

SEQUENCE LISTING

<110> Janssen Pharmaceuticals, Inc.

<120> FimH mutant, compositions therewith and use thereof.

<130> CRU6050

<160> 7

<170> PatentIn version 3.5

<210> 1

<211> 159

<212> PRT

<213> Artificial Sequence

<220>

<223> FimHLD 23-10

<400> 1

Phe	Ala	Cys	Lys	Thr	Ala	Asn	Gly	Thr	Ala	Ile	Pro	Ile	Gly	Gly	Gly
1				5					10					15	

Ser	Ala	Asn	Val	Tyr	Val	Asn	Leu	Ala	Pro	Ala	Val	Asn	Val	Gly	Gln
		20					25					30			

Asn	Leu	Val	Val	Asp	Leu	Ser	Thr	Gln	Ile	Phe	Cys	His	Asn	Asp	Tyr
	35						40					45			

Pro	Glu	Thr	Ile	Thr	Asp	Tyr	Val	Thr	Leu	Gln	Arg	Gly	Ser	Ala	Tyr
	50					55					60				

Gly	Gly	Val	Leu	Ser	Asn	Phe	Ser	Gly	Thr	Val	Lys	Tyr	Ser	Gly	Ser
65					70				75					80	

Ser	Tyr	Pro	Phe	Pro	Thr	Thr	Ser	Glu	Thr	Pro	Arg	Val	Val	Tyr	Asn
			85						90					95	

Ser	Arg	Thr	Asp	Lys	Pro	Trp	Pro	Val	Ala	Leu	Tyr	Leu	Thr	Pro	Val
			100					105					110		

Ser	Ser	Ala	Gly	Gly	Val	Ala	Ile	Lys	Ala	Gly	Ser	Leu	Ile	Ala	Val
		115					120					125			

