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C07D 405/14 (2006.01) ***C07D 513/04 (2006.01)***

Norwegian Industrial Property Office

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(54) Title **ANTIVIRAL COMPOUNDS**

(56) References Cited:

WO-A1-2009/102318, WO-A1-2009/102325, WO-A1-2009/102633, WO-A1-2010/062821
WO-A1-2010/065681, WO-A1-2010/096777, WO-A1-2010/099527, WO-A1-2010/132601

WO-A1-2010/138368
WO-A1-2011/028596
WO-A1-2011/066241
WO-A1-2011/075439
WO-A1-2011/087740
WO-A1-2011/112429
WO-A1-2011/146401
WO-A1-2012/048421
WO-A2-2008/021927
WO-A2-2008/021928
WO-A2-2008/021936
WO-A2-2012/027712
WO-A2-2012/087976

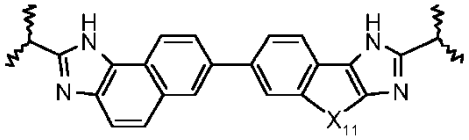
Patentkrav

1. En forbindelse med formel (I):

$$E^{1a}\text{-}V^{1a}\text{-}C(=O)\text{-}P^{1a}\text{-}W^{1a}\text{-}P^{1b}\text{-}C(=O)\text{-}V^{1b}\text{-}E^{1b} \qquad (I)$$

hvor:

W^{1a} er



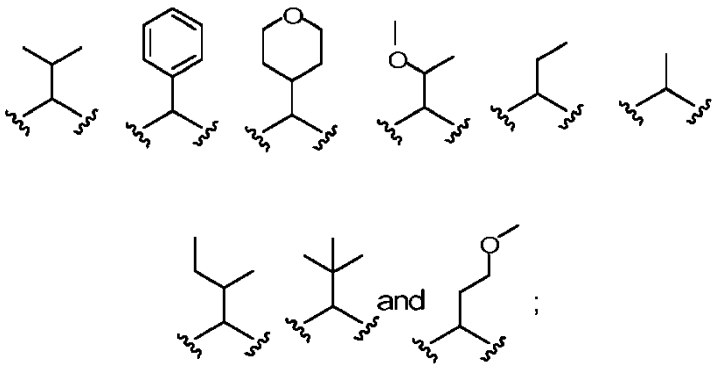
eventuelt substituert med én eller flere grupper uavhengig valgt fra halo, C_1-C_{18}-alkyl, C_1-C_{18} haloalkyl, og cyano;

X^{11} er $-CH_2-CH_2-$, $-O-CH_2-$, eller $-CH=CH-$;

E^{1a} er -N(H)(C_1-C_{18} alkoksykarbonyl), -N(H)(C_3-C_7 cykloalkylkarbonyl) eller -N(H)(C_3-C_7 cykloalkyloksykarbonyl); eller E^{1a}-V^{1a} tatt sammen er R^{9a};

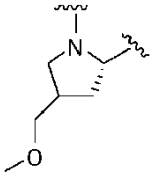
E^{1b} er -N(H)(C_1-C_{18} alkoksykarbonyl), -N(H)(C_3-C_7 cykloalkylkarbonyl) eller -N(H)(C_3-C_7 cykloalkyloksykarbonyl); eller E^{1b}-V^{1b} tatt sammen er R^{9b};

V^{1a} og V^{1b} er hver uavhengig valgt fra:

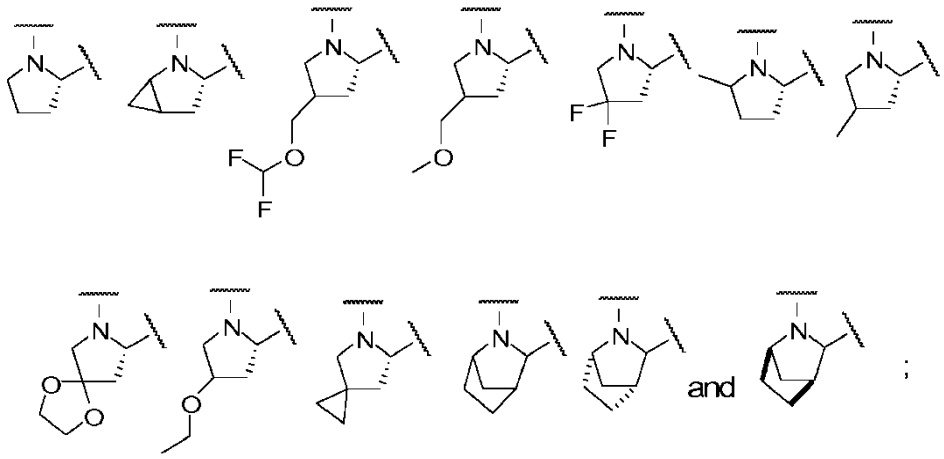


;

én av P^{1a} og P^{1b} er


;

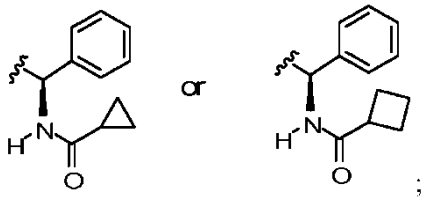
og den andre av P^{1a} og P^{1b} er valgt fra:



;

og

R^{9a} og R^{9b} er hver uavhengig:



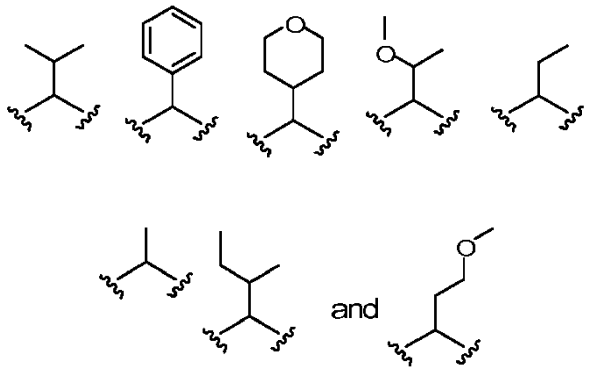
;

eller et farmasøytisk akseptabelt salt derav

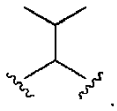
2. Forbindelse ifølge krav 1, hvor minst én av E^{1a} og E^{1b} er -N(H)C(=O)OMe.

3. Forbindelse ifølge krav 1 eller 2, hvor både E^{1a} og E^{1b} er -N(H)C(=O)OMe.

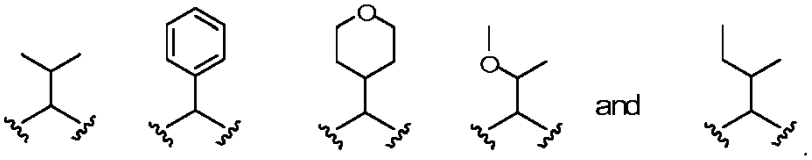
4. Forbindelse ifølge et hvilket som helst av kravene 1-3, hvor minst én av V^{1a} og V^{1b} er valgt fra:



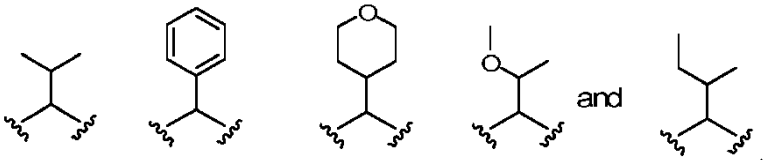
5. Forbindelse ifølge et hvilket som helst av kravene 1-4, hvor minst én av $V^{1a}$and V^{1b} er:



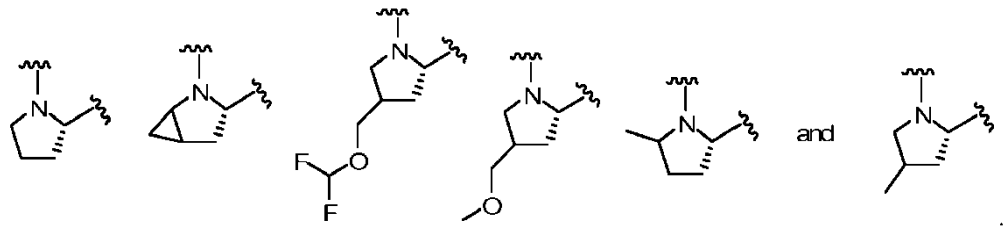
6. Forbindelse ifølge et hvilket som helst av kravene 1-5, hvor minst én av V^{1a} og V^{1b} er valgt fra:



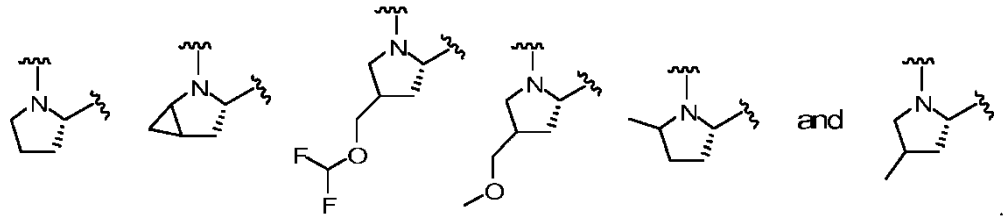
7. Forbindelse ifølge et hvilket som helst av kravene 1-6, hvor V^{1a} og V^{1b} er hver uavhengig valgt fra:



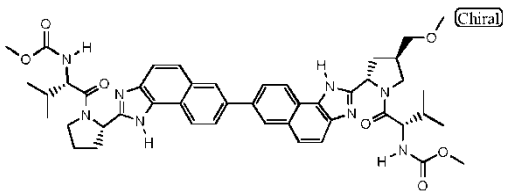
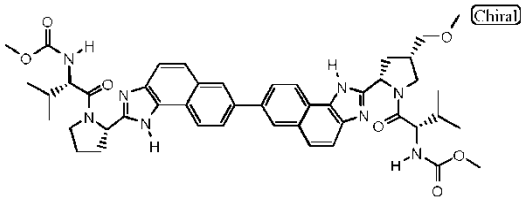
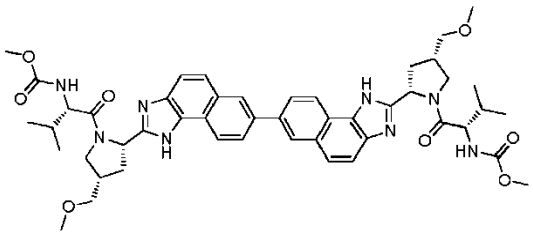
8. Forbindelse ifølge et hvilket som helst av kravene 1-7, hvor minst én av P^{1a} og P^{1b} er valgt fra:

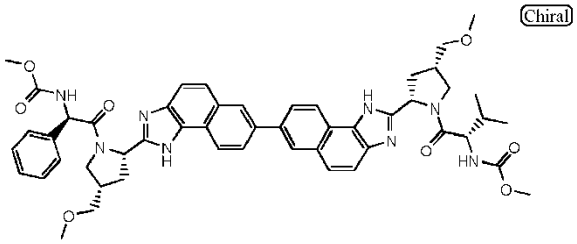
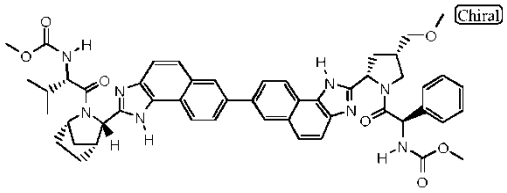
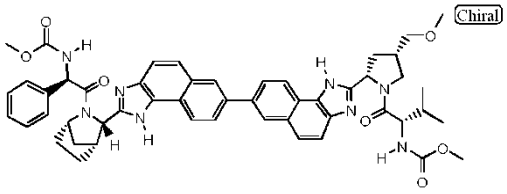
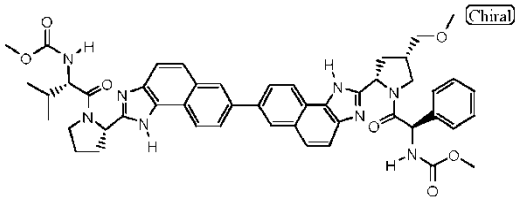
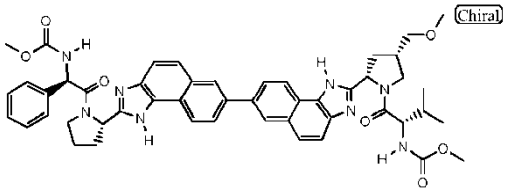
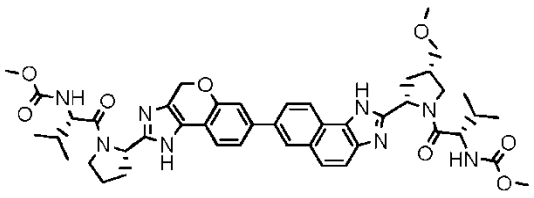


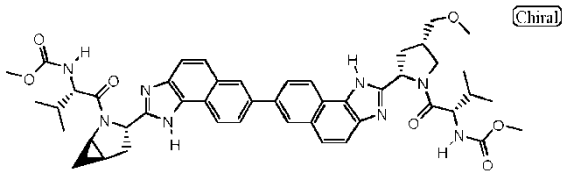
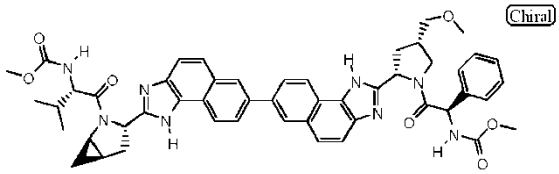
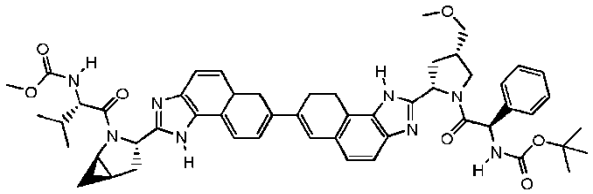
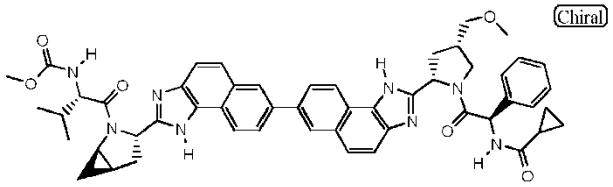
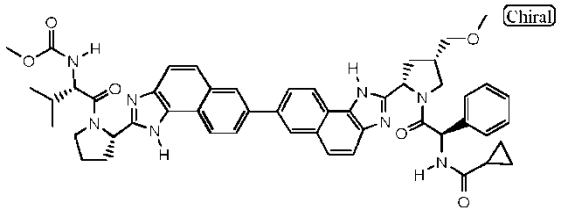
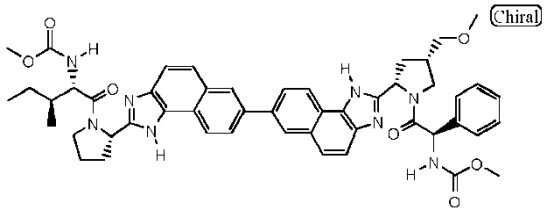
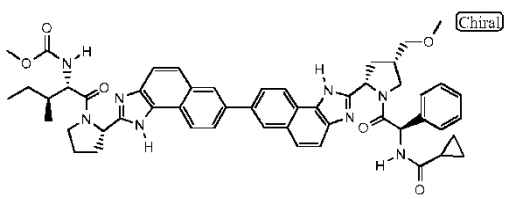
9. Forbindelse ifølge et hvilket som helst av kravene 1-7, hvor P^{1a} og P^{1b} er hver uavhengig valgt fra:

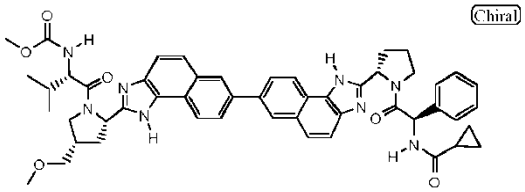
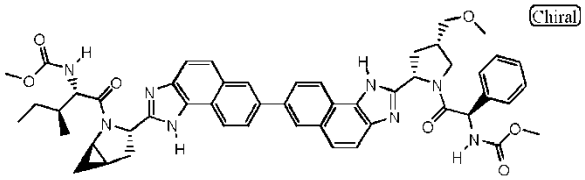
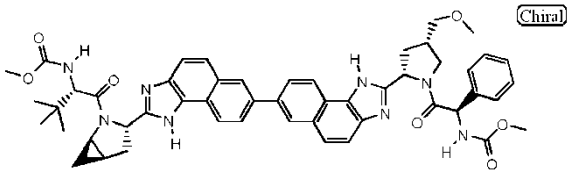
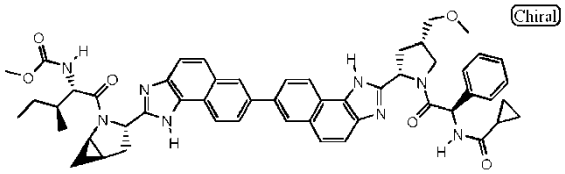
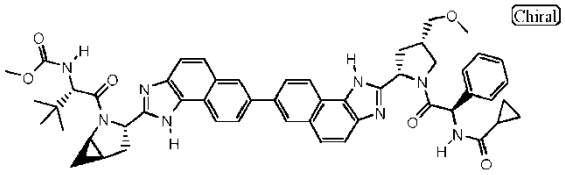
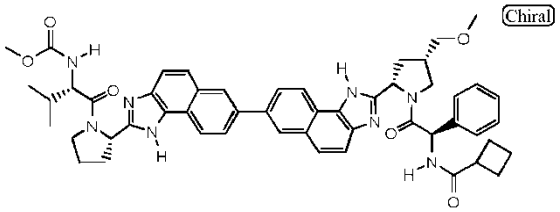
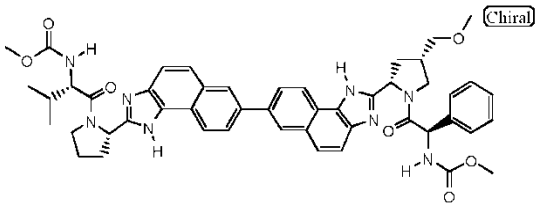


