

## PROTEINS expressed via SUMO & SUMOstar systems

(\*) denotes SUMOstar

[Apoptosis-linked gene 2]-interacting protein (Alix)\*  
5'nucleotidase-related (5'Nuc) saliva protein of the tsetse fly  
*Glossina morsitans morsitans*  
Allium sativum leaf agglutinin (ASAL)  
Antibacterial (E5), antimicrobial host defense peptides (HDP)  
Antibacterial (E6), antimicrobial host defense peptides (HDP)  
Antibacterial peptide cecropin AD  
Antibacterial peptide CM4 (ABP-CM4)  
Antitumor-analgesic peptide from the venom of *Buthus martensii*  
(Karsch) scorpion (AGAP)  
Anti-VEGF165 single-chain variable fragment (scFv)  
Aprotinin is a Kunitz-type inhibitor, clinically useful for the  
management of hemorrhagic complications  
Archaeal Argonaute family proteins  
Arginine deiminase (ADI) and ADI-caspase recruitment domain  
(CARD)  
B-cell activating factor (doBAFF), TNF-family - Dove  
B-cell activating factor (zBAFF), TNF-family - Zebrafish  
Biotin carboxylase carrier protein (BCCP), human  
Brazzein, sweet-tasting protein  
Canine Interleukin 1 $\beta$  (IL-1 $\beta$ )  
Cap protein, PCV2: porcine circovirus type  
Catalytic module of Curdlan synthase (cm-CrdS) from  
*Agrobacterium* sp.  
Chp1 chromodomain  
Clr4 chromodomain  
CPE, R<sub>9</sub>, G<sub>4</sub>S, E<sub>9</sub>, rGel fusions (five variants)\*  
CRAMP, antimicrobial host defense peptides (HDP)  
Cyanovirin-N (CVN)  
D-Amino acid oxidase  
DLX3, transcription factor of placental development  
E3 fragment, third EGF motif of Dell  
EAK(16) (AEAEAKAKAEAKAEAK) belongs to a novel class of  
self-assembling peptides  
EBP50, microvillar scaffolding protein  
EF-Tu, elongation factor from *E. Coli*  
Enhanced Green fluorescent protein (eGFP)  
Exendin-4 and Exendin(9-39)  
FANCL\*  
Fibroblast growth factor 21 (FGF21)  
Filaggrin-2 (FLG2), human skin  
FK506 binding domain of *Plasmodium vivax* (PvFKBD)

## REFERENCES

<http://www.ncbi.nlm.nih.gov/pubmed/20670214>  
<http://www.ncbi.nlm.nih.gov/pubmed/20351782>  
<http://www.ncbi.nlm.nih.gov/pubmed/20100526>  
<http://www.ncbi.nlm.nih.gov/pubmed/20713107>  
<http://www.ncbi.nlm.nih.gov/pubmed/20713107>  
<http://www.ncbi.nlm.nih.gov/pubmed/19546372>  
<http://www.ncbi.nlm.nih.gov/pubmed/19582446>  
<http://www.ncbi.nlm.nih.gov/pubmed/20945481>  
<http://www.ncbi.nlm.nih.gov/pubmed/18795288>  
<http://www.ncbi.nlm.nih.gov/pubmed/19152836>  
submitted  
[Letters in Drug Design & Discovery](#)  
<http://www.ncbi.nlm.nih.gov/pubmed/19117613>  
<http://www.ncbi.nlm.nih.gov/pubmed/20382231>  
<http://www.ncbi.nlm.nih.gov/pubmed/21343300>  
<http://www.ncbi.nlm.nih.gov/pubmed/18221889>  
<http://www.ncbi.nlm.nih.gov/pubmed/16893658>  
<http://www.ncbi.nlm.nih.gov/pubmed/20646322>  
<http://www.ncbi.nlm.nih.gov/pubmed/20473714>  
<http://www.ncbi.nlm.nih.gov/pubmed/19362535>  
<http://www.ncbi.nlm.nih.gov/pubmed/19362535>  
<http://www.ncbi.nlm.nih.gov/pubmed/21303546>  
<http://www.ncbi.nlm.nih.gov/pubmed/20713107>  
<http://www.ncbi.nlm.nih.gov/pubmed/19547966>  
<http://www.ncbi.nlm.nih.gov/pubmed/21268066>  
<http://www.ncbi.nlm.nih.gov/pubmed/20171188>  
<http://www.ncbi.nlm.nih.gov/pubmed/18973282>  
<http://www.ncbi.nlm.nih.gov/pubmed/20937695>  
submitted  
<http://www.ncbi.nlm.nih.gov/pubmed/20457256>  
<http://www.ncbi.nlm.nih.gov/pubmed/18248821>  
<http://www.ncbi.nlm.nih.gov/pubmed/20154706>  
<http://www.ncbi.nlm.nih.gov/pubmed/20163718>  
<http://www.ncbi.nlm.nih.gov/pubmed/19384417>  
<http://www.ncbi.nlm.nih.gov/pubmed/20572013>