Leu Ile Leu Arg Gln Thr Asn Asn Tyr Asn Ser Asp Asp Phe Gln Phe
130 135 140

Val Trp Asn Ile Tyr Ala Asn Asn Asp Val Val Val Pro Thr Gly
145 150 155

<210> 2
<211> 279
<212> PRT
<213> Artificial Sequence

<220>
<223> FimHt

<400> 2

Phe Ala Cys Lys Thr Ala Asn Gly Thr Ala Ile Pro Ile Gly Gly Gly
1 5 10 15

Ser Ala Asn Val Tyr Val Asn Leu Ala Pro Ala Val Asn Val Gly Gln
20 25 30

Asn Leu Val Val Asp Leu Ser Thr Gln Ile Phe Cys His Asn Asp Tyr
35 40 45

Pro Glu Thr Ile Thr Asp Tyr Val Thr Leu Gln Arg Gly Ser Ala Tyr
50 55 60

Gly Gly Val Leu Ser Asn Phe Ser Gly Thr Val Lys Tyr Ser Gly Ser
65 70 75 80

Ser Tyr Pro Phe Pro Thr Thr Ser Glu Thr Pro Arg Val Val Tyr Asn
85 90 95

Ser Arg Thr Asp Lys Pro Trp Pro Val Ala Leu Tyr Leu Thr Pro Val
100 105 110

Ser Ser Ala Gly Gly Val Ala Ile Lys Ala Gly Ser Leu Ile Ala Val
115 120 125

Leu Ile Leu Arg Gln Thr Asn Asn Tyr Asn Ser Asp Asp Phe Gln Phe
130 135 140

Val Trp Asn Ile Tyr Ala Asn Asn Asp Val Val Val Pro Thr Gly Gly
 145 150 155 160

Cys Asp Val Ser Ala Arg Asp Val Thr Val Thr Leu Pro Asp Tyr Pro
 165 170 175

Gly Ser Val Pro Ile Pro Leu Thr Val Tyr Cys Ala Lys Ser Gln Asn
 180 185 190

Leu Gly Tyr Tyr Leu Ser Gly Thr Thr Ala Asp Ala Gly Asn Ser Ile
 195 200 205

Phe Thr Asn Thr Ala Ser Phe Ser Pro Ala Gln Gly Val Gly Val Gln
 210 215 220

Leu Thr Arg Asn Gly Thr Ile Ile Pro Ala Asn Asn Thr Val Ser Leu
 225 230 235 240

Gly Ala Val Gly Thr Ser Ala Val Ser Leu Gly Leu Thr Ala Asn Tyr
 245 250 255

Ala Arg Thr Gly Gly Gln Val Thr Ala Gly Asn Val Gln Ser Ile Ile
 260 265 270

Gly Val Thr Phe Val Tyr Gln
 275

<210> 3
 <211> 205
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> FimC

<400> 3

Gly Val Ala Leu Gly Ala Thr Arg Val Ile Tyr Pro Ala Gly Gln Lys
 1 5 10 15

Gln Val Gln Leu Ala Val Thr Asn Asn Asp Glu Asn Ser Thr Tyr Leu
 20 25 30

Ile Gln Ser Trp Val Glu Asn Ala Asp Gly Val Lys Asp Gly Arg Phe
35 40 45

Ile Val Thr Pro Pro Leu Phe Ala Met Lys Gly Lys Lys Glu Asn Thr
50 55 60

Leu Arg Ile Leu Asp Ala Thr Asn Asn Gln Leu Pro Gln Asp Arg Glu
65 70 75 80

Ser Leu Phe Trp Met Asn Val Lys Ala Ile Pro Ser Met Asp Lys Ser
85 90 95

Lys Leu Thr Glu Asn Thr Leu Gln Leu Ala Ile Ile Ser Arg Ile Lys
100 105 110

Leu Tyr Tyr Arg Pro Ala Lys Leu Ala Leu Pro Pro Asp Gln Ala Ala
115 120 125

Glu Lys Leu Arg Phe Arg Arg Ser Ala Asn Ser Leu Thr Leu Ile Asn
130 135 140

Pro Thr Pro Tyr Tyr Leu Thr Val Thr Glu Leu Asn Ala Gly Ala Arg
145 150 155 160

Val Leu Glu Asn Ala Leu Val Pro Pro Met Gly Glu Ser Thr Val Lys
165 170 175

Leu Pro Ser Asp Ala Gly Ser Asn Ile Thr Tyr Arg Thr Ile Asn Asp
180 185 190

Tyr Gly Ala Leu Thr Pro Lys Met Thr Gly Val Met Glu
195 200 205

<210> 4

<211> 300

<212> PRT

