Supplementary Table 1: The insilico hydrolysis of the investigated peptides and proteins by chymotrypsin, trypsin and pepsin simultaneous cleavage.

PEPTIDE NAME	SEQUENCE and hydrolysate from chymotrypsin, trypsin and pepsin simultaneous treatment by insilico	Selected hydrolysate*	SMILES
P5-Best	YLPKHSDRD Y - L - PK - H - SDR - D	SDR	N[C@@]([H])(CO)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CCCNC(=N)N)C(=O)O
Peptide H3	IGFLIIWV IGF - L - IIW - V	**IGF**	N[C@@]([H])([C@]([H])(CC)C)C(=O)NCC(=O)N[C@@H](CC1=CC=C(C=C1))C(=O)O
		IIW	N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@H](CC1=C[NH]C2=CC=CC=C12)C(=O)O
NAP	NAPVSIPQ N - APVSIPQ	APVSIPQ	N[C@@]([H])(C)C(=O)N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(CO)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(CCC(=O)N)C(=O)O
ADNF-9	SALLRSIPA SAL - L - R - SIPA	SAL	N[C@@]([H])(CO)C(=O)N[C@@]([H])(C)C(=O)N[C@@]([H])(CC(C)C)C(=O)O
		SIPA	N[C@@]([H])(CO)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(C)C(=O)O
Humanin	MAPRGFSCLLLLTSEIDLPVKRRA M - APR - GF - SCL - L - L - L - TSEIDL - PVK - R - R - A	APR	N[C@@]([H])(C)C(=O)N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(CCCNC(=N)N)C(=O)O
		SCL	N[C@@]([H])(CO)C(=O)N[C@@]([H])(CS)C(=O)N[C@@]([H])(CC(C)C)C(=O)O
		TSEIDL	N[C@@]([H])([C@]([H])(O)C)C(=O)N[C@@]([H])(CO)C(=O)N[C@@]([H])(CCC(=O)O)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CC(C)C)C(=O)O
		PVK	N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(CCCCN)C(=O)O
Spadin	YAPLPRWSGPIGVSWGLR Y - APL - PR - W - SGPIGVSW - GL – R	**APL**	N[C@@]([H])(C)C(=O)N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(CC(C)C)C(=O)O
		SGPIGVSW	N[C@@]([H])(CO)C(=O)NCC(=O)N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)NCC(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(CO)C(=O)N[C@@H](CC1=C[NH]C2=CC=CC=C12)C(=O)O
soy-deprestatin	LSSTQAQQSY L – SSTQAQQSY	SSTQAQQSY	N[C@@]([H])(CO)C(=O)N[C@@]([H])(CO)C(=O)N[C@@]([H])([C@]([H])(O)C)C(=O)N[C@@]([H])(CCC(=O)N)C(=O)N[C@@]([H])(C)C(=O)N[C@@]([H])(CCC(=O)N)C(=O)N[C@@]([H])(CCC(=O)N)C(=O)N[C@@]([H])(CO)C(=O)N[C@@H](CC1=CC=C(C=C1)O)C(=O)O

