgt fra forbindelser med formel VI:



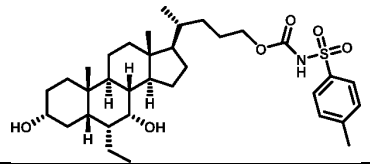
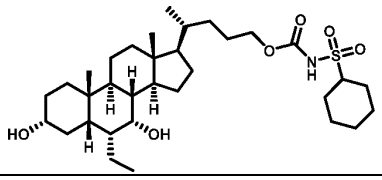
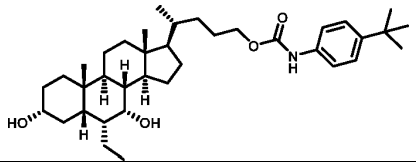
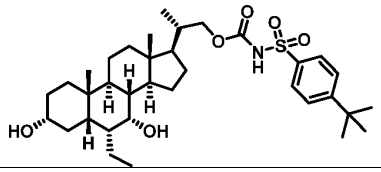
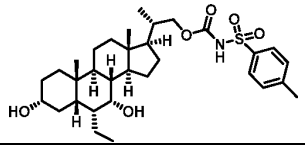
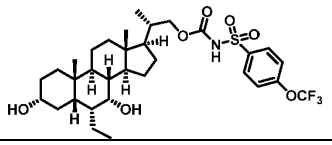
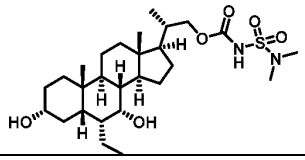
(VI)

hvori R_1 og m for hver forbindelse er angitt i tabell 3, eller et farmasøytisk akseptabelt salt derav:

Tabell 3

Forbindelse	m	R_1	Forbindelse	m	R_1	Forbindelse	m	R_1
181	0	Metyl	208	1	Metyl	235	2	Metyl
182	0	Etyl	209	1	Etyl	236	2	Etyl
183	0	Klorprofam	210	1	Klorprofam	237	2	Klorprofam
184	0	Butyl	211	1	Butyl	238	2	Butyl
185	0	t-Butyl	212	1	t-Butyl	239	2	t-Butyl
186	0	Propyl	213	1	Propyl	240	2	Propyl
187	0	Benzyl	214	1	Benzyl	241	2	Benzyl
188	0	Vinyl	215	1	Vinyl	242	2	Vinyl
189	0	Allyl	216	1	Allyl	243	2	Allyl
190	0	CF_3	217	1	CF_3	244	2	CF_3
191	0		218	1		245	2	
192	0		219	1		246	2	
193	0		220	1		247	2	
194	0		221	1		248	2	
195	0		222	1		249	2	
196	0		223	1		250	2	
197	0		224	1		251	2	
198	0		225	1		252	2	
199	0	NH_2	226	1	NH_2	253	2	NH_2
200	0		227	1		254	2	
201	0		228	1		255	2	
202	0		229	1		256	2	
203	0		230	1		257	2	
204	0		231	1		258	2	
205	0		232	1		259	2	
206	0		233	1		260	2	
207	0	F	234	1	F	261	2	F

9. En forbindelse ifølge patentkrav 1, valgt fra forbindelsene angitt nedenfor, eller et farmasøytisk akseptabelt salt derav:

Eksempel #	Struktur
1	
2	
3	
4	
5	
6	
7	

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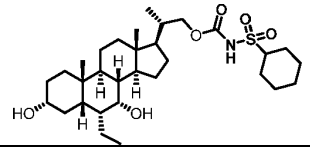
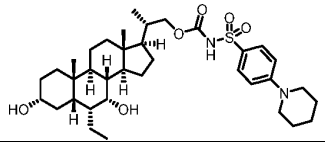
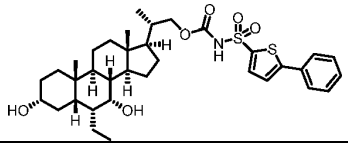
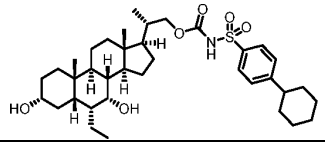
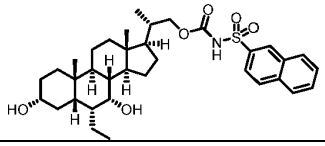
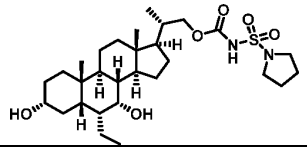
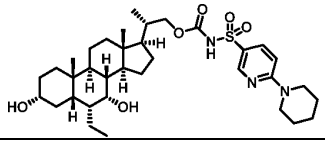
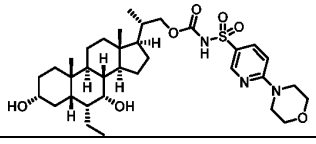
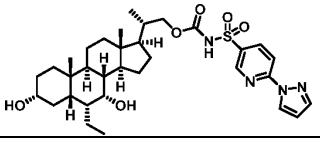
8	
9	
10	
11	
12	
13	
14	
15	
16	

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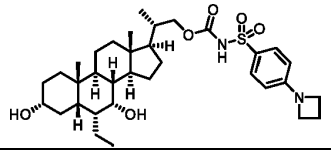
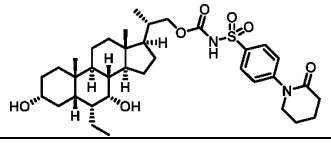
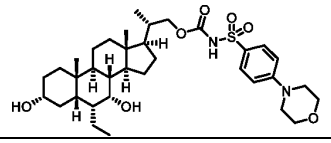
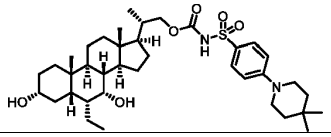
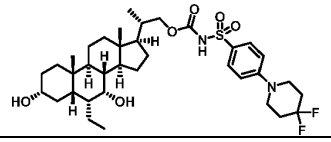
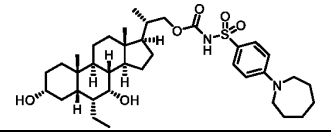
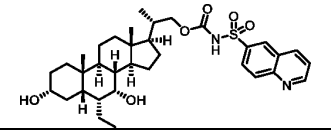
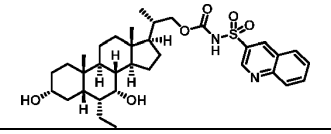
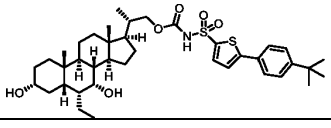
17	
18	
19	
20	
21	
22	
23	
24	
25	

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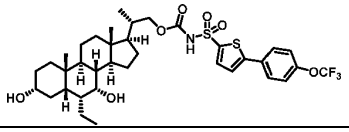
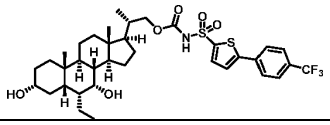
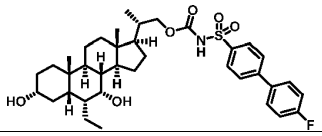
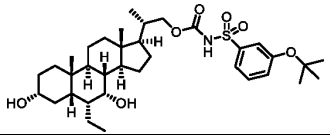
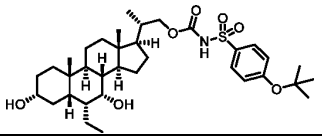
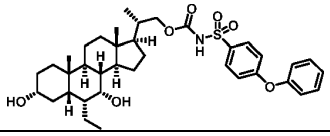
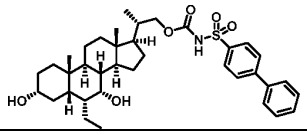
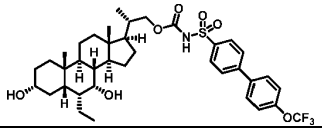
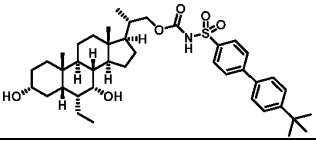
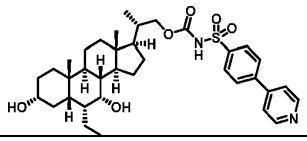
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	

