



Colony formation in *Scenedesmus*: No contribution of urea in induction by a lipophilic *Daphnia* exudate

Lürling, Miquel, Eric Von Elert

Limnol. Oceanogr., 46(7), 2001, 1809-1813 | DOI: 10.4319/lo.2001.46.7.1809

ABSTRACT: The common green alga *Scenedesmus* may respond morphologically to numerous environmental factors. The formation of colonies in *Scenedesmus* resulting from exposure to grazer (*Daphnia*) excreta is of particular interest since the induced colony formation may be an induced defense. Recent studies suggested that unicell-colony transformation in *Scenedesmus* could result from urea released by actively feeding *Daphnia* and/or by a more lipophilic substance that could be retained by lipophilic solid phase extraction (C18-SPE). We investigated the generality of the contribution of urea to the overall morphogenetic activity by separating urea and the more lipophilic infochemical using C18-SPE. No morphogenetic effect of urea was detected in two different algal growth media, whereas *Daphnia* water induced colony formation. After C18-SPE of active *Daphnia* water, the urea containing run-through was inactive, whereas the desorbed eluate remained active. Thus, colony-inducing activity is more lipophilic than urea-related.

Article Links

[Download Full-text PDF](#)

[Return to Table of Contents](#)

Please Note

Articles in L&O appear in PDF format. Open access articles may be freely downloaded by anyone. Other articles are available for download to subscribers only, or may be purchased for \$10 per article. All L&O articles are moved into Open Access after three years.