

Building Blocks

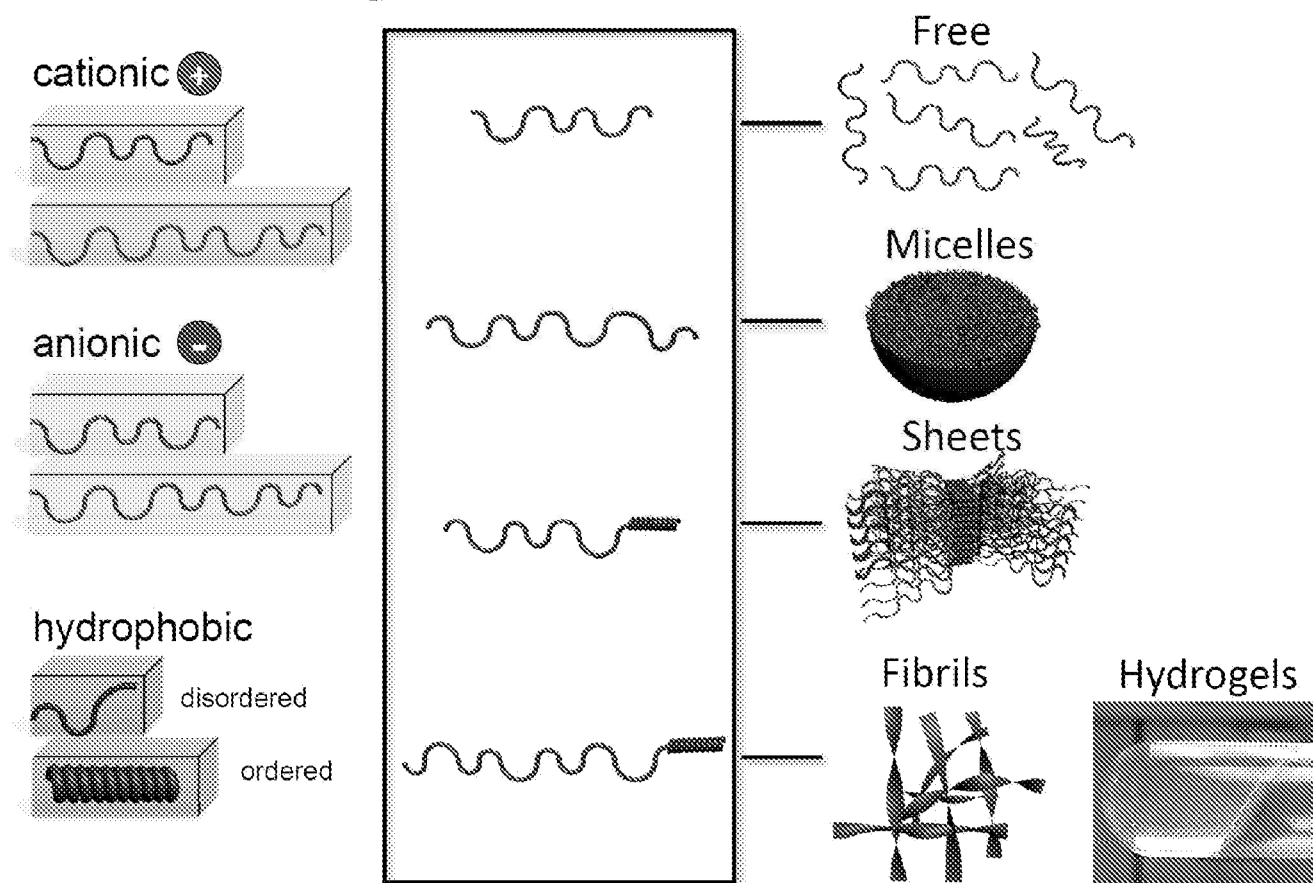


Fig. 1

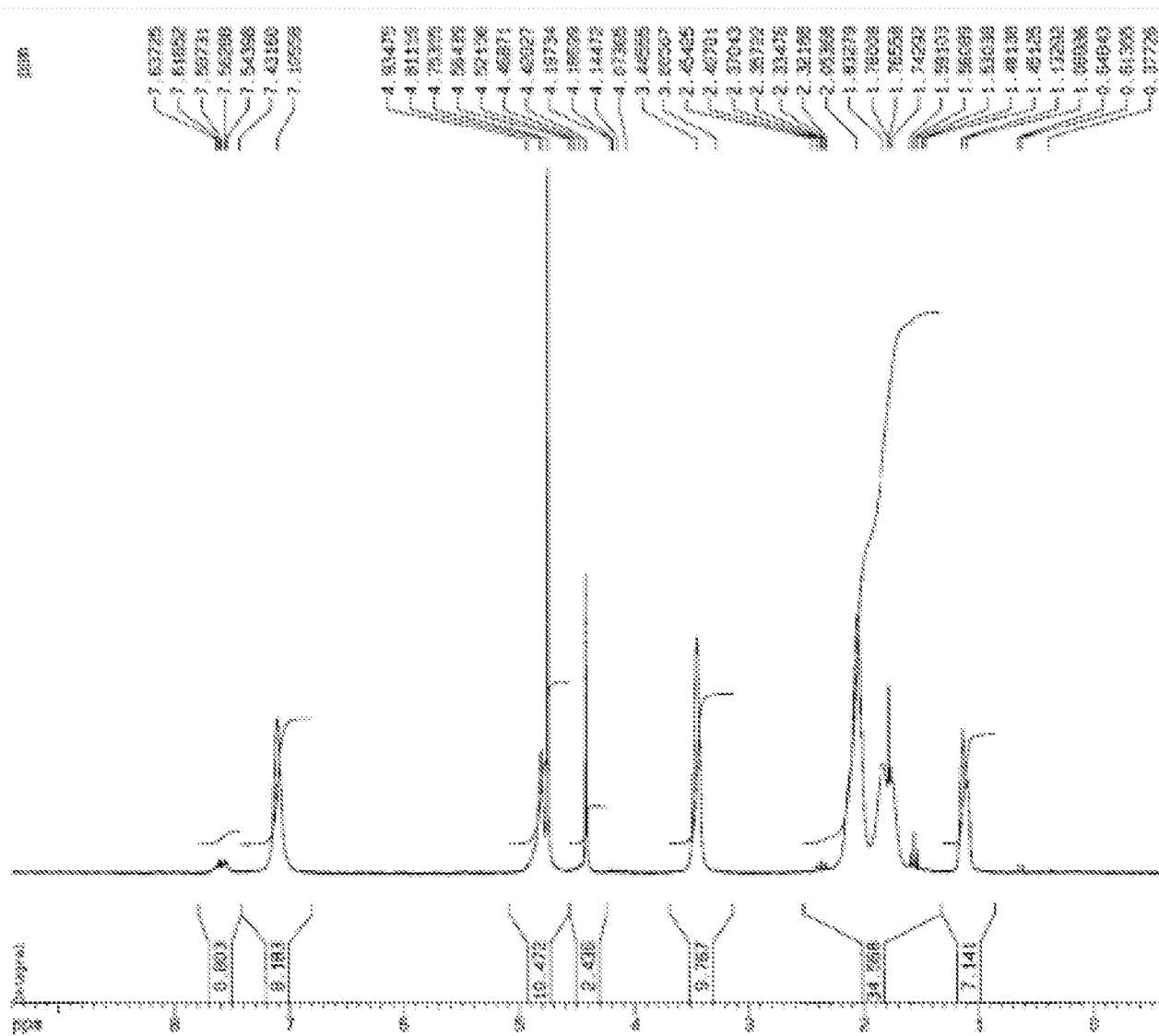


Fig. 2

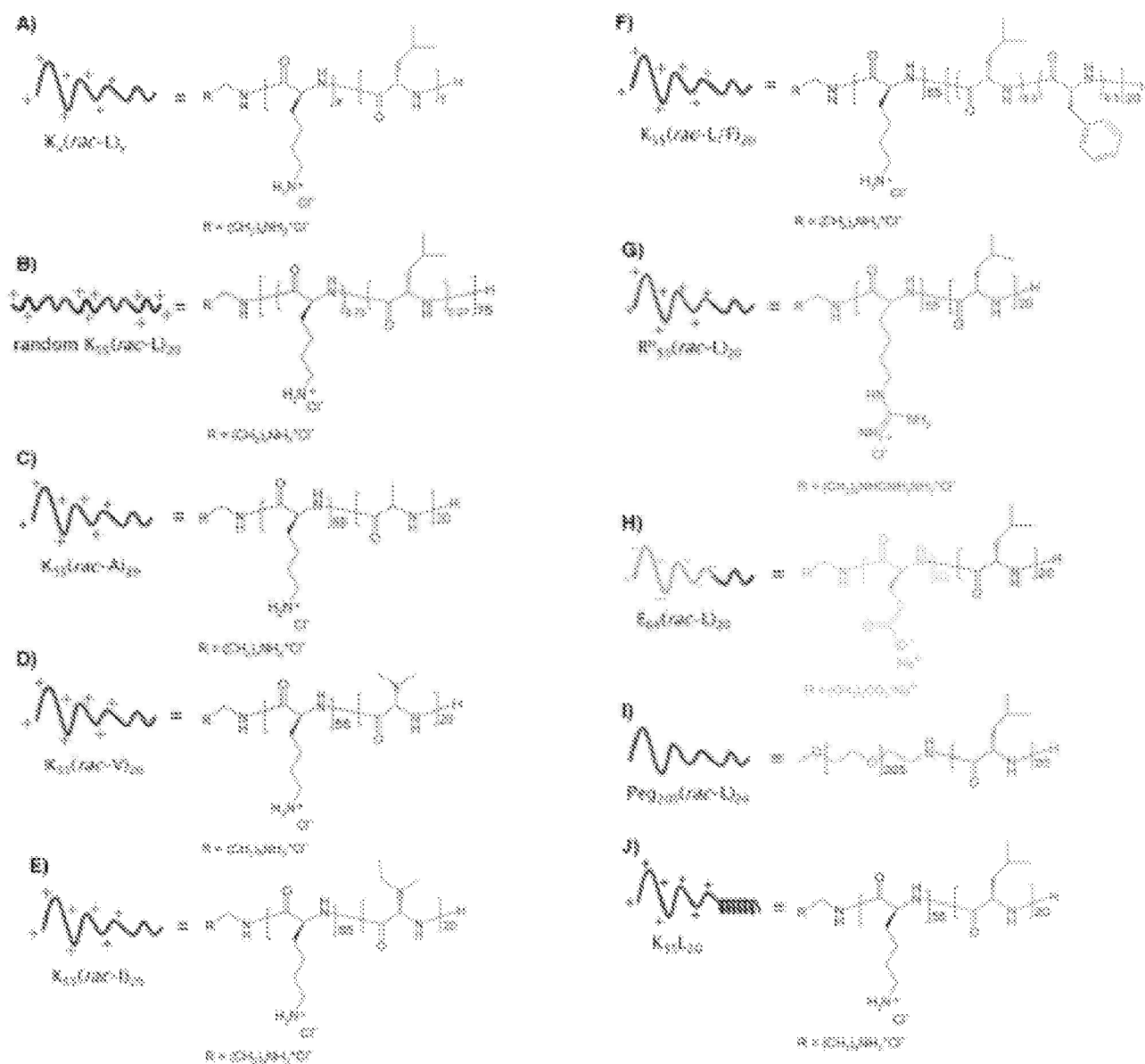
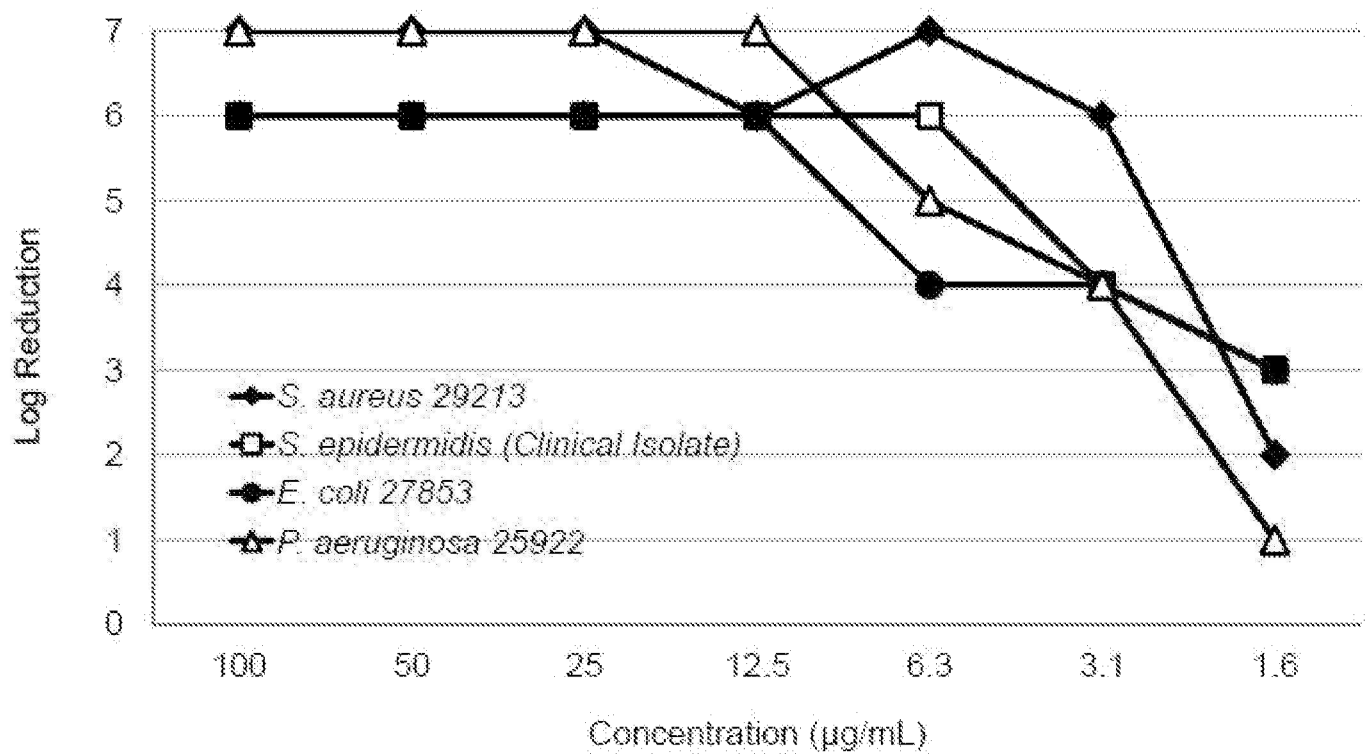