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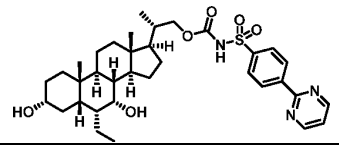
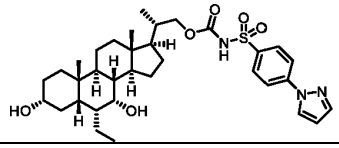
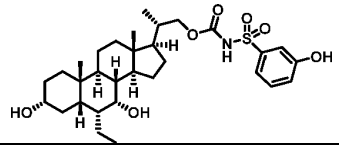
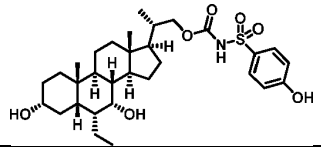
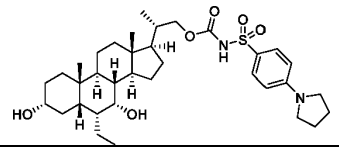
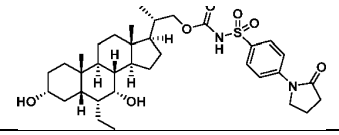
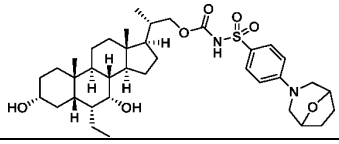
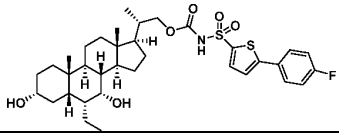
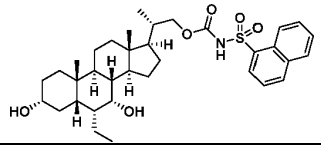
36	
37	
38	
39	
40	
41	
42	
43	
44	

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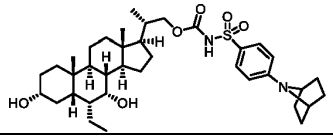
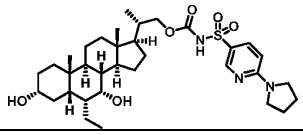
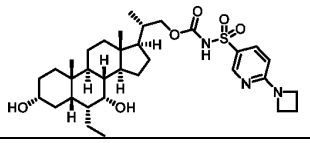
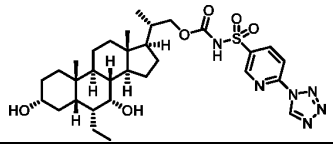
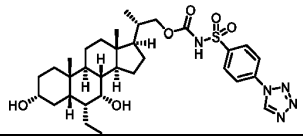
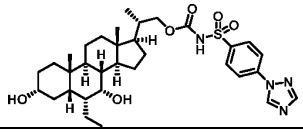
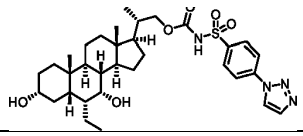
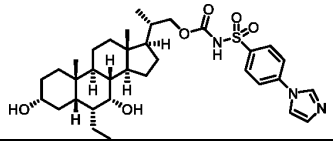
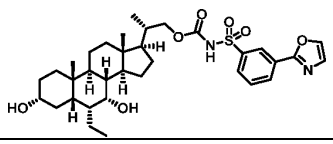
44-a	
44-b	
44-c	
44-d	
44-e	
44-f	
44-g	
44-h	
44-i	

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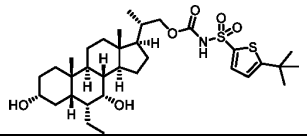
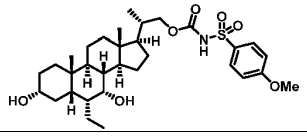
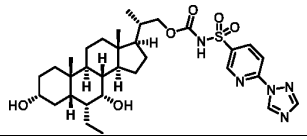
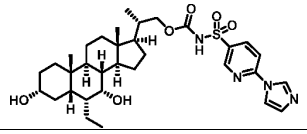
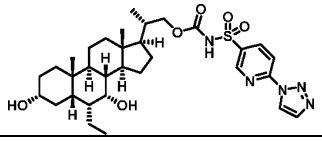
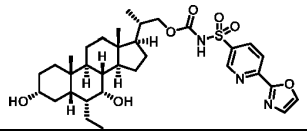
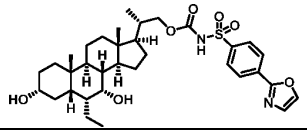
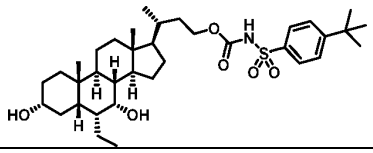
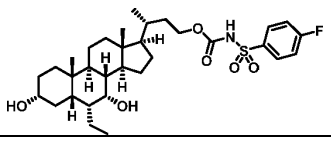
44-j	
44-k	
44-l	
44-m	
44-n	
44-o	
44-p	
45	
46	

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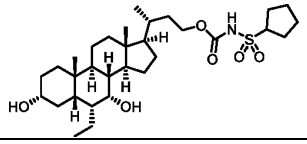
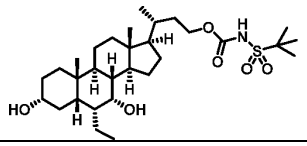
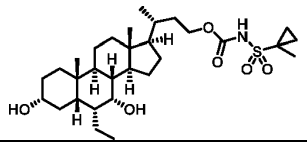
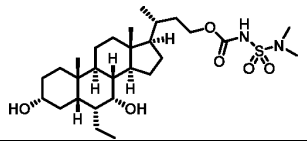
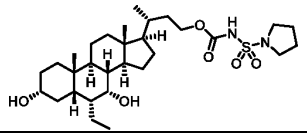
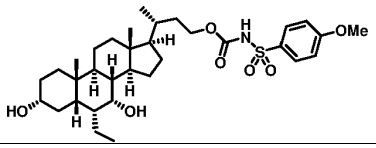
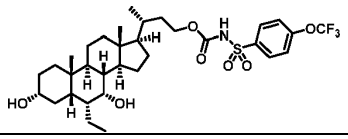
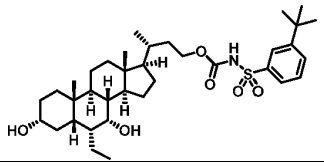
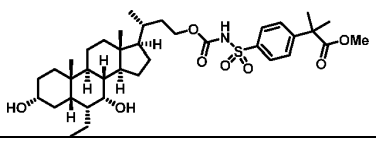
47	
48	
49	
50	
51	
52	
53	
54	
55	

