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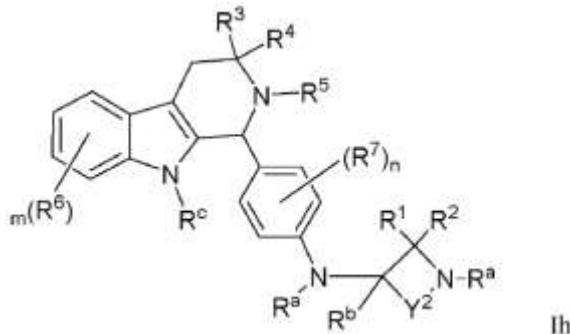
(54) Title **TETRAHYDRO-PYRIDO[3,4-B]INDOLES AS ESTROGEN RECEPTOR MODULATORS AND USES THEREOF**

(56) References  
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WO-A1-2013/090836  
WO-A1-2010/138758  
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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 valgt fra formel Ih:



eller stereoisomerer, tautomerer eller farmasøytisk akseptable salter derav, hvori:

$Y^2$  er  $-(CH_2)-$ ;

$R^a$  er valgt fra H, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>2</sub>-C<sub>8</sub>-alkenyl, propargyl, C<sub>3</sub>-C<sub>6</sub>-cykloalkyl og C<sub>3</sub>-C<sub>6</sub>-heterosyklyl, eventuelt substituert med én eller flere grupper uavhengig valgt fra F, Cl, Br, I, CN, OH, OCH<sub>3</sub> og SO<sub>2</sub>CH<sub>3</sub>;

$R^b$  er uavhengig valgt fra H,  $-O(C_1-C_3\text{-alkyl})$ , C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>2</sub>-C<sub>8</sub>-alkenyl, propargyl,  $-(C_1-C_6\text{-alkyldiyl})-(C_3-C_6\text{-cykloalkyl})$ , C<sub>3</sub>-C<sub>6</sub>-cykloalkyl, og C<sub>3</sub>-C<sub>6</sub>-heterosyklyl, eventuelt substituert med én eller flere grupper uavhengig av hverandre valgt fra F, Cl, Br, I, CN,  $-CH_2F$ ,  $-CHF_2$ ,  $-CF_3$ ,  $-CH_2CF_3$ ,  $-CH_2CHF_2$ ,  $-CH_2CH_2F$ , OH, OCH<sub>3</sub> og SO<sub>2</sub>CH<sub>3</sub>;

$R^c$  er valgt fra H, C<sub>1</sub>-C<sub>6</sub>-alkyl, allyl, propargyl, eventuelt substituert med én eller flere grupper uavhengig av hverandre valgt fra F, Cl, Br, I, CN, OH, OCH<sub>3</sub> og SO<sub>2</sub>CH<sub>3</sub>;

$R^1$ ,  $R^2$ ,  $R^3$  og  $R^4$  er uavhengig av hverandre valgt fra H, F, Cl, Br, I, -CN, -CH<sub>3</sub>,  $-CH_2CH_3$ ,  $-CH(CH_3)_2$ ,  $-CH_2CH(CH_3)_2$ ,  $-CH_2OH$ , CH<sub>2</sub>OCH<sub>3</sub>,  $-CH_2CH_2OH$ ,  $-C(CH_3)_2OH$ ,  $-CH(OH)CH(CH_3)_2$ ,  $-C(CH_3)_2CH_2OH$ , CH<sub>2</sub>CH<sub>2</sub>SO<sub>2</sub>CH<sub>3</sub>,  $-CH_2OP(O)(OH)_2$ ,  $-CH_2F$ ,  $-CHF_2$ ,  $-CH_2NH_2$ ,  $-CH_2NHSO_2CH_3$ ,  $-CH_2NHCH_3$ ,  $-CH_2N(CH_3)_2$ ,  $-CF_3$ ,  $-CH_2CF_3$ ,  $-CH_2CHF_2$ ,  $-CH(CH_3)CN$ ,  $-C(CH_3)_2CN$ ,  $-CH_2CN$ ,  $-CO_2H$ ,  $-COCH_3$ ,  $-CO_2CH_3$ ,  $-CO_2C(CH_3)_3$ ,  $-COCH(OH)CH_3$ ,  $-CONH_2$ ,  $-CONHCH_3$ ,  $-CONHCH_2CH_3$ ,  $-CONHCH(CH_3)_2$ ,  $-CON(CH_3)_2$ ,  $-C(CH_3)_2CONH_2$ ,  $-NH_2$ ,  $-NHCH_3$ ,  $-N(CH_3)_2$ ,  $-NHCOCH_3$ ,  $-N(CH_3)COCH_3$ ,  $-NHS(O)_2CH_3$ ,  $-N(CH_3)C(CH_3)_2CONH_2$ ,  $-N(CH_3)CH_2CH_2S(O)_2CH_3$ ,  $-NO_2$ , = O, -OH, -OCH<sub>3</sub>,  $-OCH_2CH_3$ ,  $-OCH_2CH_2OCH_3$ ,  $-OCH_2CH_2OH$ ,  $-OCH_2CH_2N(CH_3)_2$ ,  $-OP(O)(OH)_2$ ,

