

SEQUENCE LISTING

<110> INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE
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<120> COMPOSITIONS ANTIVIRALES DIRIGÉES CONTRE LA NUCLEOPROTEINE DES
VIRUS INFLUENZA

<130> INR-B-0003 PCT

<150> FR1101253

<151> 2011-04-21

<160> 9

<170> PatentIn version 3.5

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<211> 482

<212> PRT

<213> Influenza A virus (A/Wilson-Smith/1933(H1N1))

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Glu Ile Arg Ala Ser Val Gly Lys Met Ile Gly Gly Ile Gly Arg Phe
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Tyr Ile Gln Met Cys Thr Glu Leu Lys Leu Ser Asp Tyr Glu Gly Arg
35 40 45

Leu Ile Gln Asn Ser Leu Thr Ile Glu Arg Met Val Leu Ser Ala Phe
50 55 60

Asp Glu Arg Arg Asn Lys Tyr Leu Glu Glu His Pro Ser Ala Gly Lys
65 70 75 80

Asp Pro Lys Lys Thr Gly Gly Pro Ile Tyr Arg Arg Val Asp Gly Lys
85 90 95

Trp Met Arg Glu Leu Ile Leu Tyr Asp Lys Glu Glu Ile Arg Arg Ile
100 105 110

Trp Arg Gln Ala Asn Asn Gly Asp Asp Ala Thr Ala Gly Leu Thr His
115 120 125

Met Met Ile Trp His Ser Asn Leu Asn Asp Ala Thr Tyr Gln Arg Thr
130 135 140

Arg Ala Leu Val Arg Thr Gly Met Asp Pro Arg Met Cys Ser Leu Met
145 150 155 160

Gln Gly Ser Thr Leu Pro Arg Arg Ser Gly Ala Ala Gly Ala Ala Val

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Val	Tyr	Gly	Pro	Ala	Val	Ala	Ser	Gly	Tyr	Asp	Phe	Glu	Arg	Glu	Gly						
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Val	Tyr	Ser	Leu	Ile	Arg	Pro	Asn	Glu	Asn	Pro	Ala	His	Lys	Ser	Gln						
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Thr	Arg	Gly	Val	Gln	Ile	Ala	Ser	Asn	Glu	Asn	Met	Glu	Thr	Met	Glu						
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Ser	Ser	Thr	Leu	Glu	Leu	Arg	Ser	Arg	Tyr	Trp	Ala	Ile	Arg	Thr	Arg						
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Ile	Gln	Pro	Thr	Phe	Ser	Val	Gln	Arg	Asn	Leu	Pro	Phe	Asp	Arg	Pro						
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Thr	Ile	Met	Ala	Ala	Phe	Thr	Gly	Asn	Thr	Glu	Gly	Arg	Thr	Ser	Asp						
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Met	Arg	Thr	Glu	Ile	Ile	Arg	Leu	Met	Glu	Ser	Ala	Arg	Pro	Glu	Asp						
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Val Ser Phe Gln Gly Arg Gly Val Phe Glu Leu Ser Asp Glu Lys Ala
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Ala Ser Pro Ile Val Pro Ser Phe Asp Met Ser Asn Glu Gly Ser Tyr
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Phe Phe

<210> 2
<211> 498
<212> PRT
<213> Influenza A virus (A/WSN/1933(H1N1))

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Met Ala Thr Lys Gly Thr Lys Arg Ser Tyr Glu Gln Met Glu Thr Asp
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Gly Glu Arg Gln Asn Ala Thr Glu Ile Arg Ala Ser Val Gly Lys Met
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Ile Asp Gly Ile Gly Arg Phe Tyr Ile Gln Met Cys Thr Glu Leu Lys
35 40 45