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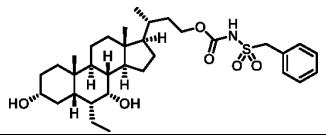
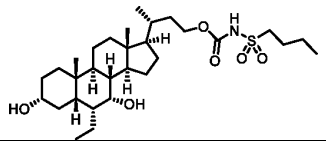
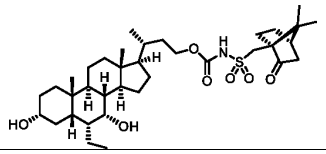
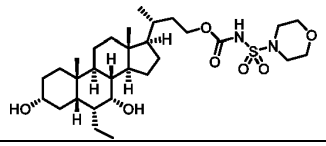
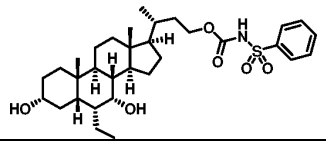
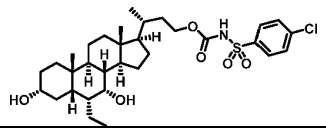
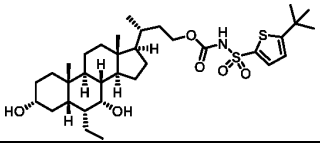
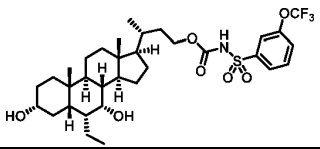
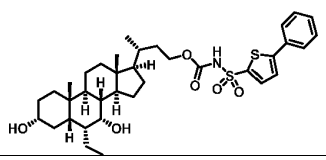
56	
57	
58	
59	
60	
61	
62	
63	
64	

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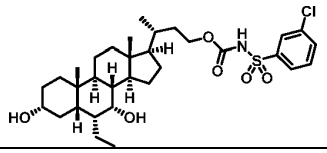
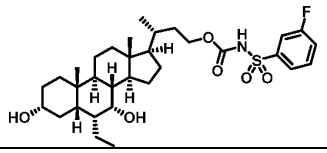
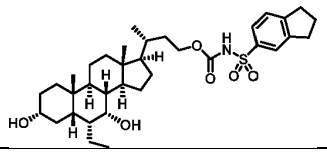
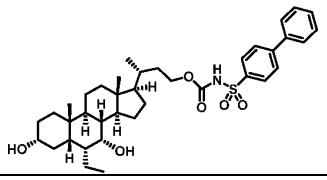
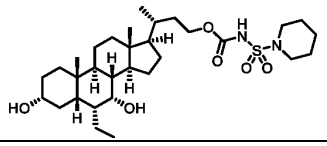
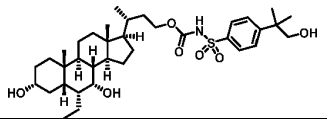
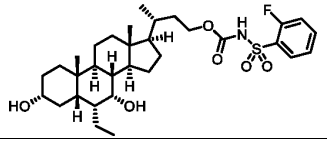
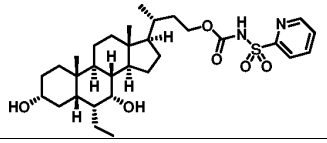
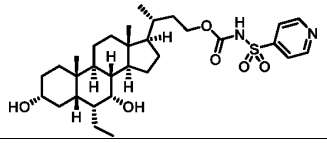
65	
66	
67	
68	
69	
70	
71	
72	
73	

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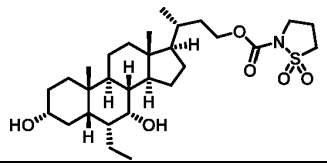
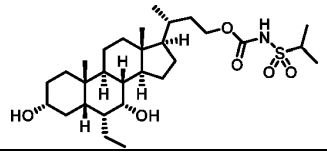
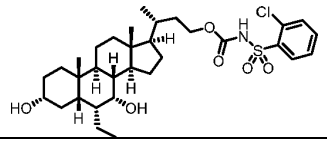
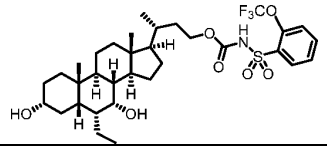
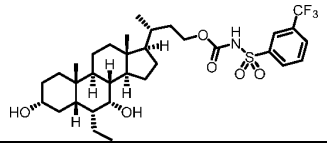
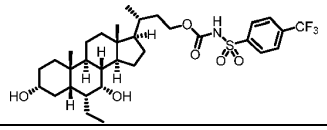
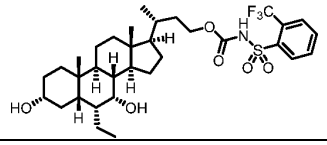
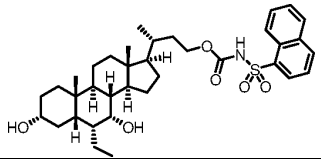
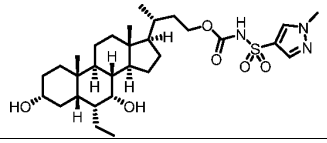
74	
75	
76	
77	
78	
79	
80	
81	
82	

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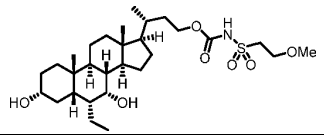
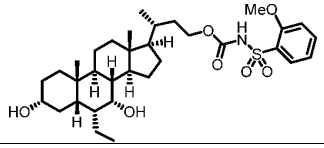
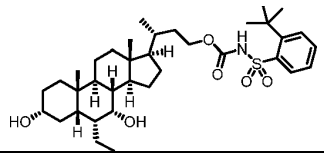
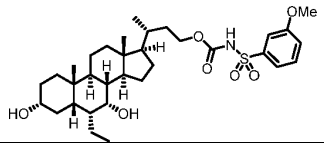
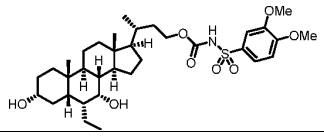
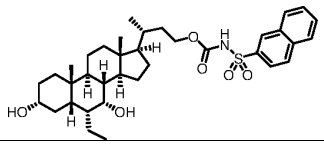
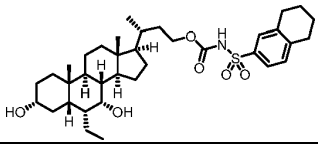
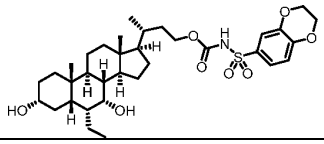
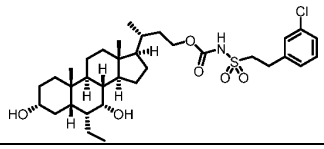
83	
84	
85	
86	
87	
88	
89	
90	
91	

