



(12) Translation of
European patent specification

(11) NO/EP 3114128 B1

NORWAY

(19) NO
(51) Int Cl.
C07D 487/04 (2006.01)
A61K 31/4985 (2006.01)
A61P 31/12 (2006.01)
C07D 498/04 (2006.01)
C07D 513/04 (2006.01)

Norwegian Industrial Property Office

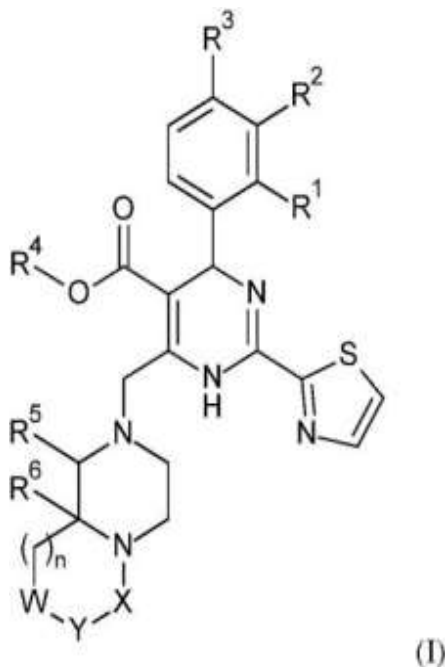
(21)	Translation Published	2019.05.13
(80)	Date of The European Patent Office Publication of the Granted Patent	2019.01.02
(86)	European Application Nr.	15710127.0
(86)	European Filing Date	2015.03.04
(87)	The European Application's Publication Date	2017.01.11
(30)	Priority	2014.03.07, WO, PCT/CN14/073068 2014.07.25, WO, PCT/CN14/083027 2015.01.16, WO, PCT/CN15/070895
(84)	Designated Contracting States:	AL ; AT ; BE ; BG ; CH ; CY ; CZ ; DE ; DK ; EE ; ES ; FI ; FR ; GB ; GR ; HR ; HU ; IE ; IS ; IT ; LI ; LT ; LU ; LV ; MC ; MK ; MT ; NL ; NO ; PL ; PT ; RO ; RS ; SE ; SI ; SK ; SM ; TR
	Designated Validation States:	MA
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(54)	Title	NOVEL 6-FUSED HETEROARYLDIHYDROPYRIMIDINES FOR THE TREATMENT AND PROPHYLAXIS OF HEPATITIS B VIRUS INFECTION
(56)	References Cited:	WO-A1-2014/029193 WO-A1-2014/184328 DE-A1- 10 013 126

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

PATENTKRAV

1. Forbindelse med formel (I)



(I)

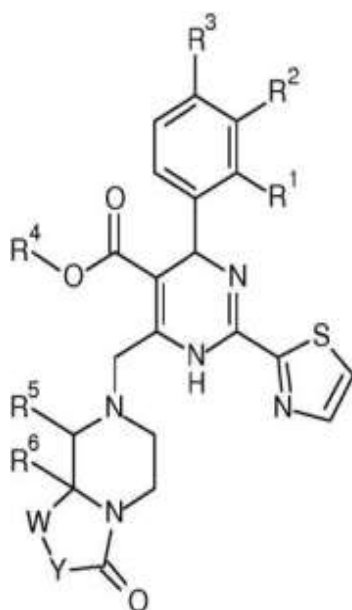
hvor

R¹ er hydrogen, halogen eller C₁₋₆alkyl;R² er hydrogen eller halogen;R³ er hydrogen eller halogen;R⁴ er C₁₋₆alkyl;R⁵ er hydrogen, hydroksyC₁₋₆alkyl, aminokarbonyl, C₁₋₆alkoksykarbonyl eller karboksy;R⁶ er hydrogen, C₁₋₆alkoksykarbonyl eller karboksy-C_mH_{2m}-;

X er karbonyl eller sulfonyl;

Y er -CH₂-, -O- eller -N(R⁷)-,hvor R⁷ er hydrogen, C₁₋₆alkyl, haloC₁₋₆alkyl, C₃₋₇sykloalkyl-C_mH_{2m}-,C₁₋₆alkoksykarbonyl-C_mH_{2m}-, -C_tH_{2t}-COOH, -haloC₁₋₆alkyl-COOH,-(C₁₋₆alkoksy)C₁₋₆alkyl-COOH, -C₁₋₆alkyl-O-C₁₋₆alkyl-COOH,-C₃₋₇sykloalkyl-C_mH_{2m}-COOH, -C_mH_{2m}-C₃₋₇sykloalkyl-COOH, hydroksy-C_tH_{2t}-,karboksy-spiro[3.3]heptyl eller karboksyfenyl-C_mH_{2m}-,karboksypyridinyl-C_mH_{2m}-;W er -CH₂-, -C(C₁₋₆alkyl)₂-, -O- eller karbonyl;

3



(IA)

hvor

R^1 er halogen eller C_{1-6} alkyl;

R^2 er hydrogen eller halogen;

R^3 er hydrogen eller halogen;

R^4 er C_{1-6} alkyl;

R^5 er hydrogen, hydroksy C_{1-6} alkyl, aminokarbonyl, C_{1-6} alkoksykarbonyl eller karboksy;

R^6 er hydrogen, C_{1-6} alkoksykarbonyl eller karboksy- C_mH_{2m} ;

