

# Supplementary Information

## Identification of quorum sensing activators and inhibitors in the marine sponge *Sarcotragus spinosulus*

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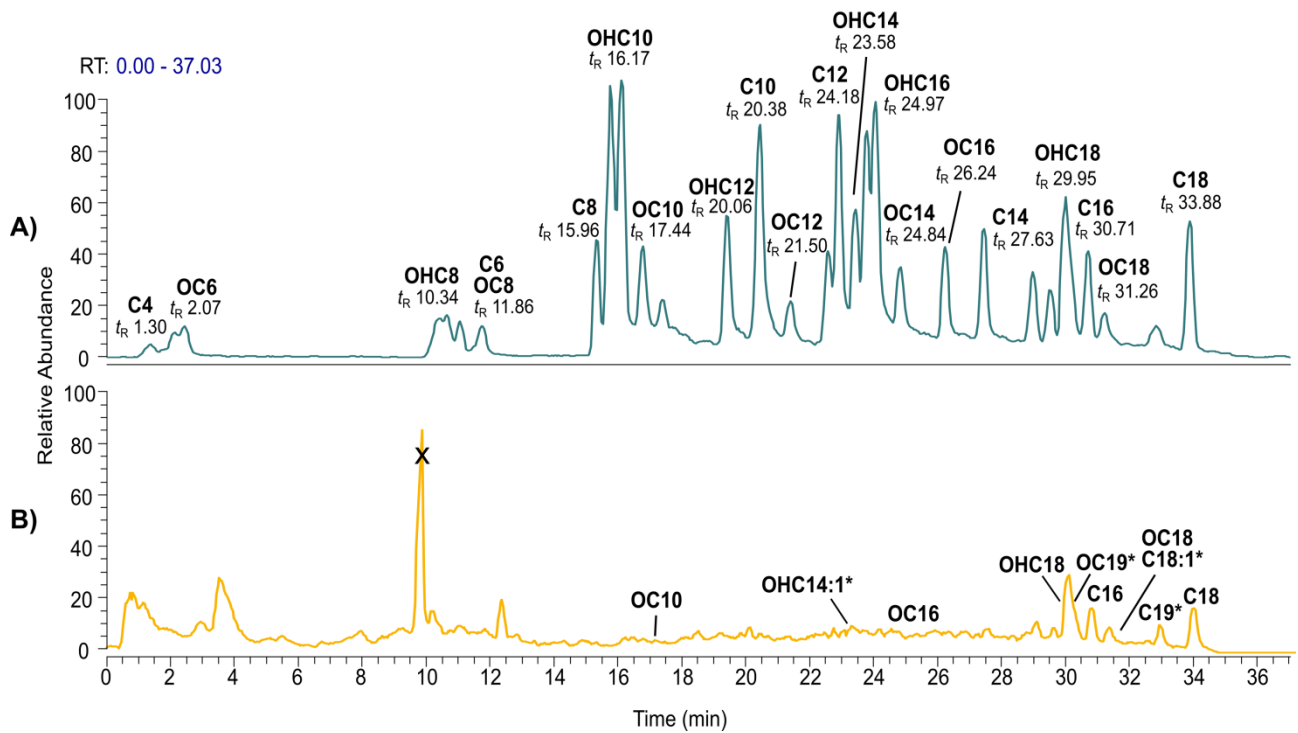
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**Figure S1.** Extracted ion chromatograms at  $m/z$ 102.05, corresponding to deacylated homoserine lactone, from the LC-HRMS analysis of the microbial enriched sponge fractions.