$-S(O)_2N(CH_3)_2$ ,  $-SCH_3$ ,  $-S(O)_2CH_3$ ,  $-S(O)_3H$ , cyklopropyl, cyklopropylamid, cyklobutyl, oksetanyl, azetidinyl, 1-metylazetidin-3-yl) oksy, N-metyl-N-oksetan-3-ylamino, azetidin-1-ylmethyl, benzyloksyfenyl, pyrrolidin-1-yl, pyrrolidin-1-yl-metanon, piperazin-1-yl, morfolinometyl, morfolino-metanon og morfolino;

$R^5$  er valgt fra H,  $C_1$ - $C_9$ -alkyl,  $C_3$ - $C_9$ -cykloalkyl,  $C_3$ - $C_9$ -heterosyklus,  $C_6$ - $C_9$ -aryl,  $C_6$ - $C_9$ -heteroaryl,  $-(C_1-C_6\text{-alkyldiyl})-(C_3-C_9\text{-cykloalkyl})$ ,  $-(C_1-C_6\text{-alkyldiyl})-(C_3-C_9\text{-heterosyklus})$ ,  $C(O)R^b$ ,  $C(O)NR^a$ ,  $SO_2R^a$  og  $SO_2NR^a$ , eventuelt substituert med ett eller flere halogen, CN, OR<sup>a</sup>, N(R<sup>a</sup>)<sub>2</sub>,  $C_1$ - $C_9$ -alkyl,  $C_3$ - $C_9$ -cykloalkyl,  $C_3$ - $C_9$ -heterosyklus,  $C_6$ - $C_9$ -aryl,  $C_6$ - $C_9$ -heteroaryl,  $C(O)R^b$ ,  $C(O)NR^a$ ,  $SO_2R^a$  og  $SO_2NR^a$ ;

$R^6$  er valgt fra F, Cl, Br, I,  $-CN$ ,  $-CH_3$ ,  $-CH_2CH_3$ ,  $-CH(CH_3)_2$ ,  $-CH_2CH(CH_3)_2$ ,  $-CH_2OH$ ,  $CH_2OCH_3$ ,  $-CH_2CH_2OH$ ,  $-C(CH_3)_2OH$ ,  $-CH(OH)CH(CH_3)_2$ ,  $-C(CH_3)_2CH_2OH$ ,  $CH_2CH_2SO_2CH_3$ ,  $-CH_2OP(O)(OH)_2$ ,  $-CH_2F$ ,  $-CHF_2$ ,  $-CH_2NH_2$ ,  $-CH_2NSO_2CH_3$ ,  $-CH_2NHCH_3$ ,  $-CH_2N(CH_3)_2$ ,  $-CF_3$ ,  $-CH_2CF_3$ ,  $-CH_2CHF_2$ ,  $-CH_2CH_2F$ ,  $-CH(CH_3)CN$ ,  $-C(CH_3)_2CN$ ,  $-CH_2CN$ ,  $-CO_2H$ ,  $-COCH_3$ ,  $-CO_2CH_3$ ,  $-CO_2C(CH_3)_3$ ,  $-COCH(OH)CH_3$ ,  $-CONH_2$ ,  $-CONHCH_3$ ,  $-CONHCH_2CH_3$ ,  $-CONHCH(CH_3)_2$ ,  $-CON(CH_3)_2$ ,  $-C(CH_3)_2CONH_2$ ,  $-NH_2$ ,  $-NHCH_3$ ,  $-N(CH_3)_2$ ,  $-NHCOCH_3$ ,  $-N(CH_3)COCH_3$ ,  $-NHS(O)_2CH_3$ ,  $-N(CH_3)C(CH_3)_2CONH_2$ ,  $-N(CH_3)CH_2CH_2S(O)_2CH_3$ ,  $-NO_2$ , = O,  $-OH$ ,  $-OCH_3$ ,  $-OCH_2CH_3$ ,  $-OCH_2CH_2OCH_3$ ,  $-OCH_2CH_2OH$ ,  $-OCH_2CH_2N(CH_3)_2$ ,  $-OP(O)(OH)_2$ ,  $-S(O)_2N(CH_3)_2$ ,  $-SCH_3$ ,  $-S(O)_2CH_3$ ,  $-S(O)_3H$ , cyklopropyl, cyklopropylamid, cyklobutyl, oksetanyl, azetidinyl, 1-metylazetidin-3-yl) oksy, N-metyl-N-oksetan-3-ylamino, azetidin-1-ylmethyl, benzyloksyfenyl, pyrrolidin-1-yl, pyrrolidin-1-yl-metanon, piperazin-1-yl, morfolinometyl, morfolino-metanon og morfolino;