Y er $-N(R^7)-$,

hvor R^7 er hydrogen, C_{1-6} alkyl, halo C_{1-6} alkyl, C_{3-7} sykloalkyl- $C_mH_{2m}-$,

C_{1-6} alkoksykarbonyl- $C_mH_{2m}-$, $-C_tH_{2t}-COOH$, $-haloC_{1-6}alkyl-COOH$,

$-(C_{1-6}alkoksy)C_{1-6}alkyl-COOH$, $-C_{1-6}alkyl-O-C_{1-6}alkyl-COOH$,

$-C_{3-7}sykloalkyl-C_mH_{2m}-COOH$, $-C_mH_{2m}-C_{3-7}sykloalkyl-COOH$, hydroksy- $C_tH_{2t}-$,

karboksypiro[3.3]heptyl eller karboksyfenyl- $C_mH_{2m}-$,

karboksypyridinyl- $C_mH_{2m}-$;

W er $-CH_2-$ eller karbonyl;

m er 0-7;

t er 1-7;

eller farmasøytisk akseptable salter eller enantiomerer eller diastereomerer derav.

4. Forbindelse ifølge krav 1 eller 3 eller farmasøytisk akseptable salter, eller enantiomerer eller diastereomerer derav, hvori

R^1 er klor, brom eller metyl;

R^2 er hydrogen eller fluor;

R^3 er hydrogen, klor eller fluor;

R^4 er metyl, etyl eller propyl;

R^5 er hydrogen, hydroksymetyl, aminokarbonyl, metoksykarbonyl eller karboksy;

R^6 er hydrogen, metyl-O-karbonyl eller karboksymetyl;

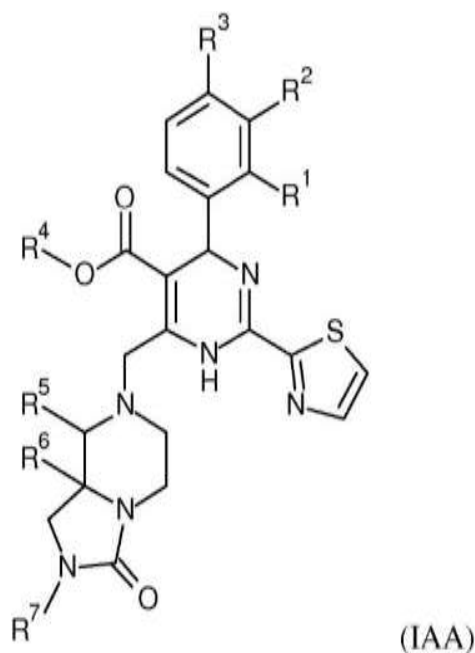
Y er $-N(R^7)-$,

hvor R^7 er hydrogen, metyl, difluoretyl, isopropyl, isobutyl, t-butyl, syklopropyl, syklopropylmetyl, metyl-O-karbonylisopropyl, karboksyetyl, karboksydifluoretyl, karboksypropyl, karboksybutyl, karboksy(gemdimetyl)metyl, karboksy(gemdimetyl)etyl, karboksy(gemdimetyl)propyl, karboksy(gemdimetyl)butyl, karboksy(metyl)etyl, karboksy(etyl)etyl, karboksy(metoksy)etyl, karboksysyklobutyl, karboksysyklobutylmetyl, karboksysyklopentyl, karboksysykloheksyl, karboksymetylsyklopropyl, karboksysyklopropylmetyl, karboksysyklobutylmetyl, karboksyspiro[3.3]heptyl, karboksymetoksyetyl, karboksymetoksypropyl, hydroksyetyl, hydroksymetyl(gemdimetyl)butyl, hydroksy(gemdimetyl)etyl, karboksyfenyl, karboksy-pyridinyl eller karboksyfenylmetyl;

W er $-CH_2-$ eller karbonyl.

5. Forbindelse med formel (IAA) ifølge krav 1 eller 3,

5



hvor

R^1 er halogen eller C_{1-6} alkyl;

R^2 er hydrogen eller halogen;

R^3 er hydrogen eller halogen;

R^4 er C_{1-6} alkyl;

R^5 er hydrogen, aminokarbonyl eller karboksy;

R^6 er hydrogen;

R^7 er C_{1-6} alkyl, halo C_{1-6} alkyl, C_{3-7} sykloalkyl, C_{3-7} sykloalkyl- C_mH_{2m} -,
- C_tH_{2t} -COOH, - C_mH_{2m} - C_{3-7} sykloalkyl-COOH eller karboksyfenyl;

m er 0-7;

t er 1-7;

eller farmasøytisk akseptable salter eller enantiomerer eller diastereomerer derav.

6. Forbindelse ifølge et hvilket som helst av kravene 1, 3 eller 5 eller farmasøytisk akseptable salter, eller enantiomerer eller diastereomerer derav, hvor

R^1 er klor eller metyl;

R^2 er hydrogen eller fluor;

R^3 er hydrogen eller fluor;

R^4 er metyl eller etyl;

R⁵ er hydrogen, aminokarbonyl eller karboksy;

R⁶ er hydrogen;

R⁷ er metyl, isopropyl, isobutyl, t-butyl, difluoretyl, syklopropyl, syklopropylmetyl, karboksy(gemdimetyl)etyl, karboksy(gemdimetyl)propyl, karboksysyklopropylmetyl, karboksysyklobutylmetyl eller karboksyfenyl.

