

# Resource Summary Report

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## Isolation of green algal symbionts from freshwater sponges and subsequent reinfection of sponge tissues

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### Proper Citation

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### Protocol Information

**URL:** <https://dx.doi.org/10.17504/protocols.io.bmuzk6x6>

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**Summary:** A variety of green algal species form intracellular symbioses with freshwater sponges. These sponges and their algal symbionts play important roles in freshwater ecosystems and provide a model for asking questions about freshwater endosymbioses involving heterotrophic animal hosts in mutualistic relationships with photosynthesizing algae. The freshwater sponge *Ephydatia muelleri*, for example, has a fully sequenced chromosomal level genome as well as many features that make it amenable to cellular and molecular studies. Here, we provide a simple protocol for isolating green algae from freshwater sponge host tissues. In most cases, microalgae can be cultured outside of the host in commercially available algal medium and on agar substrates. We also describe methods for infecting algal-free sponges hatched from gemmules to establish stable symbioses in juvenile sponges.

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