

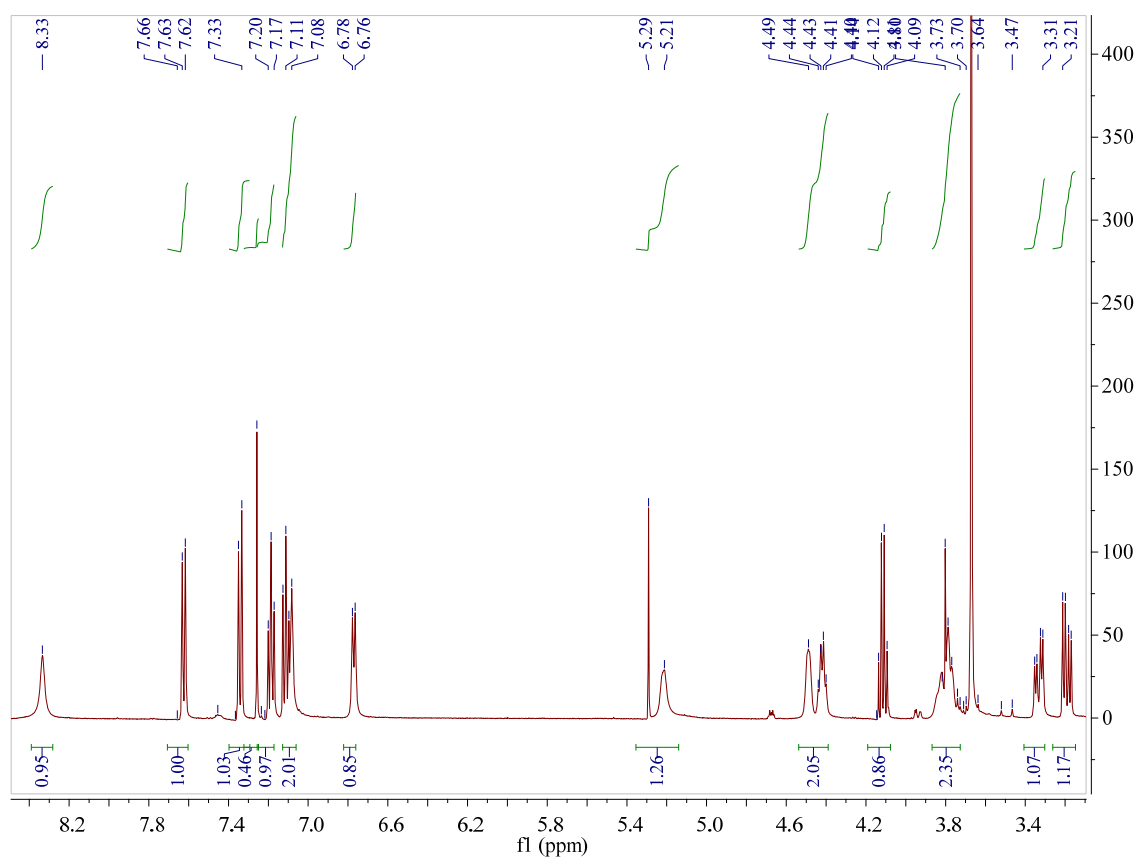
## Supplementary Information

### A diketopiperazine factor from *Rheinheimera aquimaris*

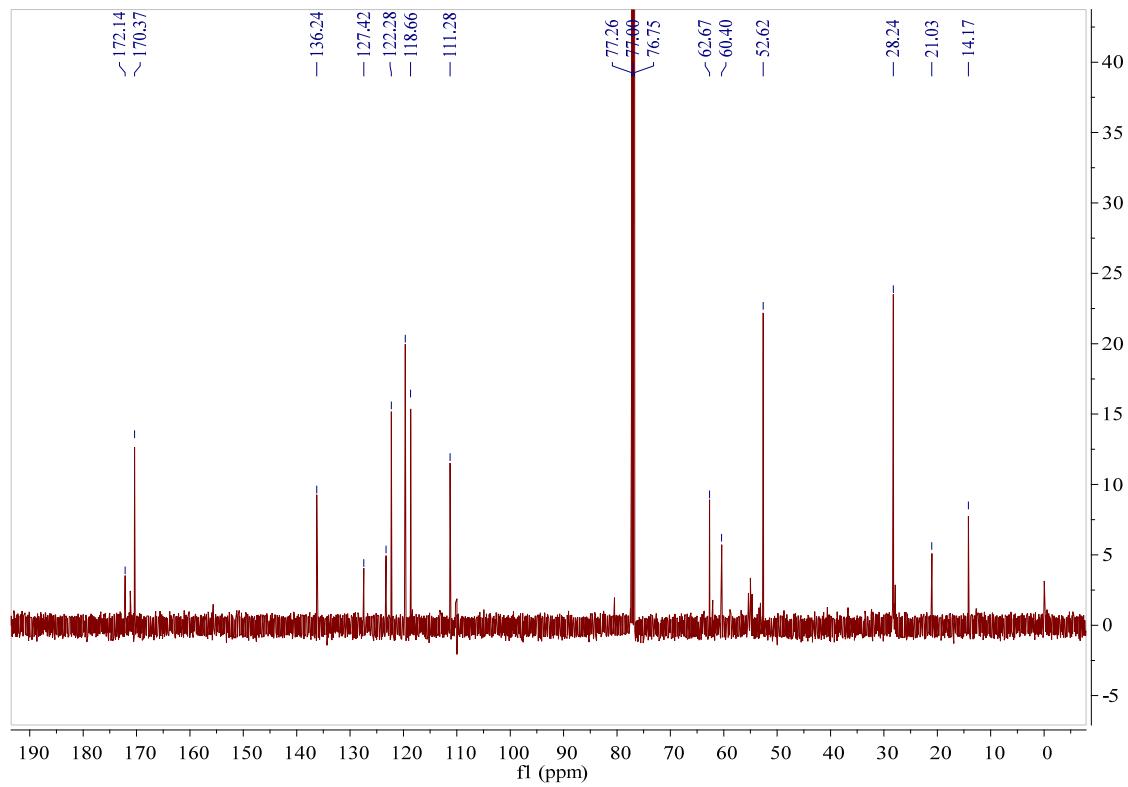
### QSI02 exhibits anti-quorum sensing