$R^7$  er F, Cl, Br, I,  $-CN$ ,  $-CH_3$ ,  $-CH_2CH_3$ ,  $-CH(CH_3)_2$ ,  $-CH_2CH(CH_3)_2$ ,  $-CH_2OH$ ,  $CH_2OCH_3$ ,  $-CH_2CH_2OH$ ,  $-C(CH_3)_2OH$ ,  $-CH(OH)CH(CH_3)_2$ ,  $-C(CH_3)_2CH_2OH$ ,  $CH_2CH_2SO_2CH_3$ ,  $-CH_2OP(O)(OH)_2$ ,  $-CH_2F$ ,  $-CHF_2$ ,  $-CH_2NH_2$ ,  $-CH_2NSO_2CH_3$ ,  $-CH_2NHCH_3$ ,  $-CH_2N(CH_3)_2$ ,  $-CF_3$ ,  $-CH_2CF_3$ ,  $-CH_2CHF_2$ ,  $-CH(CH_3)CN$ ,  $-C(CH_3)_2CN$ ,  $-CH_2CN$ ,  $-CO_2H$ ,  $-COCH_3$ ,  $-CO_2CH_3$ ,  $-CO_2C(CH_3)_3$ ,  $-COCH(OH)CH_3$ ,  $-CONH_2$ ,  $-CONHCH_3$ ,  $-CONHCH_2CH_3$ ,  $-CONHCH(CH_3)_2$ ,  $-CON(CH_3)_2$ ,  $-C(CH_3)_2CONH_2$ ,  $-NH_2$ ,  $-NHCH_3$ ,  $-N(CH_3)_2$ ,  $-NHCOCH_3$ ,  $-N(CH_3)COCH_3$ ,  $-NHS(O)_2CH_3$ ,  $-N(CH_3)C(CH_3)_2CONH_2$ ,  $-N(CH_3)CH_2CH_2S(O)_2CH_3$ ,  $-NO_2$ , = O,  $-OH$ ,  $-OCH_3$ ,  $-OCH_2CH_3$ ,  $-OCH_2CH_2OCH_3$ ,  $-OCH_2CH_2OH$ ,

$-\text{OCH}_2\text{CH}_2\text{N}(\text{CH}_3)_2$ ,  $-\text{OP(O)(OH)}_2$ ,  $-\text{S(O)}_2\text{N}(\text{CH}_3)_2$ ,  $-\text{SCH}_3$ ,  $-\text{S(O)}_2\text{CH}_3$ ,  $-\text{S(O)}_3\text{H}$ , cyklopropyl, cyklopropylamid, oksetanyl, azetidinyl, 1-metylazetidin-3-yl) oksy, N-metyl-N-oksetan-3-ylamino, azetidin-1-ylmetyl, benzyloksyfenyl, pyrrolidin-1-yl, pyrrolidin-1-yl-metanon, piperazin-1-yl, morfolinometyl, morfolino-metanon og morfolino;

m er valgt fra 0, 1, 2, 3 og 4; og

n er valgt fra 0, 1, 2, 3 og 4;

