

Supporting Information

Barrettides: A Peptide Family Specifically Produced by the Deep-Sea Sponge *Geodia barretti*

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Supplementary Tables

All six supplementary tables are combined into one Excel file and provided separately.

- Table S1: List of all sequencing resources (transcriptomes, metatranscriptome and genome) and accession numbers, if available.
- Table S2: List of BLAST hits in transcriptomes, metatranscriptomes and the draft genome assembly of *G. barretti*.
- Table S3: Nucleotide sequences of barrettides.
- Table S4: List of BLAST hits in transcriptomes other than *G. barretti*.

- Table S5: Amino acid analysis and peptide sequencing information for barrettide A from Carstens et al., 2015.
- Table S6: Amino acid analysis and peptide sequencing information for barrettide B from Carstens et al., 2015.

Supplementary Figures

- Figure S1: Steffen et al. (*unpublished*) sampled *Geodia barretti* along a depth range from 407 to 1462 m in the Davis Strait between Canada and Greenland. The signal of barrettide C recorded by UPLC-HRMS was not affected by sample depth.
- Figure S2: Spectral complexity of Barrettide C when studied at high concentration versus low concentration.

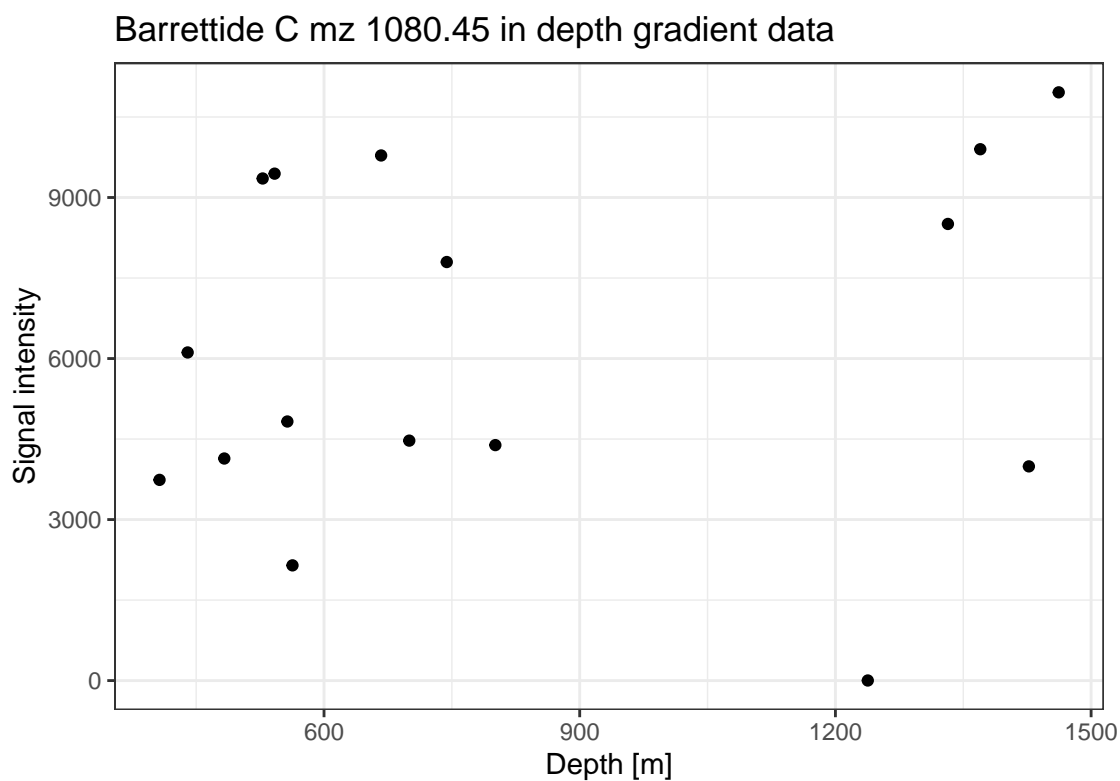


Figure S1: Barrettide C ($[M+3]^{3+}$) in *G. barretti* sampled along a depth gradient in the Labrador Sea.