7. Forbindelse ifølge krav 5 eller farmasøytisk akseptable salter, eller enantiomerer eller diastereomerer derav, hvori

R¹ er klor eller metyl;

R² er hydrogen eller fluor;

R³ er hydrogen eller fluor;

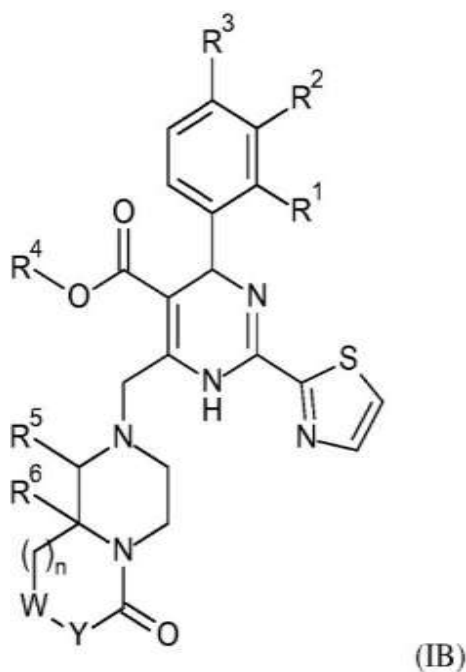
R⁴ er metyl eller etyl;

R⁵ er hydrogen eller karboksy;

R⁶ er hydrogen;

R⁷ er metyl, isopropyl, t-butyl, syklopropyl, karboksy(gemdimetyl)etyl, karboksy(gemdimetyl)propyl, karboksysyklopropylmetyl, karboksysyklobutylmetyl eller karboksyfenyl.

8. Forbindelse med formel (IB) ifølge krav 1,



hvor

R¹ er hydrogen eller halogen;

R² er hydrogen eller halogen;

R³ er hydrogen eller halogen;

R⁴ er C₁₋₆alkyl;

R⁵ er hydrogen;

R⁶ er hydrogen eller karboksymetyl;

Y er -CH₂- eller -O-;

W er -CH₂-, -C(C₁₋₆alkyl)₂- eller -O-;

n er 0 eller 1;

eller farmasøytisk akseptable salter eller enantiomerer eller diastereomerer derav.

9. Forbindelse ifølge krav 1 eller 7 eller farmasøytisk akseptable salter, eller enantiomerer eller diastereomerer derav, hvori

R¹ er hydrogen, klor eller brom;

R² er hydrogen eller fluor;

R³ er hydrogen eller fluor;

R⁴ er metyl eller etyl;

R⁵ er hydrogen;

R⁶ er hydrogen eller karboksymetyl;

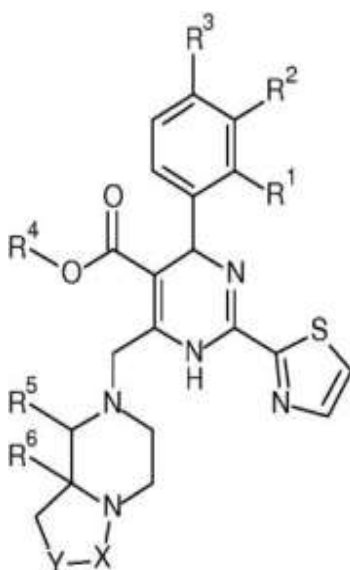
Y er -CH₂- eller -O-;

W er -CH₂-, -C(CH₃)₂- eller -O-;

n er 0 eller 1.

10. Forbindelse med formel (ID) ifølge krav 1,

8



(ID)

hvor

R^1 er halogen eller C_{1-6} alkyl;

R^2 er hydrogen eller halogen;

R^3 er hydrogen eller halogen;

R^4 er C_{1-6} alkyl;

R^5 er hydrogen, aminokarbonyl eller karboksy;

R^6 er hydrogen eller C_{1-6} alkoksykarbonyl

X er karbonyl;

Y er $-O-$ eller $-N(R^7)-$ eller $-CH_2-$,

hvor R^7 er hydrogen, C_{1-6} alkyl, halo C_{1-6} alkyl, C_{3-7} sykloalkyl,

C_{3-7} sykloalkyl- $C_mH_{2m}-$, $-C_tH_{2t}-COOH-C_mH_{2m}-C_{3-7}$ sykloalkyl- $COOH$,

hydroksy- $C_tH_{2t}-$, karboksypiro[3.3]heptyl eller karboksyfenyl- $C_mH_{2m}-$;

m er 0-7;

t er 1-7;

eller farmasøytisk akseptable salter eller enantiomerer eller diastereomerer derav.

11. Forbindelse ifølge krav 1 eller 9 eller farmasøytisk akseptable salter, eller enantiomerer eller diastereomerer derav, hvor

R^1 er klor, brom eller metyl;

R^2 er hydrogen eller fluor;

R^3 er hydrogen eller fluor;

R^4 er metyl, etyl eller propyl;

R^5 er hydrogen, aminokarbonyl eller karboksy;

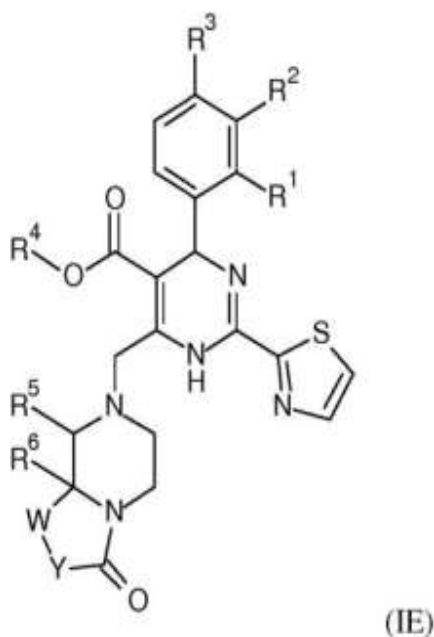
R^6 er hydrogen eller metyl-O-karbonyl;