Fig. 3

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**Fig. 4**

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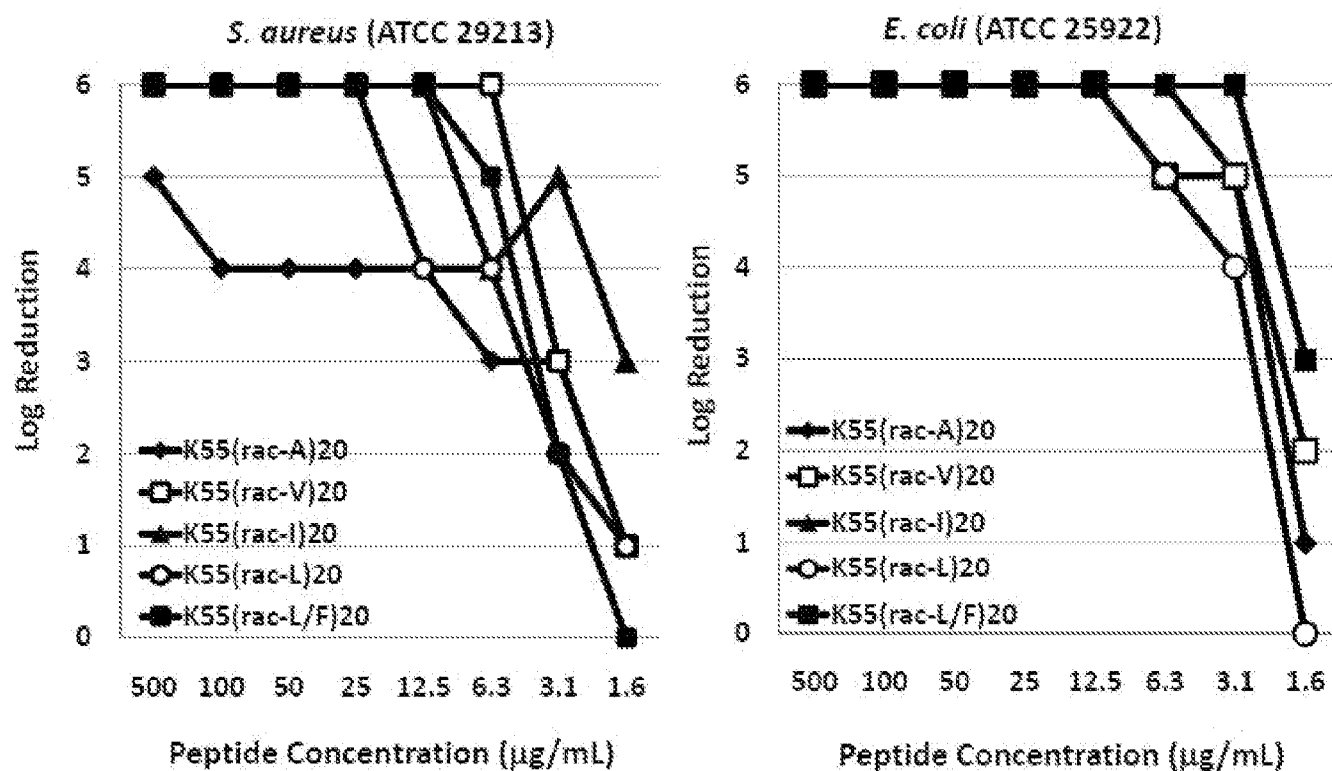
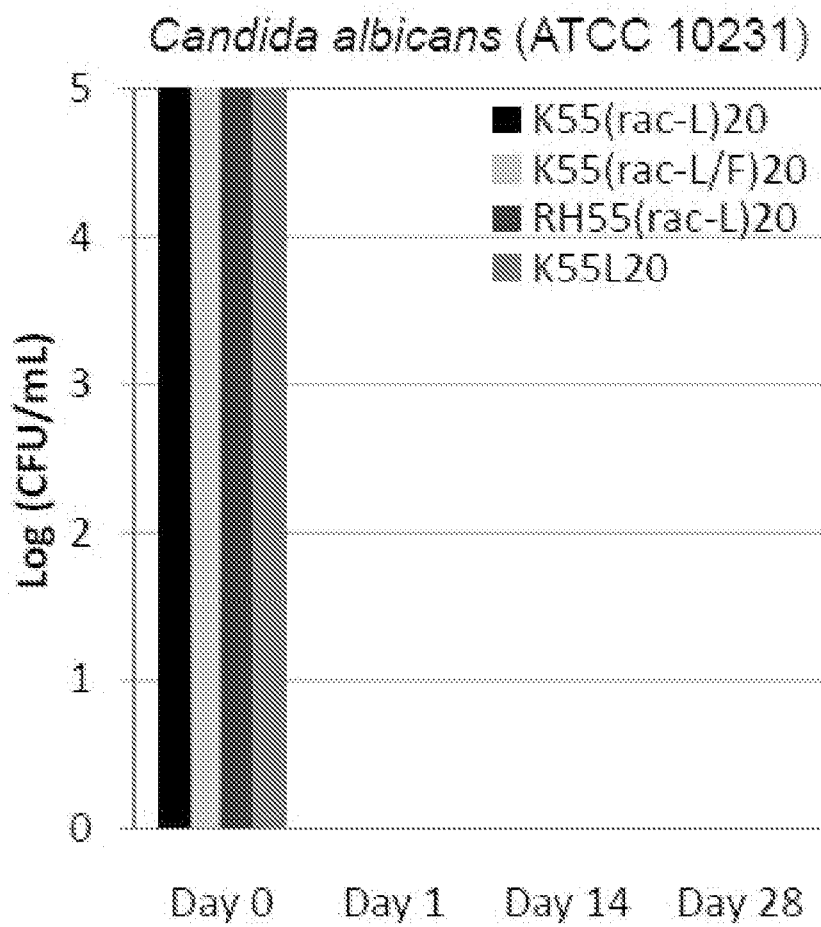
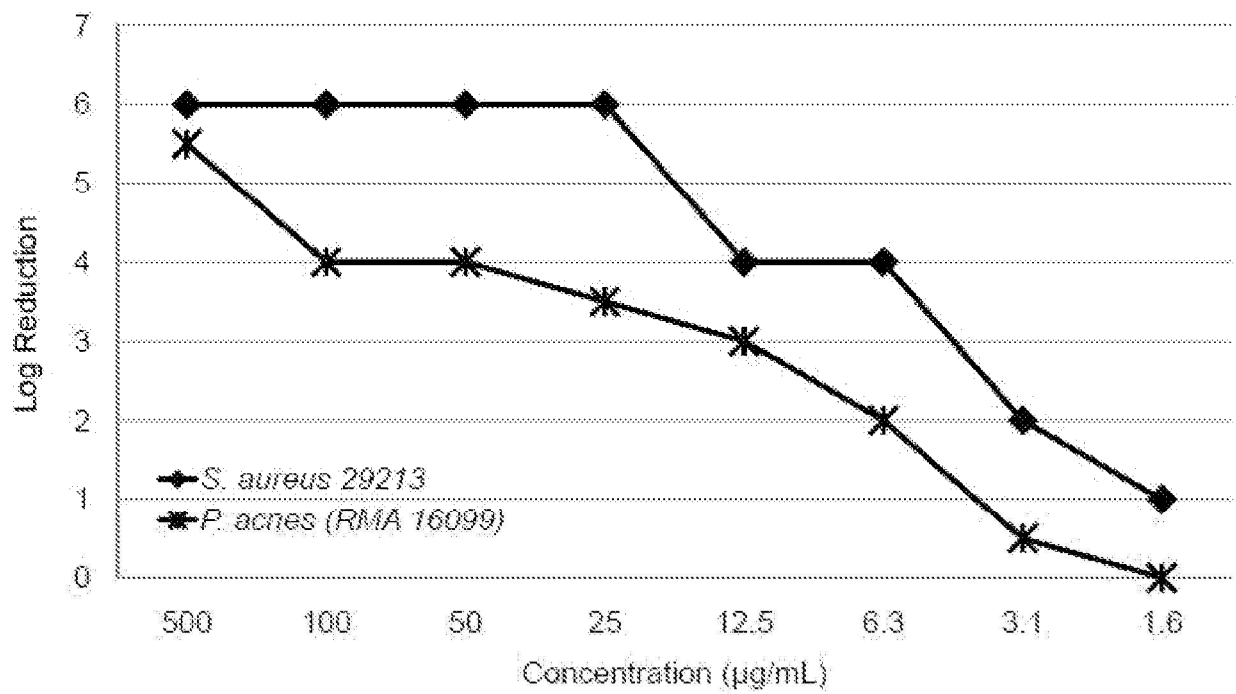