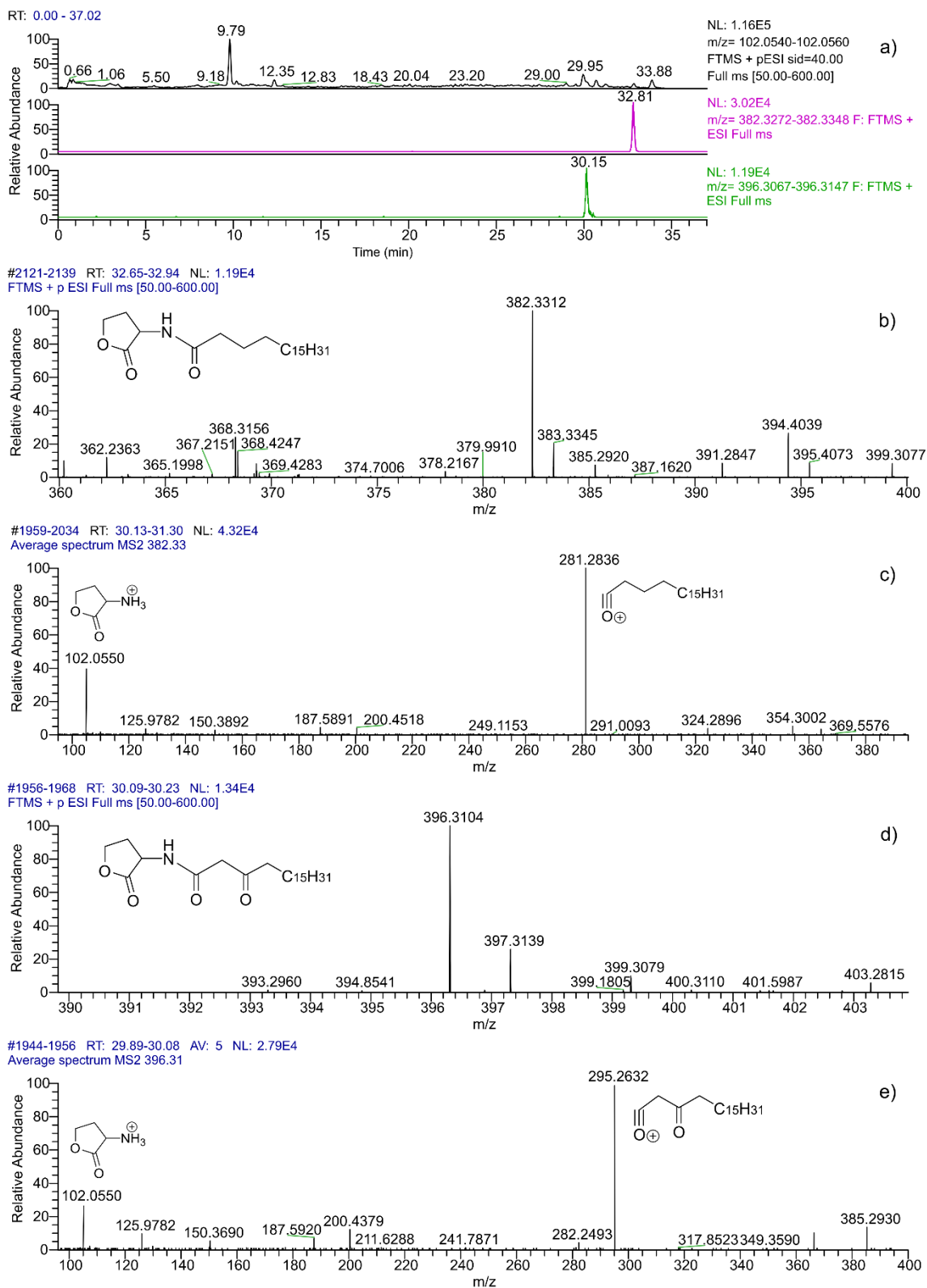
**Figure S2.** HR-MS and HR-MS/MS spectra of the new compounds C19-AHL and OC19-AHL.

**Figure S3.** HR-MS spectra of compounds **1** and **2**.

**Figure S4.** <sup>1</sup>HNMR spectra of compounds **1** and **2**.



**Figure S1:** Extracted ion chromatograms at  $m/z$ 102.05, corresponding to deacylated homoserine lactone, from the LC-HRMS analysis of the microbial enriched sponge fractions: A) standard mixture of synthetic AHLs (blue trace); B) microbial enriched sponge fraction S2 (pink trace). Asterisk-marked AHLs (\*) were only tentatively described.