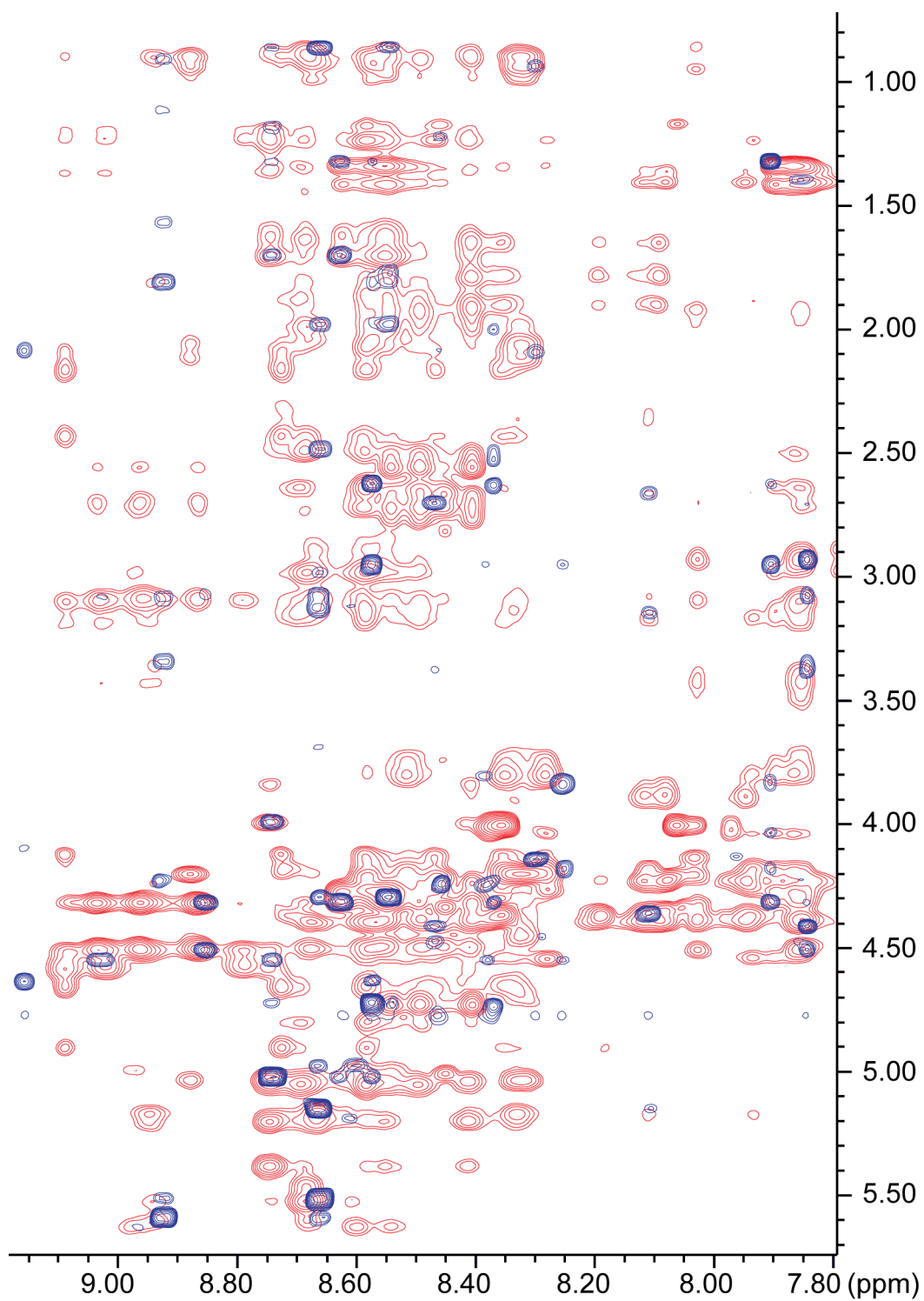


Figure S2: Overlay of the fingerprint region of Barrettide C. The NOESY spectrum of Barrettide C at a high concentration is shown in red and is overlaid with the low concentration spectrum in blue. Recorded at 600 MHz and 298 K.