Fig. 5

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**Fig. 6**

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**Fig. 7**

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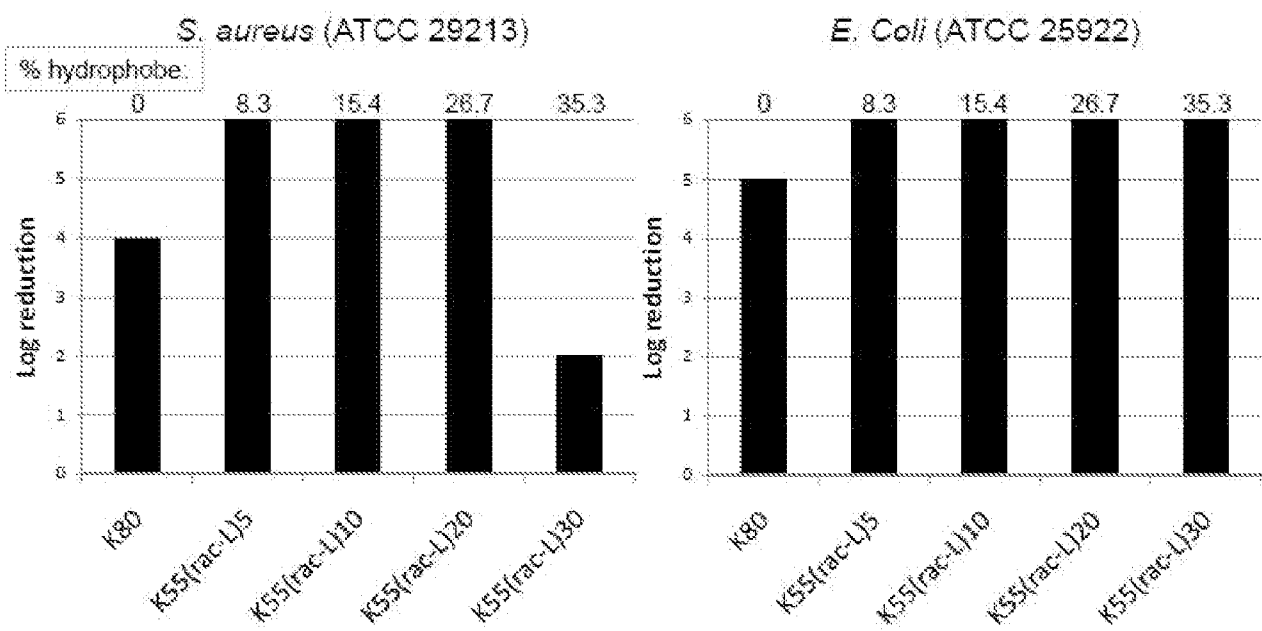
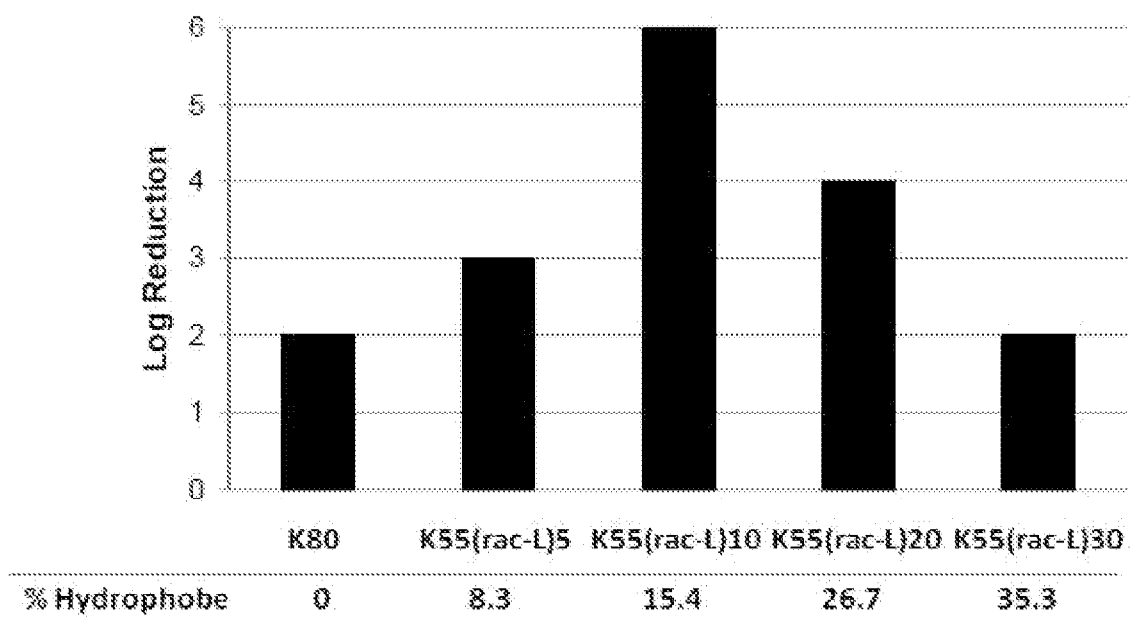


Fig. 8

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**Fig. 9**

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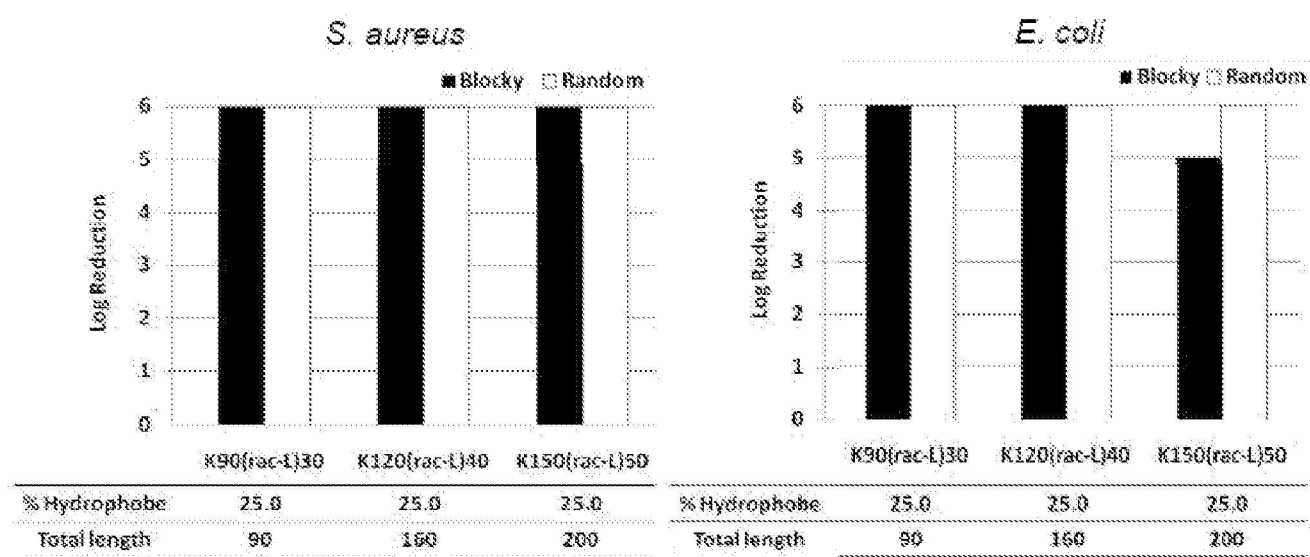
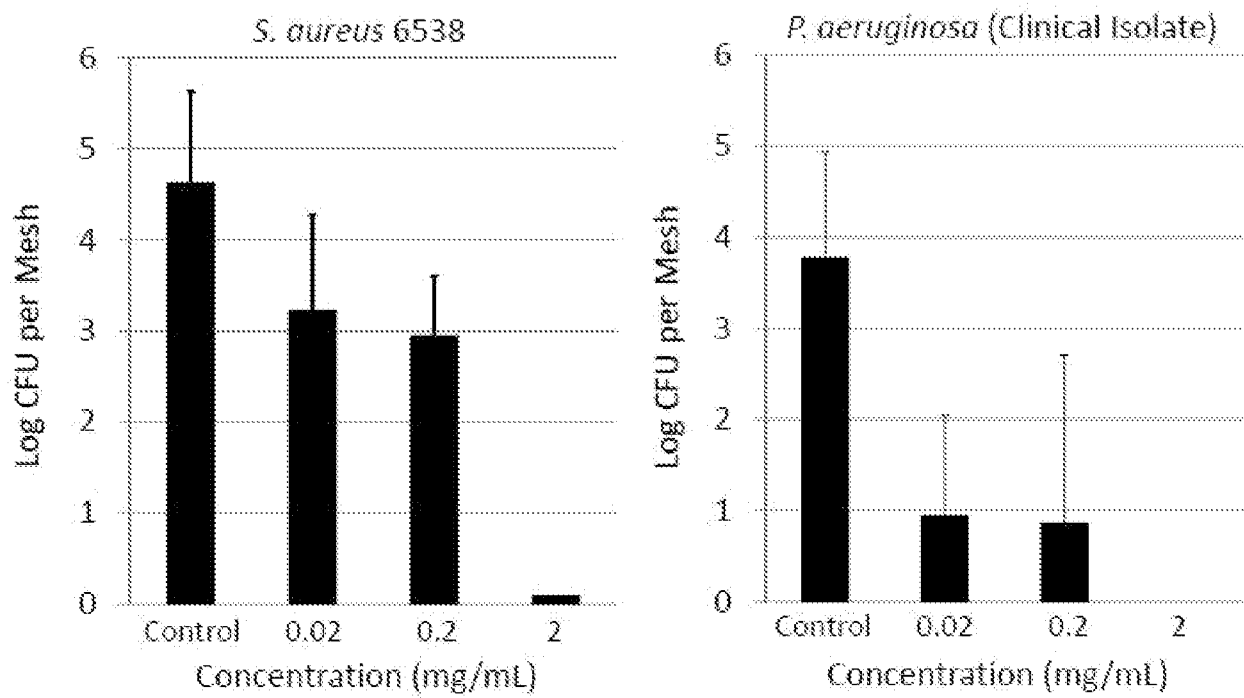