hvor alkyldiyl, aryldiyl, carbocyklyldiyl, heterocyklyldiyl og heteroaryldiyl eventuelt er substituert med en eller flere grupper uavhengig av hverandre valgt fra F, Cl, Br, I, CCN,  $\text{CH}_3$ ,  $-\text{CH}_2\text{CH}_3$ ,  $-\text{CH}(\text{CH}_3)_2$ ,  $-\text{CH}_2\text{CH}(\text{CH}_3)_2$ ,  $-\text{CH}_2\text{OH}$ ,  $\text{CH}_2\text{OCH}_3$ ,  $-\text{CH}_2\text{CH}_2\text{OH}$ ,  $-\text{C}(\text{CH}_3)_2\text{OH}$ ,  $-\text{CH}(\text{OH})\text{CH}(\text{CH}_3)_2$ ,  $-\text{C}(\text{CH}_3)_2\text{CH}_2\text{OH}$ ,  $\text{CH}_2\text{CH}_2\text{SO}_2\text{CH}_3$ ,  $-\text{CH}_2\text{OP(O)(OH)}_2$ ,  $-\text{CH}_2\text{F}$ ,  $-\text{CHF}_2$ ,  $-\text{CF}_3$ ,  $-\text{CH}_2\text{CF}_3$ ,  $-\text{CH}_2\text{CHF}_2$ ,  $-\text{CH}_2\text{CH}_2\text{F}$ ,  $-\text{CH}(\text{CH}_3)\text{CN}$ ,  $-\text{C}(\text{CH}_3)_2\text{CN}$ ,  $-\text{CH}_2\text{CN}$ ,  $-\text{CH}_2\text{NH}_2$ ,  $-\text{CH}_2\text{NSO}_2\text{CH}_3$ ,  $-\text{CH}_2\text{NHCH}_3$ ,  $-\text{CH}_2\text{N}(\text{CH}_3)_2$ ,  $-\text{CO}_2\text{H}$ ,  $-\text{COCH}_3$ ,  $-\text{CO}_2\text{CH}_3$ ,  $-\text{CO}_2\text{C}(\text{CH}_3)_3$ ,  $-\text{COCH}(\text{OH})\text{CH}_3$ ,  $-\text{CONH}_2$ ,  $-\text{CONHCH}_3$ ,  $-\text{CON}(\text{CH}_3)_2$ ,  $-\text{C}(\text{CH}_3)_2\text{CONH}_2$ ,  $-\text{NH}_2$ ,  $-\text{NHCH}_3$ ,  $-\text{N}(\text{CH}_3)_2$ ,  $-\text{NHCOCH}_3$ ,  $-\text{N}(\text{CH}_3)\text{COCH}_3$ ,  $-\text{NHS(O)}_2\text{CH}_3$ ,  $-\text{N}(\text{CH}_3)\text{C}(\text{CH}_3)_2\text{CONH}_2$ ,  $-\text{N}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{S(O)}_2\text{CH}_3$ ,  $-\text{NO}_2$ ,  $=\text{O}$ ,  $-\text{OH}$ ,  $-\text{OCH}_3$ ,  $-\text{OCH}_2\text{CH}_3$ ,  $-\text{OCH}_2\text{CH}_2\text{OCH}_3$ ,  $-\text{OCH}_2\text{CH}_2\text{OH}$ ,  $-\text{OCH}_2\text{CH}_2\text{N}(\text{CH}_3)_2$ ,  $-\text{OP(O)(OH)}_2$ ,  $-\text{S(O)}_2\text{N}(\text{CH}_3)_2$ ,  $-\text{SCH}_3$ ,  $-\text{S(O)}_2\text{CH}_3$ ,  $-\text{S(O)}_3\text{H}$ , cyklopropyl, cyklopropylamid, cyklobutyl, oksetanyl, azetidinyl, 1-metylazetidin-3-yl) oksy, N-metyl-N-oksetan-3-ylamino, azetidin-1-ylmetyl, benzyloksyfenyl, pyrrolidin-1-yl, pyrrolidin-1-yl-metanon, piperazin-1-yl, morfolinometyl, morfolino-metanon og morfolino.

