

ATOX100WO_Sequence Listing.TXT

SEQUENCE LISTING

<110> MEDIMMUNE, LLC

<120> ANTIBODIES THAT SPECIFICALLY BIND
STAPHYLOCOCCUS AUREUS ALPHA
TOXIN AND METHODS OF USE

<130> ATOX-100WO1

<140>

<141>

<150> 61/440,581

<151> 2011-02-08

<160> 92

<170> PatentIn version 3.5

<210> 1

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 1

Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu

ATOX100WO_Sequence Listing.TXT

Ala

1 5 10

<210> 2

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 2

Lys Ala Ser Ser Leu Glu Ser
1 5

<210> 3

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 3

Gln Gln Tyr Asn Ser Tyr Trp Thr
1 5

ATOX100WO_Sequence Listing.TXT

<210> 4
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 4
Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu
Gly
1 5 10

<210> 5
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 5
Asp Ala Ser Ser Leu Gln Ser
1 5

ATOX100WO_Sequence Listing.TXT

<210> 6
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 6
Leu Gln Asp Tyr Asn Tyr Pro Trp Thr
1 5

<210> 7
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 7
Ser Tyr Asp Met His
1 5

<210> 8
<211> 16

ATOX100WO_Sequence Listing.TXT

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 8

Gly	Ile	Gly	Thr	Ala	Gly	Asp	Thr	Tyr	Tyr
Pro	Gly	Ser	Val	Lys	Gly				
1				5					10
				15					

<210> 9

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 9

Asp	Asn	Tyr	Ser	Ser	Thr	Gly	Gly	Tyr	Tyr
Gly	Met	Asp	Val						
1				5					10

<210> 10

ATOX100WO_Sequence Listing.TXT

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 10

Arg Tyr Asp Met His
1 5

<210> 11

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 11

Val Ile Gly Thr Asp Gly Asp Thr Tyr Tyr
Pro Gly Ser Val Lys Gly
1 5 10
15

<210> 12

<211> 14

ATOX100WO_Sequence Listing.TXT

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 12

Asp	Arg	Tyr	Ser	Ser	Ser	Asn	His	Tyr	Asn		
Gly	Met	Asp	Val								
1				5						10	

<210> 13

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 13

Ser	Tyr	Ala	Met	Thr							
1				5							

<210> 14

<211> 17

<212> PRT

ATOX100WO_Sequence Listing.TXT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 14

Val	Ile	Ser	Gly	Ser	Gly	Gly	Ser	Thr	Tyr
Tyr	Ala	Asp	Ser	Val	Lys				
1				5					10
			15						

Gly

<210> 15

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 15

Asp	Gly	Arg	Gln	Val	Glu	Asp	Tyr	Tyr	Tyr
Tyr	Tyr	Gly	Met	Asp	Val				
1				5					10
			15						

ATOX100WO_Sequence Listing.TXT

<210> 16
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 16
Asp Arg Tyr Ser Pro Thr Gly His Tyr Met
Gly Met Asp Val
1 5 10

<210> 17
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 17
Val Ile Asp Thr Ala Gly Asp Thr Tyr Tyr
Pro Gly Ser Val Lys Gly
1 5 10

ATOX100WO_Sequence Listing.TXT
15

<210> 18
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 18
Asp Arg Tyr Ser Gly Asn Phe His Tyr Asn
Gly Met Asp Val
1 5 10

<210> 19
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 19
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr
Leu Ser Ala Ser Val Gly
Page 10

ATOX100WO_Sequence Listing.TXT

1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
Gln Ser Ile Ser Ser Trp
20 25
30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
Ala Pro Lys Leu Leu Ile
35 40
45

Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val
Pro Ser Arg Phe Ser Gly
50 55
60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr
Ile Ser Ser Leu Gln Pro
65 70
75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
Tyr Asn Ser Tyr Trp Thr
85 90
95

ATOX100WO_Sequence Listing.TXT

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 20

<211> 122

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 20

Glu Val Gln Leu Val Glu Ser Gly Gly Gly
Leu Val Gln Pro Gly Gly
1 5 10
15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
Phe Thr Phe Ser Ser Tyr
20 25
30

Asp Met His Trp Val Arg Gln Ala Thr Gly
Lys Gly Leu Glu Trp Val
35 40
45

ATOX100WO_Sequence Listing.TXT

Ser	Gly	Ile	Gly	Thr	Ala	Gly	Asp	Thr	Tyr
Tyr	Pro	Gly	Ser	Val	Lys				
	50					55			
	60								

Gly	Arg	Phe	Thr	Ile	Ser	Arg	Glu	Asn	Ala
Lys	Asn	Ser	Leu	Tyr	Leu				
65					70				
75					80				

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

Arg	Asp	Asn	Tyr	Ser	Ser	Thr	Gly	Gly	Tyr
Tyr	Gly	Met	Asp	Val	Trp				
			100					105	
			110						

Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser
		115					120		

<210> 21
 <211> 106
 <212> PRT
 <213> Artificial Sequence
 Page 13

ATOX100WO_Sequence Listing.TXT

<220>

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 21

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Thr
Leu	Ser	Ala	Ser	Val	Gly				
1				5					10
				15					

Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser
Gln	Ser	Ile	Ser	Ser	Trp				
			20					25	
			30						

Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys
Ala	Pro	Lys	Leu	Leu	Ile				
		35					40		
		45							

Tyr	Lys	Ala	Ser	Ser	Leu	Glu	Ser	Gly	Val
Pro	Ser	Arg	Phe	Ser	Gly				
	50					55			
	60								

Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr
Ile	Ser	Ser	Leu	Gln	Pro				

ATOX100WO_Sequence Listing.TXT

65
75

70
80

Asp	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln
Tyr	Asn	Ser	Tyr	Trp	Thr				
				85					90
				95					

Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys
			100					105	

<210> 22
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

<400>	22								
Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly
Leu	Val	Gln	Pro	Gly	Gly				
1				5					10
			15						

Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly
Phe	Thr	Phe	Ser	Arg	Tyr				

Page 15

ATOX100WO_Sequence Listing.TXT

20 25
30

Asp Met His Trp Val Arg Gln Ala Thr Gly
Lys Gly Leu Glu Trp Val
35 40
45

Ser Val Ile Gly Thr Asp Gly Asp Thr Tyr
Tyr Pro Gly Ser Val Lys
50 55
60

Gly Arg Phe Ile Ile Ser Arg Glu Asn Ala
Lys Asn Ser Leu Tyr Leu
65 70
75 80

Glu Met Asn Ser Leu Arg Ala Gly Asp Thr
Ala Val Tyr Tyr Cys Ala
85 90
95

Arg Asp Arg Tyr Ser Ser Ser Asn His Tyr
Asn Gly Met Asp Val Trp
100 105
110

ATOX100WO_Sequence Listing.TXT

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 23

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 23

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr
Leu Ser Ala Ser Val Gly
1 5 10
15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
Gln Ser Ile Ser Ser Trp
20 25
30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
Ala Pro Lys Val Leu Ile
35 40
45

ATOX100WO_Sequence Listing.TXT

Tyr	Lys	Ala	Ser	Ser	Leu	Glu	Ser	Gly	Val
Pro	Ser	Arg	Phe	Ser	Gly				
	50					55			
	60								

Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr
Ile	Ser	Ser	Leu	Gln	Pro				
65					70				
75					80				

Asp	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln
Tyr	Asn	Ser	Tyr	Trp	Thr				
				85					90
				95					

Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys
			100					105	

<210> 24
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

ATOX100WO_Sequence Listing.TXT

<400> 24

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly
Leu	Val	Gln	Pro	Gly	Gly				
1				5					10
				15					

Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly
Phe	Thr	Phe	Ser	Arg	Tyr				
			20					25	
			30						

Asp	Met	His	Trp	Val	Arg	Gln	Ala	Thr	Gly
Lys	Gly	Leu	Glu	Trp	Val				
		35					40		
		45							

