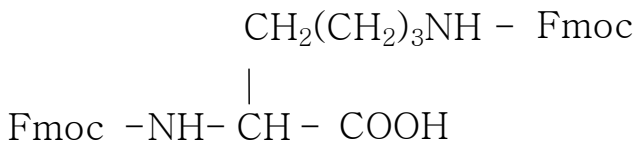
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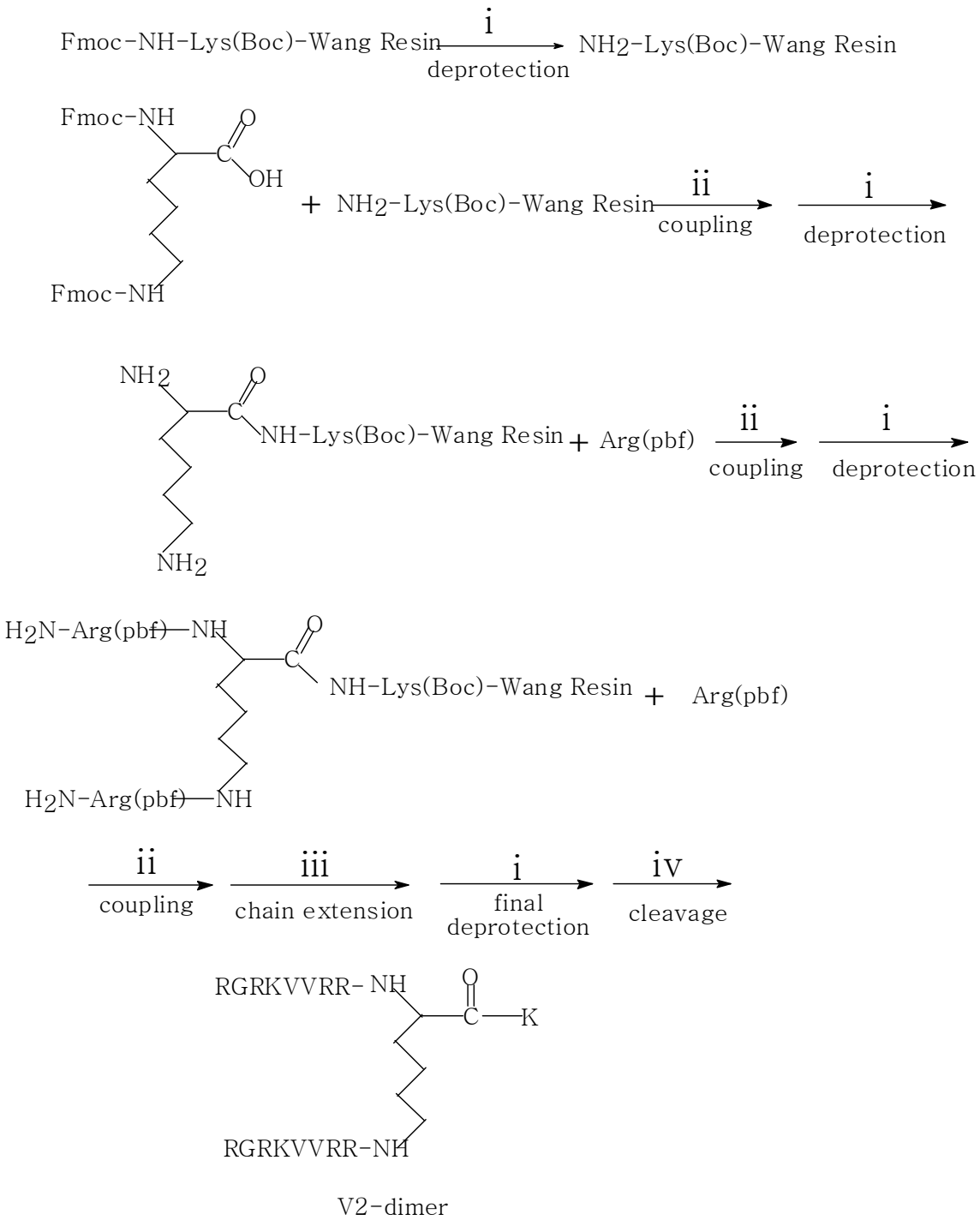