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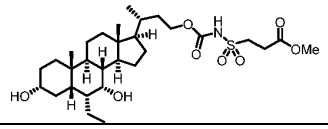
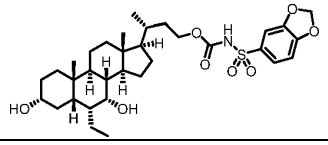
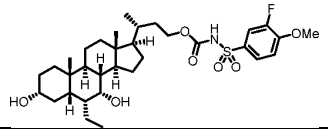
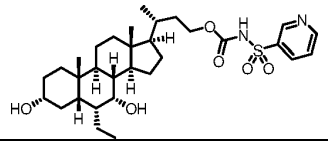
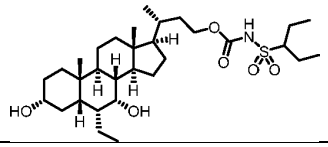
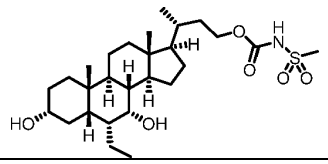
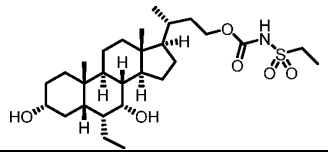
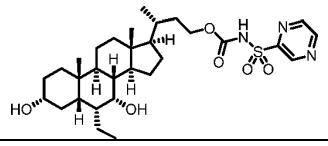
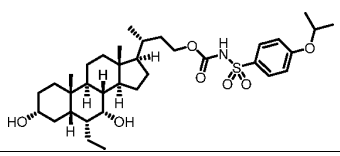
92	
93	
94	
95	
96	
97	
98	
99	
100	

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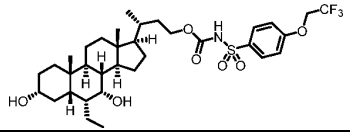
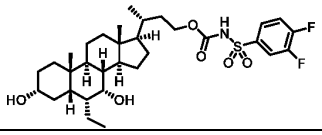
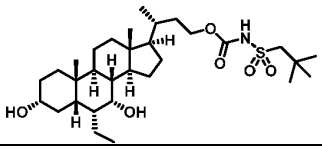
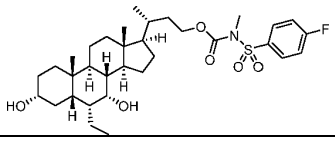
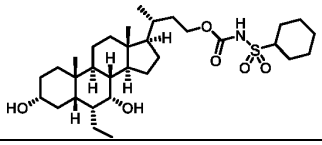
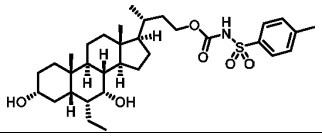
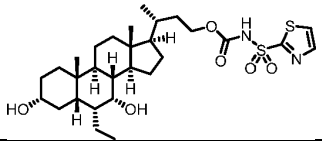
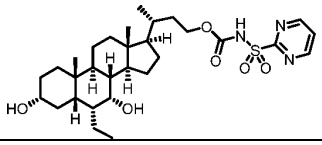
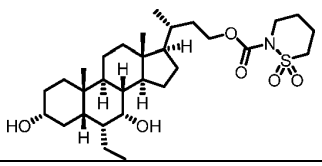
101	
102	
103	
104	
104-a	
104-b	
104-c	
104-d	
104-e	

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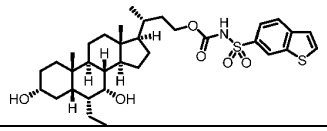
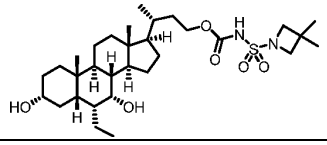
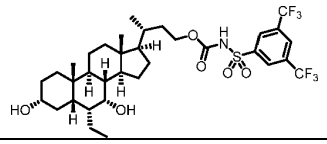
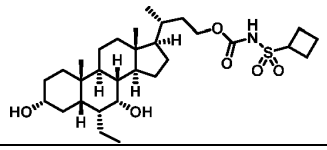
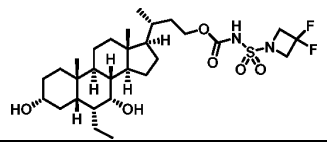
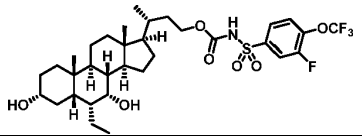
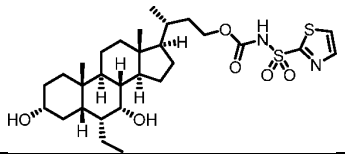
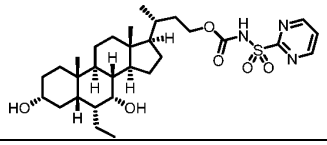
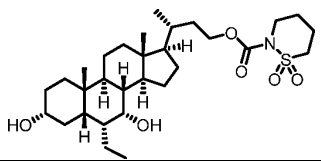
104-f	
104-g	
104-h	
104-i	
104-j	
104-k	
105	
106	
107	

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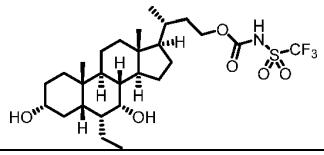
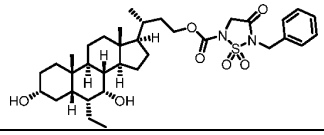
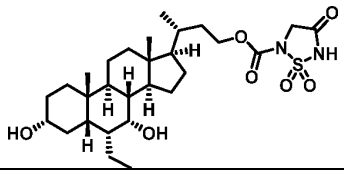
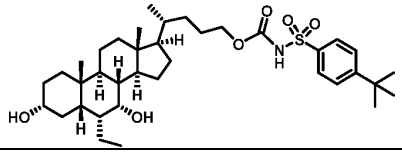
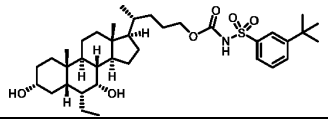
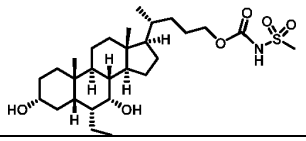
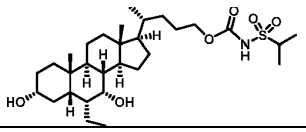
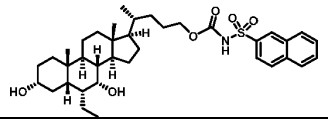
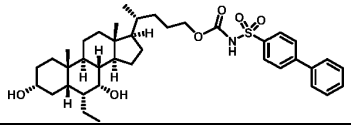
108	
109	
110	
111	
112	
113	
114	
115	
116	

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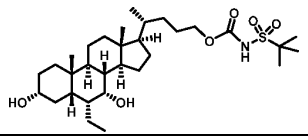
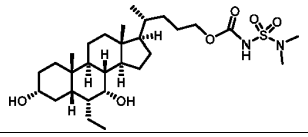
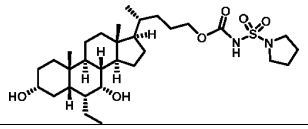
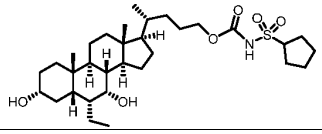
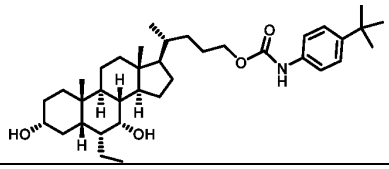
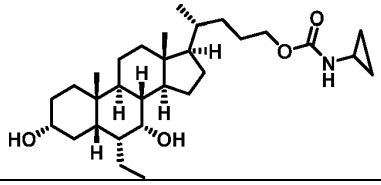
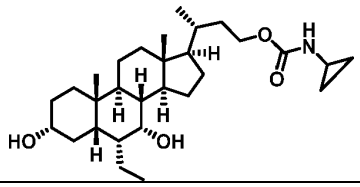
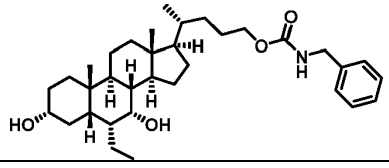
117	
118	
119	
120	
121	
122	
123	
124	