activity

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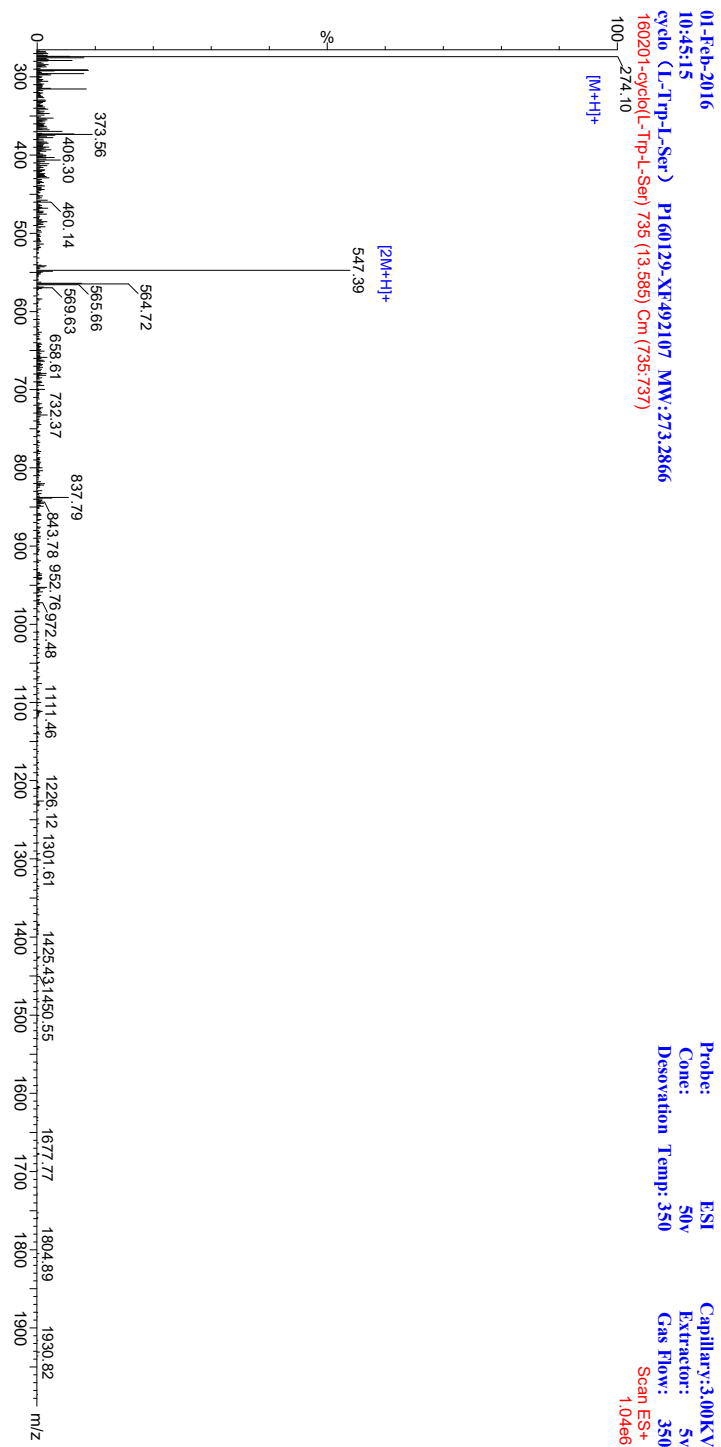
**Supplementary Figure 1:** The  $^1\text{H-NMR}$  spectrum of compound cyclo(Trp-Ser) in  $\text{CDCl}_3$ .



