

## SUPPLEMENT


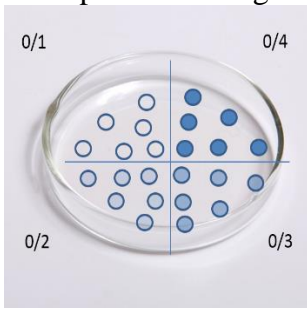
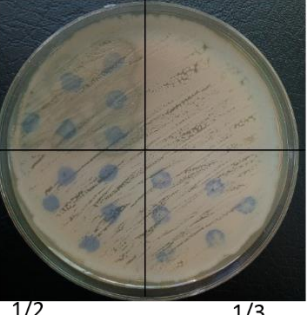

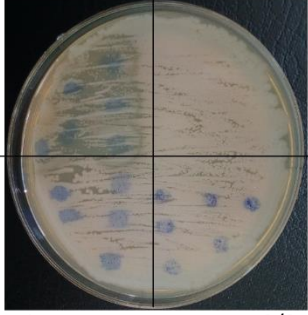

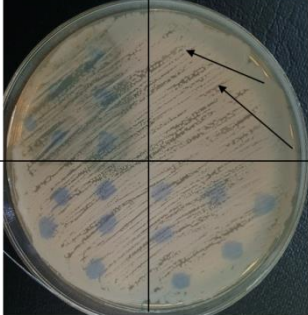
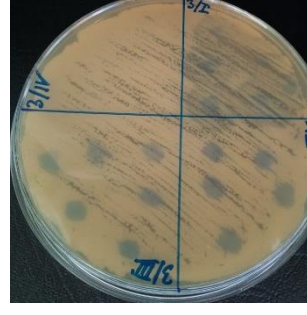
Kurpe S.R., Grishin S.Yu., Glyakina A.V., Slizen M.V., Panfilov A.V., Kochetov A.P., Surin A.K., Kobyakova M.I., Fadeev R.S., Galzitskaya O.V. (2021) Antibacterial effects of peptides synthesized based on the sequence of ribosome protein S1, *Biomeditsinskaya khimiya*, **67**(3), 231-243.

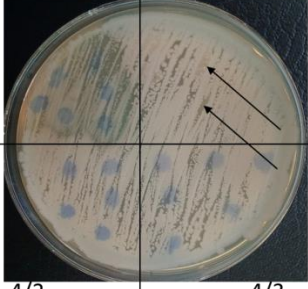

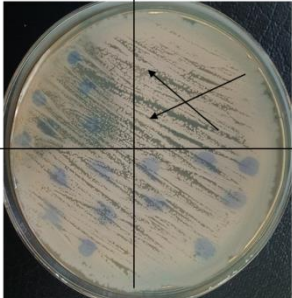
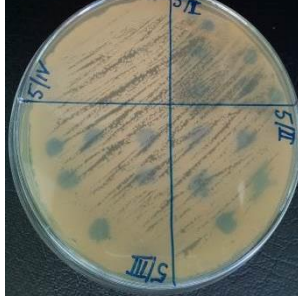
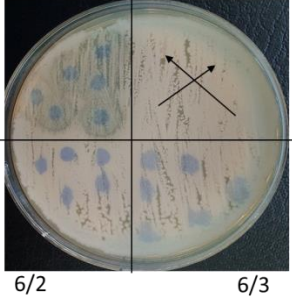

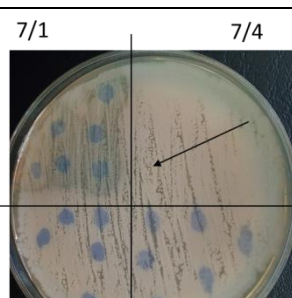

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**Table 1.** Physicochemical properties of the studied peptides.

Peptide	Normalized Hydrophobic Moment (M <sub>H</sub> )	Normalized Hydrophobicity (H)	Net Charge (Q)	Amphiphilicity Index (A)
<i>T. thermophilus</i>				
D9G	0.83	-1.33	-1	0
E10D	0.42	-1.24	-3	0.25
V10I	0.58	-1.59	-2	0.13
V10T	0.42	-1.1	-2	0.25
G14I	0.37	-1.21	-2	0.09
G14T	0.38	-0.87	-2	0.18
R23I	0.17	0.21	6	1.07
R23T	0.27	0.43	6	1.12
<i>E.coli</i>				
I10D	0.96	-1.35	0	0.25
D10F	0.91	-0.56	0	0.86
T10E	0.56	-1.11	-3	0.76
VV9V	0.54	-1.05	-2	0.13
D10G	0.45	-1.39	-2	0
V10NV	0.69	-0.61	-1	0.84
E10D	0.48	-1.37	-2	0.25

**Table 2.** Results of testing the antibacterial properties of peptides synthesized based on the S1 protein sequence from *E. coli* on *E. coli* colonies.

