Guidance for producing images and creating a further reading list

Producing and referencing images

Images (or figures as referred to in scientific publications) can be tremendously useful when trying to convey scientific concepts to any audience. For example, images can allow you to describe a complex biological process such as a cell signalling pathway more succinctly or highlight features of a cell or organism such as cellular organelles. Images can also increase the audience's engagement with and understanding of the topic.

However, when using third-party images or images not self-produced such as logos, images, diagrams and tables, copyright is an issue that must be considered. Therefore, for the Science Communication Prize, we strongly encourage the use of self-produced images.

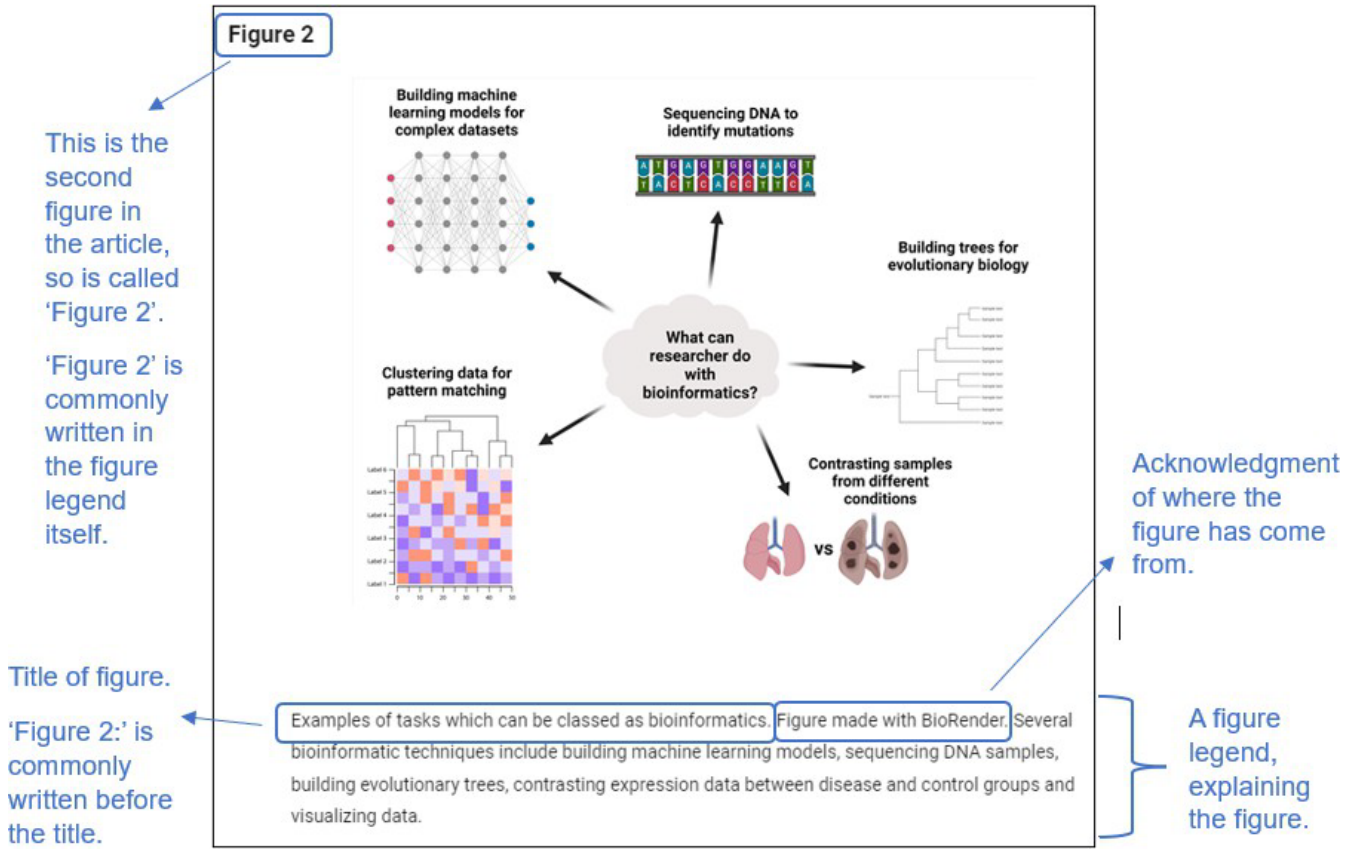
You can create your own images in a number of ways, including:

- Drawing an image then taking a photograph or scan.
- Creating an image using desktop software.
- Creating an image using free online software such as:
  - Bioicons
  - Inkscape
  - Canva
  - Vectr
- Creating an image using paid software with a valid licence (Institutional or personal licence)
  - BioRender – please note that we can only publish images from the paid licence version and not the free version
  - Adobe Illustrator
  - Microsoft Office such as PowerPoint

If the image/figure is copyrighted, it cannot be used regardless of if acknowledged. You must acknowledge where the figure has come from, even if it is your own work. Please note that we do not allow the use of Artificial Intelligence tools in the generation of images or videos included in your Science Communication Prize entry.