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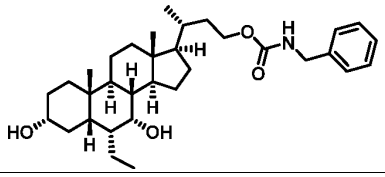
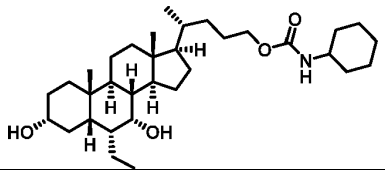
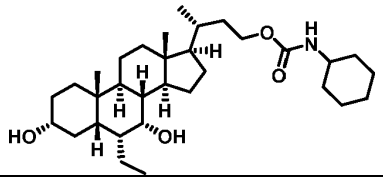
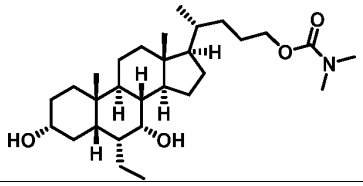
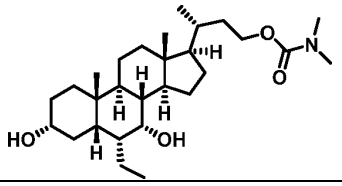
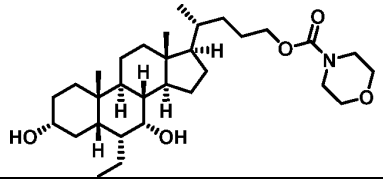
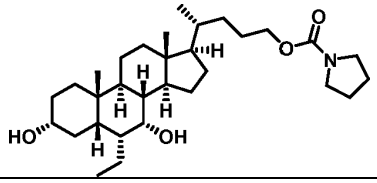
125	
126	
127	
128	
129	
130	
131	

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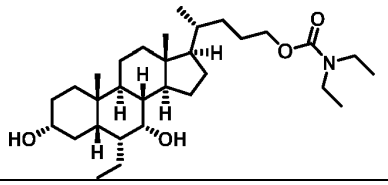
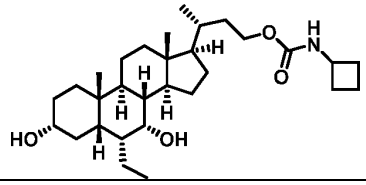
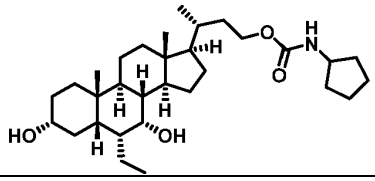
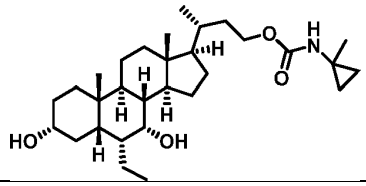
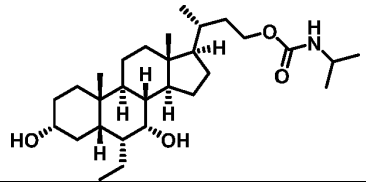
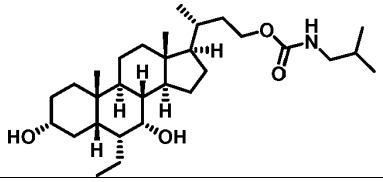
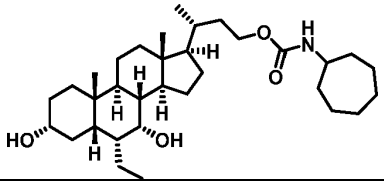
132	
133	
134	
135	
136	
137	
138	

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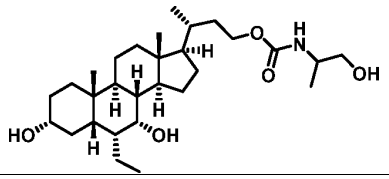
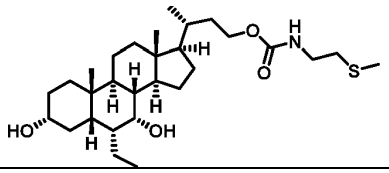
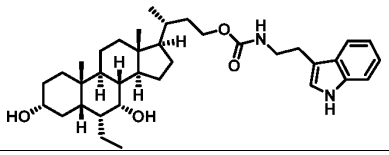
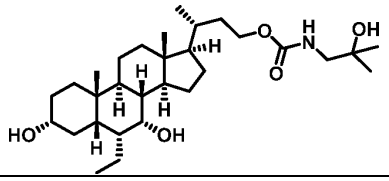
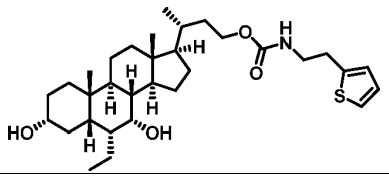
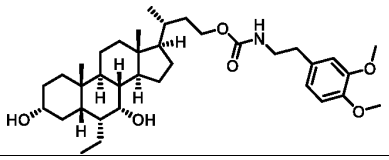
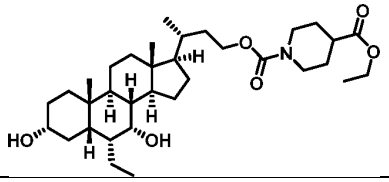
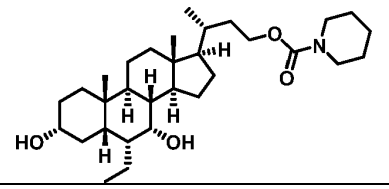
139	
140	
141	
142	
143	
144	
145	
146	

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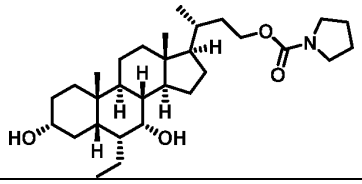
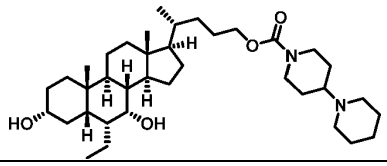
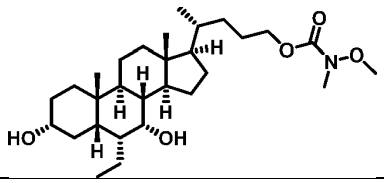
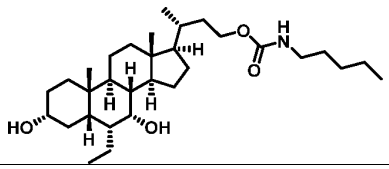
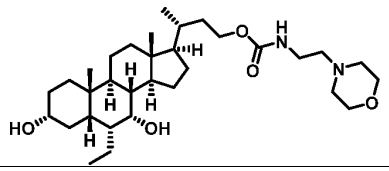
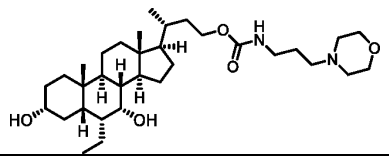
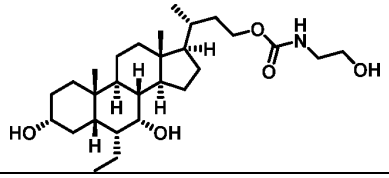
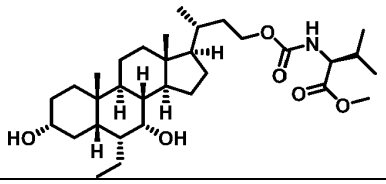
147	
148	
149	
150	
151	
152	
153	
154	