<213> Artificial Sequence

<220>

<223> Example of FimH 23-10

<400> 4

Met Lys Arg Val Ile Thr Leu Phe Ala Val Leu Leu Met Gly Trp Ser
 1 5 10 15

Val Asn Ala Trp Ser Phe Ala Cys Lys Thr Ala Asn Gly Thr Ala Ile
 20 25 30

Pro Ile Gly Gly Gly Ser Ala Asn Val Tyr Val Asn Leu Ala Pro Ala
 35 40 45

Val Asn Val Gly Gln Asn Leu Val Val Asp Leu Ser Thr Gln Ile Phe
 50 55 60

Cys His Asn Asp Tyr Pro Glu Thr Ile Thr Asp Tyr Val Thr Leu Gln
 65 70 75 80

Arg Gly Ser Ala Tyr Gly Gly Val Leu Ser Asn Phe Ser Gly Thr Val
 85 90 95

Lys Tyr Ser Gly Ser Ser Tyr Pro Phe Pro Thr Thr Ser Glu Thr Pro
 100 105 110

Arg Val Val Tyr Asn Ser Arg Thr Asp Lys Pro Trp Pro Val Ala Leu
 115 120 125

Tyr Leu Thr Pro Val Ser Ser Ala Gly Gly Val Ala Ile Lys Ala Gly
 130 135 140

Ser Leu Ile Ala Val Leu Ile Leu Arg Gln Thr Asn Asn Tyr Asn Ser
 145 150 155 160

Asp Asp Phe Gln Phe Val Trp Asn Ile Tyr Ala Asn Asn Asp Val Val
 165 170 175

Val Pro Thr Gly Gly Cys Asp Val Ser Ala Arg Asp Val Thr Val Thr
 180 185 190

Leu Pro Asp Tyr Pro Gly Ser Val Pro Ile Pro Leu Thr Val Tyr Cys
 195 200 205

Ala Lys Ser Gln Asn Leu Gly Tyr Tyr Leu Ser Gly Thr Thr Ala Asp
 210 215 220

Ala Gly Asn Ser Ile Phe Thr Asn Thr Ala Ser Phe Ser Pro Ala Gln
225 230 235 240

Gly Val Gly Val Gln Leu Thr Arg Asn Gly Thr Ile Ile Pro Ala Asn
245 250 255

Asn Thr Val Ser Leu Gly Ala Val Gly Thr Ser Ala Val Ser Leu Gly
260 265 270

Leu Thr Ala Asn Tyr Ala Arg Thr Gly Gly Gln Val Thr Ala Gly Asn
275 280 285

Val Gln Ser Ile Ile Gly Val Thr Phe Val Tyr Gln
290 295 300

<210> 5
<211> 300
<212> PRT
<213> Artificial Sequence

<220>
<223> SEQ ID NO: 2 of US 6,500,434 - FimH

<400> 5

Met Lys Arg Val Ile Thr Leu Phe Ala Val Leu Leu Met Gly Trp Ser
1 5 10 15

Val Asn Ala Trp Ser Phe Ala Cys Lys Thr Ala Asn Gly Thr Ala Ile
20 25 30

Pro Ile Gly Gly Gly Ser Ala Asn Val Tyr Val Asn Leu Ala Pro Val
35 40 45

Val Asn Val Gly Gln Asn Leu Val Val Asp Leu Ser Thr Gln Ile Phe
50 55 60

Cys His Asn Asp Tyr Pro Glu Thr Ile Thr Asp Tyr Val Thr Leu Gln
65 70 75 80

Arg Gly Ser Ala Tyr Gly Gly Val Leu Ser Asn Phe Ser Gly Thr Val
85 90 95

Lys Tyr Ser Gly Ser Ser Tyr Pro Phe Pro Thr Thr Ser Glu Thr Pro
100 105 110

Arg Val Val Tyr Asn Ser Arg Thr Asp Lys Pro Trp Pro Val Ala Leu
115 120 125

Tyr Leu Thr Pro Val Ser Ser Ala Gly Gly Val Ala Ile Lys Ala Gly
130 135 140

Ser Leu Ile Ala Val Leu Ile Leu Arg Gln Thr Asn Asn Tyr Asn Ser
145 150 155 160

Asp Asp Phe Gln Phe Val Trp Asn Ile Tyr Ala Asn Asn Asp Val Val
165 170 175

Val Pro Thr Gly Gly Cys Asp Val Ser Ala Arg Asp Val Thr Val Thr
180 185 190

Leu Pro Asp Tyr Arg Gly Ser Val Pro Ile Pro Leu Thr Val Tyr Cys
195 200 205

Ala Lys Ser Gln Asn Leu Gly Tyr Tyr Leu Ser Gly Thr His Ala Asp
210 215 220