X er karbonyl;

Y er $-O-$, $-N(R^7)-$ eller $-CH_2-$,

hvor R^7 er hydrogen, metyl, isopropyl, difluoretyl, isobutyl, t-butyl, syklopropyl, syklopropylmetyl, karboksy(gemdimetyl)etyl, karboksy(metyl)etyl, karboksysyklopropylmetyl, karboksyfenyl, karboksysyklopentyl, karboksysykloheksyl, karboksy(gemdimetyl)propyl, karboksy(gemdimetyl)butyl, karboksysyklobutylmetyl, karboksyspiro[3.3]heptyl, hydroksyetyl, hydroksy(gemdimetyl)etyl eller karboksyfenylmetyl.

12. Forbindelse med formel (IE) ifølge krav 1,



hvor

R^1 er halogen eller C_{1-6} alkyl;

R^2 er hydrogen eller halogen;

R^3 er hydrogen eller halogen;

R^4 er C_{1-6} alkyl;

R^5 er hydrogen eller karboksy;

R^6 er hydrogen eller karboksy- $C_mH_{2m}-$;

Y er $-O-$, $-N(R^7)-$ eller $-CH_2-$,

hvor R^7 er C_{1-6} alkyl, C_{3-7} sykloalkyl, $-C_tH_{2t}-COOH$, $-C_{3-7}$ sykloalkyl- $C_mH_{2m}-COOH$,
 $-C_mH_{2m}-C_{3-7}$ sykloalkyl- $COOH$, $-(C_{1-6}alkoksy)C_{1-6}alkyl-COOH$,
 $-C_{1-6}alkyl-O-C_{1-6}alkyl-COOH$, karboksyspiro[3.3]heptyl eller
 karboksyfenyl- $C_mH_{2m}-$;

W er $-CH_2-$ eller $-C(C_{1-6}alkyl)_2-$;

m er 0-7;

t er 1-7;

eller farmasøytisk akseptable salter eller enantiomerer eller diastereomerer derav.

13. Forbindelse ifølge krav 1 eller 11 eller farmasøytisk akseptable salter, eller enantiomerer eller diastereomerer derav, hvor

R^1 er klor eller metyl;

R^2 er hydrogen eller fluor;

R^3 er hydrogen eller fluor;

R^4 er metyl eller etyl;

R^5 er hydrogen eller karboksy;

R^6 er hydrogen eller karboksymetyl;

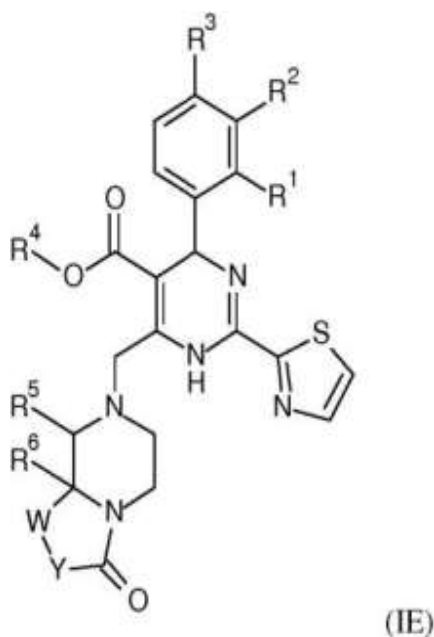
Y er $-O-$, $-N(R^7)-$ eller $-CH_2-$,

hvor R^7 er isopropyl, metyl, isobutyl, t-butyl, syklopropyl, karboksyetyl, karboksypropyl, karboksybutyl, karboksy(gemdimetyl)metyl, karboksy(gemdimetyl)etyl, karboksy(metyl)etyl, karboksysyklobutyl, karboksysyklopropylmetyl, karboksysyklopentyl, karboksysykloheksyl, karboksymetylsyklopropyl, karboksy(gemdimetyl)propyl, karboksy(etyl)etyl, karboksy(metoksy)etyl, karboksysyklobutylmetyl, karboksyspiro[3.3]heptyl, karboksymetoksyetyl, karboksymetoksypropyl, karboksyfenylmetyl eller karboksyfenyl;

W er $-CH_2-$ eller $-C(CH_3)_2-$.

14. Forbindelse med formel (IE) ifølge krav 1,

11



hvor

R^1 er halogen eller C_{1-6} alkyl;

R^2 er hydrogen eller halogen;

R^3 er hydrogen eller halogen;

R^4 er C_{1-6} alkyl;

R^5 er hydrogen eller karboksy;

R^6 er hydrogen eller karboksy- C_mH_{2m} -;

Y er $-N(R^7)-$,

hvor R^7 er hydrogen, C_{1-6} alkyl, C_{3-7} sykloalkyl, $-C_tH_{2t}-COOH$, $-C_mH_{2m}-C_{3-7}$ sykloalkyl- $COOH$ eller karboksyfenyl;

W er $-CH_2-$;

m er 0-7;

t er 1-7;

eller farmasøytisk akseptable salter eller enantiomerer eller diastereomerer derav.