Leu Ser Asp Tyr Glu Gly Arg Leu Ile Gln Asn Ser Leu Thr Ile Glu
50 55 60

Arg Met Val Leu Ser Ala Phe Asp Glu Arg Arg Asn Lys Tyr Leu Glu
65 70 75 80

Glu His Pro Ser Ala Gly Lys Asp Pro Lys Lys Thr Gly Gly Pro Ile
85 90 95

Tyr Arg Arg Val Asp Gly Lys Trp Arg Arg Glu Leu Ile Leu Tyr Asp
100 105 110

Lys Glu Glu Ile Arg Arg Ile Trp Arg Gln Ala Asn Asn Gly Asp Asp
115 120 125

Ala Thr Ala Gly Leu Thr His Met Met Ile Trp His Ser Asn Leu Asn
130 135 140

Asp Ala Thr Tyr Gln Arg Thr Arg Ala Leu Val Arg Thr Gly Met Asp
145 150 155 160

Pro Arg Met Cys Ser Leu Met Gln Gly Ser Thr Leu Pro Arg Arg Ser
165 170 175

Gly Ala Ala Gly Ala Ala Val Lys Gly Val Gly Thr Met Val Met Glu
180 185 190

Leu Ile Arg Met Ile Lys Arg Gly Ile Asn Asp Arg Asn Phe Trp Arg
 195 200 205
 Gly Glu Asn Gly Arg Arg Thr Arg Ile Ala Tyr Glu Arg Met Cys Asn
 210 215 220
 Ile Leu Lys Gly Lys Phe Gln Thr Ala Ala Gln Arg Thr Met Val Asp
 225 230 235 240
 Gln Val Arg Glu Ser Arg Asn Pro Gly Asn Ala Glu Phe Glu Asp Leu
 245 250 255
 Ile Phe Leu Ala Arg Ser Ala Leu Ile Leu Arg Gly Ser Val Ala His
 260 265 270
 Lys Ser Cys Leu Pro Ala Cys Val Tyr Gly Ser Ala Val Ala Ser Gly
 275 280 285
 Tyr Asp Phe Glu Arg Glu Gly Tyr Ser Leu Val Gly Ile Asp Pro Phe
 290 295 300
 Arg Leu Leu Gln Asn Ser Gln Val Tyr Ser Leu Ile Arg Pro Asn Glu
 305 310 315 320
 Asn Pro Ala His Lys Ser Gln Leu Val Trp Met Ala Cys His Ser Ala
 325 330 335
 Ala Phe Glu Asp Leu Arg Val Ser Ser Phe Ile Arg Gly Thr Lys Val
 340 345 350
 Val Pro Arg Gly Lys Leu Ser Thr Arg Gly Val Gln Ile Ala Ser Asn
 355 360 365
 Glu Asn Met Glu Thr Met Glu Ser Ser Thr Leu Glu Leu Arg Ser Arg
 370 375 380
 Tyr Trp Ala Ile Arg Thr Arg Ser Gly Gly Asn Thr Asn Gln Gln Arg
 385 390 395 400
 Ala Ser Ser Gly Gln Ile Ser Ile Gln Pro Thr Phe Ser Val Gln Arg
 405 410 415
 Asn Leu Pro Phe Asp Arg Pro Thr Ile Met Ala Ala Phe Thr Gly Asn
 420 425 430
 Thr Glu Gly Arg Thr Ser Asp Met Arg Thr Glu Ile Ile Arg Leu Met
 435 440 445
 Glu Ser Ala Arg Pro Glu Asp Val Ser Phe Gln Gly Arg Gly Val Phe
 450 455 460
 Glu Leu Ser Asp Glu Lys Ala Thr Ser Pro Ile Val Pro Ser Phe Asp