Lys (Fmoc)

RGRKVVRRKK V2 -monomer

(RGRKVVRR)2KK V2 –dimer

Figure 2



V2-dimer

Figure 3

RGRKVVRRKK V2-monomer

$(RGRKVVRR)_2KK$ V2-dimer

↓

$(RGRKVVRR)_4(K)_3K$ V2-tetramer

↓

$(RGRKVVRR)_8(K)_7K$ V2-Octamer

Figure 4

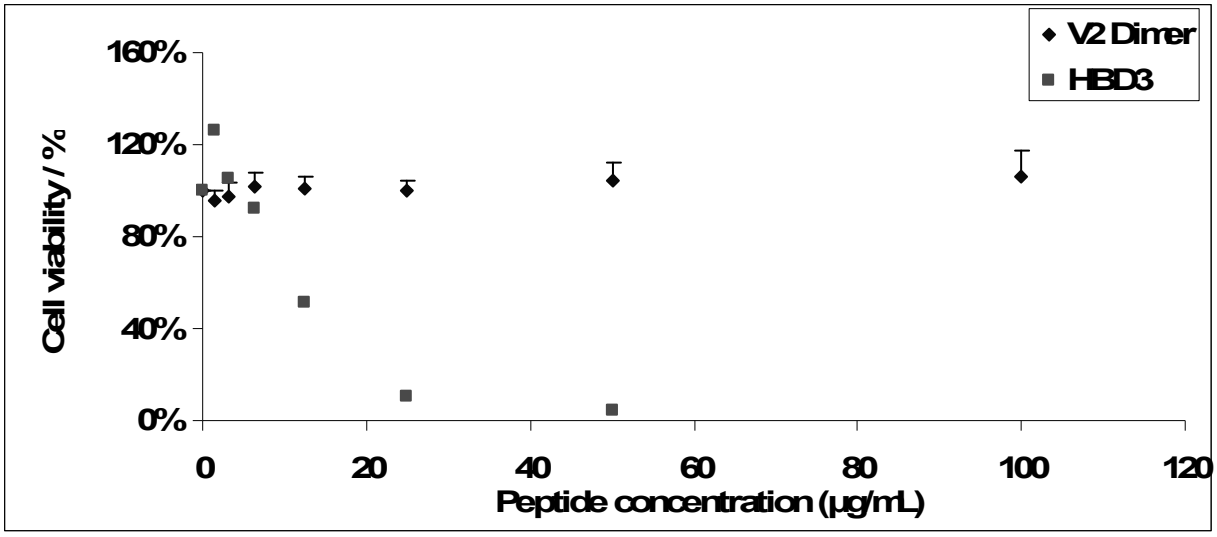


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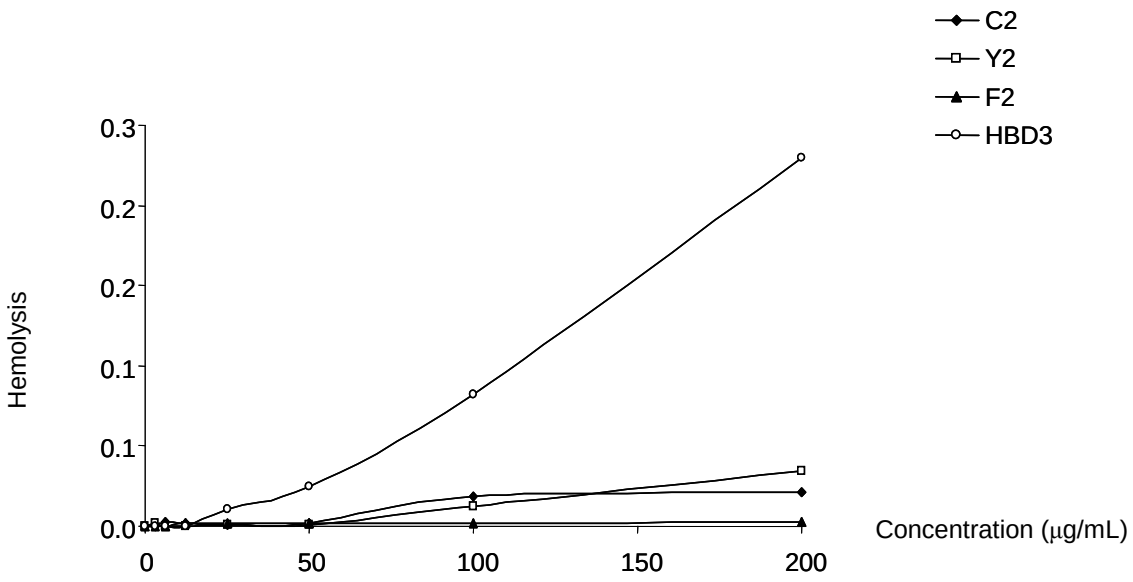