15. Forbindelse ifølge krav 1 eller 13 eller farmasøytisk akseptable salter, eller enantiomerer eller diastereomerer derav, hvor

R^1 er klor eller metyl;

R^2 er hydrogen eller fluor;

R^3 er hydrogen eller fluor;

R⁴ er metyl eller etyl;

R⁵ er hydrogen eller karboksy;

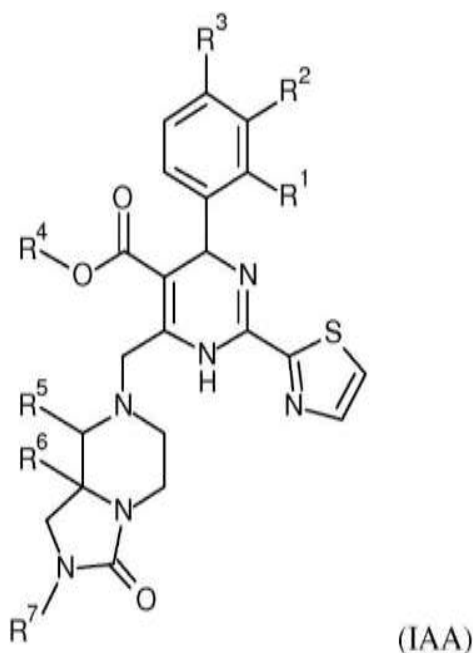
R⁶ er hydrogen eller karboksymetyl;

Y er $-N(R^7)-$,

hvor R⁷ er hydrogen, metyl, t-butyl, syklopropyl, karboksy(gemdimetyl)etyl, karboksy(gemdimetyl)propyl, karboksy(metyl)etyl, karboksysyklopropylmetyl, karboksysyklopentyl, karboksysykloheksyl, karboksysyklobutylmetyl eller karboksyfenyl;

W er $-CH_2-$.

16. Forbindelse med formel (IAA) ifølge krav 1,



hvor

R¹ er halogen eller C₁₋₆alkyl;

R² er hydrogen eller halogen;

R³ er hydrogen eller halogen;

R⁴ er C₁₋₆alkyl;

R⁵ er hydrogen eller karboksy;

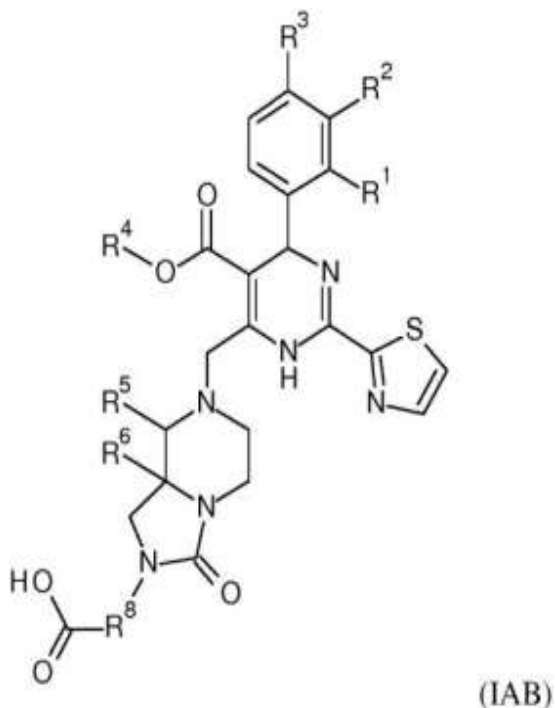
R⁶ er hydrogen;

R⁷ er C₁₋₆alkyl, haloC₁₋₆alkyl, C₃₋₇sykloalkyl, $-C_mH_{2m}-COOH$, $-C_mH_{2m}-C_{3-7}$ sykloalkyl- $COOH$ eller karboksyfenyl;

m er 1-6;

eller farmasøytisk akseptable salter eller enantiomerer eller diastereomerer derav.

17. Forbindelse med formel (IAB) ifølge krav 1,



hvor

R^1 er halogen eller C_{1-6} alkyl;

R^2 er hydrogen eller halogen;

R^3 er hydrogen eller halogen;

R^4 er C_{1-6} alkyl;

R^5 er hydrogen;

R^6 er hydrogen;

R^8 er $-C_mH_{2m}-$, C_{3-7} sykloalkyl- $-C_mH_{2m}-$ eller fenyl;

m er 1-6;

eller farmasøytisk akseptable salter eller enantiomerer eller diastereomerer derav.