Pro-neuropeptide Y (PNY) (seq.30–64),	PSKPDNPGEDAPAEDMARYYSALRHYINLITRQRY PSK - PDN - PGEDAPAEDM - AR - Y - Y - SAL - R - H - Y - IN - L - ITR - QR - Y	PSK	N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(CO)C(=O)N[C@@]([H])(CCCCN)C(=O)O
		PDN	N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CC(=O)N)C(=O)O
		PGEDAPAEDM	N1[C@@]([H])(CCC1)C(=O)NCC(=O)N[C@@]([H])(CCC(=O)O)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(C)C(=O)N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(C)C(=O)N[C@@]([H])(CCC(=O)O)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CCSC)C(=O)O
		SAL	N[C@@]([H])(CO)C(=O)N[C@@]([H])(C)C(=O)N[C@@]([H])(CC(C)C)C(=O)O
		ITR	N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@]([H])([C@]([H])(O)C)C(=O)N[C@@]([H])(CCCNC(=N)N)C(=O)O
Calcitonin gene-related peptide 1 (CGP)(seq.83–119),	CDTATCVTHRLAGLLSRSGGVVKNNFVPTNVGSKAF CDTATCVTH - R - L - AGL - L - SR - SGGVVK - N - N - F - VPTN - VGSK - AF	CDTATCVTH	N[C@@]([H])(CS)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])([C@]([H])(O)C)C(=O)N[C@@]([H])(C)C(=O)N[C@@]([H])([C@]([H])(O)C)C(=O)N[C@@]([H])(CS)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])([C@]([H])(O)C)C(=O)N[C@@H](CC1=CN=C[NH]1)C(=O)O
		AGL	N[C@@]([H])(C)C(=O)NCC(=O)N[C@@]([H])(CC(C)C)C(=O)O
		SGGVVK	N[C@@]([H])(CO)C(=O)NCC(=O)NCC(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(CCCCN)C(=O)O
		VPTN	N[C@@]([H])(C(C)C)C(=O)N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])([C@]([H])(O)C)C(=O)N[C@@]([H])(CC(=O)N)C(=O)O
		VGSK	N[C@@]([H])(C(C)C)C(=O)NCC(=O)N[C@@]([H])(CO)C(=O)N[C@@]([H])(CCCCN)C(=O)O
Vasoactive intestinal peptide (VIP) (seq.125–152),	HSDAVFTDNYTRLRKQMAVKKYLNSILN H - SDAVF - TDN - Y - TR - L - R - K - QM - AVK - K - Y - L - N - SIL – N	SDAVF	N[C@@]([H])(CO)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(C)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@H](CC1=CC=C(C=C1))C(=O)O
		TDN	N[C@@]([H])([C@]([H])(O)C)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CC(=O)N)C(=O)O
		AVK	N[C@@]([H])(C)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(CCCCN)C(=O)O
		SIL	N[C@@]([H])(CO)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@]([H])(CC(C)C)C(=O)O
α-Melanocyte-stimulating hormone (α-MSH) (seq.1–13),	MPRSCCSRSGALL M - PR - SCCSR - SGAL - L	SCCSR	N[C@@]([H])(CO)C(=O)N[C@@]([H])(CS)C(=O)N[C@@]([H])(CS)C(=O)N[C@@]([H])(CO)C(=O)N[C@@]([H])(CCCNC(=N)N)C(=O)O
		SGAL	N[C@@]([H])(CO)C(=O)NCC(=O)N[C@@]([H])(C)C(=O)N[C@@]([H])(CC(C)C)C(=O)O
Proenkephalin-A (PEA) (seq.209–237)	RYGGFMRRVGRPEWWMDYQKRYGGFLKRF R - Y - GGF - M - R - R - VGR - PEW - W - M - DY - QK - R - Y - GGF - L - K - R - F	GGF	NCC(=O)NCC(=O)N[C@@H](CC1=CC=C(C=C1))C(=O)O
		VGR	N[C@@]([H])(C(C)C)C(=O)NCC(=O)N[C@@]([H])(CCCNC(=N)N)C(=O)O
		PEW	N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(CCC(=O)O)C(=O)N[C@@H](CC1=C[NH]C2=CC=CC=C12)C(=O)O
		GGF	NCC(=O)NCC(=O)N[C@@H](CC1=CC=C(C=C1))C(=O)O