You should also include a title for your figure, and you can also include an optional figure legend. The purpose of a figure legend is to explain the image to the reader to help the reader understand what is being shown. The figure legend is often in a different font, colour or italicised compared to the main text to help the reader separate the legend from the main text.

An example from an article in The Biochemist magazine is shown below. You can find the full article, with more examples here.



You should also reference your figure in the text of your article, when you first want the reader to look at it.

For the example above, the author writes '(Figure 2)' in the text a er they talk about what is shown in the figure. You can see this in the text below. This directs the reader to the figure, to help explain the text from the article.

Why is bioinformatics necessary in biological sciences?

Bioinformatics supports every aspect in modern biological research. In some ways bioinformatics is not a useful term for the vast array of different tasks that can be performed for uses in biology (Figure 2). Illustrated in Figure 2 is a portfolio which shows the range of tasks from distinct disciplines within biological research that require an expert in bioinformatics. Building machine

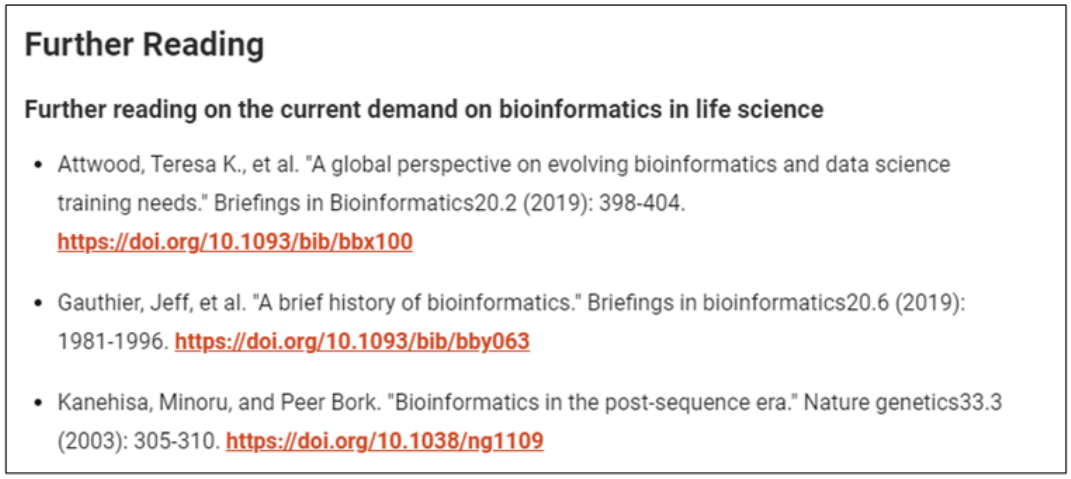
Creating a further reading list

For the Science Communication Prize, you do not need to reference in the text of your article. Instead, you should create a 'further reading' list at the bottom of your article, which should be beneficial to readers wanting to know more about the topic.

For each item in your further reading list, you should include:

- The author(s).
- The title.
- Where it was published – for example, The Biochemist or Nature Reviews Genetics.
- The year it was published.
- The page numbers.
- A link to the content online (if appropriate).

An example from The Biochemist is shown below, and the article can be found here.



Further Reading

Further reading on the current demand on bioinformatics in life science

- Attwood, Teresa K., et al. "A global perspective on evolving bioinformatics and data science training needs." Briefings in Bioinformatics20.2 (2019): 398-404. https://doi.org/10.1093/bib/bbx100
- Gauthier, Jeff, et al. "A brief history of bioinformatics." Briefings in bioinformatics20.6 (2019): 1981-1996. https://doi.org/10.1093/bib/bby063
- Kanehisa, Minoru, and Peer Bork. "Bioinformatics in the post-sequence era." Nature genetics33.3 (2003): 305-310. https://doi.org/10.1038/ng1109

You will not be judged on your referencing for the further reading list.

You can use software such as 'citethisforme', 'Mendeley', 'Zotero' or 'mybib' to help with formatting your references in the reading list. This will not be judged in the competition.

For further support, please contact our Grants department:

grants@biochemistry.org
www.biochemistry.org