2. Forbindelsen ifølge krav 1, hvori  $\text{R}^c$  er H.

3. Forbindelsen ifølge krav 1, hvori  $\text{R}^1$  og  $\text{R}^2$  er H.

4. Forbindelsen ifølge krav 1, hvori  $\text{R}^3$  er H, og  $\text{R}^4$  er  $-\text{CH}_3$ .

5. Forbindelsen ifølge krav 1, hvori  $\text{R}^5$  er  $\text{C}_1\text{-C}_6$ -fluoralkyl.

6. Forbindelsen ifølge krav 1, hvori m er 0.

7. Forbindelsen ifølge krav 1 valgt fra:

N-(3,5-difluor-4-((1R,3R)-2-(2-fluor-2-metylpropyl)-3-metyl-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin; (R)-3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-3-metyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2-fluor-2-

methylpropan-1-ol;

(S)-3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-3-metyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2-fluor-2-methylpropan-1-ol;

(R)-2-fluor-3-((1R,3R)-1-(2-fluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-3-metyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2-methylpropan-1-ol;

(S)-2-fluor-3-((1R,3R)-1-(2-fluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-3-metyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2-methylpropan-1-ol;

(R)-2-fluor-3-((1R,3R)-1-(4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-3-metyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2-methylpropan-1-ol;

(S)-2-fluor-3-((1R,3R)-1-(4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-3-metyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2-methylpropan-1-ol;

N-(3,5-difluor-4-((1R,3R)-3-metyl-2-(2,2,2-trifluoretyl)-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin;

1-(3-fluorpropyl)-N-[4-[(1R,3R)-3-metyl-2-methylsulfonyl-1,3,4,9-tetrahydropyrido[3,4-b]indol-1-yl]fenyl]azetidin-3-amin;

N-[3,5-difluor-4-[(1R,3R)-3-metyl-2-methylsulfonyl-1,3,4,9-tetrahydropyrido[3,4-b]indol-1-yl]fenyl]-1-(3-fluorpropyl)azetidin-3-amin;

1-(3-fluorpropyl)-N-[4-[(1S,3R)-3-metyl-2-methylsulfonyl-1,3,4,9-tetrahydropyrido[3,4-b]indol-1-yl]fenyl]azetidin-3-amin;

N-[3,5-difluor-4-[(1S,3R)-3-metyl-2-methylsulfonyl-1,3,4,9-tetrahydropyrido[3,4-b]indol-1-yl]fenyl]-1-(3-fluorpropyl)azetidin-3-amin;

3-[(1R,3R)-1-[2,6-difluor-4-[[1-(3-fluorpropyl)azetidin-3-yl]amino]fenyl]-3-metyl-1,3,4,9-tetrahydropyrido[3,4-b]indol-2-yl]-2,2-difluor-propan-1-ol;

(2R)-3-[(1R,3R)-1-[2,6-difluor-4-[[1-(3-fluorpropyl)azetidin-3-yl]amino]fenyl]-3-metyl-1,3,4,9-tetrahydropyrido[3,4-b]indol-2-yl]-2-methyl-propansyre;

3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-6-fluor-3-metyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2,2-difluorpropan-1-ol;

3-((1S,3S)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-6-fluor-3-metyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2,2-

difluorpropan-1-ol;  
(2S)-3-[(1R,3R)-1-[2,6-difluor-4-[(1-(3-fluorpropyl)azetidin-3-yl]amino]fenyl]-3-methyl-1,3,4,9-tetrahydropyrido[3,4-b]indol-2-yl]-2-methylpropansyre;  
N-(3,5-difluor-4-((1R,3R)-6-fluor-3-methyl-2-(2,2,2-trifluoretyl)-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin;  
N-(3,5-difluor-4-((1S,3S)-6-fluor-3-methyl-2-(2,2,2-trifluoretyl)-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin;  
3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-3-methyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2,2-dimethylpropansyre;  
N-(3,5-difluor-4-((1R,3R)-6-fluor-3-methyl-2-(methylsulfonyl)-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin;  
N-(3,5-difluor-4-((1S,3S)-6-fluor-3-methyl-2-(methylsulfonyl)-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin;  
N-(4-((1R,3R)-2-(2,2-difluoretyl)-6-fluor-3-methyl-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)-3,5-difluorfenyl)-1-(3-fluorpropyl)azetidin-3-amin;  
N-(4-((1S,3S)-2-(2,2-difluoretyl)-6-fluor-3-methyl-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)-3,5-difluorfenyl)-1-(3-fluorpropyl)azetidin-3-amin;  
N-(3,5-difluor-4-((1R,3R)-7-fluor-3-methyl-2-(2,2,2-trifluoretyl)-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin;  
N-(3,5-difluor-4-((1S,3S)-7-fluor-3-methyl-2-(2,2,2-trifluoretyl)-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin;  
(S)-3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-5-fluor-3-methyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2-fluor-2-methylpropan-1-ol;  
(R)-3-((1S,3S)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-5-fluor-3-methyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2-fluor-2-methylpropan-1-ol;  
(R)-3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-5-fluor-3-methyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2-fluor-2-methylpropan-1-ol;  
(S)-3-((1S,3S)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-5-fluor-3-methyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2-fluor-2-methylpropan-1-ol;