Fig. 10

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**Fig. 11**

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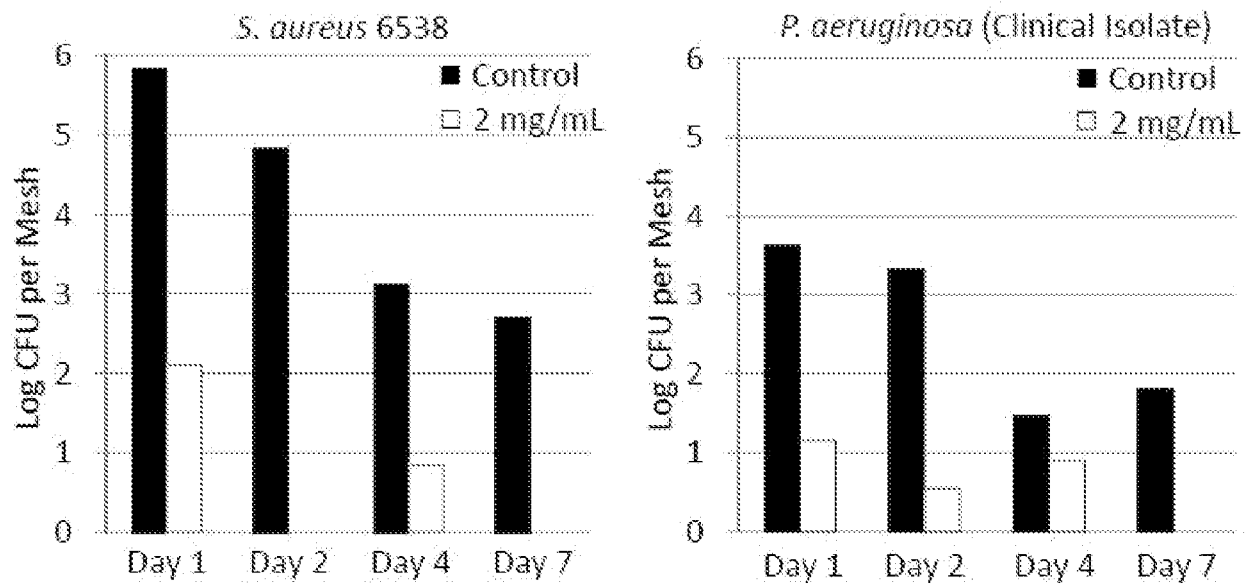


Fig. 12

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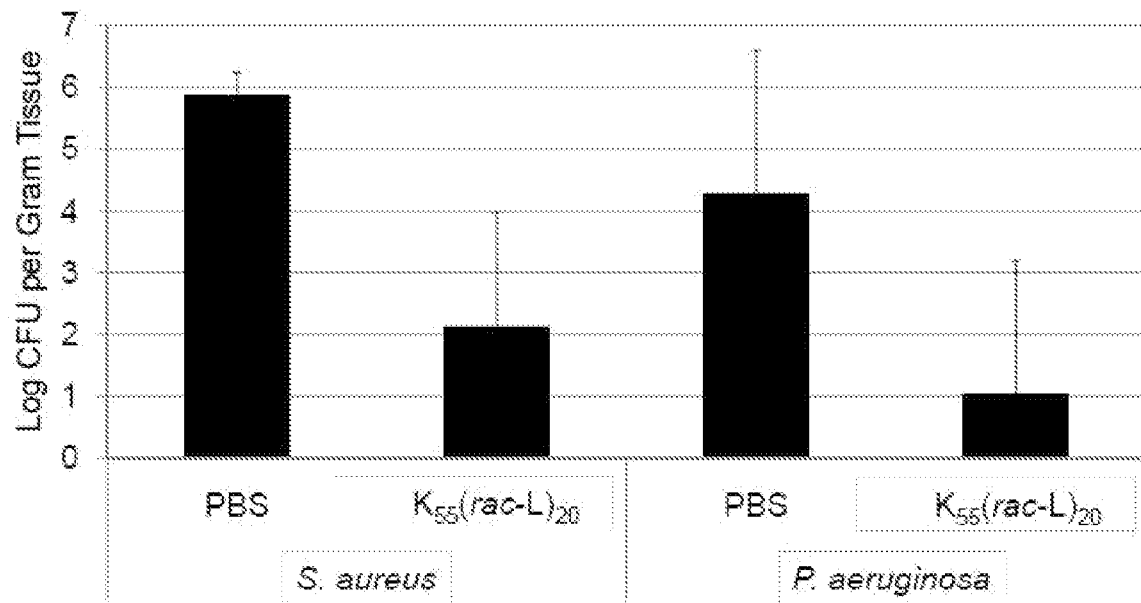
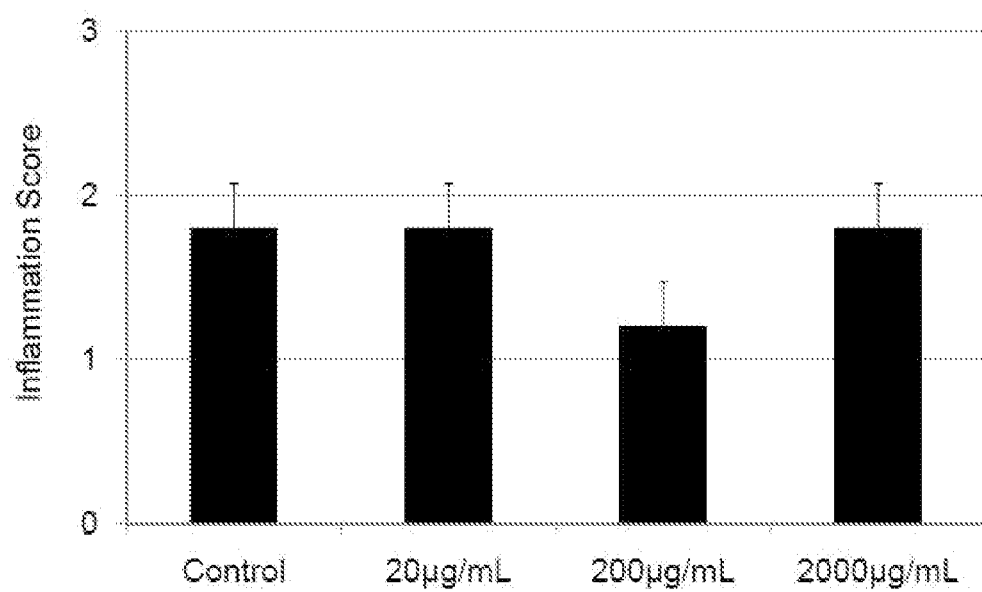
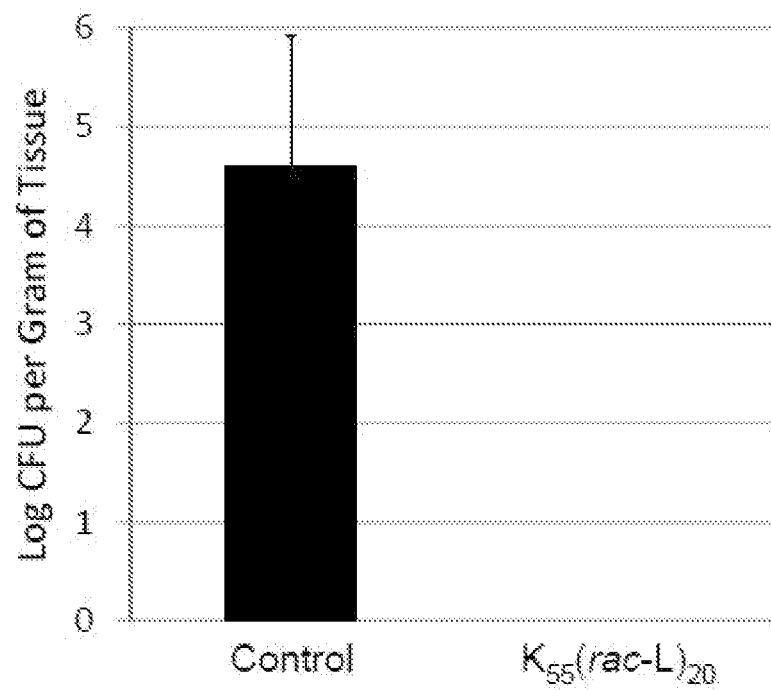


Fig. 13

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**Fig. 14**

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**Fig. 15**

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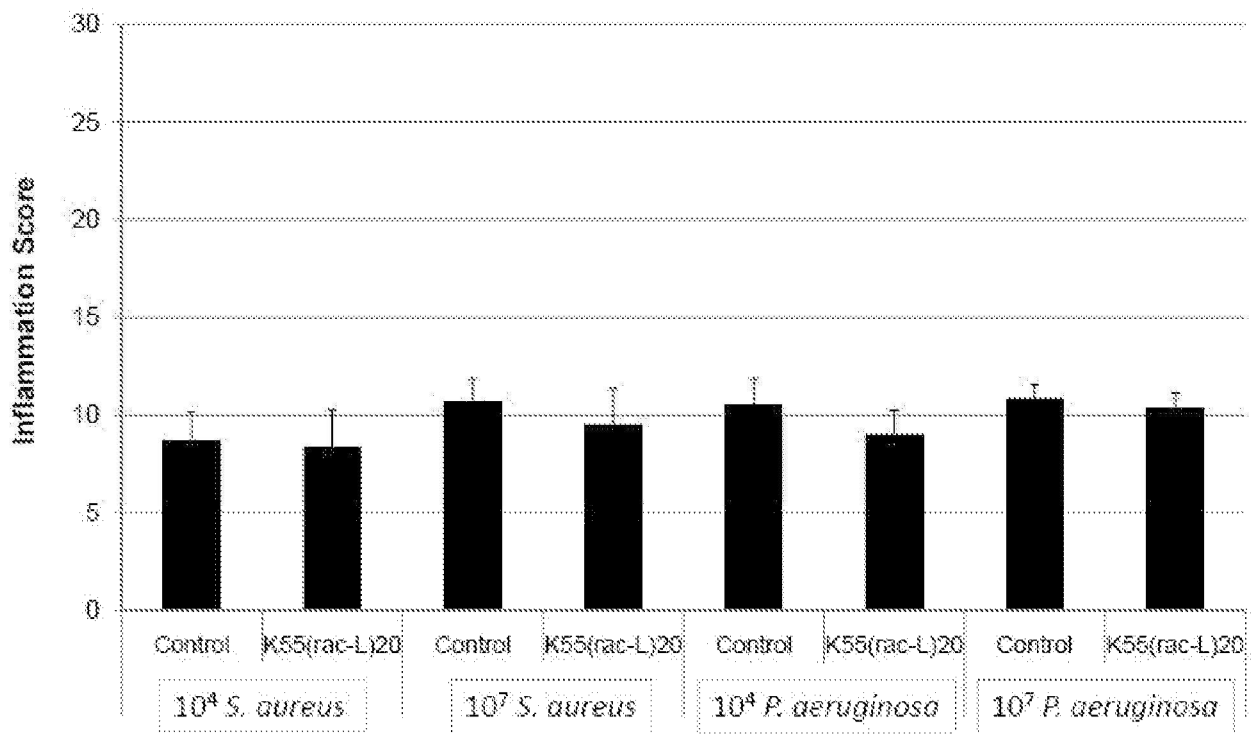