**Figure S2:**HR-MS and HR-MS/MS spectra of the new compounds C19-AHL and OC19-AHL; a) extracted ion chromatogram from the LC-HRMS analysis of the sponge enriched fraction S2 at  $m/z$  102.0550 (black trace), corresponding to deacylated homoserine lactone,  $m/z$  382.3312 (pink trace), corresponding to C19-AHL and  $m/z$  396.3104 (green trace), corresponding to OC19-AHL; b), c) HR-MS and HR-MS/MS spectra of C19-AHL; d), e) HR-MS and HR-MS/MS spectra of OC19-AHL.

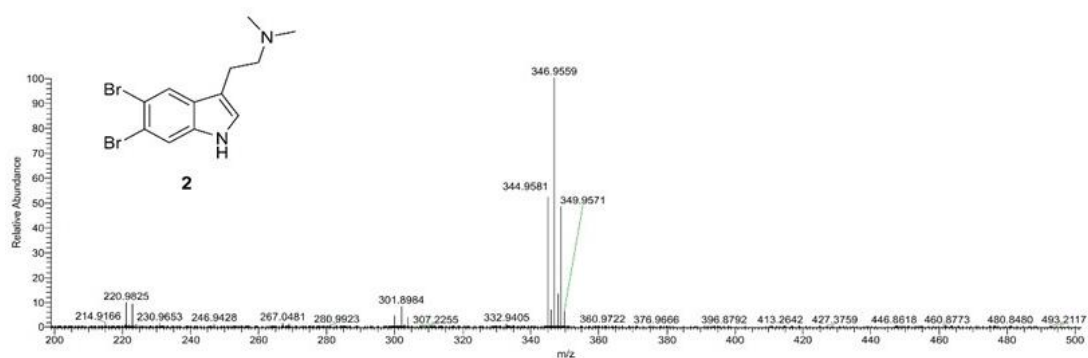
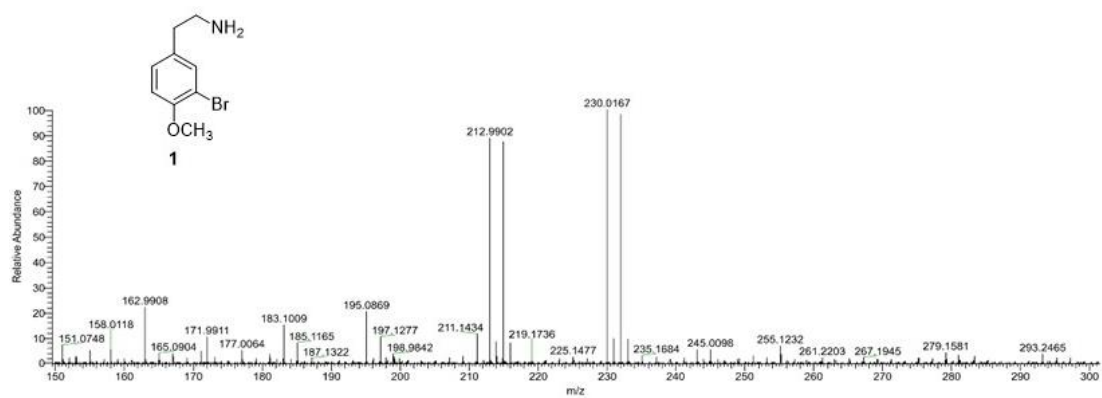


Figure S3:HR-MS spectra of compounds 1 and 2.