Ser	Val	Ile	Gly	Thr	Asp	Gly	Asp	Thr	Tyr
Tyr	Pro	Gly	Ser	Val	Lys				
	50					55			
	60								

Gly	Arg	Phe	Ile	Ile	Ser	Arg	Glu	Asn	Ala
Lys	Asn	Ser	Leu	Tyr	Leu				
65					70				
75					80				

Glu	Met	Asn	Ser	Leu	Arg	Ala	Gly	Asp	Thr
Ala	Val	Tyr	Tyr	Cys	Ala				

Page 19

ATOX100WO_Sequence Listing.TXT

85 90
95

Arg	Asp	Arg	Tyr	Ser	Ser	Ser	Asn	His	Tyr
Asn	Gly	Met	Asp	Val	Trp				
			100					105	
			110						

Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser
		115					120		

<210> 25
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

<400> 25									
Ala	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser
Leu	Ser	Ala	Ser	Val	Gly				
1				5					10
				15					

Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser
Gln	Gly	Ile	Arg	Asn	Asp				

ATOX100WO_Sequence Listing.TXT

20 25
30

Leu	Gly	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys
Ala	Pro	Lys	Leu	Leu	Ile				
		35					40		
		45							

Tyr	Asp	Ala	Ser	Ser	Leu	Gln	Ser	Gly	Val
Pro	Ser	Arg	Phe	Ser	Gly				
	50					55			
	60								

Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr
Ile	Ser	Ser	Leu	Gln	Pro				
65					70				
75					80				

Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Leu	Gln
Asp	Tyr	Asn	Tyr	Pro	Trp				
				85					90
				95					

Thr	Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile
Lys									
			100					105	

ATOX100WO_Sequence Listing.TXT

<210> 26
 <211> 125
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

<400> 26
 Glu Val Gln Leu Leu Glu Ser Gly Gly Gly
 Leu Val Gln Pro Gly Gly
 1 5 10
 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
 Phe Thr Phe Ser Ser Tyr
 20 25
 30

Ala Met Thr Trp Val Arg Gln Ala Pro Gly
 Lys Gly Leu Glu Trp Val
 35 40
 45

Ser Val Ile Ser Gly Ser Gly Gly Ser Thr
 Tyr Tyr Ala Asp Ser Val
 50 55

ATOX100WO_Sequence Listing.TXT
60

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

Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp
Thr	Ala	Val	Tyr	Tyr	Cys				
				85					90
				95					

Ala	Lys	Asp	Gly	Arg	Gln	Val	Glu	Asp	Tyr
Tyr	Tyr	Tyr	Tyr	Gly	Met				
			100					105	
			110						

Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr
Val	Ser	Ser							
		115					120		
		125							

<210> 27
 <211> 106
 <212> PRT
 <213> Artificial Sequence
 <220>

ATOX100WO_Sequence Listing.TXT

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 27

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Thr
Leu	Ser	Ala	Ser	Val	Gly				
1				5					10
				15					

Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser
Gln	Ser	Ile	Ser	Ser	Trp				
			20					25	
			30						

Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys
Ala	Pro	Lys	Leu	Leu	Ile				
		35					40		
		45							

Tyr	Lys	Ala	Ser	Ser	Leu	Glu	Ser	Gly	Val
Pro	Ser	Arg	Phe	Ser	Gly				
	50					55			
	60								

Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr
Ile	Ser	Ser	Leu	Gln	Pro				
65					70				
75					80				

ATOX100WO_Sequence Listing.TXT

Asp	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln
Tyr	Asn	Ser	Tyr	Trp	Thr				
				85					90
				95					

Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys
			100					105	

<210> 28
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

<400>	28								
Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly
Leu	Val	Gln	Pro	Gly	Gly				
1				5					10
				15					

Ser	Leu	Arg	Leu	Ser	Cys	Thr	Ala	Ser	Gly
Phe	Thr	Phe	Ser	Ser	Tyr				
			20					25	
			30						

ATOX100WO_Sequence Listing.TXT

Asp	Met	His	Trp	Val	Arg	Gln	Ala	Thr	Gly
Lys	Gly	Leu	Glu	Trp	Val				
		35					40		
		45							

Ser	Val	Ile	Asp	Thr	Ala	Gly	Asp	Thr	Tyr
Tyr	Pro	Gly	Ser	Val	Lys				
	50					55			
	60								

Gly	Arg	Phe	Thr	Ile	Ser	Arg	Glu	Asn	Ala
Lys	Asn	Ser	Leu	Tyr	Leu				
65					70				
75					80				

Gln	Met	Asn	Ser	Leu	Arg	Ala	Gly	Asp	Thr
Ala	Val	Tyr	Tyr	Cys	Val				
				85					90
				95					

Arg	Asp	Arg	Tyr	Ser	Gly	Asn	Phe	His	Tyr
Asn	Gly	Met	Asp	Val	Trp				
			100					105	
			110						

Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Page 26

ATOX100WO_Sequence Listing.TXT
115 120

<210> 29
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polynucleotide

<400> 29
gacatccaga tgacccagtc tccttccacc
ctgtctgcat ctgtaggaga cagagtcacc
60

atcacttgcc gggccagtca gagtattagt
agctggttgg cctgggtatca gcagaaacca
120

gggaaagccc ctaaactcct gatctataag
gcgtctagtt tagaaagtgg ggtcccatca
180

aggttcagcg gcagtggatc tgggacagaa
ttcactctca ccatcagcag cctgcagcct
240

gatgattttg caacttatta ctgccaacag
tataatagtt attggacggt cgccaagg
300

ATOX100WO_Sequence Listing.TXT

accaaggtgg aaatcaaa

318

<210> 30

<211> 366

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
polynucleotide

<400> 30

gaggtgcagc tgggtggagtc tgggggagggc
ttggtacagc ctggggggggtc cctgagactc
60

tcctgtgcag cctctggatt caccttcagt
agctacgaca tgcactgggt ccgccaagct
120

acaggaaaag gtctggagtg ggtctcaggt
attggcactg ctggtgacac atattatcca
180

ggctccgtga agggccgatt caccatctcc
agagaaaatg ccaagaactc cttgtatctt
240

caattgaaca gcctgagagc cggggacacg

ATOX100WO_Sequence Listing.TXT

gctgtgtact tctgtgcaag agacaattat
300

agcagcaccg ggggggtacta cggtatggac
gtctggggcc aaggggaccac ggtcaccgtc
360

tcctca
366

<210> 31
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polynucleotide

<400> 31
gacatccaga tgacccagtc tccttccacc
ctgtctgcat ctgtaggaga cagagtcacc
60

atcacttgcc gggccagtca gagtattagt
agctggttgg cctgggtatca gcagaaacca
120

gggaaagccc ctaaactcct gatctataag
gcgtctagtt tagaaagtgg ggtcccatca
180

ATOX100WO_Sequence Listing.TXT

aggttcagcg gcagtggatc tgggacagaa
ttcactctca ccatcagcag cctgcagcct
240

gatgattttg caacttatta ctgccaacag
tataatagtt attggacggt cgccaagg
300

accaaggtgg aaatcaaa

318

<210> 32

<211> 366

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
polynucleotide

<400> 32

gaggtgcagc tggtggagtc tgggggaggc
ttggtacagc ctgggggggtc cctgagactc
60

tcctgtgcag cctctggatt caccttcagt
aggtacgaca tgcactgggt ccgccaagct
120

acaggaaaag gtctggagtg ggtctcagtt

ATOX100WO_Sequence Listing.TXT

attggtactg atggtgacac atactatcca
180

ggctccgtga agggccgatt catcatctcc
agagaaaatg ccaagaactc cttgtatctt
240

gaaatgaaca gcctgagagc cggggacacg
gctgtgtatt actgtgcaag agatcggtat
300

agcagctcga accactacaa cggtatggac
gtctggggcc aagggaccac ggtcaccgtc
360

tcctca

366

<210> 33
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polynucleotide

<400> 33
gacatccaga tgacccagtc tccttccacc
ctgtctgcat ctgtaggaga cagagtcacc
60

ATOX100WO_Sequence Listing.TXT

atcacttgcc gggccagtca gagtattagt
agctggttgg cctgggtatca gcagaaacca
120

gggaaagccc ctaagggtcct gatctataag
gcgtctagtt tagaaagtgg ggtcccatca
180

aggttcagcg gcagtggatc tgggacagaa
ttcactctca ccatcagcag cctgcagcct
240

gatgattttg caacttatta ctgccaacag
tataatagtt attggacggt cgccaagg
300

accaagggtgg aaatcaaa

318

<210> 34

<211> 366

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
polynucleotide

<400> 34

gaggtgcagc tgggtggagtc tgggggaggc

ATOX100WO_Sequence Listing.TXT

ttggtacagc ctgggggggtc cctgagactc
60

tcctgtgcag cctctggatt caccttcagt
aggtacgaca tgcactgggt ccgccaagct
120

acaggaaaag gtctggagtg ggtctcagtt
attggtactg atggtgacac atactatcca
180

ggctccgtga agggccgatt catcatctcc
agagaaaatg ccaagaactc cttgtatctt
240

gaaatgaaca gcctgagagc cggggacacg
gctgtgtatt actgtgcaag agatcggtat
300

agcagctcga accactacaa cggtatggac
gtctggggcc aagggaccac ggtcaccgtc
360

tcctca

366

<210> 35
<211> 321
<212> DNA
<213> Artificial Sequence

<220>

ATOX100WO_Sequence Listing.TXT

<223> Description of Artificial
Sequence: Synthetic
polynucleotide

<400> 35

gccatccaga tgacccagtc tccatcctcc
ctgtctgcat ctgtaggaga cagagtcacc
60

atcacttgcc gggcaagtca gggcattaga
aatgatttag gctgggtatca gcagaaacca
120

gggaaagccc ctaagctcct gatctatgat
gcatccagtt tacaaagtgg ggtcccatca
180

aggttcagcg gcagtggatc tggcacagat
ttcactctca ccatcagcag cctgcagcct
240

gaagattttg caacttatta ctgtctacaa
gattacaatt acccgtggac gttcggccaa
300

gggaccaagg tggaaatcaa a

321

<210> 36

<211> 375

<212> DNA

<213> Artificial Sequence

ATOX100WO_Sequence Listing.TXT

<220>

<223> Description of Artificial
Sequence: Synthetic
polynucleotide

<400> 36

gaggtgcagc tgttggagtc tgggggaggc
ttggtacagc ctgggggggtc cctgagactc
60

tcctgtgcag cctctggatt cacctttagc
agctatgcca tgacctgggt ccgccaggct
120

ccaggggaagg ggctggaatg ggtctcagtt
attagtggta gtggtggtag cacatactac
180

gcagactccg tgaagggccg gttcacccgtc
tccagagaca attccaagaa cacgctgtat
240

ctgcaaataga acagcctgag agccgaggac
acggccgtat attactgtgc gaaagatggg
300

aggcagggtcg aggattacta ctactactac
ggatatggacg tctggggcca agggaccacg
360

gtcacccgtct cctca

375

ATOX100WO_Sequence Listing.TXT

<210> 37
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polynucleotide

<400> 37
gacatccaga tgacccagtc tccttccacc
ctgtctgcat ctgtaggaga cagagtcacc
60

atcacttgcc gggccagtca gagtattagt
agctggttgg cctgggtatca gcagaaacca
120

gggaaagccc ctaagctcct gatctataag
gcgtctagtt tagaaagtgg ggtcccatca
180

aggttcagcg gcagtggatc tgggacagaa
ttcactctca ccatcagcag cctgcagcct
240

gatgattttg caacttatta ctgccaacag
tataatagtt attggacggt cggccaaggg
300

ATOX100WO_Sequence Listing.TXT
accaaggtgg aaatcaaa

318

<210> 38
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polynucleotide

<400> 38
gaggtgcagc tgggtggagtc tgggggaggc
ttggtacagc ctgggggggtc cctgagactc
60

tcctgtacag cctctggatt caccttcagt
agttacgaca tgcactgggt ccgccaagct
120

acaggaaaag gtctggagtg ggtctcagtt
attgatactg ctggtgacac atactatcca
180

ggctccgtga agggccgatt caccatctcc
agagaaaatg ccaagaactc cttgtatctt
240

caaatgaaca gcctgagagc cggggacacg
gctgtgtatt actgtgtaag agataggat

ATOX100WO_Sequence Listing.TXT

300

agtgggaact tccactacaa cggtatggac
gtctggggcc aagggaccac ggtcaccgtc
360

tcctca

366

<210> 39

<211> 293

<212> PRT

<213> Staphylococcus aureus

<400> 39

Ala	Asp	Ser	Asp	Ile	Asn	Ile	Lys	Thr	Gly
Thr	Thr	Asp	Ile	Gly	Ser				
1				5					10
				15					

Asn	Thr	Thr	Val	Lys	Thr	Gly	Asp	Leu	Val
Thr	Tyr	Asp	Lys	Glu	Asn				
			20					25	
			30						

Gly	Met	His	Lys	Lys	Val	Phe	Tyr	Ser	Phe
Ile	Asp	Asp	Lys	Asn	His				
		35					40		
		45							

ATOX100wo_Sequence Listing.TXT

Asn Lys Lys Leu Leu Val Ile Arg Thr Lys
Gly Thr Ile Ala Gly Gln
50 55
60

Tyr Arg Val Tyr Ser Glu Glu Gly Ala Asn
Lys Ser Gly Leu Ala Trp
65 70
75 80

Pro Ser Ala Phe Lys Val Gln Leu Gln Leu
Pro Asp Asn Glu Val Ala
85 90
95

Gln Ile Ser Asp Tyr Tyr Pro Arg Asn Ser
Ile Asp Thr Lys Glu Tyr
100 105
110

Met	Ser	Thr	Leu	Thr	Tyr	Gly	Phe	Asn	Gly
Asn	Val	Thr	Gly	Asp	Asp				
		115					120		
		125							

Thr Gly Lys Ile Gly Gly Leu Ile Gly Ala
Asn Val Ser Ile Gly His
Page 39

ATOX100WO_Sequence Listing.TXT
 130 135
 140

Thr	Leu	Lys	Tyr	Val	Gln	Pro	Asp	Phe	Lys
Thr	Ile	Leu	Glu	Ser	Pro				
145					150				
155					160				

Thr	Asp	Lys	Lys	Val	Gly	Trp	Lys	Val	Ile
Phe	Asn	Asn	Met	Val	Asn				
				165					170
				175					

Gln	Asn	Trp	Gly	Pro	Tyr	Asp	Arg	Asp	Ser
Trp	Asn	Pro	Val	Tyr	Gly				
			180					185	
			190						

Asn	Gln	Leu	Phe	Met	Lys	Thr	Arg	Asn	Gly
Ser	Met	Lys	Ala	Ala	Asp				
		195					200		
		205							

Asn	Phe	Leu	Asp	Pro	Asn	Lys	Ala	Ser	Ser
Leu	Leu	Ser	Ser	Gly	Phe				
	210					215			
220									

ATOX100WO_Sequence Listing.TXT

Ser	Pro	Asp	Phe	Ala	Thr	Val	Ile	Thr	Met
Asp	Arg	Lys	Ala	Ser	Lys				
225					230				
235					240				

Gln	Gln	Thr	Asn	Ile	Asp	Val	Ile	Tyr	Glu
Arg	Val	Arg	Asp	Asp	Tyr				
				245					250
				255					

Gln	Leu	His	Trp	Thr	Ser	Thr	Asn	Trp	Lys
Gly	Thr	Asn	Thr	Lys	Asp				
			260					265	
			270						