Fig. 16

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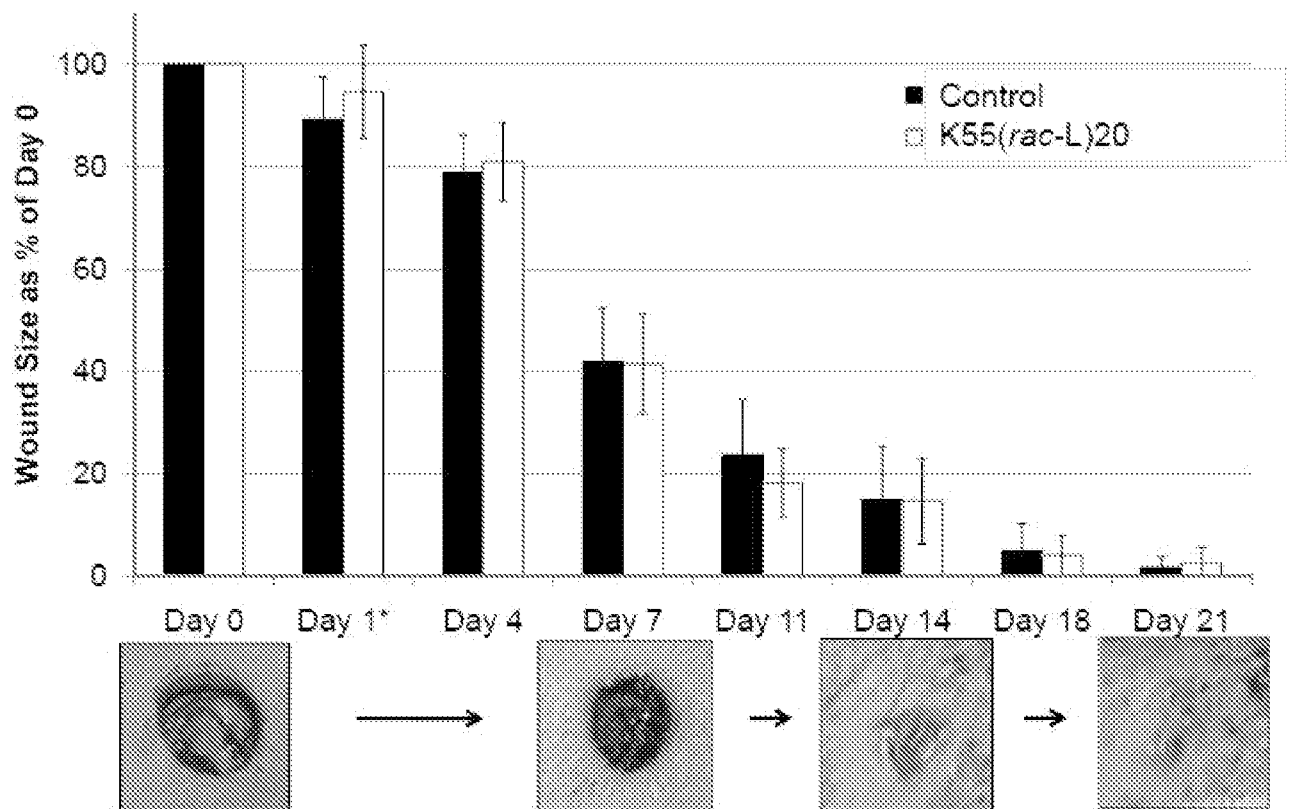


Fig. 17

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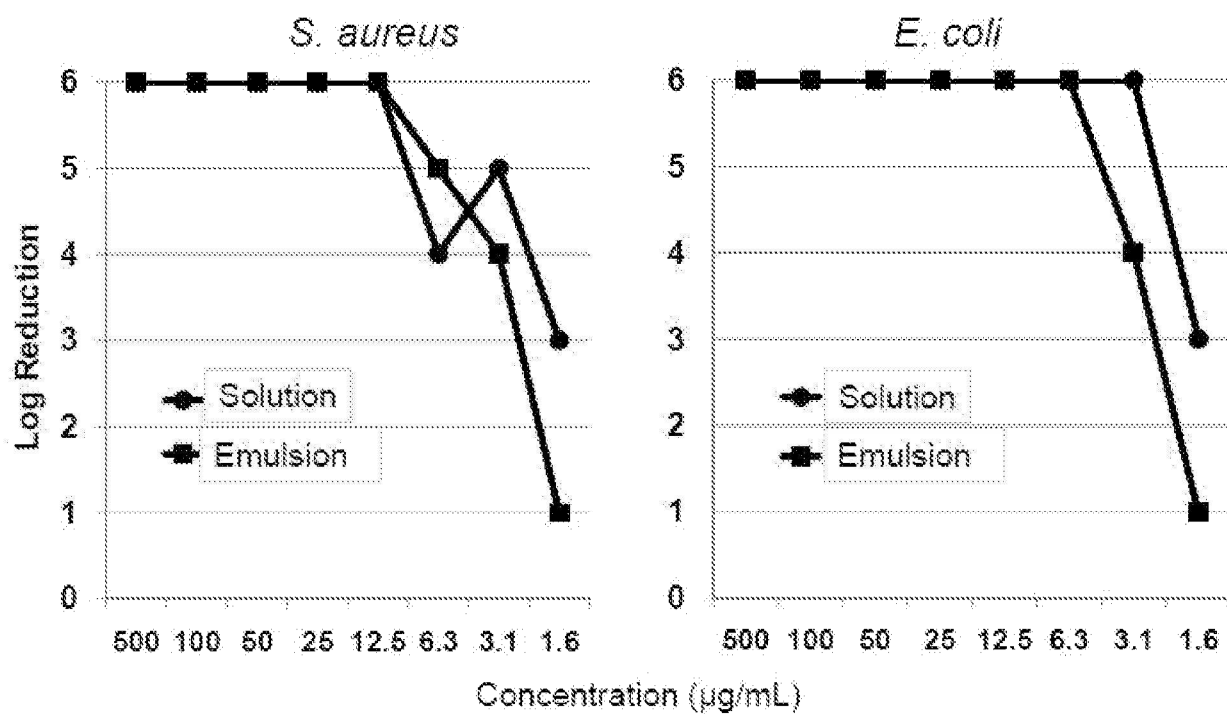


Fig. 18

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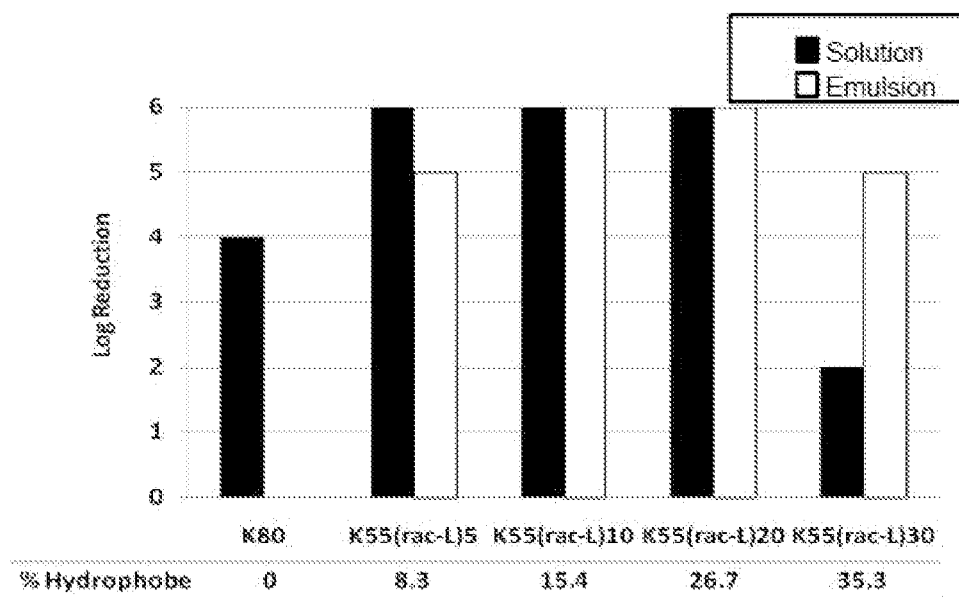
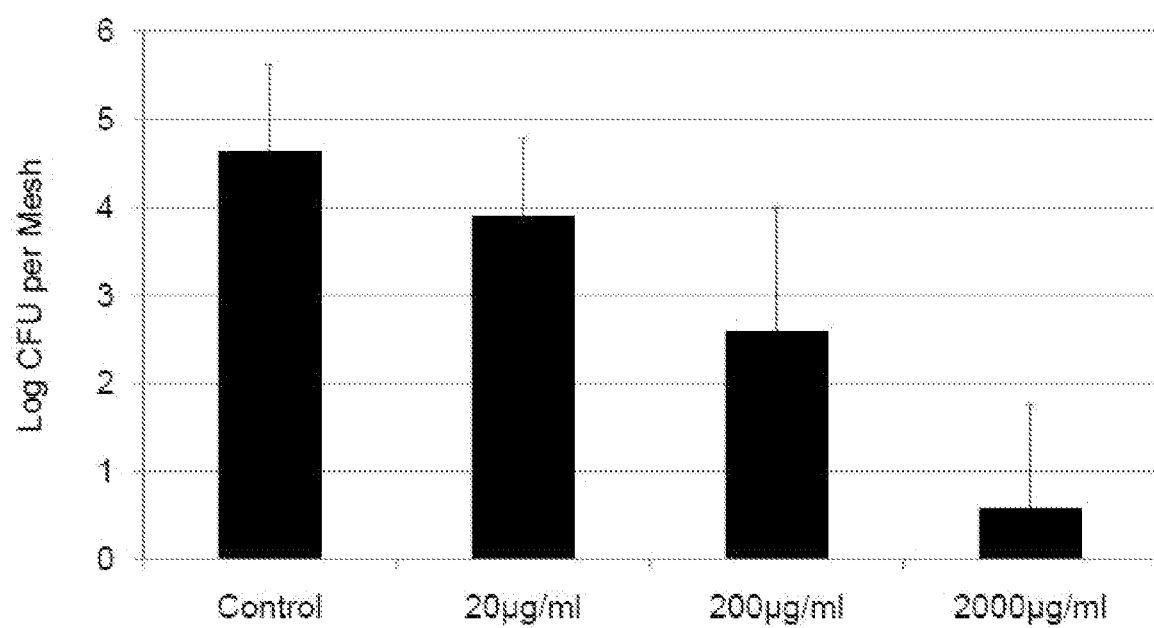
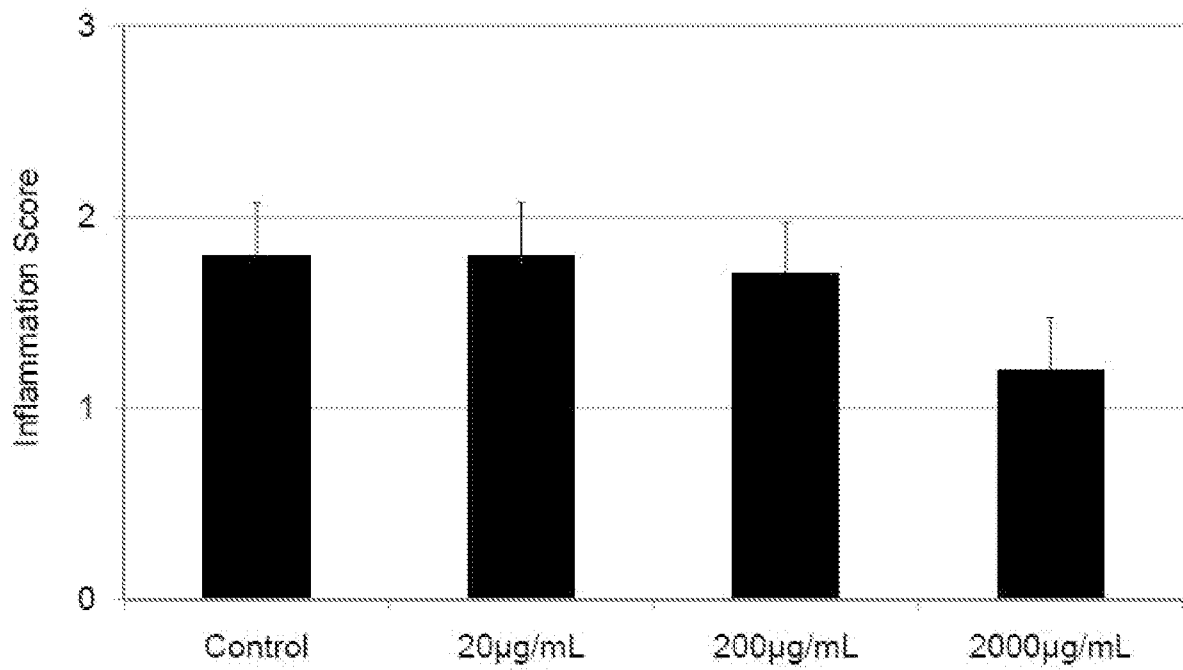