N-(3,5-difluor-4-((1R,3R)-2-(2-fluor-2-metylpropyl)-3-metyl-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)-N-metylazetidin-3-amin;

(R)-N-(4-(2-(2,2-difluoretyl)-3,3-dimetyl-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)-3,5-difluorfenyl)-1-(3-fluorpropyl)azetidin-3-amin;

(S)-N-(4-(2-(2,2-difluoretyl)-3,3-dimetyl-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)-3,5-difluorfenyl)-1-(3-fluorpropyl)azetidin-3-amin;

N-(3,5-difluor-4-((1R,3R)-5-fluor-3-metyl-2-(2,2,2-trifluoretyl)-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin;

N-(3,5-difluor-4-((1S,3S)-5-fluor-3-metyl-2-(2,2,2-trifluoretyl)-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin;

N-(3,5-difluor-4-((1S,3S)-8-fluor-3-metyl-2-(2,2,2-trifluoretyl)-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin;

N-(3,5-difluor-4-((1R,3R)-8-fluor-3-metyl-2-(2,2,2-trifluoretyl)-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin;

(S)-3-((1S,3S)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-7-fluor-3-metyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2-fluor-2-metylpropan-1-ol;

(R)-3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-7-fluor-3-metyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2-fluor-2-metylpropan-1-ol;

(S)-3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-7-fluor-3-metyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2-fluor-2-metylpropan-1-ol;

(R)-3-((1S,3S)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-7-fluor-3-metyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2-fluor-2-metylpropan-1-ol;

3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-5-fluor-3-metyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2,2-difluorpropan-1-ol;

3-((1S,3S)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-5-fluor-3-metyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2,2-difluorpropan-1-ol;

(R)-3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-

3-methyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2-fluor-2-(hydroksymethyl)propanitril;

(S)-3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-3-methyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2-fluor-2-(hydroksymethyl)propanitril;

(R)-3-(1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-3,3-dimethyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2,2-difluorpropan-1-ol;

(S)-3-(1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-3,3-dimethyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2,2-difluorpropan-1-ol;

3-((1S,3S)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-8-fluor-3-methyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2,2-difluorpropan-1-ol;

3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-8-fluor-3-methyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2,2-difluorpropan-1-ol;

3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-7-fluor-3-methyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2,2-difluorpropan-1-ol;

3-((1S,3S)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-7-fluor-3-methyl-3,4-dihydro-1H-pyrido[3,4-b]indol-2(9H)-yl)-2,2-difluorpropan-1-ol;

N-[4-[(1R,3R)-2-(2,2-difluoretyl)-3-methyl-1,3,4,9-tetrahydropyrido[3,4-b]indol-1-yl]-3,5-difluor-fenyl]-1-(3-fluorpropyl)azetidin-3-amin;

(R)-3-((2R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-6-fluor-3-methyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2-fluor-2-metylpropan-1-ol;

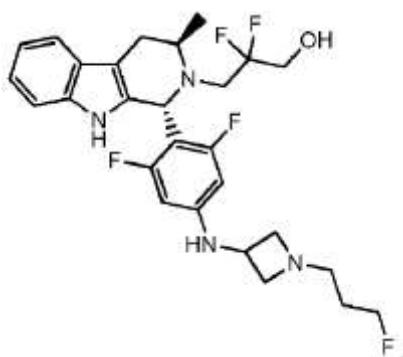
(S)-3-((1S,3S)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-6-fluor-3-methyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2-fluor-2-metylpropan-1-ol;

(S)-3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-6-fluor-3-methyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2-fluor-2-metylpropan-1-ol;