C2
Y2
F2
HBD3
Hemolysis
0.3
0.2
0.2
0.1
0.1
0.0
0
50
100
150
200
Concentration (μg/mL)

Figure 6

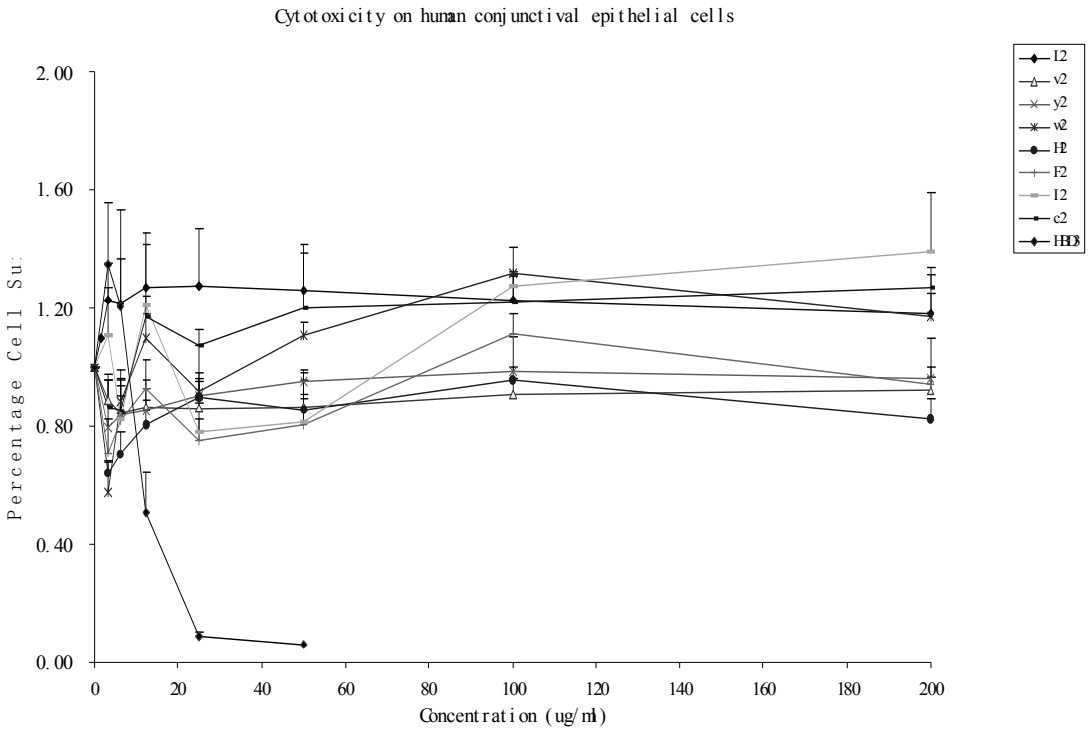

Cytotoxicity on human conjunctival epithelial cells
Percentage Cell Su
2.00
1.60
1.20
0.80
0.40
0.00
0
20
40
60
80
100
120
140
160
180
200
Concentration (ug/ml)
I2
v2
y2
w2
H2
F2
I2
c2