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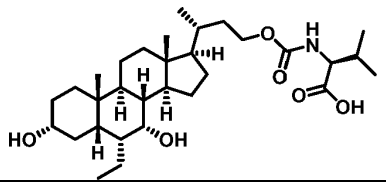
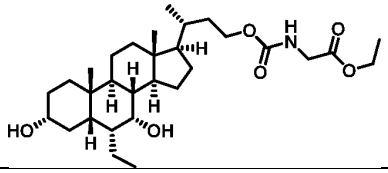
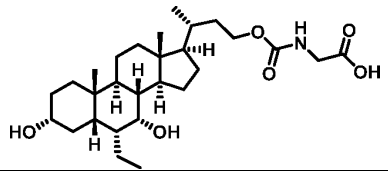
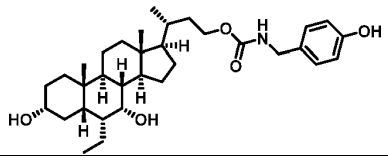
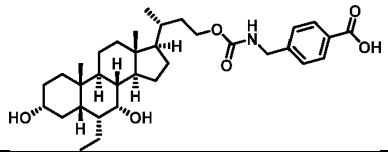
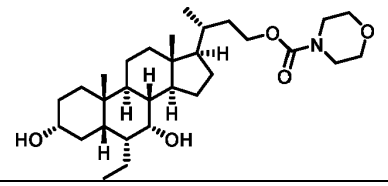
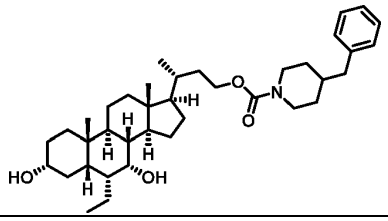
155	
156	
157	
158	
159	
160	
161	

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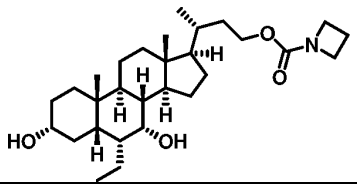
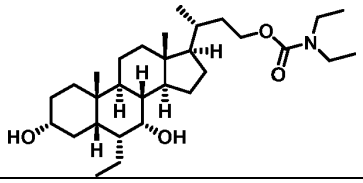
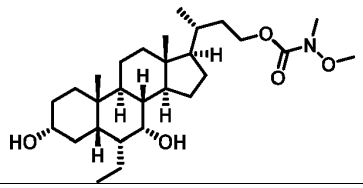
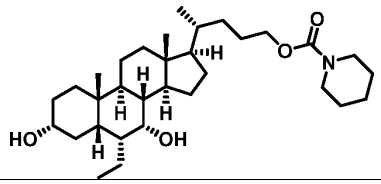
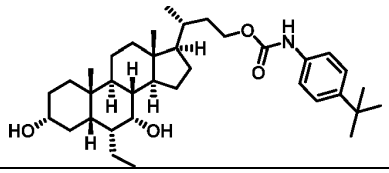
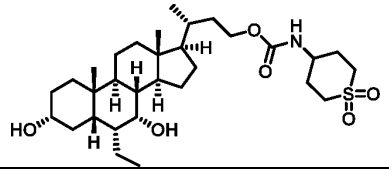
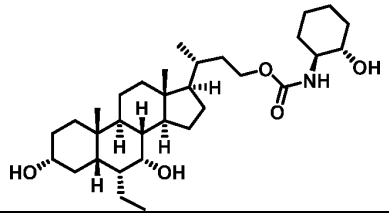
162	
163	
164	
165	
166	
167	
168	

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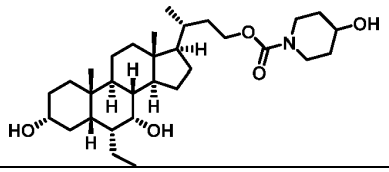
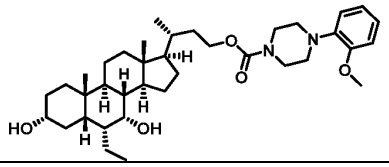
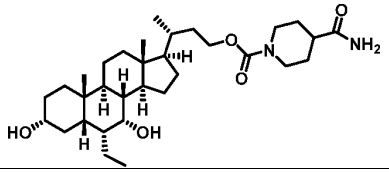
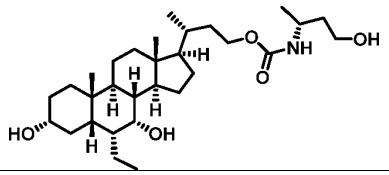
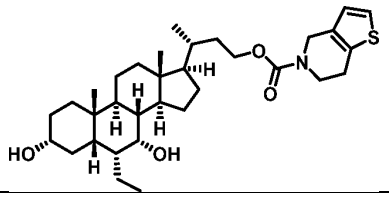
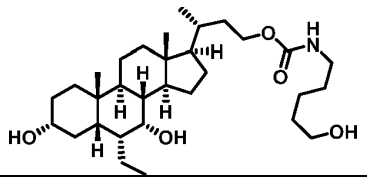
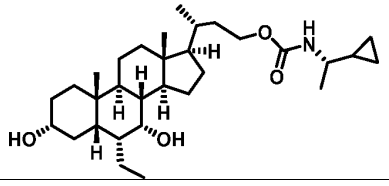
169	
170	
171	
172	
173	
174	
175	

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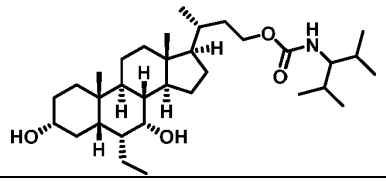
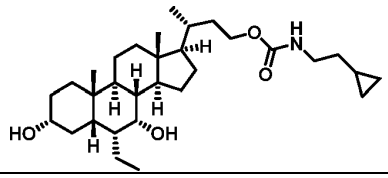
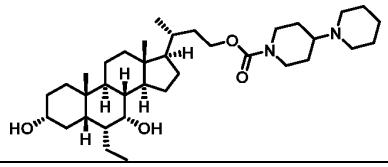
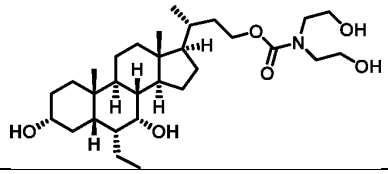
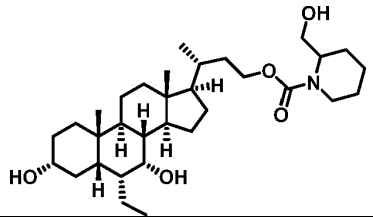
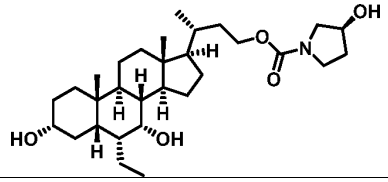
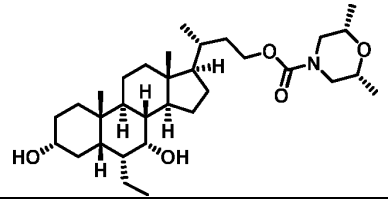
176	
177	
178	
179	
180	
181	
182	