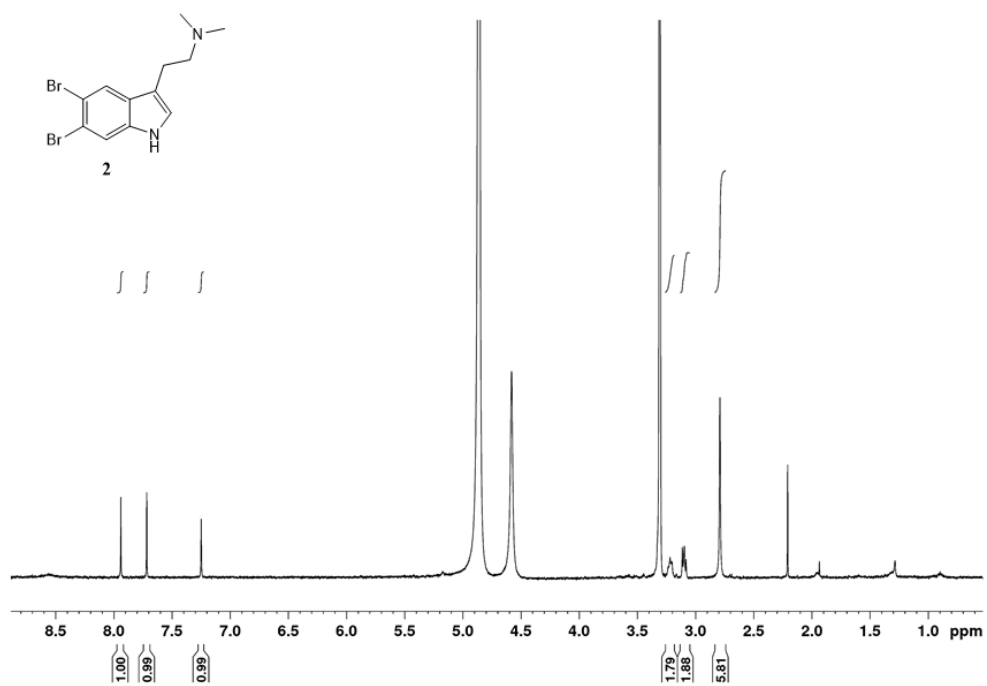
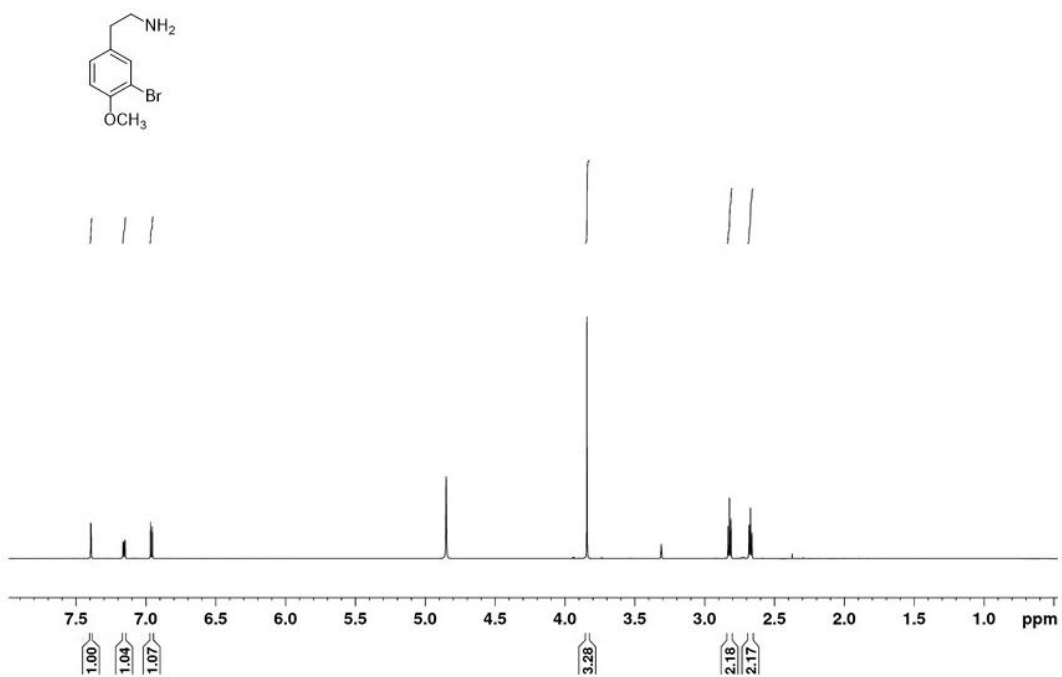


Figure S4:  $^1\text{H}$ NMR spectra of compounds 1 and 2.