Figure 7

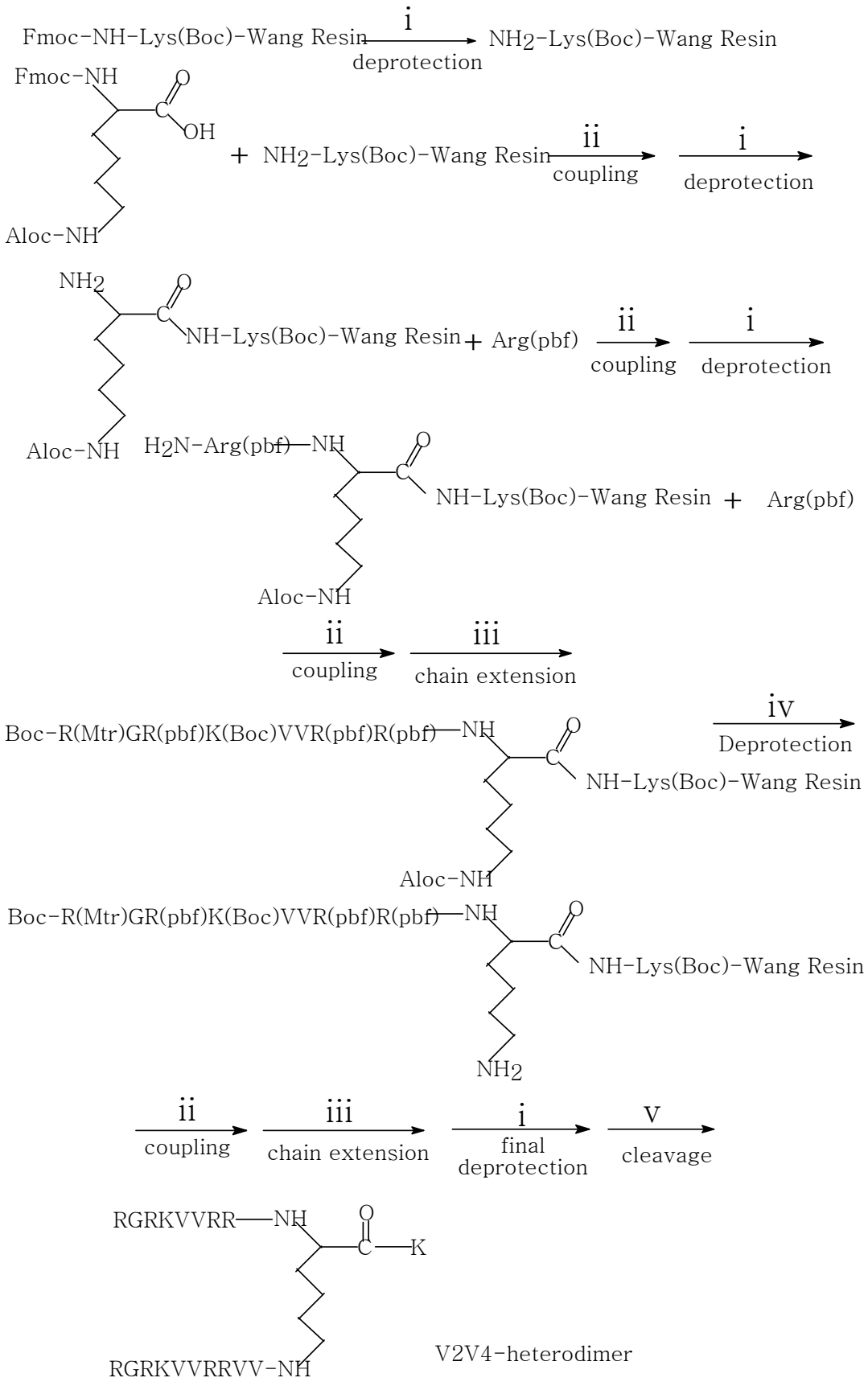