Gly Glu Asn Gly Arg Arg Thr Arg Ile Ala Tyr Glu Arg Met Cys Asn
210 215 220

Ile Leu Lys Gly Lys Phe Gln Thr Ala Ala Gln Arg Ala Met Met Asp
225 230 235 240

Gln Val Arg Glu Ser Arg Asn Pro Gly Asn Ala Glu Ile Glu Asp Leu
245 250 255

Ile Phe Leu Ala Arg Ser Ala Leu Ile Leu Arg Gly Ser Val Ala His
260 265 270

Lys Ser Cys Leu Pro Ala Cys Val Tyr Gly Pro Ala Val Ala Ser Gly
275 280 285

Tyr Asp Phe Glu Arg Glu Gly Tyr Ser Leu Val Gly Ile Asp Pro Phe
290 295 300

Arg Leu Leu Gln Asn Ser Gln Val Tyr Ser Leu Ile Arg Pro Asn Glu
305 310 315 320

Asn Pro Ala His Lys Ser Gln Leu Val Trp Met Ala Cys His Ser Ala
325 330 335

Ala Phe Glu Asp Leu Arg Val Ser Ser Phe Ile Arg Gly Thr Arg Val
340 345 350

Val Pro Arg Gly Lys Leu Ser Thr Arg Gly Val Gln Ile Ala Ser Asn
355 360 365

Glu Asn Met Glu Thr Met Asp Ser Ser Thr Leu Glu Leu Arg Ser Arg
370 375 380

Tyr Trp Ala Ile Arg Thr Arg Ser Gly Gly Asn Thr Asn Gln Gln Arg
385 390 395 400

Ala Ser Ala Gly Gln Ile Ser Val Gln Pro Thr Phe Ser Val Gln Arg
405 410 415

Asn Leu Pro Phe Glu Arg Ala Thr Ile Met Ala Ala Phe Thr Gly Asn
420 425 430

Thr Glu Gly Arg Thr Ser Asp Met Arg Thr Glu Ile Ile Arg Met Met
435 440 445

Glu Ser Ala Arg Pro Glu Asp Val Ser Phe Gln Gly Arg Gly Val Phe
450 455 460

Glu Leu Ser Asp Glu Lys Ala Thr Ser Pro Ile Val Pro Ser Phe Asp
465 470 475 480

Met Ser Asn Glu Gly Ser Tyr Phe Phe Gly Asp Asn Ala Glu Glu Tyr
485 490 495

Asp Asn

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<212> PRT
<213> Influenza A virus (A/Hong Kong/483/1997(H5N1))
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Met Ala Ser Gln Gly Thr Lys Arg Ser Tyr Glu Gln Met Glu Thr Gly
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Gly Glu Arg Gln Asn Ala Thr Glu Ile Arg Ala Ser Val Gly Arg Met
20 25 30

Val Gly Gly Ile Gly Arg Phe Tyr Ile Gln Met Cys Thr Glu Leu Lys
35 40 45

Leu Ser Asp Gln Glu Gly Arg Leu Ile Gln Asn Ser Ile Thr Ile Glu
50 55 60

Arg Met Val Leu Ser Ala Phe Asp Glu Arg Arg Asn Arg Tyr Leu Glu
65 70 75 80

Glu His Pro Ser Ala Gly Lys Asp Pro Lys Lys Thr Gly Gly Pro Ile
85 90 95

Tyr Arg Arg Arg Asp Gly Lys Trp Val Arg Glu Leu Ile Leu Tyr Asp
100 105 110

Lys Glu Glu Ile Arg Arg Ile Trp Arg Gln Ala Asn Asn Gly Glu Asp
115 120 125

Ala Thr Ala Gly Leu Thr His Met Met Ile Trp His Ser Asn Leu Asn
130 135 140

Asp Ala Thr Tyr Gln Arg Thr Arg Ala Leu Val Arg Thr Gly Met Asp
145 150 155 160

Pro Arg Met Cys Ser Leu Met Gln Gly Ser Thr Leu Pro Arg Arg Ser
165 170 175

Gly Ala Ala Gly Ala Ala Ile Lys Gly Val Gly Thr Met Val Met Glu
180 185 190

Leu Ile Arg Met Ile Lys Arg Gly Ile Asn Asp Arg Asn Phe Trp Arg
195 200 205

Gly Glu Asn Gly Arg Arg Thr Arg Ile Ala Tyr Glu Arg Met Cys Asn
210 215 220

Ile Leu Lys Gly Lys Phe Gln Thr Ala Ala Gln Lys Ala Met Met Asp
 225 230 235 240
 Gln Val Arg Glu Ser Arg Asn Pro Gly Asn Ala Glu Ile Glu Asp Leu
 245 250 255
 Ile Phe Leu Ala Arg Ser Ala Leu Ile Leu Arg Gly Ser Val Ala His
 260 265 270
 Lys Ser Cys Leu Pro Ala Cys Val Tyr Gly Leu Thr Val Ala Ser Gly
 275 280 285
 Tyr Asp Phe Glu Arg Glu Gly Tyr Ser Leu Val Gly Ile Asp Pro Phe
 290 295 300
 Arg Leu Leu Gln Asn Ser Gln Val Phe Ser Leu Ile Arg Pro Asn Glu
 305 310 315 320
 Asn Pro Ala His Lys Ser Gln Leu Val Trp Met Ala Cys His Ser Ala
 325 330 335
 Ala Phe Glu Asp Leu Arg Val Ser Ser Phe Ile Arg Gly Thr Arg Val
 340 345 350
 Ile Pro Arg Gly Gln Leu Ser Thr Arg Gly Val Gln Ile Ala Ser Asn
 355 360 365
 Glu Asn Val Glu Ala Met Asp Ser Ser Thr Leu Glu Leu Arg Ser Arg
 370 375 380
 Tyr Trp Ala Ile Arg Thr Arg Ser Gly Gly Asn Thr Asn Gln Gln Arg
 385 390 395 400
 Ala Ser Ala Gly Gln Ile Ser Val Gln Pro Thr Phe Ser Val Gln Arg
 405 410 415
 Asn Leu Pro Phe Glu Arg Ala Thr Ile Met Ala Ala Phe Lys Gly Asn
 420 425 430
 Thr Glu Gly Arg Thr Ser Asp Met Arg Thr Glu Ile Ile Arg Met Met
 435 440 445
 Glu Ser Ala Arg Pro Glu Asp Val Ser Phe Gln Gly Arg Gly Val Phe
 450 455 460
 Glu Leu Ser Asp Glu Lys Ala Thr Asn Pro Ile Val Pro Ser Phe Asp
 465 470 475 480
 Met Ser Asn Glu Gly Ser Tyr Phe Phe Gly Asp Asn Ala Glu Glu Tyr
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uuuguuuacac acacacacgc ugug 24

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