Photo		Results and conclusions
<p>Bacterial lawn</p> 	<p>Experiment design</p> 	<p>The test for the toxic effect of peptides was carried out according to the following scheme:</p> <p>0/1 - kanamycin, C = 1 mg / ml + paint 0.1 mg / ml (Coomassie R250)</p> <p>0/2 - Peptide, C = 0.1 mg / ml + paint 0.1 mg / ml (Coomassie R250)</p> <p>0/3 - Peptide, C = 1 mg / ml + paint 0.1 mg / ml (Coomassie R250)</p> <p>0/4 - Peptide, C = 1 mg / ml</p>
<p>1/1 1/4</p>  <p>1/2 1/3</p>		<p>1/ - Peptide № 1 (IVRGVVVAID)</p> <p>1 - control with kanamycin - there is a lysis zone, cell colonies are smaller, deformed</p> <p>2 - there are no lysis zones, the dye is evenly distributed</p> <p>3 - there are no lysis zones, the dye is concentrated around the perimeter of the drops</p> <p>4 - there are no lysis zones, the places of application are poorly distinguishable, there are signs of film formation</p>
<p>2/1 2/4</p>  <p>2/2 2/3</p>		<p>2/ - Peptide № 2 (DEITVKVLKF)</p> <p>1 - control with kanamycin - there is a lysis zone, colonies are smaller, deformed</p> <p>2 - there are no lysis zones, aggregates are visible, colonies are deformed</p> <p>3 - there are no lysis zones, aggregates are visible, the colonies are somewhat smaller, deformed</p> <p>4 - there are no lysis zones, the places of introduction are poorly distinguishable, the colonies are somewhat smaller</p>
<p>3/1 3/4</p>  <p>3/2 3/3</p>		<p>3/ - Peptide № 3 (TDYGCFVEIE)</p> <p>1 - control with kanamycin - there is a lysis zone, colonies are smaller, deformed</p> <p>2 - there are no lysis zones, no visible changes</p> <p>3 - there are no lysis zones, the colonies are smaller, deformed</p> <p>4 - there are no lysis zones, films are formed in the places of introduction, the colonies are smaller, deformed</p>

 <p>4/1                      4/4 4/2                      4/3</p>		<p>4/ - Peptide № 4 (VVNVGDVVEV)  1 - control with kanamycin - there is a lysis zone, colonies are smaller, deformed  2 - there are no lysis zones, the colonies are smaller, deformed  3 - there are no lysis zones, films, colonies are smaller, deformed  4 - there are no lysis zones, films are formed in the places of introduction, the colonies are smaller, deformed</p>
 <p>5/1                      5/4 5/2                      5/3</p>		<p>5/ - Peptide № 5 (DFGIFIGLDG)  1 - control with kanamycin - there is a lysis zone, colonies are smaller, deformed  2 - there are no lysis zones, the colonies are slightly smaller  3 - there are no lysis zones, the colonies are slightly smaller  4 - there are no lysis zones, films are not visible in all places of drug application</p>
 <p>6/1                      6/4 6/2                      6/3</p>		<p>6/ - Peptide № 6 (VHLSDISWNV)  1 - control with kanamycin - there is a lysis zone, colonies are smaller, deformed  2 - there are no lysis zones, the colonies are smaller, deformed  3 - there are no lysis zones, films, colonies are smaller, deformed  4 - there are no lysis zones, places of application in the form of films are visible, colonies are smaller, deformed</p>
 <p>7/1                      7/4 7/2                      7/3</p>		<p>7/ - Peptide № 7 (EIAAVVLQVD)  1 - control with kanamycin - there is a lysis zone, colonies are smaller, deformed  2 - there are no lysis zones, the colonies are slightly smaller, deformed  3 - there are no lysis zones, the colonies are slightly smaller, deformed,  4 - there are no lysis zones, there are films</p>