

## SUPPLEMENT

Sergeeva V.A., Muminova K.T., Starodubtseva N.L., Kononikhin A.S., Bugrova A.E., Indeykina M.I., Baibakova V.V., Khodzhaeva Z.S., Kan N.E., Frankevich V.E., Shmakov R.G., Nikolaev E.N., Sukhikh G.T., Features of the urine peptidome under the condition of hypertensive pathologies of pregnancy, *Biomeditsinskaya khimiya*, 2017, vol: 63(5), 379-384.

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**Supplementary 1. Specific peptides according to Kruskal–Wallis test ( $p < 0,01$ ): C – control healthy pregnant, CH –chronic hypertension, PE – preeclampsia, spPE – superimposed preeclampsia**

Peptide sequence	Protein	Gene name	Protein name	Mann-Whitney test (with Bonferroni correction per 4 groups: $p < 0.0125$ )						Average intensity			
				spPE vs C	spPE vs CH	spPE vs PE	PE vs C	PE vs CH	CH vs C	C	CH	spPE	PE
AAGEPGKAGERG VPGPPGAVGPA	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.026	0.433	0.429	0.085	0.023	0.001	0	3569 0000	3728 500	5201 761
ADGQPGAKGEPG DAGAKGDAGPPG PA	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.012	0.040	0.101	0.006	0.153	0.559	1359 9010 0	1463 1412 5	1608 6113	6919 0375
ADGQPGAKGEPG DAGAKGDAGPPG PAGP	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.012	0.269	0.261	0.002	0.924	0.009	2409 3680	8802 700	3544 500	1107 6198
AGRPGEVGGPPGPP GPA	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.026	0.365	0.153	0.239	0.004	0.001	0	7095 288	6513 13	3507 50
AGSEADHEGTH	P02671	FGA	Fibrinogen alpha chain	0.005	1.000	0.046	0.142	0.046	0.005	0	6771 88	3231 89	3287 6

AGSEADHEGTHST K	P02671	FGA	Fibrinogen alpha chain	0.005	0.772	0.046	0.142	0.006	0.001	0	6260 413	2159 975	3267 89
AGSEADHEGTHST KR	P02671	FGA	Fibrinogen alpha chain	0.005	0.524	0.034	0.239	0.003	0.001	0	3225 513	1851 58	1254 00
AGSEADHEGTHST KRGH	P02671	FGA	Fibrinogen alpha chain	0.026	0.945	0.008	-	0.008	0.026	0	6512 63	1544 63	0
APGDRGEPGPPG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.005	0.772	0.335	0.018	0.059	0.001	0	1032 513	3534 65	1552 14
APGDRGEPGPPGP A	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.007	0.066	0.189	0.000	0.065	0.232	2326 3415 0	2083 0537 5	2763 3975	1003 8000 7
DAGPVGPPGPPGP PGPPGPPS	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.010	0.023	0.210	0.000	0.028	0.401	3420 7950	2397 2475	2110 250	9945 081
DEAGSEADHEGTH	P02671	FGA	Fibrinogen alpha chain	0.005	0.772	0.083	0.085	0.015	0.001	0	9912 225	3847 600	5435 86
DEAGSEADHEGTH STKRGH	P02671	FGA	Fibrinogen alpha chain	0.005	0.685	0.210	0.051	0.023	0.001	0	8343 900	1712 165	6949 50
DEAGSEADHEGTH STKRGHA	P02671	FGA	Fibrinogen alpha chain	0.001	0.955	0.117	0.030	0.071	0.001	0	1200 0913	1064 0804	6070 340
DGPPGPPGERGP	P12107	COL11 A1	Collagen alpha- 1(XI) chain	0.030	0.076	0.008	0.809	0.640	0.580	1929 90	0	8991 68	1135 50
DGQPGAKGEPGD AGA	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.005	0.076	0.021	0.239	0.472	-	0	0	6543 00	8724 3
DSGEGDFLAEGGG VR	P02671	FGA	Fibrinogen alpha chain	0.026	0.171	0.008	-	-	-	0	0	8802 38	0
EAGSEADHEGTH	P02671	FGA	Fibrinogen alpha chain	0.005	0.566	0.007	0.422	0.052	0.026	0	9369 5	9034 4	7814
EAGSEADHEGTHS TK	P02671	FGA	Fibrinogen alpha chain	0.005	0.750	0.008	0.422	0.052	0.026	0	8520 4	6432 8	1053 3