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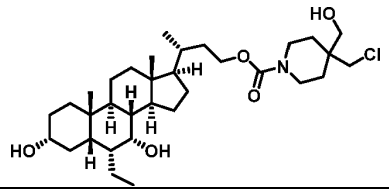
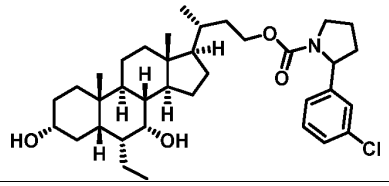
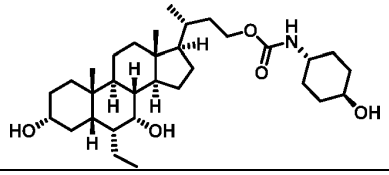
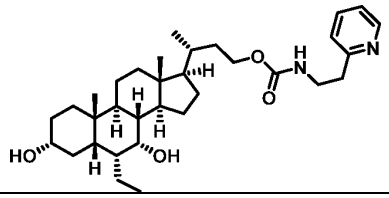
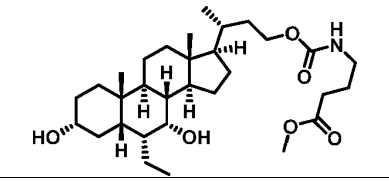
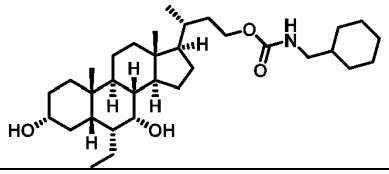
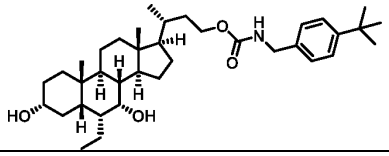
183	
184	
185	
186	
187	
188	
189	

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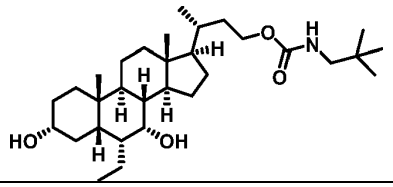
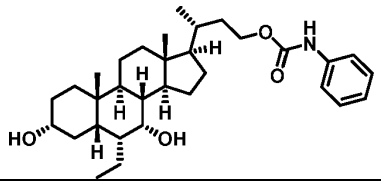
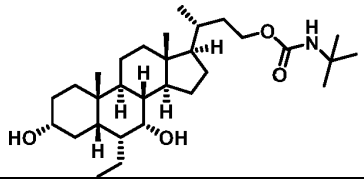
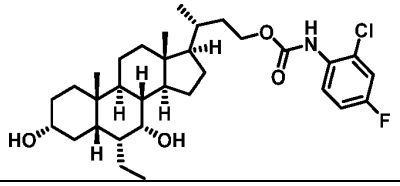
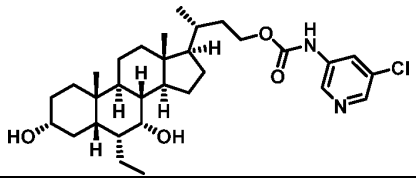
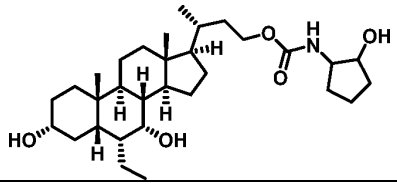
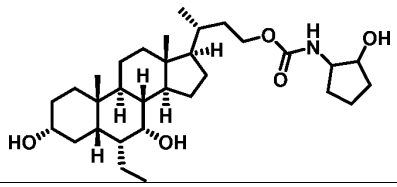
190	
191	
192	
193	
194	
195	
196	

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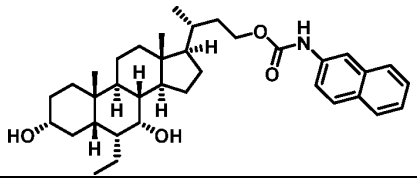
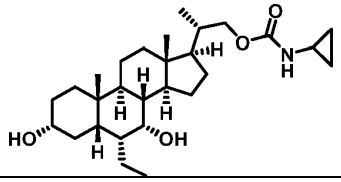
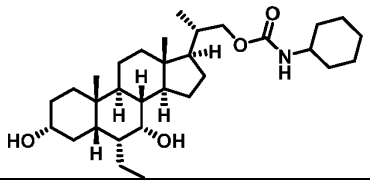
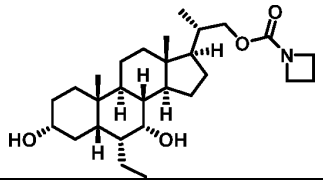
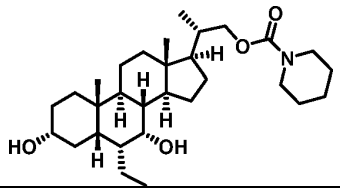
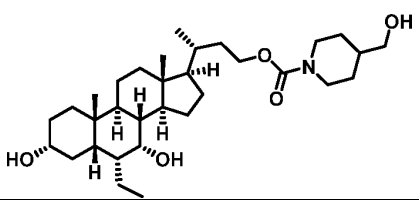
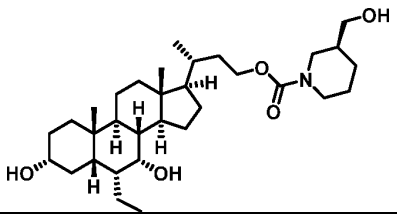
197	
198	
199	
200	
201	
202	
203	

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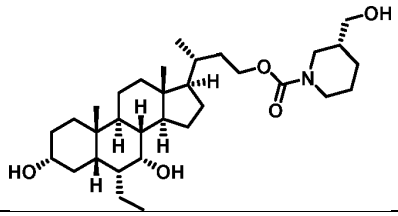
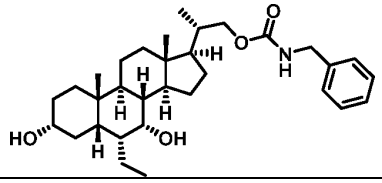
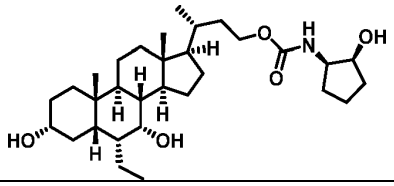
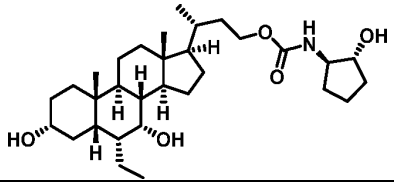
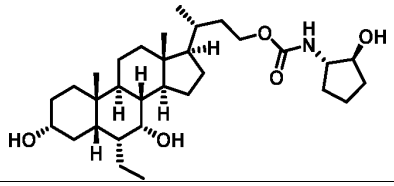
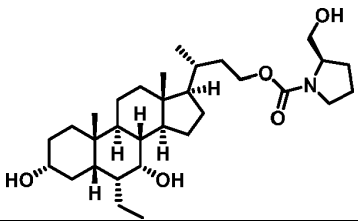
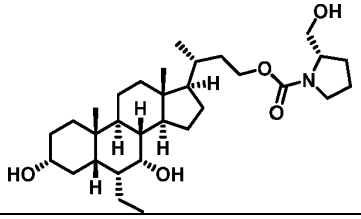
204	
205	
206	
207	
208	
209	
210	

