G00002

163163

FIGURE 1

atcatcaaa

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ATG	***AAA***	***CTG***	***ACG***	***TG*T**	GTG	GTG	ATC	GTC	GCC	GTG	CTG	CTC	CTG	ACG
M	K	L	T	C	V	V	I	V	A	V	L	L	L	T
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
GCC	TGT	CAA	CTC	ATC	ACA	GCT	AAT	GAC	TCC	AGA	GGT	ACG	CAG	AAG
A	C	Q	L	I	T	A	N	D	S	R	G	T	Q	K ↓
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
CAT	CGT	GCC	CTG	AGG	TCG	GAC	ACC	AAA	CTC	TCC	ATG	TCG	ACT	CGC
H	R	A	L	R	S	D	T	K	L	S	M	S	T	R
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
TGC	AAG	AGT	AAA	GGA	GCA	AAA	TGT	TCA	AAG	CTT	ATG	TAT	GAC	TGC
C	K	S	K	G	A	K	C	S	K	L	M	Y	D	C
61	62	63	64	65	66	67	68	69	70	71	72	73	74	
TGC	AGC	GGT	TCT	TGC	AGC	GGC	ACC	GTA	GGT	AGA	TGT	GGC	TGA	tcc
C	S	G	S	C	S	G	T	V	G	R	C	G		

ggcgcttgatctccccttctgtgctctatccttttctgccgagtcctccttacctgagagtggtcatgaaccactcatcacctacccctggaggt
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SEQUENCE LISTING

<110> The University of Queensland

<120> Novel omega conotoxin peptides

<130> 2171650/MJC

<140> PCT/AU99/00288

<141> 1999-04-16

<150> PP2989/98

<151> 1998-04-16

<150> PP8419/99

<151> 1999-02-01

<160> 38

<170> PatentIn version 3.0

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Ser Gly Thr Val Gly Arg
1 5

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Ser Lys Leu Met Tyr Asp
1 5

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Ser Arg Leu Met Tyr Asp
1 5

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Asp Arg Leu Met Tyr Asp
1 5

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<212> PRT

<213> conus catus

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Cys Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

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<211> 27

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<213> synthetic

<400> 6

Cys Lys Ser Lys Gly Ala Lys Cys Ser Arg Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 7

<211> 27

<212> PRT

<213> synthetic

<400> 7

Cys Lys Ser Lys Gly Ala Lys Cys Asp Arg Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

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<212> PRT

<213> conus magus

<400> 8

Cys Lys Gly Lys Gly Ala Lys Cys Ser Arg Leu Met Tyr Asp Cys Cys
1 5 10 15

Thr Gly Ser Cys Arg Ser Gly Lys Cys
20 25

<210> 9

<211> 26

<212> PRT

<213> conus magus

<400> 9

Cys Lys Gly Lys Gly Ala Pro Cys Arg Lys Thr Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Gly Arg Arg Gly Lys Cys
20 25

<210> 10

<211> 27

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<213> conus geographus

<220>

<221> misc_feature

<223> Pro at positions 4, 10 and 21 is 4-Hyp

<400> 10

Cys Lys Ser Pro Gly Ser Ser Cys Ser Pro Thr Ser Tyr Asn Cys Cys
1 5 10 15

Arg Ser Cys Asn Pro Tyr Thr Lys Arg Cys Tyr
20 25

<210> 11

<211> 18

<212> DNA

<213> conus catus

<400> 11 18
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<210> 12

<211> 382

<212> DNA

<213> conus catus

<220>

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<222> (10)..(228)

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```
          Met Lys Leu Thr Cys Val Val Ile Val Ala Val Leu Leu Leu
          1               5                   10

acg gcc tgt caa ctc atc aca gct aat gac tcc aga ggt acg cag aag       99
Thr Ala Cys Gln Leu Ile Thr Ala Asn Asp Ser Arg Gly Thr Gln Lys
15                  20                  25                  30

cat cgt gcc ctg agg tcg gac acc aaa ctc tcc atg tcg act cgc tgc      147
His Arg Ala Leu Arg Ser Asp Thr Lys Leu Ser Met Ser Thr Arg Cys
                35                  40                  45

aag agt aaa gga gca aaa tgt tca aag ctt atg tat gac tgc tgc agc      195
Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Met Tyr Asp Cys Cys Ser
            50                  55                  60

ggt tct tgc agc ggc acc gta ggt aga tgt ggc tgatccggcg cttgatctcc    248
Gly Ser Cys Ser Gly Thr Val Gly Arg Cys Gly
        65                  70

cccttctgtg ctctatcctt ttctgcctga gtcctcctta cctgagagtg gtcatgaacc    308

actcatcacc taccccctgg aggtctcaaa gaactacttg aaataaagcc gcttgcaaaa    368

aaaaaaaaaa aaaa                                                     382


<210>  13

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<213>  conus catus


<400>  13

Met Lys Leu Thr Cys Val Val Ile Val Ala Val Leu Leu Leu Thr Ala
1               5                   10                  15