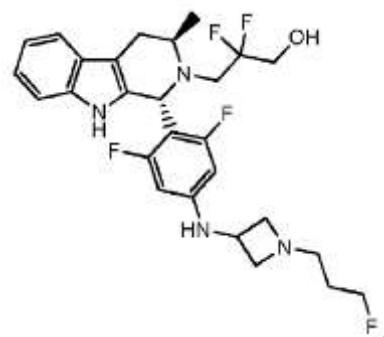
(R)-3-((1R,3S)-1-(2,6-difluor-4-((1-(3-fluorpropyl)azetidin-3-yl)amino)fenyl)-6-fluor-3-methyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2-fluor-2-

metylpropan-1-ol;

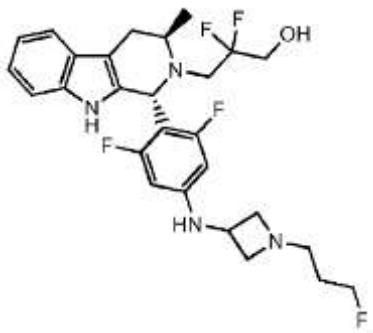
8. Forbindelsen av formel Ih ifølge krav 1, eller farmasøytisk akseptable salter derav, hvori forbindelsen av formel Ih er 3-[(1R,3R)-1-[2,6-difluor-4-[[1-(3-fluorpropyl)azetidin-3-yl]amino]fenyl]-3-metyl-1,3,4,9-tetrahydropyrido[3,4-b]indol-2-yl]-2,2-difluor-propan-1-ol eller et farmasøytisk akseptabelt salt derav.



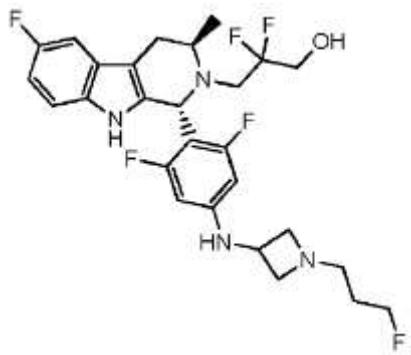
9. Forbindelsen av formel Ih ifølge krav 1, hvori forbindelsen av formel Ih er 3-[(1R,3R)-1-[2,6-difluor-4-[[1-(3-fluorpropyl)azetidin-3-yl]amino]fenyl]-3-metyl-1,3,4,9-tetrahydropyrido[3,4-b]indol-2-yl]-2,2-difluor-propan-1-ol.



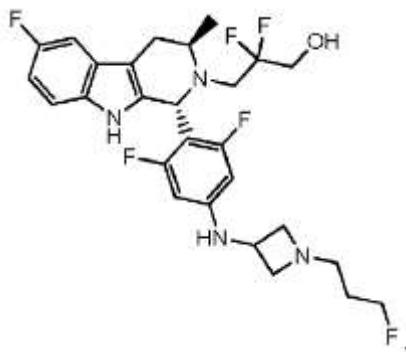
10. Farmasøytisk akseptabelt salt av forbindelsen av formel Ih ifølge krav 1, hvori forbindelsen av formel Ih er 3-[(1R,3R)-1-[2,6-difluor-4-[[1-(3-fluorpropyl)azetidin-3-yl]amino]fenyl]-3-metyl-1,3,4,9-tetrahydropyrido[3,4-b]indol-2-yl]-2,2-difluor-propan-1-ol.



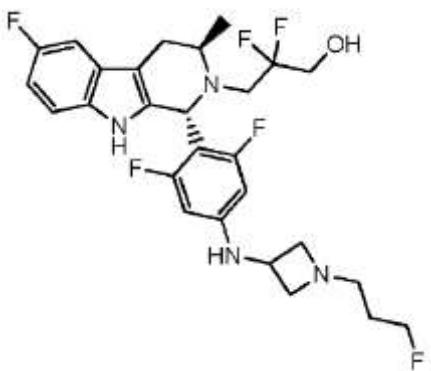
11. Forbindelsen av formel Ih ifølge krav 1, eller farmasøytisk akseptable salter derav, hvori forbindelsen av formel Ih er 3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluoropropyl)azetidin-3-yl)amino)fenyl)-6-fluor-3-metyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2,2-difluorpropan-1-ol eller et farmasøytisk akseptabelt salt derav.



