

## Supplementary Information

### Peptidomics as a tool to assess the cleavage of wine haze proteins by peptidases from *Drosophila suzukii* larvae

#### Authors

Wendell Albuquerque<sup>1</sup>, Parviz Ghezellou<sup>2</sup>, Kwang-Zin Lee<sup>3</sup>, Quintus Schneider<sup>1</sup>, Phillip Gross<sup>1</sup>, Tobias Kessel<sup>3</sup>, Bodunrin Omokungbe<sup>3</sup>, Bernhard Spengler<sup>2</sup>, Andreas Vilcinskas<sup>3,4</sup>, Holger Zorn<sup>1,3</sup>, Martin Gand<sup>1\*</sup>

#### Affiliations

<sup>1</sup>Institute of Food Chemistry and Food Biotechnology, Justus Liebig University Giessen, Heinrich-Buff-Ring 17, 35392 Giessen, Germany

<sup>2</sup>Institute of Inorganic and Analytical Chemistry, Justus Liebig University Giessen, Heinrich-Buff-Ring 17, 35392 Giessen, Germany

<sup>3</sup>Fraunhofer Institute for Molecular Biology and Applied Ecology, Ohlebergsweg 12, 35392 Giessen, Germany

<sup>4</sup>Institute for Insect Biotechnology, Justus Liebig University Giessen, Heinrich-Buff-Ring 26-32, 35392 Giessen, Germany

\*Corresponding author, E-Mail: [Martin.Gand@lcb.chemie.uni-giessen.de](mailto:Martin.Gand@lcb.chemie.uni-giessen.de), ORC-ID: 0000-0001-8211-691X

**Supplementary Table S1:** Peptide sequences for rTLP and rCHI identified by top-down peptidomics following incubation with peptidases from *Drosophila suzukii* larvae at pH 3.5.

Protein	Peptide
<b>rTLP</b>	NVNAGTTGGRVW
<b>rCHI</b>	YSGFGNDGSTDANKREIAA
	SGFGNDGSTDANKREIAAF
	NSYSGFGNDGSTDANKREIAAF
	SGFGNDGSTDANKREIAA
	NSYSGFGNDGSTDANKREIAA
	YSGFGNDGSTDANKREIAAF
	SALNSYSGFGNDGSTDANKREIAA
	LSALNSYSGFGNDGSTDANKREIAA
	WMNNVHSVIGQ
	DVVTSEKTA
	NVHSVIGQGFGATIR
	LSALNSYSGFGNDGSTDANKREIAAF
	DVVTSEKTA
	GFGATIRAING
	WMNNVHSVIGQGFGA
	YTRAAF
	RVQYYKDY
	WMNNVHSVIGQGF
	GATIRAING
	TDVVTSEKTA
	NKREIAAF
	NYGAAGNSIGFNGLSNPGIVAT
	FAHVTHETGHF
	IEEINGASHN
	TIRAINGA
	NYGAAGNSIGFNG
	WMNNVHSVIGQGFGATIR
	IEEINGASHNY
	SALNSYSGFGNDGSTDANKREIAAF
	FYTRAAF
	FFDGIINQ
	SVIGQGFGATIRAINGA
	NVHSVIGQGF
	NYGAAGNSIGFNGLSNPGIVA
	NVHSVIGQ
	GFGATIRAINGA
	FDGIINQ

	VVTSFKTAL
	NVHSVIGQGFGA
	DVVTSFKT
	VVTSFKTALW
	FKTALWF
	WFWMNNVH
	NVHSVIGQFGGATIRAIN

1 MAARKLLTVLL VGALFGAAVA QNCGCASGLC CSKYGYCOTG SDYCGDGCQS GPCDSSSSGG SSVSDIVTQS FFDGIINQAA SSCAGKNFYT RAAFLSALNS YSGFGNDGST DANKREIAAF FARVTHETGH

131 FCYIEEINGA SHNYCDSSNT QYPCVSGQNY YGRGFLQLTW NYNYGAAGNS IGFNLGNPG IVATDVVTSE KTALNFWGN VHVGQGGG ATIRAINGAV ECNGGNTAAV NRVQYYKDY CSQLGVSPGD

261 NLTC

**Supplementary Figure S1:** Peptide products from the cleavage of rCHI (UniProt ID: QX7AU6) following incubation with peptidases from *D. suzukii* larvae. The highlighted amino acid sequences (blue underlined) were identified by *de novo* sequencing and database comparison using Peaks Studio v.X+.

```
1  ATFNIQNHCS YTVWAAAVPG GGMQLGSGQS WSLNVNAGTT GGRVWARTNC NFDASGNGKC ETGDCGGLLQ CTAYGTPPNT LAEFALNQFS NLDFFDISLV
101 DGFNVPMAPN PTSNGCTRGI SCTADIVGEC PAALKTTGGC NNPCTVFKTD EYCCNSGSCS ATDYSRFFKT RCPDAYSYPK DDQTSTFTCT AGTNYEVVFC
201 P
```

**Supplementary Figure S2:** Peptide products from the cleavage of rTLP (PDB ID: 4JRU) following incubation with peptidases from *D. suzukii* larvae. The highlighted amino acid sequences (blue underlined) were identified by *de novo* sequencing and database comparison using Peaks Studio v. X+.