

Natural products and morphogenic activity of γ -Proteobacteria associated with the marine hydroid polyp *Hydractinia echinata*.

Guo H, Rischer M, Sperfeld M, Weigel C, Menzel KD, Clardy J, Beemelmans C (2017) Natural products and morphogenic activity of γ -Proteobacteria associated with the marine hydroid polyp *Hydractinia echinata*. *Bioorg Med Chem* 25(22), 6088-6097.

[Details](#)



Abstract

Illumina 16S rRNA gene sequencing was used to profile the associated bacterial community of the marine hydroid *Hydractinia echinata*, a long-standing model system in developmental biology. 56 associated bacteria were isolated and evaluated for their antimicrobial activity. Three strains were selected for further in-depth chemical analysis leading to the identification of 17 natural products. Several γ -Proteobacteria were found to induce settlement of the motile larvae, but only six isolates induced the metamorphosis to the primary polyp stage within 24h. Our study paves the way to better understand how bacterial partners contribute to protection, homeostasis and propagation of the hydroid polyp.

Involved units

[Molecular and Applied Microbiology Axel Brakhage](#) [Read more](#)

[Chemical Biology of Microbe-Host Interactions Christine Beemelmans](#) [Read more](#)

[Bio Pilot Plant Miriam Agler-Rosenbaum](#) [Read more](#)

[Jena Microbial Resource Collection Kerstin Voigt](#) [Read more](#)

Leibniz-HKI-Authors



Christine Beemelmans

[Details](#)



Huijuan Guo

[Details](#)



Klaus-Dieter Menzel

[Details](#)



Maja Rischer

[Details](#)



Christiane Weigel

[Details](#)

Topics

[Secondary metabolites from marine microbes](#)

Identifier

doi: 10.1016/j.bmc.2017.06.053

PMID: 28893599