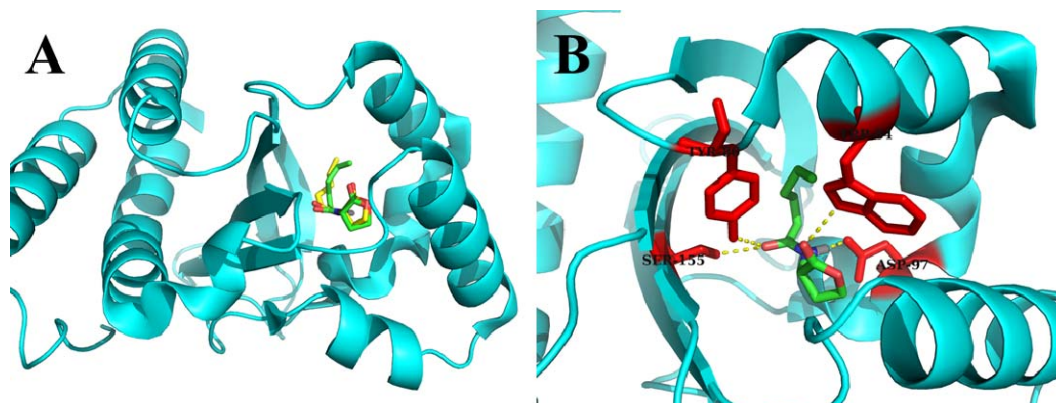
**Supplementary Figure 2:** The  $^{13}\text{C}$ -NMR spectrum of compound cyclo(Trp-Ser) in  $\text{CDCl}_3$ .



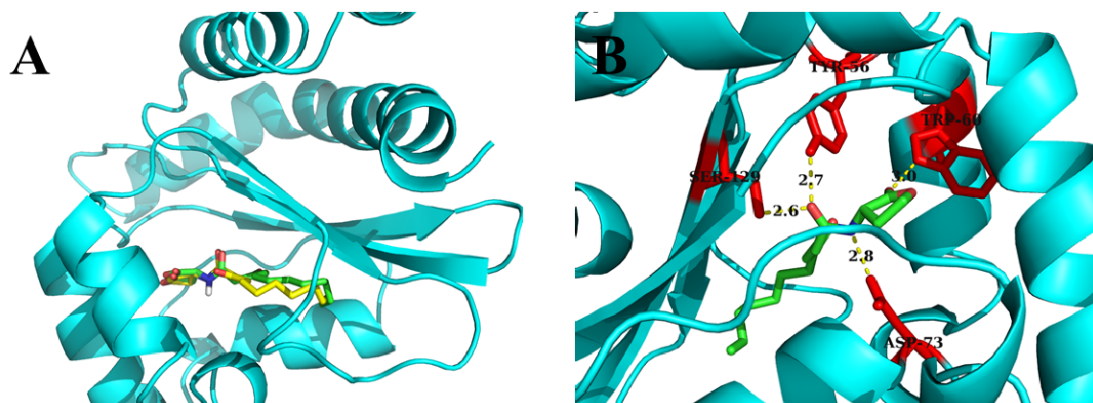
**Supplementary Figure 3:** The MS spectrum of compound cyclo(Trp-Ser).



**Supplementary Figure 4:** (A) Overlay of docked pose of C<sub>6</sub>HSL (native ligand; in green sticks) with its X-ray structure (in yellow sticks) for 3QP1 protein. (B) Analysis of docked C<sub>6</sub>HSL bound to 3QP1 showing the key interactions in the binding pocket.



**Supplementary Figure 5:** (A) Overlay of docked pose of 3-oxo-C<sub>12</sub>HSL (native ligand; in green sticks) with its X-ray structure (in yellow sticks) for 2UV0 protein, with RMSD=1.56 Å. (B) analysis of docked 3-oxo-C<sub>12</sub>HSL bound to 2UV0 showing the key interactions in the binding pocket.



**Supplementary Table 1** MICs values of cyclo(Trp-Ser) and azithromycin against different microorganisms.

Microorganisms	MIC(mg/ml)	
	cyclo(Trp-Ser)	azithromycin
<i>Staphylococcus aureus</i> ATCC25923	3.2	0.2
<i>Escherichia coli</i>	6.4	0.2
<i>Chromobacterium violaceum</i>	3.2	0.4
<i>Chromobacterium violaceum</i> CV026	3.2	0.4
<i>Pseudomonas aeruginosa</i> PA01	6.4	0.2
<i>Candida albicans</i> 00147	6.4	0.8