EAI PMSIPPEVKFN KPF	P01009	SERPI NA1	Alpha-1- antitrypsin	0.001	0.032	0.030	0.085	0.280	-	0	0	7343 5363	4658 4150
EAPSLRPAPPPISG GGY	P02675	FGB	Fibrinogen alpha chain	0.026	0.673	0.242	0.142	0.010	0.001	0	1810 175	1703 2500	2094 25
EPGSPGENGAPGQ MGPRG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.060	0.945	0.762	0.002	0.658	0.032	1093 2965	1686 675	4146 38	3286 693
EQNTKSPLFMGKV VNPTQK	P01009	SERPI NA1	Alpha-1- antitrypsin	0.001	0.032	0.006	0.239	0.472	-	0	0	5679 825	2724 5121
ERGEAGIPGVPGA KGEDGKDGSPGEP GANG	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.002	0.066	0.114	0.004	0.985	0.045	1012 8775 0	5056 9375	1804 3550	5018 1621
ESGREGAPGAEGS PGRDGSPGAK	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.026	0.365	0.268	0.142	0.006	0.001	0	3338 138	1181 93	8200 9
ESGREGAPGAEGS PGRDGSPGAKGDR GETGPA	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.011	0.040	0.317	0.008	0.105	0.347	1268 4865 0	7865 5750	8943 438	6636 9861
FPGSPGAKGEVGP	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.026	0.848	0.008	-	0.001	0.005	0	4788 038	2012 625	0
GAAGPPGPTGPAG PPGFPGA V GAK	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.026	0.655	0.052	0.422	0.007	0.005	0	4712 125	3683 75	4278 6
GADGQPGAKGEP GDAGAK	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.026	0.365	0.500	0.085	0.020	0.001	0	1095 605	3576 8	8144 1
GAKGEPGPVG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.026	0.945	0.008	-	0.008	0.026	0	3092 738	1835 63	0
GAPGTPGPQG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.005	0.524	0.010	0.422	0.001	0.001	0	9584 063	2063 81	5088 93
GDAGQPGEKGSPPG AQGPPGAPGP	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.026	0.433	0.395	0.085	0.017	0.001	0	1547 3338	2187 750	1365 607
GDAGQPGEKGSPPG AQGPPGAPGPL	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.005	0.603	0.034	0.239	0.004	0.001	0	3845 888	6509 75	4778 32

GDAGQPGEKGSPPG AQGPPGAPGLG	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.005	0.524	0.089	0.142	0.008	0.001	0	9417 1250	1300 9725	9137 786
GDRGEPGPPGPA	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.118	0.507	0.052	0.809	0.001	0.005	2217 40	1332 4371	1216 625	1031 50
GEAGSAGPPGPPG	P08123	COL1 A2	Collagen alpha- 2(I) chain	0.026	0.365	0.174	0.239	0.003	0.001	0	1021 0750	6476 13	5518 86
GEAGTAGPPGTPG P	P08123	COL1 A2	Collagen alpha- 2(I) chain	0.133	0.408	0.338	0.422	0.007	0.005	0	3581 788	0	8660 4
GEPGDAGAKGDA GPPGPAGAPPPG PIG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.026	0.750	0.062	0.422	0.010	0.005	0	1858 925	1819 75	2876 14
GETGPAGRPGEVG PPGPPGPA	P02452	COL1 A1	Collagen alpha- 1(I) chain	1.000	0.225	0.338	0.150	0.001	0.049	6246 10	3699 875	0	1275 0
GEVGAVGPPGFAG EKGPS	P08123	COL1 A2	Collagen alpha- 2(I) chain ь	0.030	0.603	0.025	0.784	0.003	0.004	1898 30	8707 450	1022 500	2112 39
GEVGAVGPPGFAG EKGPSGEAGTAGP PGTPGP	P08123	COL1 A2	Collagen alpha- 2(I) chain	0.133	0.408	0.071	-	0.001	0.005	0	2272 288	0	0
GFPGSPGAKGEVG PA	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.142	0.433	0.153	0.823	0.003	0.007	3297 500	3211 9625	2161 125	7832 36
GGAGPPGPEGGKG AAGPPGPPGAA	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.005	0.904	0.007	0.422	0.007	0.005	0	7634 288	9427 38	9721 4
GKDGEAGAQQPP GP	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.005	0.524	0.329	0.030	0.064	0.001	0	2432 5000	3503 438	4211 536
GKTGPPGPA	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.026	0.750	0.052	0.422	0.007	0.005	0	4208 88	7525 5	1087 4
GLPGTGPPGGENG KPG	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.011	0.751	0.423	0.012	0.221	0.002	7212 8400	1587 2613	8926 025	3772 4208
GLPGTGPPGGENG KPGEP	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.004	1.000	0.142	0.005	0.175	0.002	4867 6950	1212 8675	4788 904	2309 6371