Lys	Trp	Thr	Asp	Arg	Ser	Ser	Glu	Arg	Tyr
Lys	Ile	Asp	Trp	Glu	Lys				
		275					280		
		285							

Glu	Glu	Met	Thr	Asn					
290									

<210> 40
 <211> 293
 <212> PRT
 <213> Staphylococcus aureus

ATOX100wo_Sequence_Listing.TXT

$\langle 400 \rangle$ 40

Ala Asp Ser Asp Ile Asn Ile Lys Thr Gly
Thr Thr Asp Ile Gly Ser
1 5 10
15

Asn Thr Thr Val Lys Thr Gly Asp Leu Val
Thr Tyr Asp Lys Glu Asn
20 25
30

Gly Met Leu Lys Lys Val Phe Tyr Ser Phe
Ile Asp Asp Lys Asn His
35 40
45

Asn Lys Lys Leu Leu Val Ile Arg Thr Lys
Gly Thr Ile Ala Gly Gln
50 55
60

Tyr Arg Val Tyr Ser Glu Glu Gly Ala Asn
Lys Ser Gly Leu Ala Trp
65 70
75 80

Pro Ser Ala Phe Lys Val Gln Leu Gln Leu
Page 42

ATOX100WO_Sequence Listing.TXT

Pro Asp Asn Glu Val Ala
85 90
95

Gln Ile Ser Asp Tyr Tyr Pro Arg Asn Ser
Ile Asp Thr Lys Glu Tyr
100 105
110

Met Ser Thr Leu Thr Tyr Gly Phe Asn Gly
Asn Val Thr Gly Asp Asp
115 120
125

Thr Gly Lys Ile Gly Gly Leu Ile Gly Ala
Asn Val Ser Ile Gly His
130 135
140

Thr Leu Lys Tyr Val Gln Pro Asp Phe Lys
Thr Ile Leu Glu Ser Pro
145 150
155 160

Thr Asp Lys Lys Val Gly Trp Lys Val Ile
Phe Asn Asn Met Val Asn
165 170
175

ATOX100WO_Sequence Listing.TXT

Gln	Asn	Trp	Gly	Pro	Tyr	Asp	Arg	Asp	Ser
Trp	Asn	Pro	Val	Tyr	Gly				
			180					185	
			190						

Asn	Gln	Leu	Phe	Met	Lys	Thr	Arg	Asn	Gly
Ser	Met	Lys	Ala	Ala	Asp				
		195					200		
		205							

Asn	Phe	Leu	Asp	Pro	Asn	Lys	Ala	Ser	Ser
Leu	Leu	Ser	Ser	Gly	Phe				
	210					215			
	220								

Ser	Pro	Asp	Phe	Ala	Thr	Val	Ile	Thr	Met
Asp	Arg	Lys	Ala	Ser	Lys				
225					230				
235					240				

Gln	Gln	Thr	Asn	Ile	Asp	Val	Ile	Tyr	Glu
Arg	Val	Arg	Asp	Asp	Tyr				
				245					250
				255					

Gln	Leu	His	Trp	Thr	Ser	Thr	Asn	Trp	Lys
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Page 44

ATOX100wO_Sequence Listing.TXT

Gly Thr Asn Thr Lys Asp

260

265

270

Lys Trp Thr Asp Arg Ser Ser Glu Arg Tyr

Lys Ile Asp Trp Glu Lys

275

280

285

Glu Glu Met Thr Asn

290

<210> 41

<211> 122

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial

Sequence: Synthetic

polypeptide

<400> 41

Glu Val Gln Leu Val Glu Ser Gly Gly Gly

Leu Val Gln Pro Gly Gly

1

5

10

15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly

ATOX100WO_Sequence Listing.TXT

Phe Thr Phe Ser Ser Tyr

20

25

30

Asp Met His Trp Val Arg Gln Ala Thr Gly
Lys Gly Leu Glu Trp Val

35

40

45

Ser Gly Ile Gly Thr Ala Gly Asp Thr Tyr
Tyr Pro Gly Ser Val Lys

50

55

60

Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala
Lys Asn Ser Leu Tyr Leu

65

70

75

80

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr
Ala Val Tyr Tyr Cys Ala

85

90

95

Arg Asp Arg Tyr Ser Pro Thr Gly His Tyr
Met Gly Met Asp Val Trp

100

105

110

ATOX100WO_Sequence Listing.TXT

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 42

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 42

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr
Leu Ser Ala Ser Val Gly
1 5 10
15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
Gln Ser Ile Ser Ser Trp
20 25
30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
Ala Pro Lys Leu Leu Ile
35 40
45

ATOX100WO_Sequence Listing.TXT

Tyr	Lys	Ala	Ser	Ser	Leu	Glu	Ser	Gly	Val
Pro	Ser	Arg	Phe	Ser	Gly				
	50					55			
	60								

Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr
Ile	Ser	Ser	Leu	Gln	Pro				
65					70				
75					80				

Asp	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln
Tyr	Asp	Thr	Tyr	Trp	Thr				
				85					90
				95					

Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys
			100					105	

<210> 43
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

ATOX100wo_Sequence_Listing.TXT

<400> 43

Glu Val Gln Leu Val Glu Ser Gly Gly Gly
Leu Val Gln Pro Gly Gly
1 5 10
15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
Phe Thr Phe Ser Ser Tyr
20 25
30

Asp Met His Trp Val Arg Gln Ala Thr Gly
Lys Gly Leu Glu Trp Val
35 40
45

Ser Gly Ile Gly Thr Ala Gly Asp Thr Tyr
Tyr Pro Gly Ser Val Lys
50 55
60

Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala
Lys Asn Ser Leu Tyr Leu
65 70
75 80

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr
Page 49

ATOX100WO_Sequence Listing.TXT

Ala Val Tyr Tyr Cys Ala
85 90
95

Arg Asp Arg Tyr Ser Arg Thr Gly His Tyr
Met Gly Met Asp Val Trp
100 105
110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 44
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 44
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr
Leu Ser Ala Ser Val Gly
1 5 10
15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
Page 50

ATOX100WO_Sequence Listing.TXT

Gln Ser Ile Ser Ser Trp

20

25

30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys

Ala Pro Lys Leu Leu Ile

35

40

45

Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val

Pro Ser Arg Phe Ser Gly

50

55

60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr

Ile Ser Ser Leu Gln Pro

65

70

75

80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln

Tyr Asp Thr Tyr Trp Thr

85

90

95

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys

100

105

ATOX100WO_Sequence Listing.TXT

<210> 45

<211> 122

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 45

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly
Leu	Val	Gln	Pro	Gly	Gly				
1				5					10
			15						

Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly
Phe	Thr	Phe	Ser	Ser	Tyr				
			20					25	
			30						

Asp	Met	His	Trp	Val	Arg	Gln	Ala	Thr	Gly
Lys	Gly	Leu	Glu	Trp	Val				
		35					40		
		45							

Ser	Gly	Ile	Gly	Thr	Ala	Gly	Asp	Thr	Tyr
Tyr	Pro	Gly	Ser	Val	Lys				
	50					55			
60									

ATOX100WO_Sequence Listing.TXT

Gly	Arg	Phe	Thr	Ile	Ser	Arg	Glu	Asn	Ala
Lys	Asn	Ser	Leu	Tyr	Leu				
65					70				
75					80				

Gln	Met	Asn	Ser	Leu	Arg	Ala	Gly	Asp	Thr
Ala	Val	Tyr	Tyr	Cys	Ala				
				85					90
				95					

Arg	Asp	Arg	Tyr	Ser	Arg	Thr	Gly	His	Tyr
Met	Gly	Met	Ser	Leu	Trp				
			100					105	
			110						

Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser
		115					120		

<210> 46
 <211> 106
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

ATOX100wo_Sequence Listing.TXT

<400> 46

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr
Leu Ser Ala Ser Val Gly
1 5 10
15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
Gln Ser Ile Ser Ser Trp
20 25
30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
Ala Pro Lys Leu Leu Ile
35 40
45

Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val
Pro Ser Arg Phe Ser Gly
50 55
60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr
Ile Ser Ser Leu Gln Pro
65 70
75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
Page 54

ATOX100WO_Sequence Listing.TXT

Tyr Asp Thr Tyr Trp Thr
85 90
95

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 47
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 47
Glu Val Gln Leu Val Glu Ser Gly Gly Gly
Leu Val Gln Pro Gly Gly
1 5 10
15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
Phe Thr Phe Ser Ser Tyr
20 25
30

Asp Met His Trp Val Arg Gln Ala Thr Gly
Page 55

ATOX100WO_Sequence Listing.TXT

Lys Gly Leu Glu Trp Val

35

40

45

Ser Gly Ile Gly Thr Ala Gly Asp Thr Tyr
Tyr Pro Gly Ser Val Lys

50

55

60

Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala
Lys Asn Ser Leu Tyr Leu

65

70

75

80

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr
Ala Val Tyr Tyr Cys Ala

85

90

95

Arg Asp Asn Tyr Ser Arg Thr Gly His Tyr
Met Gly Met Asp Val Trp

100

105

110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser

115

120

ATOX100WO_Sequence Listing.TXT

<210> 48

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 48

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Thr
Leu	Ser	Ala	Ser	Val	Gly				
1				5					10
				15					

Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser
Gln	Ser	Ile	Ser	Ser	Trp				
			20					25	
			30						

Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys
Ala	Pro	Lys	Leu	Leu	Ile				
		35					40		
		45							

Tyr	Lys	Ala	Ser	Ser	Leu	Glu	Ser	Gly	Val
Pro	Ser	Arg	Phe	Ser	Gly				
	50					55			
60									

ATOX100WO_Sequence Listing.TXT

Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr
Ile	Ser	Ser	Leu	Gln	Pro				
65					70				
75					80				

Asp	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Lys	Gln
Tyr	Ala	Asp	Tyr	Trp	Thr				
				85					90
				95					

Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys
			100					105	

<210> 49
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

<400>	49								
Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly
Leu	Val	Gln	Pro	Gly	Gly				
1				5					10
			15						

ATOX100wo_Sequence_Listing.TXT

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
Phe Thr Phe Ser Ser Tyr
20 25
30

Asp Met His Trp Val Arg Gln Ala Thr Gly
Lys Gly Leu Glu Trp Val
35 40
45

Ser Gly Ile Gly Thr Ala Gly Asp Thr Tyr
Tyr Pro Gly Ser Val Lys
50 55
60

Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala
Lys Asn Ser Leu Tyr Leu
65 70
75 80

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr
Ala Val Tyr Tyr Cys Ala
85 90
95

Arg Asp Asn Tyr Ser Arg Thr Gly His Tyr
Page 59

ATOX100WO_Sequence Listing.TXT

Met Gly Met Asp Val Trp

100

105

110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser

115

120

<210> 50

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 50

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr

Leu Ser Ala Ser Val Gly

1

5

10

15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser

Gln Ser Ile Ser Ser Trp

20

25

30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys

ATOX100WO_Sequence Listing.TXT

Ala Pro Lys Leu Leu Ile

35

40

45

Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val

Pro Ser Arg Phe Ser Gly

50

55

60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr

Ile Ser Ser Leu Gln Pro

65

70

75

80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln

Tyr Asp Thr Tyr Trp Thr

85

90

95

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys

100

105

<210> 51

<211> 122

<212> PRT

<213> Artificial Sequence

<220>

ATOX100WO_Sequence Listing.TXT

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 51

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly
Leu	Val	Gln	Pro	Gly	Gly				
1				5					10
			15						

Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly
Phe	Thr	Phe	Ser	Ser	Tyr				
			20					25	
			30						

Asp	Met	His	Trp	Val	Arg	Gln	Ala	Thr	Gly
Lys	Gly	Leu	Glu	Trp	Val				
		35					40		
		45							

Ser	Gly	Ile	Gly	Thr	Ala	Gly	Asp	Thr	Tyr
Tyr	Pro	Gly	Ser	Val	Lys				
	50					55			
60									

Gly	Arg	Phe	Thr	Ile	Ser	Arg	Glu	Asn	Ala
Lys	Asn	Ser	Leu	Tyr	Leu				
65					70				
75					80				

ATOX100WO_Sequence Listing.TXT

Gln	Met	Asn	Ser	Leu	Arg	Ala	Gly	Asp	Thr
Ala	Val	Tyr	Tyr	Cys	Ala				
				85					90
				95					

Arg	Asp	Arg	Tyr	Ser	Pro	Thr	Gly	His	Tyr
Met	Gly	Met	Ser	Leu	Trp				
			100					105	
			110						

Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser
		115					120		

<210> 52
 <211> 106
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

<400>	52								
Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Thr
Leu	Ser	Ala	Ser	Val	Gly				
1				5					10
				15					

ATOX100WO_Sequence Listing.TXT

Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser
Gln	Ser	Ile	Ser	Ser	Trp				
			20					25	
			30						

Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys
Ala	Pro	Lys	Leu	Leu	Ile				
		35					40		
		45							

Tyr	Lys	Ala	Ser	Ser	Leu	Glu	Ser	Gly	Val
Pro	Ser	Arg	Phe	Ser	Gly				
	50					55			
	60								

Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr
Ile	Ser	Ser	Leu	Gln	Pro				
65					70				
75					80				

Asp	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln
Tyr	Asp	Thr	Tyr	Trp	Thr				
				85					90
				95					

Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Page 64

ATOX100WO_Sequence Listing.TXT
100 105

<210> 53
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

<400> 53
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly
 Leu Val Gln Pro Gly Gly
 1 5 10
 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
 Phe Thr Phe Ser Ser Tyr
 20 25
 30

Asp Met His Trp Val Arg Gln Ala Thr Gly
 Lys Gly Leu Glu Trp Val
 35 40
 45

Ser Gly Ile Gly Thr Ala Gly Asp Thr Tyr
 Page 65

ATOX100WO_Sequence Listing.TXT

Tyr Pro Gly Ser Val Lys
50 55
60

Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala
Lys Asn Ser Leu Tyr Leu
65 70
75 80

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr
Ala Val Tyr Tyr Cys Ala
85 90
95

Arg Asp Arg Tyr Ser Arg Thr Gly His Tyr
Met Gly Met Asp Val Trp
100 105
110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 54
<211> 106
<212> PRT
<213> Artificial Sequence
<220>

ATOX100WO_Sequence Listing.TXT

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 54

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Thr
Leu	Ser	Ala	Ser	Val	Gly				
1				5					10
				15					

Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser
Gln	Ser	Ile	Ser	Ser	Trp				
			20					25	
			30						

Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys
Ala	Pro	Lys	Leu	Leu	Ile				
		35					40		
		45							

Tyr	Lys	Ala	Ser	Ser	Leu	Glu	Ser	Gly	Val
Pro	Ser	Arg	Phe	Ser	Gly				
	50					55			
	60								

Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr
Ile	Ser	Ser	Leu	Gln	Pro				
65					70				
75					80				

ATOX100WO_Sequence Listing.TXT

Asp	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Lys	Gln
Tyr	Ala	Asp	Tyr	Trp	Thr				
				85					90
				95					

Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys
			100					105	

<210> 55
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

<400>	55								
Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly
Leu	Val	Gln	Pro	Gly	Gly				
1				5					10
				15					

Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly
Phe	Thr	Phe	Ser	Ser	Tyr				
			20					25	
			30						

ATOX100WO_Sequence Listing.TXT

Asp	Met	His	Trp	Val	Arg	Gln	Ala	Thr	Gly
Lys	Gly	Leu	Glu	Trp	Val				
		35					40		
		45							