Fig. 19

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**Fig. 20**

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**Fig. 21**

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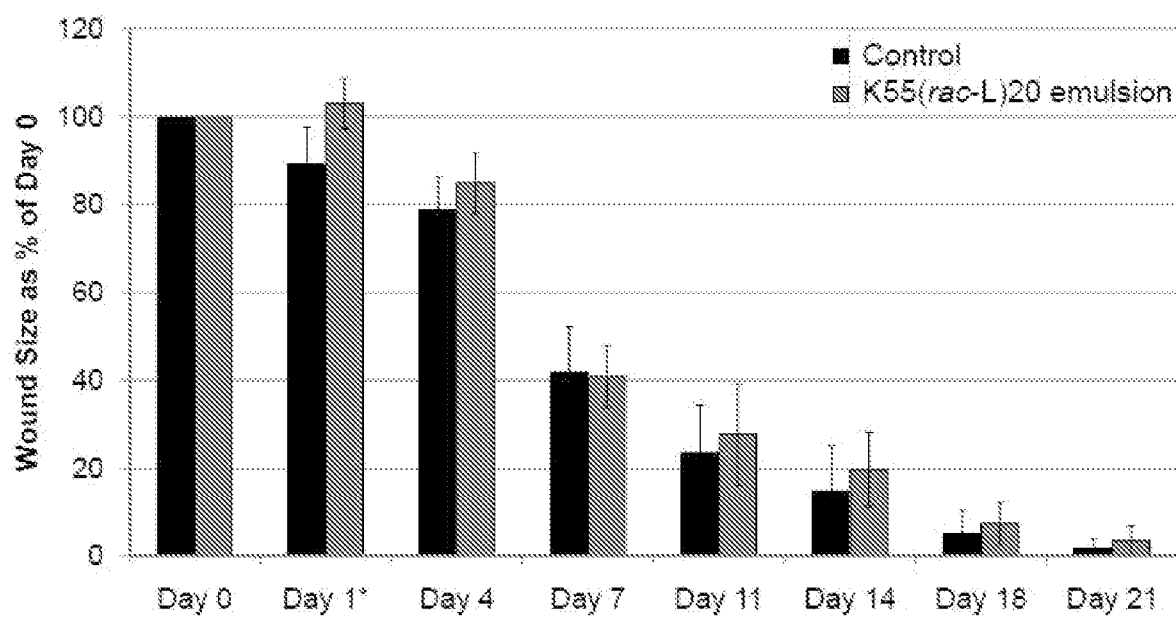


Fig. 22

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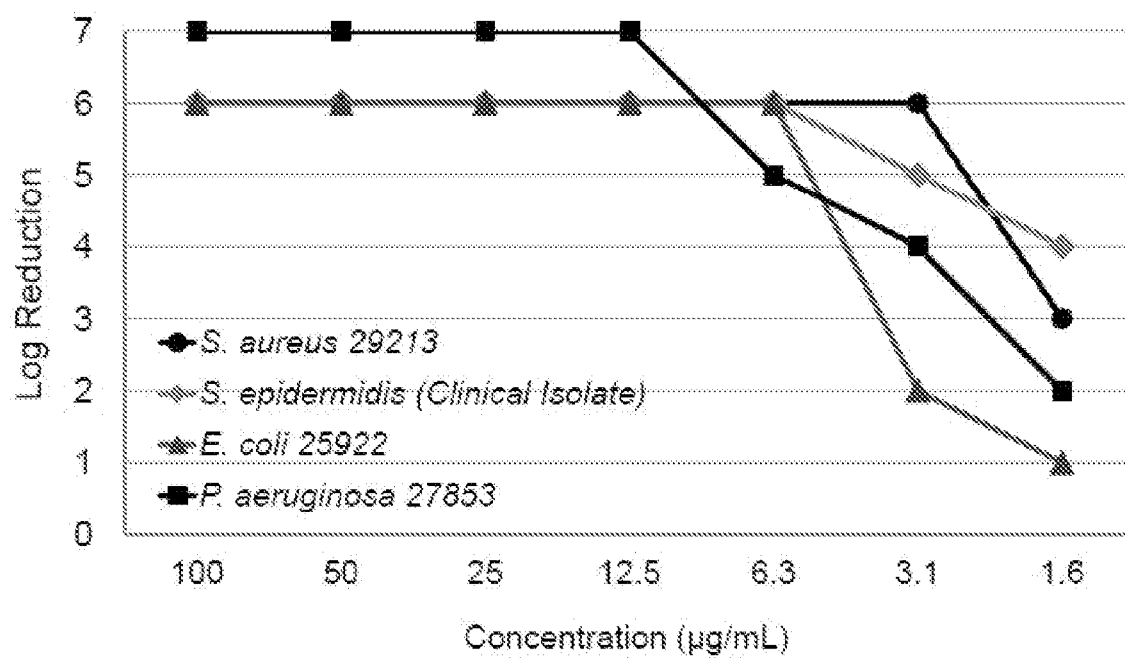


Fig. 23

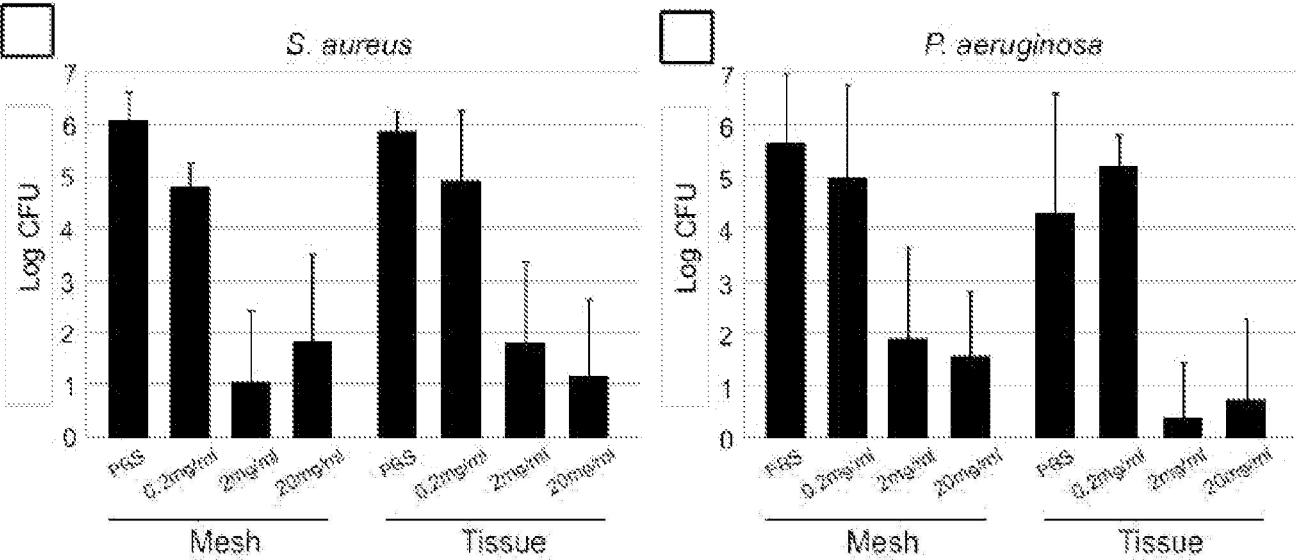
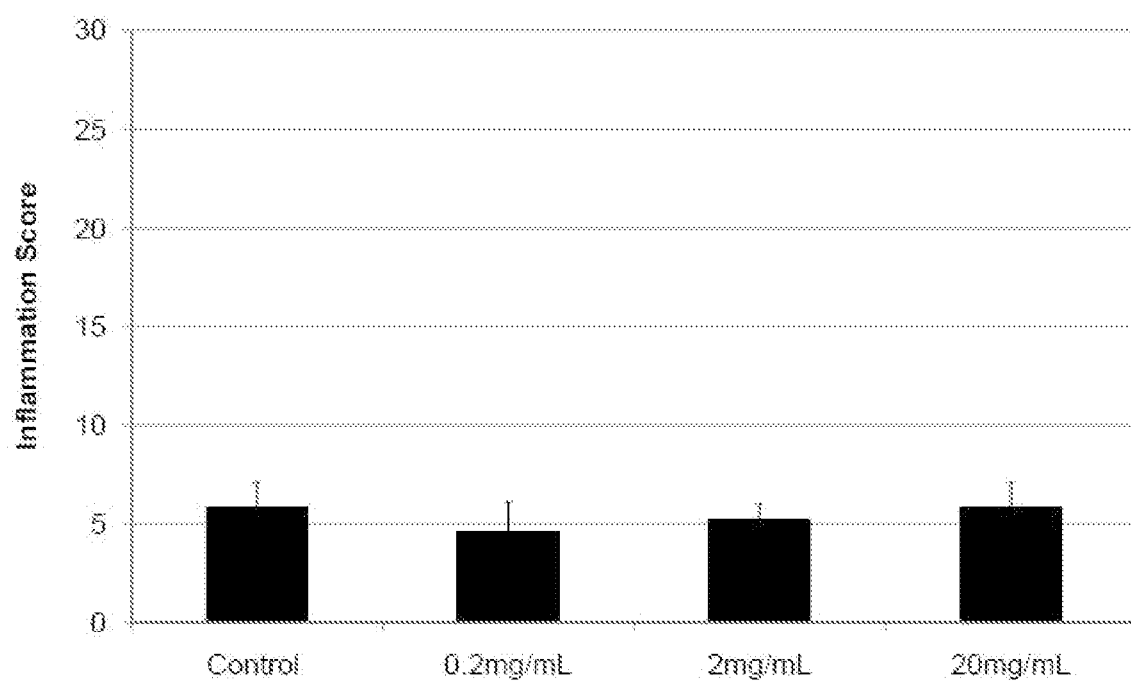
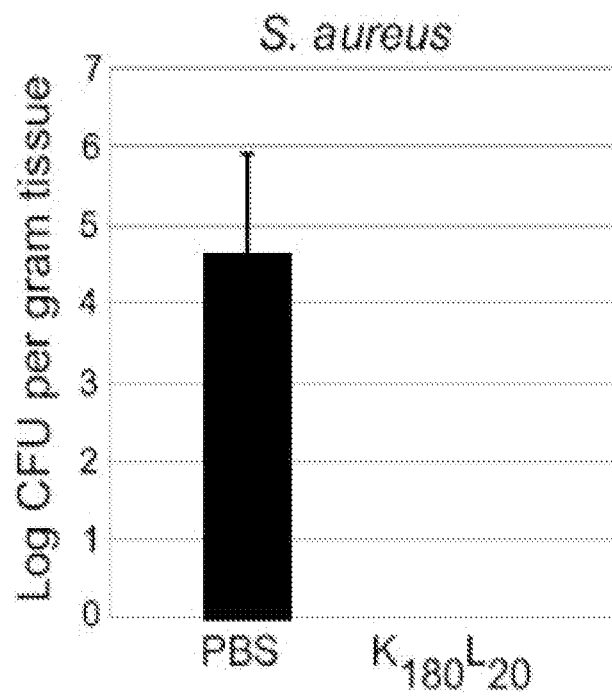