GLPGTGGPPGENG KPGEPGP	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.004	0.866	0.284	0.000	0.654	0.006	1160 3399	2865 463	6255 44	3594 954
GNDGARGSDGQP GPPGPPGTA	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.102	0.524	0.010	0.411	0.002	0.021	1353 850	9741 500	1555 525	1308 500
GNSGEPGAPGSKG DTGAKGEPGPVG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.018	0.101	0.163	0.002	0.165	0.525	9463 1625	6198 4363	1224 5688	3850 0962
GPPGADGQPGAK GEPGDAGAKGDA GPPGPA	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.039	0.056	0.860	0.000	0.002	0.700	1484 9990	1342 2268	0	1071 632
GPPGEAGKPGEQG VPGD	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.023	0.050	0.468	0.001	0.048	0.461	1793 4055	1923 4813	2220 473	8199 507
GPPGPPGPA	P02452; P08123	COL1 A1;CO L1A2	Collagen alpha- 1(I) chain; Collagen alpha- 2(I) chain	0.057	0.325	0.740	0.000	0.095	0.590	7508 280	6710 238	9509 63	1804 868
GPPGPPGPPGPPA	Q96A84 ;P27658	EMID1 ; COL8 A1	EMI domain- containing protein 1; Collagen alpha- 1(VIII) chain	0.009	0.032	0.008	0.823	0.472	0.580	6075 00	0	1990 78	1726 11
GPPGPPGPPGPPGP PS	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.018	0.127	0.351	0.000	0.038	0.492	4735 1320	3379 0913	7761 388	1569 7925
GPPGPPGPPGPPS	P02452; P39060	COL1 A1;CO L18A1	Collagen alpha- 1(I) chain; Collagen alpha- 1(XVIII) chain	0.018	0.103	0.153	0.004	0.165	0.666	4953 8935	4633 9300	7751 619	2233 1319

GPPGSNGNPGPPG PSGSPGKDGPPGP AG	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.007	0.695	0.642	0.000	0.207	0.050	1380 9125	5597 438	4631 83	2058 150
GQDGRPGPPGPPG A	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.027	0.250	0.624	0.000	0.018	0.079	7756 700	3706 100	5193 03	9433 59
GRPGEVGPPGPPG P	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.026	0.655	0.008	-	0.001	0.005	0	3506 463	4040 63	0
GRPGEVGPPGPPG PA	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.118	0.365	0.008	0.254	0.000	0.004	1971 70	8725 338	5618 25	0
GRPGEVGPPGPPG PAG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.142	0.365	0.008	0.254	0.000	0.009	3276 40	2580 950	1610 38	0
GSEADHEGTH	P02671; P02671- 2	FGA	Fibrinogen alpha chain	0.005	1.000	0.007	0.422	0.007	0.005	0	3658 75	1778 78	1060 3
GSEADHEGTHSTK	P02671	FGA	Fibrinogen alpha chain	0.005	0.862	0.046	0.142	0.010	0.001	0	3911 179	1501 663	2201 46
GSPGEAGRPGEAG LPGAKG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.005	0.524	0.129	0.051	0.023	0.001	0	6186 1000	1274 6875	4177 414
GSPGKDGPPGPAG	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.133	0.408	0.071	-	0.001	0.005	0	2497 913	0	0
IEQNTKSPL	P01009	SERPI NA1	Alpha-1- antitrypsin	0.005	0.076	0.029	0.239	0.472	-	0	0	6906 0238	1241 9643
KGNSGEPGAPGSK GDTGAKGEPGPV G	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.029	0.518	0.566	0.054	0.168	0.001	4122 8050	6447 388	7267 513	3322 8968
KNGETGPQGPPGP TGPGGDKGDTGPP GP	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.088	0.904	0.726	0.001	0.624	0.043	4637 335	1202 150	1750 81	8826 23
KNGETGPQGPPGP TGPGGDKGDTGPP GPQG	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.006	0.666	0.078	0.000	0.267	0.004	2950 6100	7533 638	2336 013	1113 8821