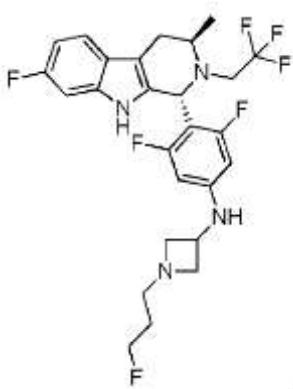
12. Forbindelsen av formel Ih ifølge krav 1, hvori forbindelsen av formel Ih er 3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluoropropyl)azetidin-3-yl)amino)fenyl)-6-fluor-3-metyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2,2-difluorpropan-1-ol.



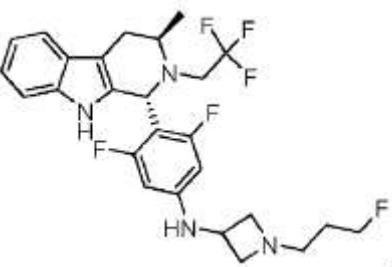
13. Farmasøytisk akseptabelt salt av forbindelsen av formel Ih ifølge krav 1, hvori forbindelsen av formel Ih er 3-((1R,3R)-1-(2,6-difluor-4-((1-(3-fluoropropyl)azetidin-3-yl)amino)fenyl)-6-fluor-3-metyl-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indol-2-yl)-2,2-difluorpropan-1-ol.



14. Forbindelsen av formel Ih ifølge krav 1, eller farmasøytisk akseptable salter derav, hvori forbindelsen av formel Ih er *N*-(3,5-difluor-4-((1*R*,3*R*)-7-fluor-3-metyl-2-(2,2,2-trifluoretyl)-2,3,4,9-tetrahydro-1*H*-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin eller et farmasøytisk akseptabelt salt derav.



15. Forbindelsen av formel Ih ifølge krav 1, eller farmasøytisk akseptable salter derav, hvori forbindelsen av formel Ih er *N*-(3,5-difluor-4-((1*R*,3*R*)-3-metyl-2-(2,2,2-trifluoretyl)-2,3,4,9-tetrahydro-1*H*-pyrido[3,4-b]indol-1-yl)fenyl)-1-(3-fluorpropyl)azetidin-3-amin eller et farmasøytisk akseptabelt salt derav.



16. Farmasøytisk sammensetning som omfatter en forbindelse ifølge et hvilket som helst av kravene 1 til 15 og en farmasøytisk akseptabel eksipiens.

17. Forbindelse ifølge et hvilket som helst av kravene 1 til 15 for anvendelse som terapeutisk aktivt stoff.

18. Forbindelse ifølge et hvilket som helst av kravene 1 til 15 for anvendelse i behandling av en ER-relatert sykdom eller lidelse, hvori den ER-relaterte sykdommen eller lidelsen er kreft valgt fra brystkreft, lungekreft, kreft i eggstokkene, livmorslimhinnekreft, prostatakreft og livmorkreft.
19. Forbindelsen for anvendelse ifølge krav 18, hvori kreften er brystkreft.
20. Forbindelsen for anvendelse ifølge krav 19, hvori brystkreften er hormonreceptorpositiv metastatisk brystkreft.
21. Forbindelsen for anvendelse ifølge krav 19, hvori brystkreften er hormonavhengig brystkreft.
22. Forbindelsen for anvendelse ifølge krav 19, hvori brystkreften er en østrogenerseptoravhengig brystkreft.
23. Forbindelsen for anvendelse ifølge krav 19, hvori brystkreften er en hormonrefraktær brystkreft.
24. Forbindelsen for anvendelse ifølge et hvilket som helst av kravene 19 til 23, hvori kreften er resistent mot anti-hormonell behandling.
25. Forbindelsen for anvendelse ifølge krav 24, hvori den anti-hormonelle behandlingen omfatter tamoksifen, fulvestrant, steroide aromataseinhibitorer eller ikke-steroide aromataseinhibitorer.
26. Forbindelsen for anvendelse ifølge krav 19, hvori brystkreften aldri er blitt behandlet med cellegift.
27. Forbindelsen for anvendelse ifølge et hvilket som helst av kravene 19 til 26, hvori forbindelsen administreres i kombinasjon med en CDK4/6-inhibitor.
28. Forbindelsen for anvendelse ifølge krav 27, hvori CDK4/6-inhibitoren er palbociclib, ribociclib eller LY283519.