Cys Gln Leu Ile Thr Ala Asn Asp Ser Arg Gly Thr Gln Lys His Arg
            20                  25                  30


Ala Leu Arg Ser Asp Thr Lys Leu Ser Met Ser Thr Arg Cys Lys Ser
        35                  40                  45


Lys Gly Ala Lys Cys Ser Lys Leu Met Tyr Asp Cys Cys Ser Gly Ser
    50                  55                  60


Cys Ser Gly Thr Val Gly Arg Cys Gly
65                  70


<210>  14

<211>  27

<212>  PRT
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<213> conus catus

<400> 14

Cys Arg Ser Lys Gly Ala Lys Cys Ser Lys Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 15

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<212> PRT

<213> conus catus

<400> 15

Cys Lys Ser Lys Gly Ala Arg Cys Ser Lys Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 16

<211> 27

<212> PRT

<213> conus catus

<400> 16

Cys Lys Ser Lys Gly Ala Gln Cys Ser Lys Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 17

<211> 27

<212> PRT

<213> conus catus

<400> 17

Cys Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Ala Val Gly Arg Cys
20 25

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Cys Lys Ser Lys Gly Ala Lys Cys Asp Lys Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 19

<211> 27

<212> PRT

<213> synthetic

<400> 19

Cys Lys Tyr Lys Gly Ala Lys Cys Ser Arg Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

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<211> 27

<212> PRT

<213> synthetic

<400> 20

Cys Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Ala Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 21

<211> 27

<212> PRT

<213> synthetic

<400> 21

Cys Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Met Tyr Asp Cys Cys
1 5 10 15

Thr Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 22

<211> 27

<212> PRT

<213> synthetic

<220>

<221> misc_feature

<223> Xaa at position 5 is D-alanine

<400> 22

Cys Lys Ser Lys Xaa Ala Lys Cys Ser Lys Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 23

<211> 28

<212> PRT

<213> synthetic

<400> 23

Cys Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys Tyr
20 25

<210> 24

<211> 27

<212> PRT

<213> synthetic

<400> 24

Cys Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 25

<211> 28

<212> PRT

<213> synthetic

<400> 25

Tyr Cys Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Met Tyr Asp Cys
1 5 10 15

Cys Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 26

<211> 27

<212> PRT

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<220>

<221> misc_feature

<223> Cysteine at position 1 ia acylated

<400> 26

Cys Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 27

<211> 27

<212> PRT

<213> synthetic

<220>

<221> misc_feature

<223> Leu at position 12 is L-norleucine

<400> 27

Cys Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Leu Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 28

<211> 27

<212> PRT

<213> synthetic

<220>

<221> misc_feature

<223> Leu at position 12 is L-norleucine

<400> 28

Cys Lys Ser Lys Gly Ala Lys Cys Ser Arg Leu Leu Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 29

<211> 27

<212> PRT

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<220>

<221> misc_feature

<223> Leu at position 12 is L-norleucine

<400> 29

Cys Lys Tyr Lys Gly Ala Lys Cys Ser Arg Leu Leu Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 30

<211> 27

<212> PRT

<213> synthetic

<220>

<221> misc_feature

<223> Xaa at position 12 is L-O-methyl homoserine

<400> 30

Cys Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Xaa Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 31

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<223> Methionine residue at position 12 is oxidised to its sulfoxide

<400> 31

Cys Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Xaa Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 32

<211> 27

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<213> synthetic

<400> 32

Cys Lys Ser Lys Gly Ala Lys Cys Ser Lys Leu Met Tyr Asp Cys Cys
1 5 10 15

Ser Gly Ser Cys Ser Gly Thr Val Gly Arg Cys
20 25

<210> 33

<211> 6

<212> PRT

<213> synthetic

<400> 33

Asp Lys Leu Met Tyr Asp
1 5

<210> 34

<211> 6

<212> PRT

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<400> 34

Ser Lys Leu Ala Tyr Asp
1 5

<210> 35

<211> 6

<212> PRT

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<220>

<221> misc_feature

<223> Leu at position 4 is L-norleucine

<400> 35

Ser Lys Leu Leu Tyr Asp
1 5

<210> 36

<211> 6

<212> PRT

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<220>

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<223> Leu at position 4 is L-norleucine

<400> 36

Ser Arg Leu Leu Tyr Asp
1 5

<210> 37

<211> 6

<212> PRT

<213> synthetic

<220>

<221> misc_feature

<223> Xaa at position 4 is L-O-methyl homoserine

<400> 37

Ser Lys Leu Xaa Tyr Asp
1 5

<210> 38

<211> 6

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<213> synthetic

<220>

<221> misc_feature

<223> Xaa at position 4 is L-O-methyl serine

<400> 38

Ser Lys Leu Xaa Tyr Asp
1 5