LDGAKGDAGPAG PKGEPGSPGENGA PG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.032	0.603	0.718	0.001	0.818	0.033	4178 5000	8465 150	8454 58	1240 7425
LMIEQNTKSPL	P01009	SERPI NA1	Alpha-1- antitrypsin	0.005	0.076	0.040	0.239	0.472	-	0	0	1806 963	5138 964
LMIEQNTKSPLFM GKVVNPTQK	P01009	SERPI NA1	Alpha-1- antitrypsin	0.001	0.032	0.017	0.142	0.361	-	0	0	7838 150	4221 0804
LRTLNPDSQLQL TTGNGL	P01009	SERPI NA1	Alpha-1- antitrypsin	0.005	0.076	0.010	0.422	0.640	-	0	0	1906 663	9466 786
LRTLNPDSQLQL TTGNGLF	P01009	SERPI NA1	Alpha-1- antitrypsin	0.005	0.076	0.010	0.422	0.640	-	0	0	3226 163	7311 429
LTGPIGPPGPA	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.026	0.848	0.008	-	0.001	0.005	0	1602 150	3771 25	0
LTGPIGPPGPAGAP GDKGESGSPGAP PTG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.011	0.603	0.232	0.000	0.465	0.005	1196 3235	2426 200	6347 66	3460 529
MGVVSLGSPSGEV SHPRKT	P02765	AHSG	Alpha-2-HS- glycoprotein	0.005	0.076	0.007	0.422	0.640	-	0	0	2417 625	3096 75
MIEQNTKSPL	P01009	SERPI NA1	Alpha-1- antitrypsin	0.001	0.032	0.030	0.085	0.280	-	0	0	1117 3375	2718 3408
NGDDGEAGKPGR PGERGPPGP	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.010	0.631	0.230	0.086	0.086	0.001	1894 0385 0	3762 3275	2390 8388	1650 5928 2
NTGAPGSPGVVS	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.026	0.433	0.242	0.142	0.006	0.001	0	5272 388	5290 88	1750 69
NTGAPGSPGVSGP K	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.005	0.524	0.210	0.051	0.023	0.001	0	3068 4125 0	4068 5750	2340 1514
PGAKEGPDAGA K	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.026	0.433	0.527	0.051	0.026	0.001	0	1021 438	1968 28	1539 66

PGEAGRPGEAGLP GAKG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.026	0.365	0.008	-	0.000	0.001	0	1598 8000	1512 500	0
PGERGPPG	P02452; P02461; Q96A84 ;P13942	COL1 A1;CO L3A1; EMID1 ; COL11 A2	Collagen alpha- 1(I) chain; Collagen alpha- 1(III) chain; EMI domain- containing protein 1; Collagen alpha- 2(XI) chain	0.026	0.365	0.268	0.142	0.006	0.001	0	8138 54	4503 0	2042 6
PGSPGVSGPK	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.026	0.433	0.052	0.422	0.001	0.001	0	5853 313	1223 313	1127 46
PMSIPPEVKFNKPF	P01009	SERPI NA1	Alpha-1- antitrypsin	0.005	0.076	0.029	0.239	0.472	-	0	0	8029 225	1950 982
PPEVKFNKPF	P01009	SERPI NA1	Alpha-1- antitrypsin	0.005	0.076	0.008	0.422	0.640	-	0	0	9265 625	6415 71
PPEVKFNKPF	P01009	SERPI NA1	Alpha-1- antitrypsin	0.001	0.032	0.004	0.239	0.472	-	0	0	4568 151	7802 89
PPGEAGKPGEQGV PGDLG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.006	0.013	0.109	0.003	0.097	0.525	3638 1935	2875 3425	9234 06	1204 5311
PPGPPGKNGDDGE AGKPGRPGERGPP GPQ	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.157	0.382	0.606	0.001	0.472	0.019	6131 275	0	0	8324 64
PSGEVSHPRKT	P02765	AHSG	Alpha-2-HS- glycoprotein	0.005	0.076	0.001	-	-	-	0	0	3508 488	0
QGLPGTGGPPGEN GKPGEPGPKG	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.135	0.171	0.327	0.000	0.361	0.007	7497 515	0	4696 50	8822 00