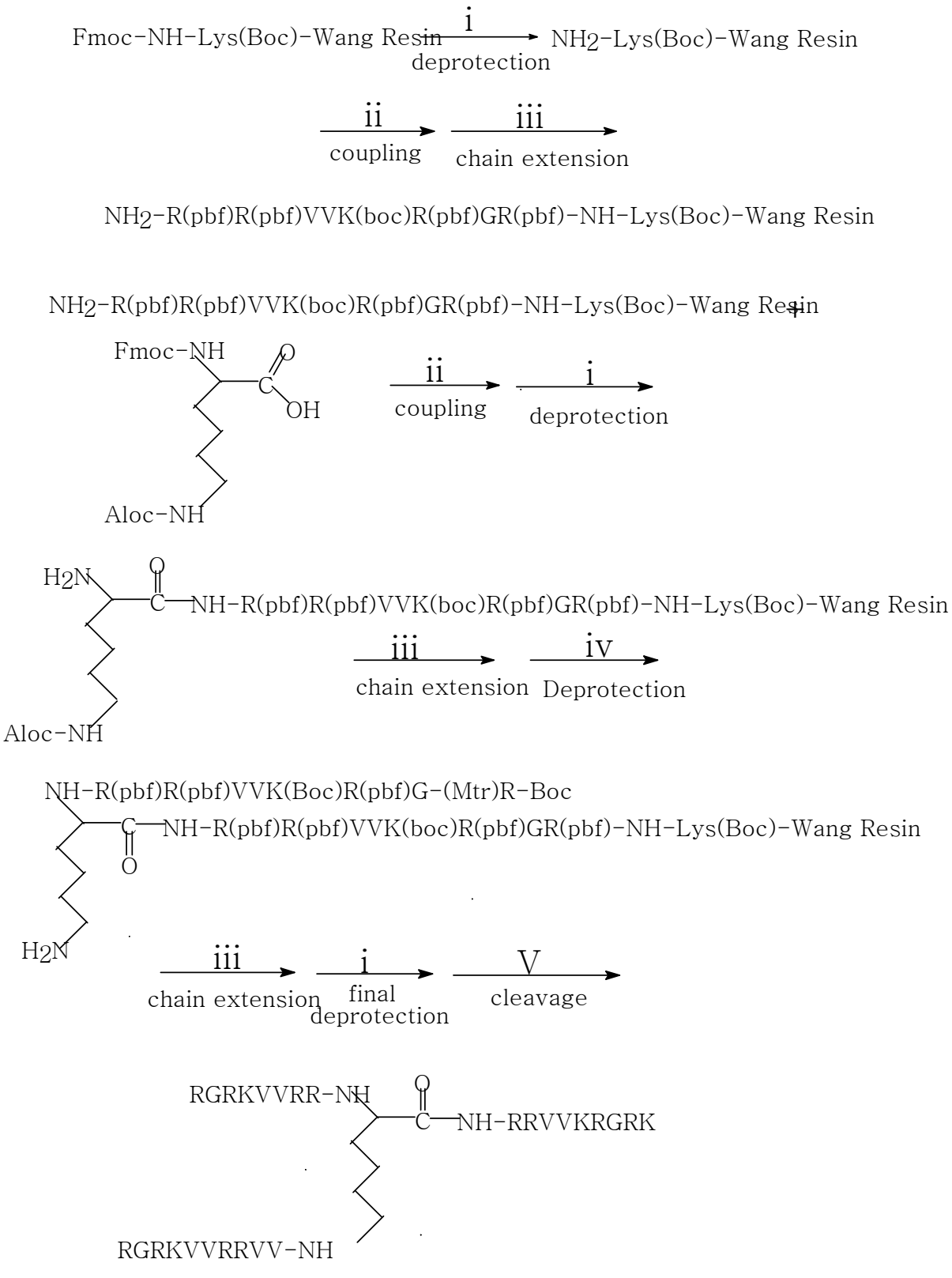