Phoenixin (PNX-14) 51-64	DVQPPGLKVWSDPF DVQPPGL - K - VW - SDPF	DVQPPGL	N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(CCC(=O)N)C(=O)N1[C@@]([H])(CCC1)C(=O)N1[C@@]([H])(CCC1)C(=O)NCC(=O)N[C@@]([H])(CC(C)C)C(=O)O
		SDPF	N[C@@]([H])(CO)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N1[C@@]([H])(CCC1)C(=O)N[C@@H](CC1=CC=C(C=C1))C(=O)O
potato patatin-derived peptide	TNKPVI TN - K - PVI	**PVI**	N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)O
VCP region (797-806)	TEDNDDDLYG TEDN - DDDL - Y – G	TEDN	N[C@@]([H])([C@]([H])(O)C)C(=O)N[C@@]([H])(CCC(=O)O)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CC(=O)N)C(=O)O
		DDDL	N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CC(C)C)C(=O)O
VCP region (521-526)	GCGKTL GCGK – TL	GCGK	NCC(=O)N[C@@]([H])(CS)C(=O)NCC(=O)N[C@@]([H])(CCCCN)C(=O)O
GABARAPL2 peptide	MKWMFKEDHSLEHRCVESAKIRAKYPDRVPVIVEKVSGSQIVDIDKRKYLVPSDITVAQFMWIIRKRIQLPSEKAIFLFVDKTVPQSSLTMGQLYEKEKDEDGFLYVAYSGENTFGF M - K - W - M - F - K - EDH - SL - EH - R - CVESAK - IR - AK - Y - PDR - VPVIVEK - VSGSQIVDIDK - R - K - Y - L - VPSDITVAQF - M - W - IIR - K - R - IQL - PSEK - AIF - L - F - VDK - TVPQSSL - TM - GQL - Y - EK - EK - DEDGF - L - Y - VAY - SGEN - TF – GF	EDH	N[C@@]([H])(CCC(=O)O)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@H](CC1=CN=C[NH]1)C(=O)O
		CVESAK	N[C@@]([H])(CS)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(CCC(=O)O)C(=O)N[C@@]([H])(CO)C(=O)N[C@@]([H])(C)C(=O)N[C@@]([H])(CCCCN)C(=O)O
		PDR	N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CCCNC(=N)N)C(=O)O
		VPVIVEK	N[C@@]([H])(C(C)C)C(=O)N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(CCC(=O)O)C(=O)N[C@@]([H])(CCCCN)C(=O)O
		VSGSQIVDIDK	N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(CO)C(=O)NCC(=O)N[C@@]([H])(CO)C(=O)N[C@@]([H])(CCC(=O)N)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CCCCN)C(=O)O
		VPSDITVAQF	N[C@@]([H])(C(C)C)C(=O)N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(CO)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@]([H])([C@]([H])(O)C)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(C)C(=O)N[C@@]([H])(CCC(=O)N)C(=O)N[C@@H](CC1=CC=C(C=C1))C(=O)O
		IIR	N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@]([H])(CCCNC(=N)N)C(=O)O
		IQL	N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@]([H])(CCC(=O)N)C(=O)N[C@@]([H])(CC(C)C)C(=O)O
		PSEK	N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(CO)C(=O)N[C@@]([H])(CCC(=O)O)C(=O)N[C@@]([H])(CCCCN)C(=O)O
		AIF	N[C@@]([H])(C)C(=O)N[C@@]([H])([C@]([H])(CC)C)C(=O)N[C@@H](CC1=CC=C(C=C1))C(=O)O

		VDK	N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CCCCN)C(=O)O
		TVPQSSL	N[C@@]([H])([C@]([H])(O)C)C(=O)N[C@@]([H])(C(C)C)C(=O)N1[C@@]([H])(CCC1)C(=O)N[C@@]([H])(CCC(=O)N)C(=O)N[C@@]([H])(CO)C(=O)N[C@@]([H])(CO)C(=O)N[C@@]([H])(CC(C)C)C(=O)O
		GQL	NCC(=O)N[C@@]([H])(CCC(=O)N)C(=O)N[C@@]([H])(CC(C)C)C(=O)O
		DEDGF	N[C@@]([H])(CC(=O)O)C(=O)N[C@@]([H])(CCC(=O)O)C(=O)N[C@@]([H])(CC(=O)O)C(=O)NCC(=O)N[C@@H](CC1=CC=C(C=C1))C(=O)O
		VAY	N[C@@]([H])(C(C)C)C(=O)N[C@@]([H])(C)C(=O)N[C@@H](CC1=CC=C(C=C1)O)C(=O)O
		SGEN	N[C@@]([H])(CO)C(=O)NCC(=O)N[C@@]([H])(CCC(=O)O)C(=O)N[C@@]([H])(CC(=O)N)C(=O)O
TUBA4A (142-148)	GGGTGSG	GGGTGSG	NCC(=O)NCC(=O)NCC(=O)N[C@@]([H])([C@]([H])(O)C)C(=O)NCC(=O)N[C@@]([H])(CO)C(=O)NCC(=O)O
BIOPEP-UWM	LAVYPWT L - AVY - PW - T	**AVY**	N[C@@]([H])(C)C(=O)N[C@@]([H])(C(C)C)C(=O)N[C@@H](CC1=CC=C(C=C1)O)C(=O)O

*Selected Active peptides are in bold