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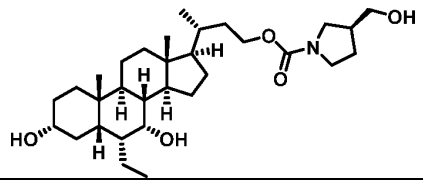
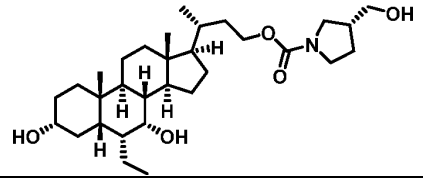
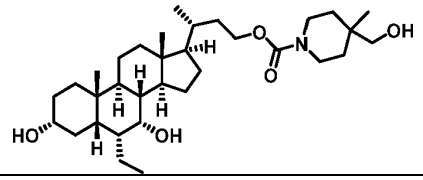
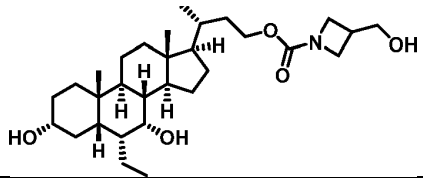
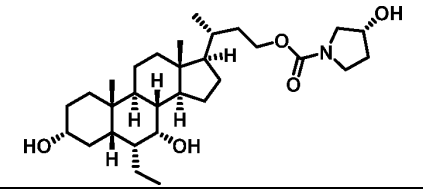
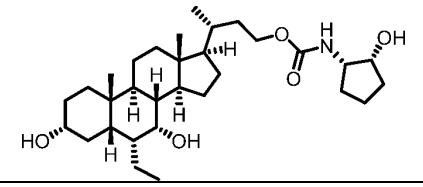
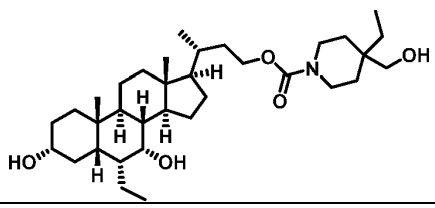
211	
212	
213	
214	
215	
216	
217	

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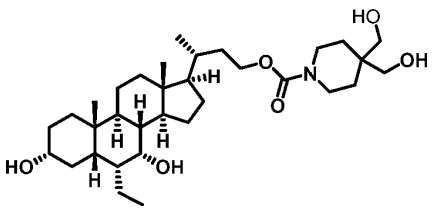
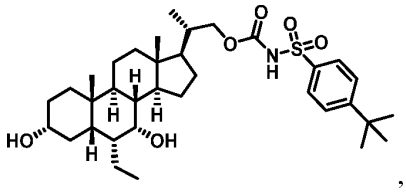
218	

10. Forbindelsen ifølge patentkrav 9, som har strukturen



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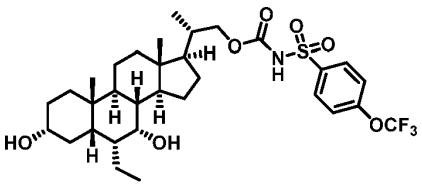
eller et farmasøytisk akseptabelt salt derav.

11. Forbindelsen ifølge patentkrav 9, som har strukturen



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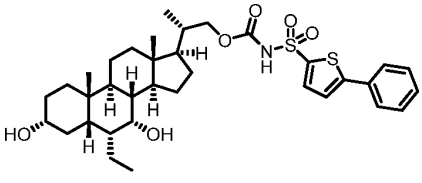
eller et farmasøytisk akseptabelt salt derav.

12. Forbindelsen ifølge patentkrav 9, som har strukturen



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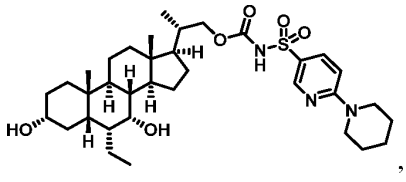
eller et farmasøytisk akseptabelt salt derav.

13. Forbindelsen ifølge patentkrav 9, som har strukturen



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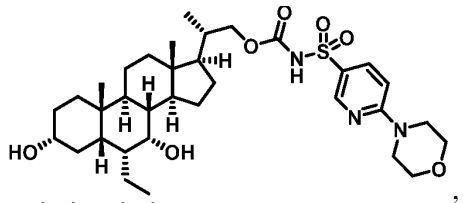
eller et farmasøytisk akseptabelt salt derav.

14. Forbindelsen ifølge patentkrav 9, som har strukturen



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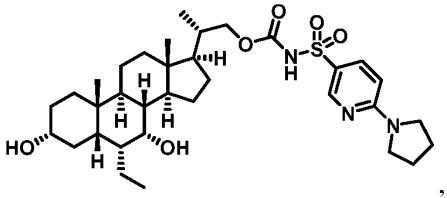
eller et farmasøytisk akseptabelt salt derav.

15. Forbindelsen ifølge patentkrav 9, som har strukturen



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eller et farmasøytisk akseptabelt salt derav.

16. Forbindelsen ifølge hvilket som helst av patentkravene 1–15 for anvendelse for å forhindre eller behandle en FXR-mediert sykdom eller tilstand.

17. Forbindelsen for anvendelse ifølge patentkrav 16, hvor den FXR-medierte sykdommen eller tilstanden er valgt fra gruppen bestående av kronisk leversykdom, gastrointestinal sykdom, nyresykdom, kardiovaskulær sykdom og metabolsk sykdom.

18. Forbindelsen for anvendelse ifølge patentkrav 17, hvori den FXR-medierte sykdommen eller tilstanden er en kronisk leversykdom valgt fra gruppen bestående av primær biliær kolangitt, cerebrotendinøs xantomatose, primær skleroserende kolangitt, medikamentindusert kolestase, intrahepatisk svangerskapskolestase, parenteral ernæringsassosiert kolestase, bakteriell gjengroing eller sepsisassosiert kolestase, autoimmun hepatitt, kronisk viral hepatitt, alkoholisk leversykdom, ikke-alkoholisk fettleversykdom, ikke-alkoholisk steatohepatitt, levertransplantasjon assosiert transplantat versus vertssykdom, levende donortransplantasjon leverregenerering, medfødt leverfibrose, koledokolitiase, granulomatøs leversykdom, intra- eller ekstrahepatisk malignitet, Sjøgrens syndrom, sarkoidose, Wilsons sykdom, Gauchers sykdom, hemokromatose og alfa 1-antitrypsinmangel.

19. Forbindelsen for anvendelse ifølge patentkrav 17, hvor den FXR-medierte sykdommen eller tilstanden er en nyresykdom valgt fra gruppen bestående av diabetisk nefropati, fokal segmentell glomerulosklerose, hypertensiv nefrosklerose, kronisk glomerulonefritt, kronisk transplantasjonsglomerulopati, kronisk interstitiell nefritt og polycystisk nyresykdom;

20. Forbindelsen for anvendelse ifølge patentkrav 17, hvor den FXR-medierte sykdommen eller tilstanden er en kardiovaskulær sykdom valgt fra gruppen bestående av (a) aterosklerose, arteriosklerose, dyslipidemi, hyperkolesterolemi og hypertriglyseridemi; eller (b) en metabolsk sykdom valgt fra gruppen bestående av insulinresistens, diabetes type 1 og type 2 og fedme.

21. En farmasøytisk sammensetning som omfatter forbindelsen ifølge hvilket som helst av patentkravene 1–15 og en farmasøytisk akseptabel bærer.