Ala Gly Asn Ser Ile Phe Thr Asn Thr Ala Ser Phe Ser Pro Ala Gln
225 230 235 240

Gly Val Gly Val Gln Leu Thr Arg Asn Gly Thr Ile Ile Pro Ala Asn
245 250 255

Asn Thr Val Ser Leu Gly Ala Val Gly Thr Ser Ala Val Ser Leu Gly
260 265 270

Leu Thr Ala Asn Tyr Ala Arg Thr Gly Gly Gln Val Thr Ala Gly Asn
275 280 285

Val Gln Ser Ile Ile Gly Val Thr Phe Val Thr Gln
290 295 300

<210> 6
 <211> 279
 <212> PRT
 <213> Artificial Sequence

<220>

<223> FimH sequence with truncation at N-terminus

<400> 6

Phe Ala Cys Lys Thr Ala Asn Gly Thr Ala Ile Pro Ile Gly Gly Gly
 1 5 10 15

Ser Ala Asn Val Tyr Val Asn Leu Ala Pro Val Val Asn Val Gly Gln
 20 25 30

Asn Leu Val Val Asp Leu Ser Thr Gln Ile Phe Cys His Asn Asp Tyr
 35 40 45

Pro Glu Thr Ile Thr Asp Tyr Val Thr Leu Gln Arg Gly Ser Ala Tyr
 50 55 60

Gly Gly Val Leu Ser Asn Phe Ser Gly Thr Val Lys Tyr Ser Gly Ser
 65 70 75 80

Ser Tyr Pro Phe Pro Thr Thr Ser Glu Thr Pro Arg Val Val Tyr Asn
 85 90 95

Ser Arg Thr Asp Lys Pro Trp Pro Val Ala Leu Tyr Leu Thr Pro Val
 100 105 110

Ser Ser Ala Gly Gly Leu Val Ile Lys Ala Gly Ser Leu Ile Ala Val
 115 120 125

Leu Ile Leu Arg Gln Thr Asn Asn Tyr Asn Ser Asp Asp Phe Gln Phe
 130 135 140

Val Trp Asn Ile Tyr Ala Asn Asn Asp Val Val Val Pro Thr Gly Gly
 145 150 155 160

Cys Asp Val Ser Ala Arg Asp Val Thr Val Thr Leu Pro Asp Tyr Arg
 165 170 175

Gly Ser Val Pro Ile Pro Leu Thr Val Tyr Cys Ala Lys Ser Gln Asn
180 185 190

Leu Gly Tyr Tyr Leu Ser Gly Thr His Ala Asp Ala Gly Asn Ser Ile
195 200 205

Phe Thr Asn Thr Ala Ser Phe Ser Pro Ala Gln Gly Val Gly Val Gln
210 215 220

Leu Thr Arg Asn Gly Thr Ile Ile Pro Thr Asn Asn Thr Val Ser Leu
225 230 235 240

Gly Ala Val Gly Thr Ser Ala Val Ser Leu Gly Leu Thr Ala Asn Tyr
245 250 255

Ala Arg Thr Gly Gly Gln Val Thr Ala Gly Asn Val Gln Ser Ile Ile
260 265 270

Gly Val Thr Phe Val Tyr Gln
275

<210> 7
<211> 160
<212> PRT
<213> Artificial Sequence

<220>
<223> FimHLD

<400> 7

Phe Ala Cys Lys Thr Ala Asn Gly Thr Ala Ile Pro Ile Gly Gly Gly
1 5 10 15

Ser Ala Asn Val Tyr Val Asn Leu Ala Pro Val Val Asn Val Gly Gln
20 25 30

Asn Leu Val Val Asp Leu Ser Thr Gln Ile Phe Cys His Asn Asp Tyr
35 40 45

Pro Glu Thr Ile Thr Asp Tyr Val Thr Leu Gln Arg Gly Ser Ala Tyr
50 55 60

Gly Gly Val Leu Ser Asn Phe Ser Gly Thr Val Lys Tyr Ser Gly Ser
65 70 75 80

Ser Tyr Pro Phe Pro Thr Thr Ser Glu Thr Pro Arg Val Val Tyr Asn
85 90 95

Ser Arg Thr Asp Lys Pro Trp Pro Val Ala Leu Tyr Leu Thr Pro Val
100 105 110

Ser Ser Ala Gly Gly Leu Val Ile Lys Ala Gly Ser Leu Ile Ala Val
115 120 125

Leu Ile Leu Arg Gln Thr Asn Asn Tyr Asn Ser Asp Asp Phe Gln Phe
130 135 140

Val Trp Asn Ile Tyr Ala Asn Asn Asp Val Val Val Pro Thr Gly Gly
145 150 155 160