18. Forbindelse ifølge et hvilket som helst av kravene 1 til 14, valgt fra Metyl-(4R)-4-(2-klor-4-fluor-fenyl)-6-[(6-okso-1,3,4,8,9,9a-heksahydropyrazino[1,2-c][1,3]oksazin-2-yl)metyl]-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-4-(2-klor-4-fluor-fenyl)-6-[(4-okso-6,7,9,9a-tetrahydro-1H-pyrazino[2,1-c][1,4]oksazin-8-yl)metyl]-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(8aR)-3-okso-5,6,8,8a-tetrahydro-1H-oksazolo[3,4-a]pyrazin-7-yl)metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(8aS)-3-okso-5,6,8,8a-tetrahydro-1H-oksazolo[3,4-a]pyrazin-7-yl)metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(8aS)-6-okso-1,3,4,7,8,8a-heksahidropyrrolo[1,2-a]pyrazin-2-yl)metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(8aR)-6-okso-1,3,4,7,8,8a-heksahidropyrrolo[1,2-a]pyrazin-2-yl)metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(8aR)-6-okso-1,3,4,7,8,8a-heksahidropyrrolo[1,2-a]pyrazin-2-yl)metyl]-4-(2-brom-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Etyl-(4R)-6-[[[(8aR)-6-okso-1,3,4,7,8,8a-heksahidropyrrolo[1,2-a]pyrazin-2-yl)metyl]-4-(2-brom-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Etyl-(4S)-6-[[[(8aR)-6-okso-1,3,4,7,8,8a-heksahidropyrrolo[1,2-a]pyrazin-2-yl)metyl]-4-(3,4-difluorfenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Etyl-(4R)-4-(2-klor-3-fluor-fenyl)-6-[(6-okso-3,4,7,8,9,9a-heksahidro-1H-pyrido[1,2-a]pyrazin-2-yl)metyl]-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(8aR)-3-okso-1,2,5,6,8,8a-heksahidroimidazo[1,5-a]pyrazin-7-yl)metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(8aS)-3-okso-1,2,5,6,8,8a-heksahidroimidazo[1,5-a]pyrazin-7-yl)metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Etyl-(4R)-6-[[[(8aS)-3-okso-1,2,5,6,8,8a-heksahydroimidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-brom-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Etyl-(4R)-6-[[[(8aR)-3-okso-1,2,5,6,8,8a-heksahydroimidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-brom-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(8aR)-1,3-diokso-5,6,8,8a-tetrahydroimidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(8aS)-1,3-diokso-5,6,8,8a-tetrahydroimidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(3aS)-1,1-diokso-2,3,3a,4,6,7-heksahydro-[1,2,5]tiadiazolo[2,3-a]pyrazin-5-yl]metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(3aR)-1,1-diokso-2,3,3a,4,6,7-heksahydro-[1,2,5]tiadiazolo[2,3-a]pyrazin-5-yl]metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

3-[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;

3-[(8aS)-7-[[[(4R)-4-(2-klorfenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2-metyl-propansyre;

3-[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2-metyl-propansyre;

3-[(8aS)-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;

Etyl-(4R)-4-(2-klor-3-fluor-fenyl)-6-[[[2-(2-metoksy-1,1-dimetyl-2-okso-etyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-2-tiazol-2-yl-

1,4-dihydropyrimidin-5-karboksylat;

Metyl-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-2,5,6,8-tetrahydro-1H-imidazo[1,5-a]pyrazin-8a-karboksylat;

(R)-6-[(S)-2-(4-karboksy-fenyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyremetylester;

(R)-6-[(S)-2-(4-karboksy-fenyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyreetylester;

(R)-6-[(S)-2-(3-karboksy-fenyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyreetylester;

(R)-6-[(S)-2-(2-karboksy-fenyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyreetylester;

(R)-6-[(S)-2-(3-karboksy-fenyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyremetylester;

2-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-2-syklopropyl-3-okso-1,5,6,8-tetrahydroimidazo[1,5-a]pyrazin-8a-yl]eddiksyre;

2-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-2-isopropyl-3-okso-1,5,6,8-tetrahydroimidazo[1,5-a]pyrazin-8a-yl]eddiksyre;

(R)-6-[(S)-2-(1-karboksy-1-metyl-etyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyreetylester;

3-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-3-metyl-butansyre;

3-[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-

dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-3-metyl-butansyre;
 1-[[[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]metyl]syklopropankarboksylsyre;
 1-[[[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]metyl]syklopropankarboksylsyre;
 3-[(8aS)-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-3-metyl-butansyre;
 1-[[[(8aS)-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]metyl]syklopropankarboksylsyre;
 3-[(2S,8aR)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]syklobutankarboksylsyre;
 3-[(8aR)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]syklobutankarboksylsyre;
 3-[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;
 3-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;
 3-[(8aS)-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;
 3-[(8aS)-7-[[[(4S)-4-(3-fluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre; og

7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-syklopropyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre.

2-[1-[(8aR)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]syklopropyl]eddiksyre;

2-[1-[(8aR)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]syklopropyl]eddiksyre;

2-[1-[(8aR)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]syklopropyl]eddiksyre;

(1R,2R)-2-[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]syklopentankarboksylysyre;

(1S,2R)-2-[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]syklopentankarboksylysyre;

(1R,2S)-2-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]syklopentankarboksylysyre;

(1S,2S)-2-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]syklopentankarboksylysyre;

4-[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]butansyre;

4-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-butansyre;

4-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-

a]pyrazin-2-yl]-3,3-dimetyl-butansyre;

(R)-6-[(S)-2-(2-karboksy-etyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyreetyler;

(R)-6-[(S)-2-((R)-2-karboksy-1-metyl-etyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyreetyler;

(R)-6-[(S)-2-((S)-2-karboksy-1-metyl-etyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyreetyler;

(R)-6-[(S)-2-(1-karboksy-syklobutylmetyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyremetyler;

6-[(S)-2-(1-karboksy-syklobutylmetyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-((R)-2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyreetyler;

(R)-6-[(S)-2-((1R,3S)-3-karboksy-syklopentyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyremetyler;

(R)-6-[(S)-2-((R)-(S)-3-karboksy-syklopentyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyreetyler;

(R)-6-[(S)-2-((1R,3R)-3-karboksy-syklopentyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyremetyler;