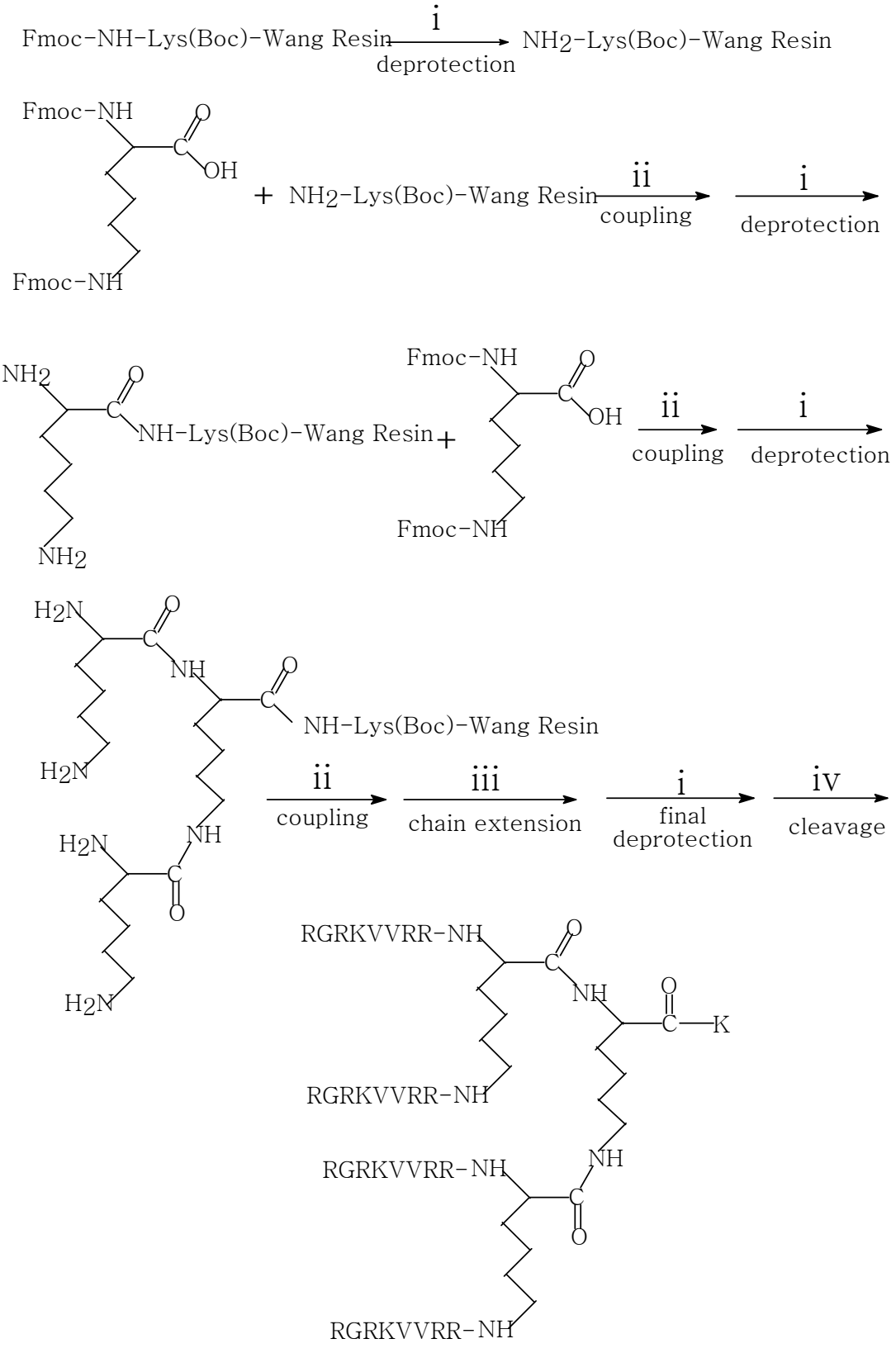