Ser	Gly	Ile	Gly	Thr	Ala	Gly	Asp	Thr	Tyr
Tyr	Pro	Gly	Ser	Val	Lys				
	50					55			
	60								

Gly	Arg	Phe	Thr	Ile	Ser	Arg	Glu	Asn	Ala
Lys	Asn	Ser	Leu	Tyr	Leu				
65					70				
75					80				

Gln	Met	Asn	Ser	Leu	Arg	Ala	Gly	Asp	Thr
Ala	Val	Tyr	Tyr	Cys	Ala				
				85					90
				95					

Arg	Asp	Asn	Tyr	Ser	Ser	Thr	Gly	Gly	Tyr
Tyr	Gly	Met	Asp	Val	Trp				
			100					105	
			110						

Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Page 69

ATOX100WO_Sequence Listing.TXT
115120

<210> 56
 <211> 106
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

<400> 56
 Asp Ile Gln Met Thr Gln Ser Pro Ser Thr
 Leu Ser Ala Ser Val Gly
 1510
15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
 Gln Ser Ile Ser Ser Trp
2025
30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
 Ala Pro Lys Leu Leu Ile
3540
45

Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val
 Page 70

ATOX100WO_Sequence Listing.TXT

Pro Ser Arg Phe Ser Gly
 50 55
 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr
 Ile Ser Ser Leu Gln Pro
 65 70
 75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
 Tyr Asn Ser Tyr Trp Thr
 85 90
 95

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 57
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

<400> 57
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly

ATOX100WO_Sequence Listing.TXT

Leu Val Gln Pro Gly Gly
 1 5 10
 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
 Phe Thr Phe Ser Ser His
 20 25
 30

Asp Met His Trp Val Arg Gln Ala Thr Gly
 Lys Gly Leu Glu Trp Val
 35 40
 45

Ser Gly Ile Gly Thr Ala Gly Asp Thr Tyr
 Tyr Pro Asp Ser Val Lys
 50 55
 60

Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala
 Lys Asn Ser Leu Tyr Leu
 65 70
 75 80

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr
 Ala Val Tyr Tyr Cys Ala
 85 90
 95

ATOX100WO_Sequence Listing.TXT

Arg	Asp	Arg	Tyr	Ser	Pro	Thr	Gly	His	Tyr
Tyr	Gly	Met	Asp	Val	Trp				
			100					105	
			110						

Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser
		115					120		

<210> 58
 <211> 106
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 polypeptide

<400>	58								
Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Thr
Leu	Ser	Ala	Ser	Val	Gly				
1				5					10
				15					

Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser
Gln	Ser	Ile	Ser	Ser	Trp				
			20					25	
			30						

ATOX100WO_Sequence Listing.TXT

Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys
Ala	Pro	Lys	Leu	Leu	Ile				
		35					40		
		45							

Tyr	Lys	Ala	Ser	Ser	Leu	Glu	Ser	Gly	Val
Pro	Ser	Arg	Phe	Ser	Gly				
	50					55			
	60								

Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr
Ile	Ser	Ser	Leu	Gln	Pro				
65					70				
75					80				

Asp	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Lys	Gln
Tyr	Ala	Asp	Tyr	Trp	Thr				
				85					90
				95					

Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys
			100					105	

<210> 59
 <211> 122
 <212> PRT

ATOX100WO_Sequence Listing.TXT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 59

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly
Leu	Val	Gln	Pro	Gly	Gly				
1				5					10
			15						

Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly
Phe	Thr	Phe	Ser	Ser	Tyr				
			20					25	
			30						

Asp	Met	His	Trp	Val	Arg	Gln	Ala	Thr	Gly
Lys	Gly	Leu	Glu	Trp	Val				
		35					40		
		45							

Ser	Gly	Ile	Gly	Thr	Ala	Gly	Asp	Thr	Tyr
Tyr	Pro	Gly	Ser	Val	Lys				
	50					55			
60									

Gly	Arg	Phe	Thr	Ile	Ser	Arg	Glu	Asn	Ala
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Page 75

ATOX100WO_Sequence Listing.TXT

Lys Asn Ser Leu Tyr Leu
65 70
75 80

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr
Ala Val Tyr Tyr Cys Ala
85 90
95

Arg Asp Asn Tyr Ser Pro Thr Gly Gly Tyr
Tyr Gly Met Asp Val Trp
100 105
110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 60
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 60
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr
Page 76

ATOX100WO_Sequence Listing.TXT

Leu Ser Ala Ser Val Gly
 1 5 10
 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
 Gln Ser Ile Ser Ser Trp
 20 25
 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
 Ala Pro Lys Leu Leu Ile
 35 40
 45

Tyr Lys Ala Ser Ser Leu Lys Ser Gly Val
 Pro Ser Arg Phe Ser Gly
 50 55
 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr
 Ile Ser Ser Leu Gln Pro
 65 70
 75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
 Tyr Glu Ser Tyr Trp Thr
 85 90
 95

ATOX100WO_Sequence Listing.TXT

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 61

<211> 122

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 61

Glu Val Gln Leu Val Glu Ser Gly Gly Gly
Leu Val Gln Pro Gly Gly
1 5 10
15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
Phe Thr Phe Ser Ser His
20 25
30

Asp Met His Trp Val Arg Gln Ala Thr Gly
Lys Gly Leu Glu Trp Val
35 40
45

ATOX100WO_Sequence Listing.TXT

Ser	Gly	Ile	Gly	Thr	Arg	Gly	Asp	Thr	Tyr
Tyr	Pro	Asp	Ser	Val	Lys				
	50					55			
	60								

Gly	Arg	Phe	Thr	Ile	Ser	Arg	Glu	Asn	Ala
Lys	Asn	Ser	Leu	Tyr	Leu				
65					70				
75					80				

Gln	Met	Asn	Ser	Leu	Arg	Ala	Gly	Asp	Thr
Ala	Val	Tyr	Tyr	Cys	Ala				
				85					90
				95					

Arg	Asp	Arg	Tyr	Ser	Pro	Thr	Gly	His	Tyr
Tyr	Gly	Met	Asp	Val	Trp				
			100					105	
			110						

Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser
		115					120		

<210> 62
 <211> 122
 <212> PRT

ATOX100WO_Sequence Listing.TXT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 62

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly
Leu	Val	Gln	Pro	Gly	Gly				
1				5					10
			15						

Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly
Phe	Thr	Phe	Ser	Ser	His				
			20					25	
			30						

Asp	Met	His	Trp	Val	Arg	Gln	Ala	Thr	Gly
Lys	Gly	Leu	Glu	Trp	Val				
		35					40		
		45							

Ser	Gly	Ile	Gly	Thr	Arg	Gly	Asp	Thr	Tyr
Tyr	Pro	Asp	Ser	Val	Lys				
	50					55			
60									

Gly	Arg	Phe	Thr	Ile	Ser	Arg	Glu	Asn	Ala
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Page 80

ATOX100WO_Sequence Listing.TXT

Lys Asn Ser Leu Tyr Leu
65 70
75 80

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr
Ala Val Tyr Tyr Cys Ala
85 90
95

Arg Asp Lys Tyr Ser Pro Thr Gly His Tyr
Tyr Gly Met Asp Val Trp
100 105
110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 63
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 63
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr
Page 81

ATOX100WO_Sequence Listing.TXT

Leu Ser Ala Ser Val Gly
 1 5 10
 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
 Gln Ser Ile Ser Ser Trp
 20 25
 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
 Ala Pro Lys Leu Leu Ile
 35 40
 45

Tyr Lys Ala Ser Ser Leu Val Lys Gly Val
 Pro Ser Arg Phe Ser Gly
 50 55
 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr
 Ile Ser Ser Leu Gln Pro
 65 70
 75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
 Tyr Glu Ser Tyr Trp Thr
 85 90
 95