FL-HCS, full-length human holocarboxylase synthetase	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19740736">http://www.ncbi.nlm.nih.gov/pubmed/19740736</a>
Foot and Mouth Disease (FMDV) capsid proteins	
Glucagon-like-peptide-1 receptor (GLP-1R)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18248821">http://www.ncbi.nlm.nih.gov/pubmed/18248821</a>
Groucho (Gro)/transducin-like enhancer of split (TLE) family corepressors	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20732424">http://www.ncbi.nlm.nih.gov/pubmed/20732424</a>
GSTx2, implicated in (DDT) resistance	<a href="http://www.ncbi.nlm.nih.gov/pubmed/17785190">http://www.ncbi.nlm.nih.gov/pubmed/17785190</a>
hBD-1, $\beta$ -Defensin-1, human	submitted
Heat shock protein (hsp70) from <i>Trypanosoma carassii</i>	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19527750">http://www.ncbi.nlm.nih.gov/pubmed/19527750</a>
Heparin-binding epidermal growth factor (HB-EGF)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19950003">http://www.ncbi.nlm.nih.gov/pubmed/19950003</a>
HHC10, antimicrobial host defense peptides (HDP)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20713107">http://www.ncbi.nlm.nih.gov/pubmed/20713107</a>
HIV gp120 peptide	
Human aspartyl-tRNA synthetase (hDRS)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/17434317">http://www.ncbi.nlm.nih.gov/pubmed/17434317</a>
Human EFHC1C (EFHC1C-terminus, residues 403–640)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18593566">http://www.ncbi.nlm.nih.gov/pubmed/18593566</a>
Human epidermal growth factor (hEGF)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/17073723">http://www.ncbi.nlm.nih.gov/pubmed/17073723</a>
Human Hemangiopoietin (hHAPO)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20618138">http://www.ncbi.nlm.nih.gov/pubmed/20618138</a>
Human holocarboxylase synthetase (58-HCS and FL-HCS)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19740736">http://www.ncbi.nlm.nih.gov/pubmed/19740736</a>
Human IL-18	
Human IL-21	
Human IL-23	
Human Keratinocyte Growth Factor 2 (hKGF-2)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19104760">http://www.ncbi.nlm.nih.gov/pubmed/19104760</a>
Human MAP kinase	
Human mitochondrial transduction domain transcription factor A (MTD-TFAM)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19460293">http://www.ncbi.nlm.nih.gov/pubmed/19460293</a>
Human Oxidoreductase	
Human SARS coronavirus membrane protein (SARS-CoV M)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/16211506">http://www.ncbi.nlm.nih.gov/pubmed/16211506</a>
Human tryptase $\beta$ -II*	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18713650">http://www.ncbi.nlm.nih.gov/pubmed/18713650</a>
Human Urodilatin	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18189135">http://www.ncbi.nlm.nih.gov/pubmed/18189135</a>
Human $\beta$ -defensins 4 (hBD4)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20526896">http://www.ncbi.nlm.nih.gov/pubmed/20526896</a>
Immunomodulatory peptide (IDR-1), antimicrobial host defense peptides (HDP)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20713107">http://www.ncbi.nlm.nih.gov/pubmed/20713107</a>
ITK protein of the TEC Kinase family	submitted
KcsA K <sup>+</sup> channel (membrane spanning N-Cys peptides)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19803500">http://www.ncbi.nlm.nih.gov/pubmed/19803500</a>
Lactate dehydrogenase (LdhB) protein	<a href="http://www.ncbi.nlm.nih.gov/pubmed/17551728">http://www.ncbi.nlm.nih.gov/pubmed/17551728</a>
Lagos bat virus membrane protein (LAG M)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18391421">http://www.ncbi.nlm.nih.gov/pubmed/18391421</a>
Liver X Receptor (LXR)	
LL37, antimicrobial host defense peptides (HDP)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20713107">http://www.ncbi.nlm.nih.gov/pubmed/20713107</a>
Luffin P1 peptides	<a href="http://www.ncbi.nlm.nih.gov/pubmed/21195767">http://www.ncbi.nlm.nih.gov/pubmed/21195767</a>
Lycotoxin-1 insecticidal peptide	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18465835">http://www.ncbi.nlm.nih.gov/pubmed/18465835</a>
Matrix (M) from VSV serotype New Jersey (VSV <sub>NJ</sub> )	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19112510">http://www.ncbi.nlm.nih.gov/pubmed/19112510</a>
Matrix (M) protein from Lagos bat virus (LBV)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19112510">http://www.ncbi.nlm.nih.gov/pubmed/19112510</a>
Matrix metalloproteinase 13 (MMP13)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20457256">http://www.ncbi.nlm.nih.gov/pubmed/20457256</a>
mCherry (Fluorescent Protein) fused to peptides (3 motifs)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/21316369">http://www.ncbi.nlm.nih.gov/pubmed/21316369</a>
MD145 norovirus (Caliciviridae) Pol	<a href="http://www.ncbi.nlm.nih.gov/pubmed/15681440">http://www.ncbi.nlm.nih.gov/pubmed/15681440</a>
Metallothionein (MT)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19208897">http://www.ncbi.nlm.nih.gov/pubmed/19208897</a>