QKGEPPGVPG	P39060	COL18 A1	Collagen alpha- 1(XVIII) chain	0.133	0.408	0.071	-	0.001	0.005	0	2265 050	0	0
RGGAGPPGPEGGK GAAGPPGPPGAA	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.005	0.524	0.034	0.239	0.004	0.001	0	1203 5675	1778 725	8708 57
RTGEVGA VGPPGF AGEKGPS	P08123	COL1 A2	Collagen alpha- 2(I) chain	0.142	0.433	0.008	0.254	0.000	0.007	8847 50	1080 8125	8207 38	0
SALLEEYTKKLNTQ	P02647	APOA 1	Apolipoprotein A-I	0.005	0.076	0.029	0.239	0.472	-	0	0	5167 00	9703 2
SGEGDFLAEGGGV R	P02671	FGA	Fibrinogen alpha chain	0.026	0.171	0.008	-	-	-	0	0	2856 075	0
SIPPEVKFNKPF	P01009	SERPI NA1	Alpha-1- antitrypsin	0.005	0.076	0.010	0.422	0.640	-	0	0	5121 373	4349 643
SKGESGNKGEPPGS AGPQGPPGPSGEE GKRGP	P08123	COL1 A2	Collagen alpha- 2(I) chain	0.133	0.408	0.338	0.422	0.008	0.005	0	1024 4250	0	4058 21
SLGSPSGEVSHPR KT	P02765	AHSG	Alpha-2-HS- glycoprotein	0.005	0.076	0.001	-	-	-	0	0	5078 188	0
SPGNIGPAGKEGP VGLPG	P08123	COL1 A2	Collagen alpha- 2(I) chain	0.002	0.051	0.030	0.001	0.662	0.001	2419 8710	7750 950	1856 058	1103 2507
SPGPDGKTGPPGP AG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.025	0.070	0.235	0.001	0.163	0.525	1823 7180	1894 1188	1625 875	7420 274
SVIDQSRVLNLGPI TR	P07911	UMOD	Uromodulin	0.157	0.110	0.320	0.326	0.005	0.001	3597 5400	1243 70	5903 078	2872 9166
TGPIGPPGPA	P02452; P02461	COL1 A1;CO L3A1	Collagen alpha- 1(I) chain; Collagen alpha- 1(III) chain	0.005	0.603	0.104	0.085	0.017	0.001	0	1201 5663	1944 488	7507 25

TGPIGPPGPAGAPG DKGES	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.018	0.262	0.422	0.005	0.702	0.025	4467 545	1627 445	9828 6	1788 993
TGPIGPPGPAGAPG DKGESGPSGP	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.014	0.365	0.493	0.001	0.882	0.003	4742 645	1281 575	9647 8	1624 246
VDKFLEDVKKL	P01009	SERPI NA1	Alpha-1- antitrypsin	0.005	0.076	0.010	0.422	0.640	-	0	0	1060 051	7583 929
VGPPGPPGPPGPPG PPS	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.003	0.031	0.090	0.000	0.098	0.134	1555 9180 0	1126 7150 0	2510 0375	7038 2054
VGPPGPPGPPGPPG PPSA	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.004	0.031	0.202	0.001	0.143	0.232	2046 3665	1429 7475	3640 450	1000 0554
VGPPGPPGPPGPPG PPSAG	P02452	COL1 A1	Collagen alpha- 1(I) chain	0.009	0.041	0.154	0.002	0.189	0.162	5725 7745	4144 8125	1104 6875	2959 4243
VKELDRDTV	P01009	SERPI NA1	Alpha-1- antitrypsin	0.005	0.076	0.001	-	-	-	0	0	1706 325	0
VKGERGSPGGPGA A	P02461	COL3 A1	Collagen alpha- 1(III) chain	0.026	0.945	0.008	-	0.008	0.026	0	1859 51	5404 3	0