Fmoc-NH-Lys(Boc)-Wang Resin
i
deprotection
NH2-Lys(Boc)-Wang Resin
Fmoc-NH
OH
Aloc-NH
+ NH2-Lys(Boc)-Wang Resin
ii
coupling
i
deprotection
NH2
NH-Lys(Boc)-Wang Resin
+ Arg(pbf)
ii
coupling
i
deprotection
Aloc-NH
H2N-Arg(pbf)-NH
NH-Lys(Boc)-Wang Resin + Arg(pbf)
Aloc-NH
ii
coupling
iii
chain extension
Boc-R(Mtr)GR(pbf)K(Boc)VVR(pbf)R(pbf)-NH
iv
Deprotection
NH-Lys(Boc)-Wang Resin
Aloc-NH
Boc-R(Mtr)GR(pbf)K(Boc)VVR(pbf)R(pbf)-NH
NH-Lys(Boc)-Wang Resin
NH2
ii
coupling
iii
chain extension
i
final deprotection
v
cleavage
RGRKVVRR-NH
K
RGRKVVRRVV-NH
V2V4-heterodimer

Figure 8



heterotrimer

Figure 9



V2-tetramer

SEQUENCE LISTING

<110> Singapore Health Services Pte Ltd
Agency for Science, Technology and Research

<120> MULTIMERIC FORMS OF ANTIMICROBIAL PEPTIDES

<130> SG1997A

<150> US 61/046,584
<151> 2008-04-21

<160> 58

<170> PatentIn version 3.4

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Xaa Ser Thr Arg Gly Arg Lys Xaa Xaa Arg Arg
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Xaa Xaa Arg Arg Xaa Xaa
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Arg Arg Xaa Xaa
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Arg Arg Xaa Xaa
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Arg

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35 40 45

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<213> artificial

<220>
<223> hBD3 repeated fragment excluding terminal KK, C residues replaced with C(Acm)

<220>
<221> X

<222> (5)..(6)
<223> C comprises C(Acm), C(But), C(t-Buthio), C(Bzl), C(4-MeBzl), C(4-MeOBzl) or C(Mmt).

<400> 43

Arg Gly Arg Lys Xaa Xaa Arg Arg
1 5

<210> 44
<211> 8
<212> PRT
<213> artificial

<220>
<223> hBD3 repeated fragment excluding terminal KK, C residues replaced with V

<400> 44

Arg Gly Arg Lys Val Val Arg Arg
1 5

<210> 45
<211> 10
<212> PRT
<213> artificial

<220>
<223> hBD3 derived peptide, V2 monomer and KK residues. 10 aa

<400> 45

Arg Gly Arg Lys Val Val Arg Arg Lys Lys
1 5 10

<210> 46
<211> 10
<212> PRT
<213> artificial

<220>
<223> V4 monomer, V4-10 AA

<400> 46

Arg Gly Arg Lys Val Val Arg Arg Val Val
1 5 10

<210> 47
<211> 10
<212> PRT
<213> artificial

<220>
<223> Y4 monomer (Y4-10 AA)

<400> 47

Arg Gly Arg Lys Tyr Tyr Arg Arg Tyr Tyr
1 5 10

<210> 48
<211> 10
<212> PRT
<213> artificial

<220>
<223> W4 monomer, W4-10 AA

<400> 48

Arg Gly Arg Lys Trp Trp Arg Arg Trp Trp
1 5 10

<210> 49
<211> 8
<212> PRT
<213> artificial

<220>
<223> hBD3 derived peptide, V3 monomer

<400> 49

Arg Val Arg Lys Val Val Arg Arg
1 5

<210> 50
<211> 8
<212> PRT
<213> artificial

<220>
<223> hBD3 derived peptide, V2R monomer

<400> 50

Arg Arg Arg Lys Val Val Arg Arg
1 5

<210> 51
<211> 8
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<220>
<223> hBD3 derived peptide, V2D monomer

<400> 51

Arg Asp Arg Lys Val Val Arg Arg
1 5

<210> 52
<211> 8
<212> PRT
<213> artificial

<220>
<223> hBD3 derived peptide, E2 monomer

<400> 52

Arg Gly Arg Lys Glu Glu Arg Arg
1 5

<210> 53
<211> 8
<212> PRT
<213> artificial

<220>
<223> hBD3 derived peptide, K2 monomer

<400> 53

Arg Gly Arg Lys Lys Lys Arg Arg
1 5

<210> 54
<211> 10
<212> PRT
<213> Artificial

<220>
<223> peptide comprising 10 arginines (R)

<400> 54

Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg
1 5 10

<210> 55
<211> 4
<212> PRT
<213> artificial

<220>
<223> peptide comprising 4 valines (V)

<400> 55

Val Val Val Val
1

<210> 56
<211> 4
<212> PRT
<213> artificial

<220>
<223> peptide comprising 4 tyrosines (Y)

<400> 56

Tyr Tyr Tyr Tyr
1

<210> 57
<211> 8
<212> PRT
<213> artificial

<220>
<223> SEQ ID NO: 44 in reverse

<400> 57

Arg Arg Val Val Lys Arg Gly Arg
1 5

<210> 58
<211> 9
<212> PRT
<213> artificial

<220>
<223> SEQ ID NO: 57 + K

<400> 58

Arg Arg Val Val Lys Arg Gly Arg Lys
1 5