(R)-6-[(S)-2-((1R,3R)-3-karboksy-syklopentyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyreetyler;

(R)-6-[2-(4-karboksy-benzyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyremetyler;

(R)-6-[2-(4-karboksy-benzyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-

ylmetyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylysyreetyylester;

2-[2-[7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]etoksy]eddikeyre;

2-[3-[7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]propoksy]eddikeyre;

Metyl-(4R)-4-(2-klor-4-fluor-fenyl)-6-[[2-(5-hydroksey-4,4-dimetyl-pentyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylyat;

Etyl-(4R)-4-(2-klor-3-fluor-fenyl)-6-[[2-(2-hydrokseyetyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylyat;

Etyl-(4R)-4-(2-klor-3-fluor-fenyl)-6-[[2-(2-hydrokseyetyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylyat;

4-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]sykloheksankarboksylysyre;

4-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]sykloheksankarboksylysyre;

3-[(8aS)-7-[[[(4R)-4-(2-klorfenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;

2-[[[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]metyl]butansyre;

3-[(8aS)-7-[[[(4S)-5-etoksykarbonyl-4-(3-fluor-2-metyl-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;

3-[(8aS)-7-[[4-(4-klorfenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;

3-[(8aS)-7-[[4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2-metoksy-propansyre;

2-[(8aS)-7-[[4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]spiro[3.3]heptan-6-karboksylsyre;

5-[(8aS)-7-[[4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]pentansyre;

3-[(8aS)-7-[[4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]metyl]syklobutankarboksylsyre;

(8R,8aS)-7-[[4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-syklopropyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;

(8S,8aR)-7-[[4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-syklopropyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;

(8R,8aS)-2-syklopropyl-7-[[4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;

(8S,8aR)-2-syklopropyl-7-[[4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;

(8R,8aS)-7-[[4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-isopropyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;

(8S,8aR)-7-[[4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-isopropyl-3-okso-5,6,8,8a-tetrahydro-1H-

imidazo[1,5-a]pyrazin-8-karboksylsyre;
 (8R,8aS)-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-isopropyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;
 (8S,8aR)-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-isopropyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;
 (8R,8aS)-2-tert-butyl-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;
 (8S,8aR)-2-tert-butyl-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;
 (8R,8aS)-2-tert-butyl-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;
 (8S,8aR)-2-tert-butyl-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;
 (8R,8aS)-2-tert-butyl-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;
 (8S,8aR)-2-tert-butyl-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylsyre;
 Metyl-(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-2,5,6,8-tetrahydro-1H-imidazo[1,5-a]pyrazin-8a-karboksylat;
 2-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-1,1-dimetyl-3-okso-6,8-dihydro-5H-oksazolo[3,4-a]pyrazin-8a-yl]eddiksyre;
 2-[(8aR)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-

dihydropyrimidin-6-yl]metyl]-1,1-dimetyl-3-okso-6,8-dihydro-5H-oksazolo[3,4-a]pyrazin-8a-yl]eddiksyre;

(8S,8aR)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-metyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

(8R,8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-metyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

Metyl-(4R)-6-[[[(8R,8aS)-2-tert-butyl-8-karbamoyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(8S,8aR)-2-tert-butyl-8-karbamoyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

3-[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-propoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;

4-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-butansyre;

5-[7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]pyridin-2-karboksylysyre;

(S)-6-[(S)-2-(2-karboksy-2,2-difluor-etyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(3,4-difluor-2-metyl-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylysyreetyler;

(8R,8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-(syklopropylmetyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

(8S,8aR)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-(syklopropylmetyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

3-[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-(4-metyltiazol-2-yl)-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;

2-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-6-okso-1,3,4,7,8,8a-heksahydropyrrolo[1,2-a]pyrazin-1-karboksylysyre;

(8R,8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-isobutyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

(8S,8aR)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-isobutyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

(8R,8aR)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-oksazolo[3,4-a]pyrazin-8-karboksylysyre;

(8S,8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-oksazolo[3,4-a]pyrazin-8-karboksylysyre;

Etyl-(4R)-6-[[[(8R,8aS)-2-tert-butyl-8-(hydroksymetyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Etyl-(4R)-6-[[[(8S,8aR)-2-tert-butyl-8-(hydroksymetyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Etyl-(4R)-6-[[[(8aR)-2-isopropyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat; og

Etyl-(4R)-6-[[[(8aS)-2-isopropyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

(8R,8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-(2,2-difluoretyl)-3-okso-5,6,8,8a-tetrahydro-1H-

imidazo[1,5-a]pyrazin-8-karboksytsyre;

(8S,8aR)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-2-(2,2-difluoretyl)-3-okso-5,6,8,8a-tetrahydro-1H-

imidazo[1,5-a]pyrazin-8-karboksytsyre;

Etyl-(4R)-6-[[[(8aR)-2-(2-hydroksy-2-metyl-propyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl]-1,4-dihydropyrimidin-5-karboksylat;

og Etyl-(4R)-6-[[[(8aS)-2-(2-hydroksy-2-metyl-propyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl]-1,4-dihydropyrimidin-5-karboksylat;

eller farmasøytisk akseptable salter eller enantiomerer eller diastereomerer derav.

