

## COMUNICAÇÃO ORAL 11

## Scientific images literacy in medical, biological, and environmental sciences: the case of graphical abstracts

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## Resumo

**Introduction:** The increase in number and diversity of scientific digital publishing lead to new strategies to disclosure journals and manuscripts. First published in Chemistry in 1977, graphical abstracts (GA) have spread to other fields and have evolved adapting for different disciplines and contexts. Coexisting with traditional verbal abstracts and new publishing initiatives such as author summary, lay summary, significance statements and highlights of the paper [1], GA differs in being a multimodal representation (pictorial, symbol and verbal) of the central concepts in a paper. Furthermore, GA are typical in areas where research results are inherently visual or where symbolic notations are consolidated, like Chemistry Engineering, Medical, Biological and Environmental Sciences [2]. Although GA design principles, dimensions, visual structures and templates vary among publishers and scientific areas, its ultimate goal is to communicate science in a consistent way according to new challenges to attract readerships and to enlarge citations, including social media supports [2; 3]. Graphicacy involves three main abilities: visual thinking, visual learning and visual communication [4]. These

skills must be explicitly taught to obtain an effective GA, especially in the Biological Sciences, respecting the particularities of the structure, style, content and context of GA publication. **Objectives:** This work aims to review the importance of GA in scientific dissemination and the need for scientific visual literacy to promote successful scientific communication practices in a scenario of increasing erasure of knowledge frontiers and expansion of science circulation spaces, involving researchers but also graduate students. **Conclusion:** Scientific visual literacy, especially of GA in Medical, Biological and Environmental Sciences, can enable the production of multimodal abstracts that go beyond aesthetic needs and respect the necessary rigor with which the scientific report must be carried out. Thus, communication between scientists from similar and correlated areas can be improved and science can become a more friendly and inviting field for lay people. We argue that this is only possible through informed and explicit training on GA in higher education spaces looking to improve researchers and students reading, writing, learning, and also teaching skills.

**Keywords:** graphical abstracts; visual literacy; scientific visual communication; learning/teaching.

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