Fig. 24

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**Fig. 25**

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**Fig. 26**

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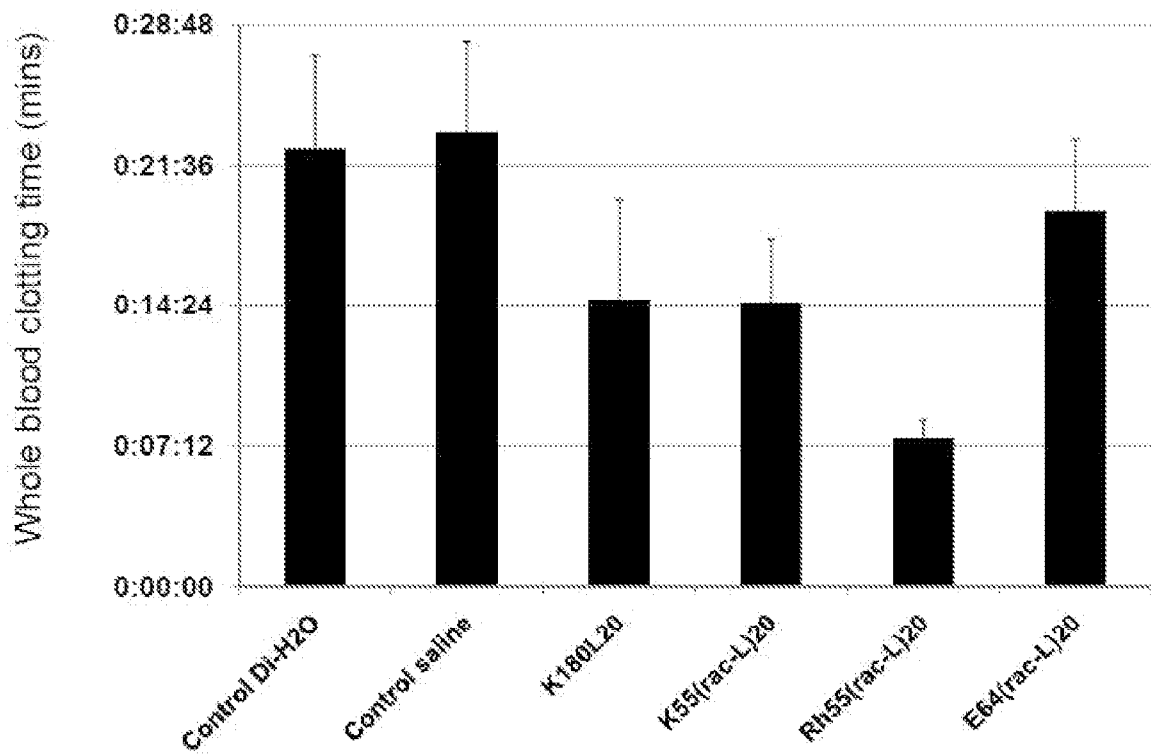


Fig. 27

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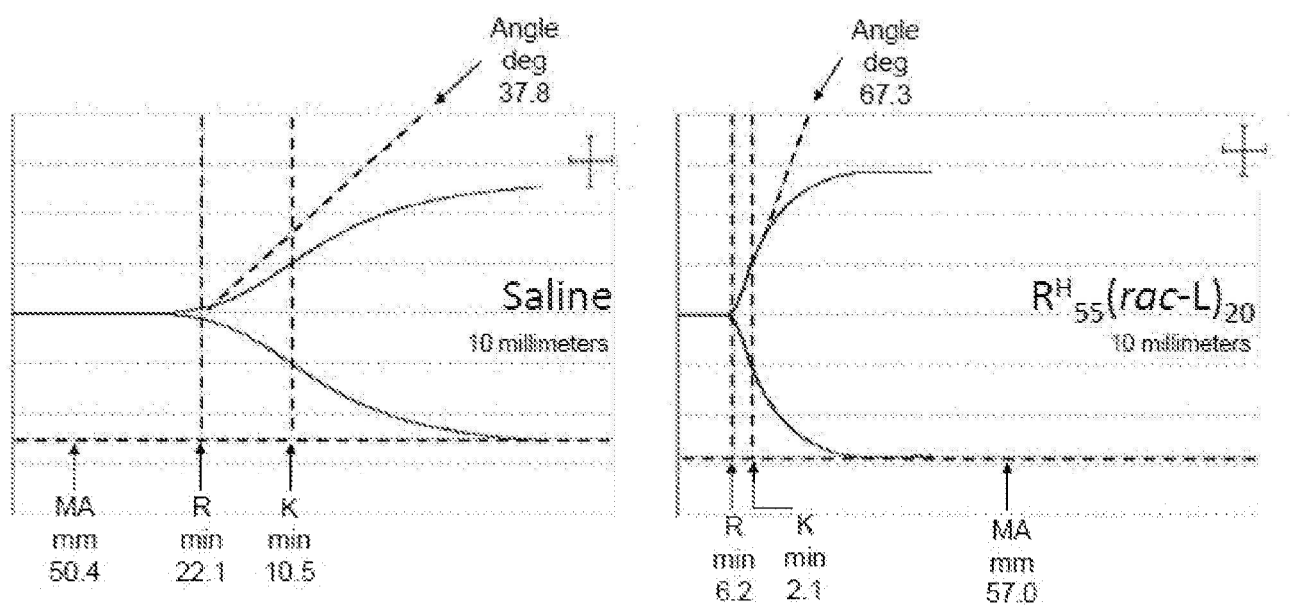


Fig. 28

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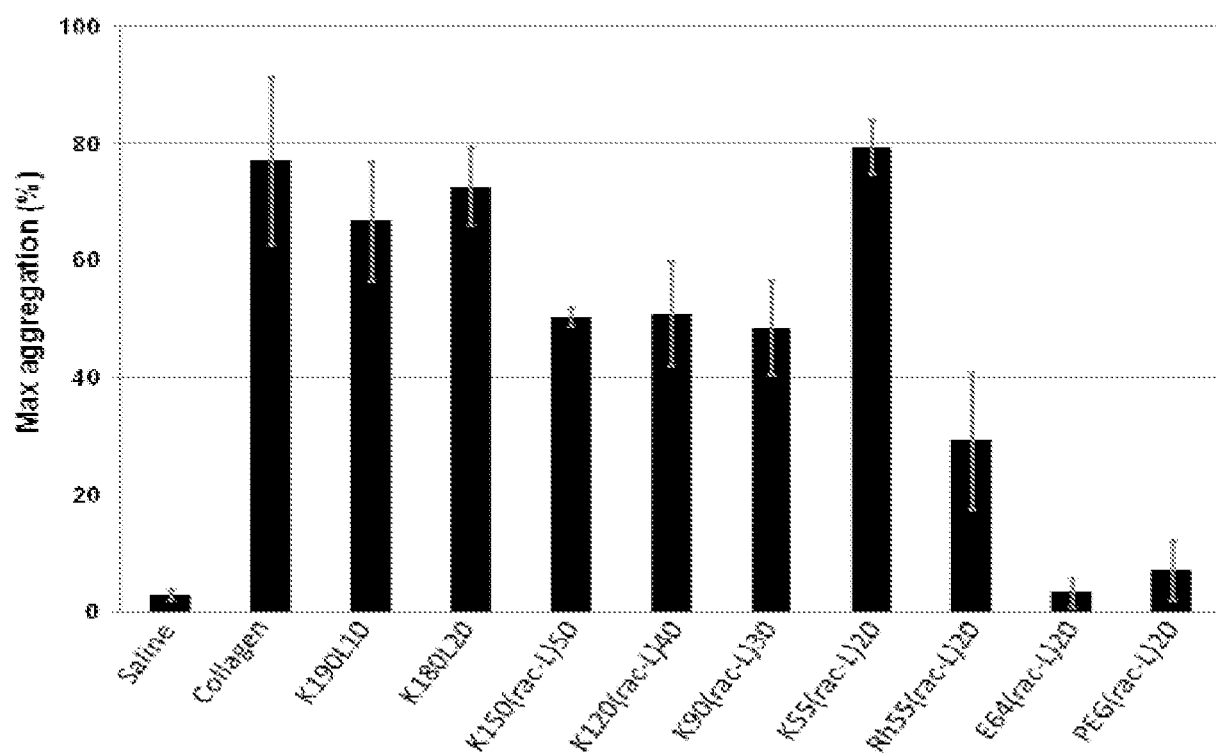