Mps1 N-terminal domain (M-NTD)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19120698">http://www.ncbi.nlm.nih.gov/pubmed/19120698</a>
Murine Secretory Phospholipase A2 (sPLA2)*	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18539905">http://www.ncbi.nlm.nih.gov/pubmed/18539905</a>
Murine UBP43*	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18713650">http://www.ncbi.nlm.nih.gov/pubmed/18713650</a>
Murine USP15*	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18713650">http://www.ncbi.nlm.nih.gov/pubmed/18713650</a>
Murine USP4*	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18713650">http://www.ncbi.nlm.nih.gov/pubmed/18713650</a>
Mx226, antimicrobial host defense peptides (HDP)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20713107">http://www.ncbi.nlm.nih.gov/pubmed/20713107</a>
Myostatin peptide (GDF8)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/16322573">http://www.ncbi.nlm.nih.gov/pubmed/16322573</a>
Nonstructural protein 3 (NS3) variants, hepatitis C virus (HCV)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19153239">http://www.ncbi.nlm.nih.gov/pubmed/19153239</a>
Nonstructural protein 4 (NS4A) variants, hepatitis C virus (HCV)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19153239">http://www.ncbi.nlm.nih.gov/pubmed/19153239</a>
NS3-4A, Hepatitis C virus membrane-bound enzyme complex	<a href="http://www.ncbi.nlm.nih.gov/pubmed/21047963">http://www.ncbi.nlm.nih.gov/pubmed/21047963</a>
Parathyroid hormone receptor 1 (PTH1R)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18248821">http://www.ncbi.nlm.nih.gov/pubmed/18248821</a>
Parkin	submitted
PCPB1	submitted
PfM6T $\alpha$ , PfM6T $\beta$ , and PfM6T $\gamma$ : malaria parasite <i>P. falciparum</i> membrane proteins	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19465059">http://www.ncbi.nlm.nih.gov/pubmed/19465059</a>
Photoactivated adenylyl cyclase (bPAC)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/21030594">http://www.ncbi.nlm.nih.gov/pubmed/21030594</a>
Poliovirus 3AB	submitted
Prestin STAS (10 different variants)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20471983">http://www.ncbi.nlm.nih.gov/pubmed/20471983</a>
Prolactins (zfPRL1 and zfPRL2)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19584915">http://www.ncbi.nlm.nih.gov/pubmed/19584915</a>
PYL1 and PYL2, PYR/PYL/RCAR family of START proteins	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19898420">http://www.ncbi.nlm.nih.gov/pubmed/19898420</a>
Rad51 capsid protein	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18467498">http://www.ncbi.nlm.nih.gov/pubmed/18467498</a>
RecA protein	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18467498">http://www.ncbi.nlm.nih.gov/pubmed/18467498</a>
Renalase1, human renalase	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20302943">http://www.ncbi.nlm.nih.gov/pubmed/20302943</a>