ATOX100WO_Sequence Listing.TXT

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 64

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 64

Gln Gln Tyr Asp Thr Tyr Trp Thr
1 5

<210> 65

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 65

Asp Arg Tyr Ser Arg Thr Gly His Tyr Met

ATOX100WO_Sequence Listing.TXT

Gly Met Asp Val		
1	5	10

<210> 66
 <211> 14
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 peptide

<400> 66		
Asp Arg Tyr Ser Arg Thr Gly His Tyr Met		
Gly Met Ser Leu		
1	5	10

<210> 67
 <211> 14
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 peptide

<400> 67

ATOX100WO_Sequence Listing.TXT

Asp	Asn	Tyr	Ser	Arg	Thr	Gly	His	Tyr	Met
Gly	Met	Asp	Val						
1				5					10

<210> 68

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 68

Lys	Gln	Tyr	Ala	Asp	Tyr	Trp	Thr
1				5			

<210> 69

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 69

Ser	His	Asp	Met	His
-----	-----	-----	-----	-----

ATOX100WO_Sequence Listing.TXT

1

5

<210> 70

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 70

Gly Ile Gly Thr Ala Gly Asp Thr Tyr Tyr

Pro Asp Ser Val Lys Gly

1

5

10

15

<210> 71

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 71

Asp Arg Tyr Ser Pro Thr Gly His Tyr Tyr

Gly Met Asp Val

ATOX100WO_Sequence Listing.TXT

1 5 10

<210> 72

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 72

Asp Asn Tyr Ser Pro Thr Gly Gly Tyr Tyr
Gly Met Asp Val

1 5 10

<210> 73

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 73

Lys Ala Ser Ser Leu Lys Ser

ATOX100WO_Sequence Listing.TXT

1

5

<210> 74

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 74

Gln Gln Tyr Glu Ser Tyr Trp Thr
1 5

<210> 75

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 75

Gly Ile Gly Thr Arg Gly Asp Thr Tyr Tyr
Pro Asp Ser Val Lys Gly
1 5 10

15

ATOX100WO_Sequence Listing.TXT

<210> 76
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 76
Asp Lys Tyr Ser Pro Thr Gly His Tyr Tyr
Gly Met Asp Val
1 5 10

<210> 77
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 77
Lys Ala Ser Ser Leu Val Lys
1 5

ATOX100WO_Sequence Listing.TXT

<210> 78
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
peptide

<400> 78
Asp Arg Tyr Ser Pro Thr Gly His Tyr Met
Gly Met Ser Leu
1 5 10

<210> 79
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 79
Glu Val Gln Leu Val Glu Ser Gly Gly Gly
Leu Val Gln Pro Gly Gly
1 5 10
15

ATOX100wo_Sequence Listing.TXT

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
Phe Thr Phe Ser Ser His
20 25
30

Asp Met His Trp Val Arg Gln Ala Thr Gly
Lys Gly Leu Glu Trp Val
35 40
45

Ser Gly Ile Gly Thr Ala Gly Asp Thr Tyr
Tyr Pro Asp Ser Val Lys
50 55
60

Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala
Lys Asn Ser Leu Tyr Leu
65 70
75 80

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr
Ala Val Tyr Tyr Cys Ala
85 90
95

Arg Asp Arg Tyr Ser Pro Thr Gly His Tyr
Page 91

ATOX100WO_Sequence Listing.TXT

Tyr Gly Met Asp Val Trp

100

105

110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser

115

120

<210> 80

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic
primer

<400> 80

atatatgagc tcgcagattc tgatattaat
attaaaacc

39

<210> 81

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial
Sequence: Synthetic

ATOX100WO_Sequence Listing.TXT
primer

<400> 81
atatataagc ttaatttgtc atttcttctt tttccc
36

<210> 82
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
6xHis tag

<400> 82
His His His His His His
1 5

<210> 83
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
primer

<400> 83

ATOX100WO_Sequence Listing.TXT

gataaagaaa atggcatgct caaaaaagta
ttttatagtt ttatc
45

<210> 84
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
primer

<400> 84
gataaaacta taaaatactt ttttgagcat
gccattttct ttatc
45

<210> 85
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
primer

<400> 85
atattggatc cgcagattct gatattaata ttaaaac

ATOX100WO_Sequence Listing.TXT
37

<210> 86
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
primer

<400> 86
atacttctcg agttatttat tatgattttt
atcatcgata aaac
44

<210> 87
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
primer

<400> 87
catagggatc caaactgcta gttattagaa cgaaag
36

ATOX100WO_Sequence Listing.TXT

<210> 88
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial
 Sequence: Synthetic
 primer

<400> 88
 catagctcga gtcaatttgt catttcttct
 ttttcccaat c
 41

<210> 89
 <211> 293
 <212> PRT
 <213> Staphylococcus aureus

<400> 89
 Ala Asp Ser Asp Ile Asn Ile Lys Thr Gly
 Thr Thr Asp Ile Gly Ser
 1 5 10
 15

Asn Thr Thr Val Lys Thr Gly Asp Leu Val
 Thr Tyr Asp Lys Glu Asn
 20 25
 30

ATOX100wo_Sequence Listing.TXT

Gly Met His Lys Lys Val Phe Tyr Ser Phe
Ile Asp Asp Lys Asn His
35 40
45

Asn Lys Lys Leu Leu Val Ile Arg Thr Lys
Gly Thr Ile Ala Gly Gln
50 55
60

Tyr Arg Val Tyr Ser Glu Glu Gly Ala Asn
Lys Ser Gly Leu Ala Trp
65 70
75 80

Pro Ser Ala Phe Lys Val Gln Leu Gln Leu
Pro Asp Asn Glu Val Ala
85 90
95

Gln	Ile	Ser	Asp	Tyr	Tyr	Pro	Arg	Asn	Ser
Ile	Asp	Thr	Lys	Glu	Tyr				
			100					105	
			110						

Met Ser Thr Leu Thr Tyr Gly Phe Asn Gly
Page 97

ATOX100WO_Sequence Listing.TXT

Asn Val Thr Gly Asp Asp
 115
 125

120

Thr Gly Lys Ile Gly Gly Leu Ile Gly Ala
 Asn Val Ser Ile Gly His
 130
 140

135

Thr Leu Lys Tyr Val Gln Pro Asp Phe Lys
 Thr Ile Leu Glu Ser Pro
 145
 155

150

160

Thr Asp Lys Lys Val Gly Trp Lys Val Ile
 Phe Asn Asn Met Val Asn
 165
 175

170

Gln Asn Trp Gly Pro Tyr Asp Arg Asp Ser
 Trp Asn Pro Val Tyr Gly
 180
 190

185

Asn Gln Leu Phe Met Lys Thr Arg Asn Gly
 Ser Met Lys Ala Ala Asp
 195
 205

200

ATOX100WO_Sequence Listing.TXT

Asn	Phe	Leu	Asp	Pro	Asn	Lys	Ala	Ser	Ser
Leu	Leu	Ser	Ser	Gly	Phe				
	210					215			
	220								

Ser	Pro	Asp	Phe	Ala	Thr	Val	Ile	Thr	Met
Asp	Arg	Lys	Ala	Ser	Lys				
225					230				
235					240				

Gln	Gln	Thr	Asn	Ile	Asp	Val	Ile	Tyr	Glu
Arg	Val	Arg	Asp	Asp	Tyr				
				245					250
				255					

Gln	Leu	His	Trp	Thr	Ser	Thr	Asn	Trp	Lys
Gly	Thr	Asn	Thr	Lys	Asp				
			260					265	
			270						

Lys	Trp	Ile	Asp	Arg	Ser	Ser	Glu	Arg	Tyr
Lys	Ile	Asp	Trp	Glu	Lys				
		275					280		
		285							