Fig. 29

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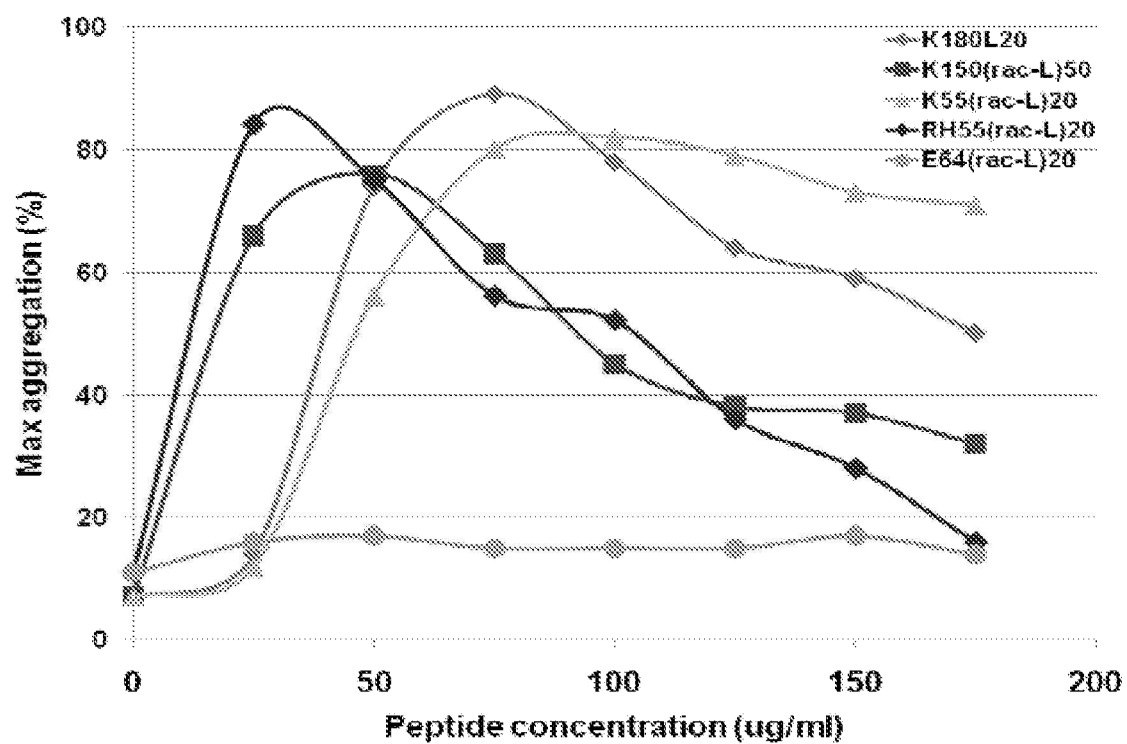


Fig. 30

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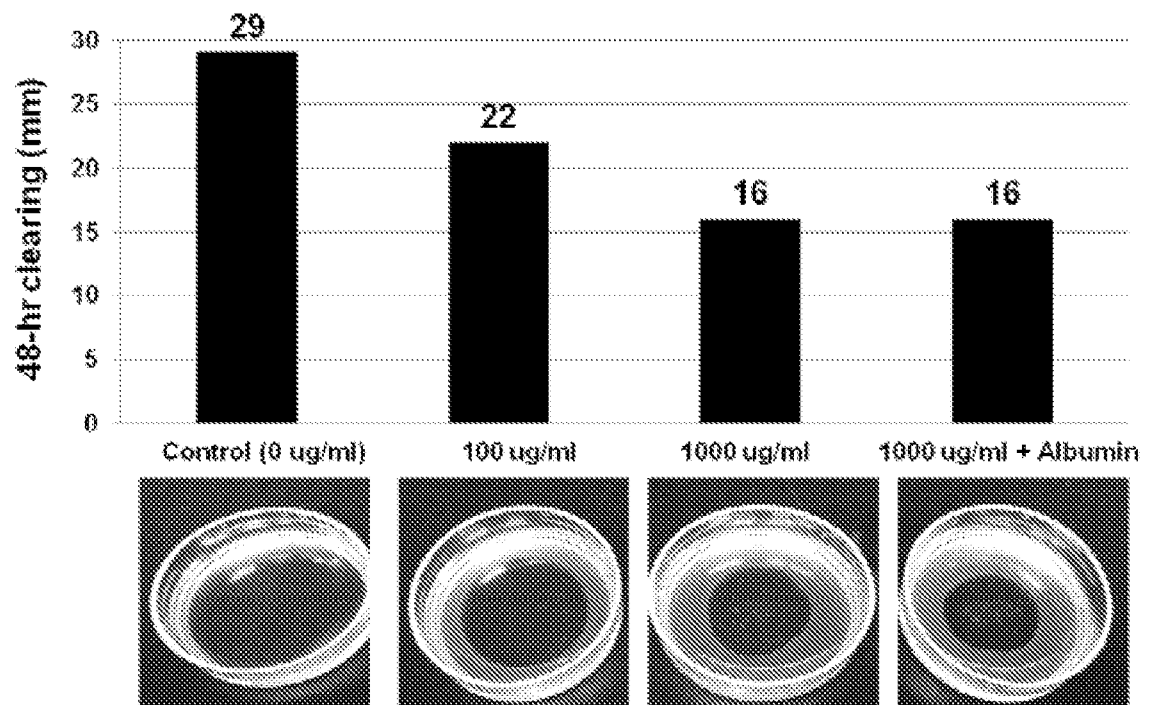


Fig. 31

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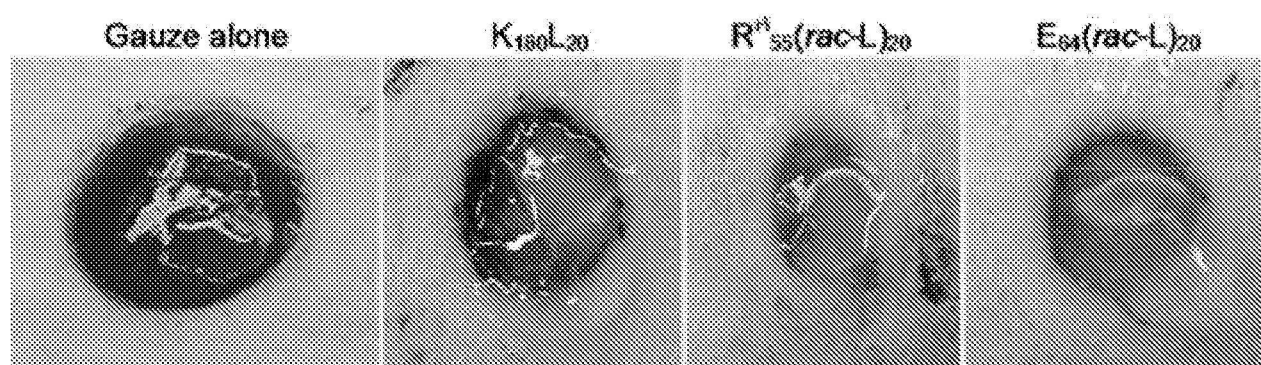


Fig. 32

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Polypeptide	PDI ^a	M _n (× 10 ³) ^b
K₅₅L_x series		
K ₅₅ L ₅	1.09	9.8
K ₅₅ L ₁₀	1.09	10.4
K ₅₅ L ₁₅	1.09	10.9
K ₅₅ L ₂₀	1.09	11.5
K ₅₅ L ₂₅	1.09	12.1
K ₅₅ L ₃₀	1.09	12.6
K₅₅(rac-L)_x series		
K ₅₅ (rac-L) ₅	1.12	9.6
K ₅₅ (rac-L) ₁₀	1.12	10.2
K ₅₅ (rac-L) ₂₀	1.12	11.3
K ₅₅ (rac-L) ₃₀	1.12	12.4
random K₅₅(rac-L)_x and K₅₅L_x series		
random K ₅₅ L ₂₀	1.13	10.3
random K ₅₅ (rac-L) ₅	1.14	10
random K ₅₅ (rac-L) ₁₀	1.18	10.2
random K ₅₅ (rac-L) ₂₀	1.16	12.2
random K₅₅(rac-X)_y		
K ₅₅ (rac-L) ₂₀	1.12	11.3
K ₅₅ (rac-L/F) ₂₀	1.12	11.7
K ₅₅ (rac-V) ₂₀	1.12	11
K ₅₅ (rac-A) ₂₀	1.12	10.5
Long K_x(rac-L)_y and random K_x(rac-L)_y series		
K ₅₀ (rac-L) ₃₀	1.27	18.1
random K ₅₀ (rac-L) ₃₀	1.17	18.3
K ₁₂₀ (rac-L) ₄₀	1.16	24.3
random K ₁₂₀ (rac-L) ₄₀	1.07	23.5
K ₁₅₀ (rac-L) ₅₀	1.23	30.3
random K ₁₅₀ (rac-L) ₅₀	1.23	31.3
Polypeptide	PDI ^a	M _n (× 10 ³) ^b
K_x		
K ₈₀	1.2	13.2
K ₂₅₆	1.2	42.4
Long K_xL_y series		
K ₁₈₀ L ₂₀	1.30	40.2
K ₁₈₀ L ₄₀	1.23	41.2
R^H₅₅		
R ^H ₅₅ (rac-L) ₂₀ ^c	-	13.6
PEG		
PEG ₃₀₅ (rac-L) ₂₀	1.06	11.3
E series		
E ₆₄ (rac-L) ₂₀	1.17	11.9
E ₁₈₀ L ₂₀	1.34	30.3

Fig. 33

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Peptide	<i>E. coli</i> 11229	<i>E. coli</i> O157:H7
Block K ₅₅ L ₂₀	1	0.25
Block K ₅₅ (rac-L) ₂₀	1	1
Block K ₅₅ (rac-L) ₁₀	5	1
Block K ₅₅ (rac-L/F) ₂₀	5	1
Block R ^H ₅₅ (rac-L) ₂₀	30	1

Fig. 34

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Microbe	MIC ($\mu\text{g/mL}$)			
	$K_{60}L_{20}$ random	$K_{55}(\text{rac-L})_{20}$	$K_{55}(\text{rac-L})_{10}$	$K_{55}(\text{rac-L/F})_{20}$
<i>S. aureus</i>	7.8	7.8	7.8	7.8
<i>L. monocytogenes</i>	3.9	7.8	3.9	5.9
<i>S. enterica</i>	31.3	125	62.5	250
<i>B. cereus</i>	7.8	7.8	7.8	7.8
<i>B. subtilis</i>	7.8	11.7	5.9	7.8
<i>B. cereus</i> endospores	15.6	15.6	15.6	15.6
<i>B. subtilis</i> endospores	250	125	250	250

Fig. 35

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	Log Reduction
Block $K_{55}(rac-L)_{20}$	0.3
Block $K_{55}(rac-L)_{20}$ Emulsion	0.3
Block $(R^H/K)_{55}(rac-L)_{20}$	1.5, 3.0
Block $E_{64}(rac-L)_{20}$	0

Fig. 36

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Microbe	MIC ($\mu\text{g/mL}$)			
	$K_{60}L_{20}$ random	$K_{55}(\text{rac-L})_{20}$	$K_{55}(\text{rac-L})_{10}$	$K_{55}(\text{rac-L/F})_{20}$
<i>B. subtilis</i> endospores	7.8	31.3	15.6	15.6

Fig. 37

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		% Cytotoxicity
$K_{55}(rac-L)_{20}$ Block	Solution	92.0
	Emulsion	0
$R^H_{55}(rac-L)_{20}$ Block	Solution	88.4
	Emulsion	18.5

Fig. 38

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TEG parameter	Saline	Peptide (10 ug/ml)			
		K ₁₈₆ L ₂₀	K ₅₅ (rac-L) ₂₀	R ^H ₅₅ (rac-L) ₂₀	E ₆₄ (rac-L) ₂₀
R time (min)	18.3 ± 3.2	11.6 ± 2.0*	10.8 ± 1.3*	5.7 ± 0.7*	18.7 ± 2.5
K time (min)	7.5 ± 1.7	5.2 ± 1.0	2.9 ± 0.6*	1.7 ± 0.3*	7.3 ± 0.8
α angle (°)	41.5 ± 2.8	45.3 ± 2.7	59.7 ± 4.7*	70.9 ± 3.3*	40.3 ± 1.6
MA (mm)	53.5 ± 3.3	46.6 ± 3.2	51.5 ± 0.8	60.7 ± 3.5	54.8 ± 3.6

Fig. 39