Ribonuclease inhibitor (RI), murine	<a href="http://www.ncbi.nlm.nih.gov/pubmed/21292012">http://www.ncbi.nlm.nih.gov/pubmed/21292012</a>
Rpt2 and Rpt5	<a href="http://www.ncbi.nlm.nih.gov/pubmed/18796432">http://www.ncbi.nlm.nih.gov/pubmed/18796432</a>
SA2 peptide, surfactant-like self-assembling peptide	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20687533">http://www.ncbi.nlm.nih.gov/pubmed/20687533</a>
Sindbis virus RNA-dependent RNA polymerase (nsP4)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19036396">http://www.ncbi.nlm.nih.gov/pubmed/19036396</a>
SMARCAL1, SWI/SNF family of proteins	submitted
Soybean Ca <sup>2+</sup> (SCaM4) and the C-lobe fragment of SCaM4 (SCaM4CT) calmodulin-binding domain (CaMBD)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19667066">http://www.ncbi.nlm.nih.gov/pubmed/19667066</a>
SPINK6, human	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20667819">http://www.ncbi.nlm.nih.gov/pubmed/20667819</a>
Spink9, E. Coli	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19190773">http://www.ncbi.nlm.nih.gov/pubmed/19190773</a>
Stromal cell-derived factor-1 (SDF-1)(S4V)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/17875967">http://www.ncbi.nlm.nih.gov/pubmed/17875967</a>
Suppressors of T-cell receptor signalling 1 (Sts1)	<a href="http://www.ncbi.nlm.nih.gov/pubmed/21222271">http://www.ncbi.nlm.nih.gov/pubmed/21222271</a>
Swi6	<a href="http://www.ncbi.nlm.nih.gov/pubmed/19362535">http://www.ncbi.nlm.nih.gov/pubmed/19362535</a>
Syntaxin (Syx1A), SNAP receptor (SNARE) protein	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20133592">http://www.ncbi.nlm.nih.gov/pubmed/20133592</a>
T4 bacteriophage helicase	
TGF- $\beta$ Related Growth Factor	
Transcription Factor 4 (Tcf4) peptide	
Tumor necrosis factor (TNF)- $\alpha$	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20363332">http://www.ncbi.nlm.nih.gov/pubmed/20363332</a>
UNG1 and UNG2	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20870715">http://www.ncbi.nlm.nih.gov/pubmed/20870715</a>
VAMP2/synaptobrevin, SNAP receptor (SNARE) protein	<a href="http://www.ncbi.nlm.nih.gov/pubmed/20603329">http://www.ncbi.nlm.nih.gov/pubmed/20603329</a>
Viral Integrase proteins	submitted
Vitronectin	<a href="http://trace.tennessee.edu/utk_chanhonoproj/1237/">http://trace.tennessee.edu/utk_chanhonoproj/1237/</a>
Wnt peptide	

YcbW (ZapC) as a fourth FtsZ-binding component of the Z-ring in E.coli.

<http://www.ncbi.nlm.nih.gov/pubmed/21216997>

Z dependent protease inhibitor (ZPI)

submitted

Zinc metalloprotease B (ZmpB)

<http://www.ncbi.nlm.nih.gov/pubmed/21098102>

$\beta$ -Catenin peptide

$\beta$ -Glucuronidase

$\gamma$ -glutamylethylamide ( $\gamma$ -GGT)

<http://www.ncbi.nlm.nih.gov/pubmed/21327888>