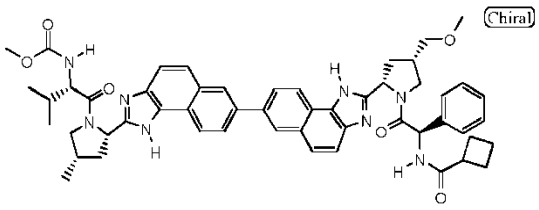
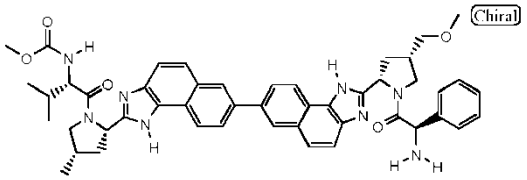
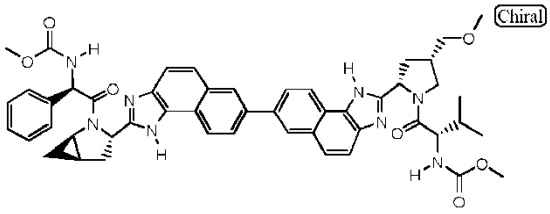
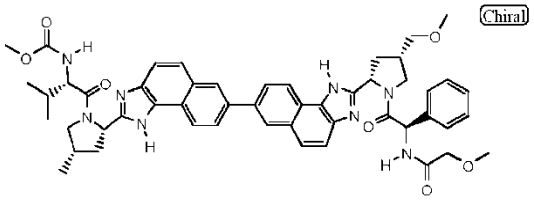
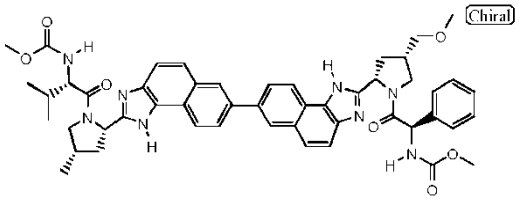
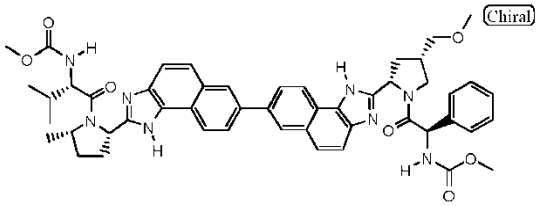
10. Forbindelse ifølge krav 1, hvor forbindelsen er valgt fra gruppen bestående av:

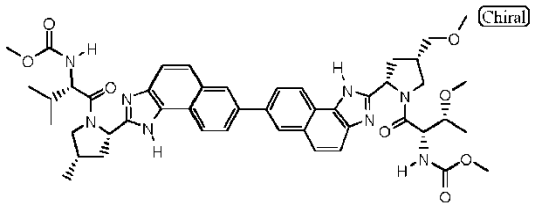
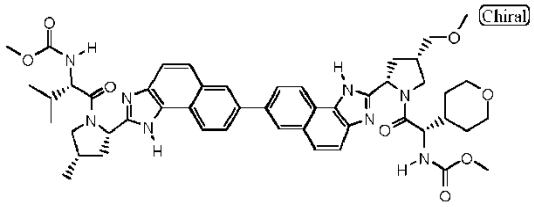
397	
398	
436	

437	
451	
452	
453	
454	
459	

471	
472	
497	
502	
508	
509	
511	

512	
529	
530	
531	
532	
537	
540	

541	
545	
548	
550	
553	
554	

559	
560	
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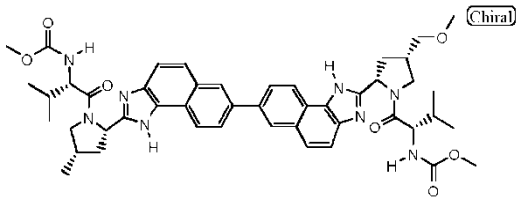
568	

11. En farmasøytisk sammensetning omfattende forbindelsen som beskrevet i et hvilket som helst av kravene 1-10, eller et farmasøytisk akseptabelt salt derav; og minst én farmasøytisk akseptabel bærer.

12. Farmasøytisk sammensetning ifølge krav 11, som videre omfatter minst ett ytterligere terapeutisk middel.

13. Farmasøytisk sammensetning ifølge krav 12, hvor nevnte ytterligere terapeutiske middel er valgt fra gruppen bestående av ribavirinanaloger, NS3-proteaseinhibitorer, NS5b-polymeraseinhibitorer, alfa-glukosidase 1-inhibitorer, hepatoprotektanter, ikke-nukleosidinhibitorer av HCV og andre legemidler for behandling av HCV.

14. Farmasøytisk sammensetning ifølge krav 11, videre omfattende en nukleosidanalog.

15. Farmasøytisk sammensetning ifølge krav 14, hvor nevnte nukleosidanalog er valgt fra ribavirin, viramidin, levovirin, et L-nukleosid, og isatoribin.

16. En forbindelse som beskrevet i et hvilket som helst av kravene 1-10, eller et farmasøytisk akseptabelt salt derav for anvendelse i en fremgangsmåte for behandling av lidelser assosiert med hepatitt C.