Glu	Glu	Met	Thr	Asn
-----	-----	-----	-----	-----

ATOX100WO_Sequence Listing.TXT
290

<210> 90
<211> 299
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 90
Ala Gln His Ile Thr Pro Val Ser Glu Lys
Lys Val Asp Asp Lys Ile
1 5 10
15

Thr Leu Tyr Lys Thr Thr Ala Thr Ser Asp
Ser Asp Lys Leu Lys Ile
20 25
30

Ser Gln Ile Leu Thr Phe Asn Phe Ile Lys
Asp Lys Ser Tyr Asp Lys
35 40
45

Asp Thr Leu Ile Leu Lys Ala Ala Gly Asn
Page 100

ATOX100WO_Sequence Listing.TXT

Ile Tyr Ser Gly Tyr Thr
50 55
60

Lys Pro Asn Pro Lys Asp Thr Ile Ser Ser
Gln Phe Tyr Trp Gly Ser
65 70
75 80

Lys Tyr Asn Ile Ser Ile Asn Ser Asp Ser
Asn Asp Ser Val Asn Val
85 90
95

Val Asp Tyr Ala Pro Lys Asn Gln Asn Glu
Glu Phe Gln Val Gln Gln
100 105
110

Thr Val Gly Tyr Ser Tyr Gly Gly Asp Ile
Asn Ile Ser Asn Gly Leu
115 120
125

Ser Gly Gly Gly Asn Gly Ser Lys Ser Phe
Ser Glu Thr Ile Asn Tyr
130 135
140

ATOX100WO_Sequence Listing.TXT

Lys	Gln	Glu	Ser	Tyr	Arg	Thr	Ser	Leu	Asp
Lys	Arg	Thr	Asn	Phe	Lys				
145					150				
155					160				

Lys	Ile	Gly	Trp	Asp	Val	Glu	Ala	His	Lys
Ile	Met	Asn	Asn	Gly	Trp				
				165					170
				175					

Gly	Pro	Tyr	Gly	Arg	Asp	Ser	Tyr	His	Ser
Thr	Tyr	Gly	Asn	Glu	Met				
			180					185	
			190						

Phe	Leu	Gly	Ser	Arg	Gln	Ser	Asn	Leu	Asn
Ala	Gly	Gln	Asn	Phe	Leu				
		195					200		
		205							

Glu	Tyr	His	Lys	Met	Pro	Val	Leu	Ser	Arg
Gly	Asn	Phe	Asn	Pro	Glu				
	210					215			
	220								

Phe	Ile	Gly	Val	Leu	Ser	Arg	Lys	Gln	Asn
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Page 102

ATOX100WO_Sequence Listing.TXT

Ala Ala Lys Lys Ser Lys
 225 230
 235 240

Ile Thr Val Thr Tyr Gln Arg Glu Met Asp
 Arg Tyr Thr Asn Phe Trp 250
 245
 255

Asn Gln Leu His Trp Ile Gly Asn Asn Tyr
 Lys Asp Glu Asn Arg Ala 265
 260
 270

Thr His Thr Ser Ile Tyr Glu Val Asp Trp
 Glu Asn His Thr Val Lys 280
 275
 285

Leu Ile Asp Thr Gln Ser Lys Glu Lys Asn
 Pro 290 295

<210> 91
 <211> 452
 <212> PRT
 <213> Artificial Sequence
 Page 103

ATOX100WO_Sequence Listing.TXT

<220>

<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 91

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly
Leu	Val	Gln	Pro	Gly	Gly				
1				5					10
			15						

Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly
Phe	Thr	Phe	Ser	Ser	His				
			20					25	
			30						

Asp	Met	His	Trp	Val	Arg	Gln	Ala	Thr	Gly
Lys	Gly	Leu	Glu	Trp	Val				
		35					40		
		45							

Ser	Gly	Ile	Gly	Thr	Ala	Gly	Asp	Thr	Tyr
Tyr	Pro	Asp	Ser	Val	Lys				
	50					55			
	60								

Gly	Arg	Phe	Thr	Ile	Ser	Arg	Glu	Asn	Ala
Lys	Asn	Ser	Leu	Tyr	Leu				

Page 104

ATOX100WO_Sequence Listing.TXT

65
75

70
80

Gln	Met	Asn	Ser	Leu	Arg	Ala	Gly	Asp	Thr
Ala	Val	Tyr	Tyr	Cys	Ala				
				85					90
				95					

Arg	Asp	Arg	Tyr	Ser	Pro	Thr	Gly	His	Tyr
Tyr	Gly	Met	Asp	Val	Trp				
			100						105
			110						

Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser
Ala	Ser	Thr	Lys	Gly	Pro				
		115							120
		125							

Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys
Ser	Thr	Ser	Gly	Gly	Thr				
	130					135			
	140								

Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr
Phe	Pro	Glu	Pro	Val	Thr				
145					150				
155					160				

ATOX100wo_Sequence_Listing.TXT

Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser
Gly	Val	His	Thr	Phe	Pro				
				165					170
			175						

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
Leu Ser Ser Val Val Thr
180 185
190

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

His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys
Arg	Val	Glu	Pro	Lys	Ser				
	210					215			
	220								

Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys
Pro	Ala	Pro	Glu	Leu	Leu				
225					230				
235					240				

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
Lys Pro Lys Asp Thr Leu
Page 106

ATOX100WO_Sequence Listing.TXT

245 250
255

Tyr Ile Thr Arg Glu Pro Glu Val Thr Cys
Val Val Val Asp Val Ser
260 265
270

His Glu Asp Pro Glu Val Lys Phe Asn Trp
Tyr Val Asp Gly Val Glu
275 280
285

Val His Asn Ala Lys Thr Lys Pro Arg Glu
Glu Gln Tyr Asn Ser Thr
290 295
300

Tyr Arg Val Val Ser Val Leu Thr Val Leu
His Gln Asp Trp Leu Asn
305 310
315 320

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
Lys Ala Leu Pro Ala Pro
325 330
335

ATOX100wo_Sequence_Listing.TXT

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
Gln Pro Arg Glu Pro Gln
340 345
350

Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu
Met	Thr	Lys	Asn	Gln	Val				
		355					360		
		365							

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
Pro Ser Asp Ile Ala Val
370 375
380

Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn
Asn	Tyr	Lys	Thr	Thr	Pro				
385					390				
395					400				

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
Leu Tyr Ser Lys Leu Thr
405 410
415

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
Val Phe Ser Cys Ser Val
Page 108

ATOX100wo_Sequence Listing.TXT

420 425
430

Met His Glu Ala Leu His Asn His Tyr Thr
Gln Lys Ser Leu Ser Leu
435 440
445

Ser Pro Gly Lys
450

<210> 92
<211> 212
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence: Synthetic
polypeptide

<400> 92
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr
Leu Ser Ala Ser Val Gly
1 5 10
15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
Gln Ser Ile Ser Ser Trp
Page 109

ATOX100WO_Sequence Listing.TXT

20 25
30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
Ala Pro Lys Leu Leu Ile
35 40
45

Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val
Pro Ser Arg Phe Ser Gly
50 55
60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr
Ile Ser Ser Leu Gln Pro
65 70
75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Lys Gln
Tyr Ala Asp Tyr Trp Thr
85 90
95

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
Arg Thr Val Ala Ala Pro
100 105
110

ATOX100WO_Sequence Listing.TXT

Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu
Gln	Leu	Lys	Ser	Gly	Thr				
		115					120		
		125							

Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe
Tyr	Pro	Arg	Glu	Ala	Lys				
	130					135			
	140								

Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln
Ser	Gly	Asn	Ser	Gln	Glu				
145					150				
155					160				

Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser
Thr	Tyr	Ser	Leu	Ser	Ser				
				165					170
				175					

Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu
Lys	His	Lys	Val	Tyr	Ala				
			180					185	
			190						

Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser
Pro	Val	Thr	Lys	Ser	Phe				
				Page	111				

ATOX100wo_Sequence Listing.TXT

195

200

205

Asn Arg Gly Glu
210