19. Forbindelse ifølge et hvilket som helst av kravene 1 til 15 eller 17, valgt fra 3-[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;

3-[(8aS)-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;

(R)-6-[(S)-2-(4-karboksy-fenyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl]-1,4-dihydro-pyrimidin-5-karboksytsyremetyler;

(R)-6-[(S)-2-(4-karboksy-fenyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl]-1,4-dihydro-pyrimidin-5-karboksytsyreetyler;

(R)-6-[(S)-2-(3-karboksy-fenyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-3-fluor-fenyl)-2-tiazol-2-yl]-1,4-dihydro-pyrimidin-5-karboksytsyreetyler;

(R)-6-[(S)-2-(3-karboksy-fenyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl]-1,4-dihydro-pyrimidin-5-karboksytsyremetyler;

3-[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-

dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-3-metyl-butansyre;
 1-[[[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]metyl]syklopropankarboksylsyre;
 1-[[[(8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]metyl]syklopropankarboksylsyre;
 1-[[[(8aS)-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]metyl]syklopropankarboksylsyre;
 3-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre; og
 3-[(8aS)-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;
 4-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-butansyre;
 4-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-3,3-dimetyl-butansyre;
 (R)-6-[(S)-2-(1-karboksy-syklobutylmetyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylsyremetylester;
 6-[(S)-2-(1-karboksy-syklobutylmetyl)-3-okso-heksahydro-imidazo[1,5-a]pyrazin-7-ylmetyl]-4-((R)-2-klor-3-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydro-pyrimidin-5-karboksylsyreetylester;
 3-[(8aS)-7-[[[(4S)-5-etoksykarbonyl-4-(3-fluor-2-metyl-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-2-yl]-2,2-dimetyl-propansyre;

(8S,8aR)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-syklopropyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

(8S,8aR)-2-syklopropyl-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

(8S,8aR)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-isopropyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

(8S,8aR)-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-isopropyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

(8S,8aR)-2-tert-butyl-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

(8S,8aR)-2-tert-butyl-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

(8S,8aR)-2-tert-butyl-7-[[[(4S)-4-(3,4-difluor-2-metyl-fenyl)-5-metoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

(8R,8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-2-metyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;

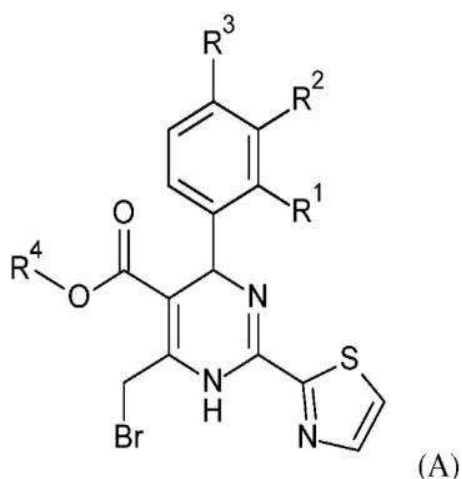
Metyl-(4R)-6-[[[(8R,8aS)-2-tert-butyl-8-karbamoyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

Metyl-(4R)-6-[[[(8S,8aR)-2-tert-butyl-8-karbamoyl-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-7-yl]metyl]-4-(2-klor-4-fluor-fenyl)-2-tiazol-2-yl-1,4-dihydropyrimidin-5-karboksylat;

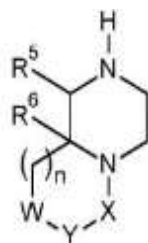
4-[(8aS)-7-[[[(4R)-4-(2-klor-4-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-

a]pyrazin-2-yl]-2,2-dimetyl-butansyre;
 (8R,8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-2-(syklopropylmetyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;
 (8S,8aR)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-2-(syklopropylmetyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;
 2-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-6-okso-1,3,4,7,8,8a-heksahydropyrrolo[1,2-a]pyrazin-1-karboksylysyre;
 (8R,8aR)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-oksazolo[3,4-a]pyrazin-8-karboksylysyre;
 (8S,8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-3-okso-5,6,8,8a-tetrahydro-1H-oksazolo[3,4-a]pyrazin-8-karboksylysyre;
 (8R,8aS)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-2-(2,2-difluoretyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre; og
 (8S,8aR)-7-[[[(4R)-4-(2-klor-3-fluor-fenyl)-5-etoksykarbonyl-2-tiazol-2-yl]-1,4-dihydropyrimidin-6-yl]metyl]-2-(2,2-difluoretyl)-3-okso-5,6,8,8a-tetrahydro-1H-imidazo[1,5-a]pyrazin-8-karboksylysyre;
 eller farmasøytisk akseptable salter eller enantiomerer eller diastereomerer derav.

20. Prosess for fremstilling av en forbindelse ifølge et hvilket som helst av kravene 1 til 19, som omfatter reaksjonen av en forbindelse med formel (A)



med



i tilstedeværelse av en base;

hvor R^1 til R^6 , X, Y, W og n er definert som i et hvilket som helst av kravene 1 til 18.

21. Forbindelse ifølge et hvilket som helst av kravene 1 til 19 for anvendelse som et terapeutisk aktivt stoff.

22. Farmasøytisk sammensetning som omfatter en forbindelse ifølge et hvilket som helst av kravene 1 til 19 og en terapeutisk inert bærer.

23. Anvendelsen av en forbindelse ifølge et hvilket som helst av kravene 1 til 19 for fremstilling av et medikament for behandling eller profylakse av hepatitt B-virusinfeksjon.

24. Forbindelse ifølge et hvilket som helst av kravene 1 til 19 for anvendelse ved behandling eller profylakse av hepatitt B-virusinfeksjon.