OceanSide
Publications, Inc.

Digital Art Guidelines

To publish the figures in your article with the highest quality, it is important to submit digital art that conforms to the appropriate guidelines, including artwork type, size, resolution, color mode, and file format. Submitted figures that do not meet journal guidelines may result in delays to the publication of a manuscript. The Editorial Office reserves the right to modify figures in order to meet journal guidelines. Include the number of figures on the title page of the manuscript submission.

Sizing and preparation:

- Submit figures at their final publication size; do not scale.
- Preferably size figures to either 1 column 1.5 column, or 2 column width. (see chart to right.)
- The height of all figures must be less than or equal to 54 picas. Lengthy figure captions may require that the height of the figures be reduced.

Columns	Inches	Centimeters	Picas
1	1.67" (min); 3.33" (max)	4.233cm (min); 8.467cm (max)	10p (min); 20p (max)
1.5	4.167"; (min) 5" (max)	5.883cm (min); 12.7cm (max)	25p (min); 30p (max)
2	4.167"; (min) 7.08" (max)	5.883cm (minv); 18cm (max)	25p (min); 42p6 (max)

- All figures must fall within the maximum height and width values and must be viewable without rotation.
- Figures must be a useful visualization of data that could not otherwise be accomplished in a few lines of text.
- The following graphics can be submitted as figures: charts, graphs, illustrations, and photographs.
- Figures must be numbered consecutively in the order in which they are cited in the manuscript. Figures should be numbered using Arabic numerals (e.g., 1, 2, 3). Include the figure number in the figure's filename.
- Each figure must have a corresponding short title and caption included in the manuscript text.
- All figures must make economical use of space. Large areas of white space are not acceptable (e.g., axes of graphs extending beyond the relevant points needed to display data).
- Each figure must be self-contained and comprehensible without referring to the manuscript. This includes the following requirements:

  A. All symbols used in a figure must be defined for that figure (e.g, *, †). If a symbol is used in multiple figures, the definition of the symbol must also be repeated for every figure in which it appears. Symbols may be defined in a key within the figure or in the figure caption.

  B. All abbreviations used in a figure (including those used in the figure's title and caption) must be defined in the figure caption. This includes abbreviations defined in the manuscript. If the same abbreviation is repeated in multiple figures, the definition of that abbreviation must be repeated for every figure in which it appears. Only the most widely recognized abbreviations are the exception to this rule.
- Visual representation of animal subjects through the use of illustrations is preferred to photographs.
- Photographs of subjects in which the individual is identifiable require a signed model release.
- Authors are responsible for obtaining full permission to publish figures for which they do not hold the copyright. Proof of this permission is required prior to publication.
- The use of clip art and stock photography is not allowed.
- Images created by generative artificial intelligence technology are not permitted.
- Lines should be a minimum of 0.5-1 point thick when the figure is correctly sized to its corresponding column width.
- Charts and graphs must be two-dimensional unless the data require a third dimension.
- Illustrations must be professionally drawn. Use color where appropriate.
- Color figures should be provided in RGB mode, with ICC profile embedded.

Labeling and Font Usage:

- Type within figures must be consistent and legible when viewing the figure at its final size. Preferred font is Arial 9 pt.
- For symbols, please use standard fonts such as Symbol, Mathematical Pi, and European Pi.
- Do not use varying letter type sizes within a single figure; use the same size or similar sizes throughout.
- The use of italic and bold styling should be used only when meaningful (e.g., differentiating between gene and protein names).
- Fonts should be embedded in the file.
- Avoid the use of reverse type (white lettering on darker background.)
- Avoid lettering on top of shaded or textured areas.
- Provide labels (locants) for all multipanel figures using uppercase 10 point Helvetica Bold.

  For example: **A, B, C, D**.

Acceptable file formats for figures:
Note: see next page for explanations of Vector and Raster formats

- **Vector+Raster Formats:** PDF, EPS, AI, PPT, PPTX (Charts, graphs, line-work, text, etc.)
  If submitting PDF with raster elements, do not use the default settings - change to high-quality settings to ensure that high resolution images are preserved and fonts are embedded.

- **Raster only Formats:** TIF, JPG, PNG (Photographs, scans, screenshots, etc.)

IMPORTANT Submit Vector Artwork whenever possible.

Microsoft Office:

Figures submitted in Word, Excel, or PowerPoint are acceptable but should be avoided if possible. If MS Office is your only choice, please follow these general rules to ensure that the file is properly prepared:

1. Do not use pattern or textured fills in graphics. Instead, use solid fills or percentage screens: these will be effectively maintained as vector data during file conversion. **Note:** A 20% difference in percent screens is most effective for differentiation.

2. Raster artwork placed within any MS Office application should be of acceptable minimum resolution for print production: 300 ppi for halftones, 600-900 ppi for combinations, and 1000-1200 ppi for line art.

3. When inserting pictures/images into files, be sure to select "insert" rather than "insert link." The latter will not properly embed the high-resolution image into the MS Office file.

4. For each file created in MS Office, **before** saving the file, choose File>Options>Advanced and check the box labeled "Do not compress images in file." (This will help ensure that high resolution is maintained.)

5. Always embed fonts in your documents. See the guidelines below for embedding fonts in MS Office documents.

Embedding Fonts in MS Office:
  - From the file menu, select Save As...
  - From the **Tools** menu, select **Save Options...**, then check **Embed Fonts in the file**.

Authors who do not comply with these guidelines will be asked to resubmit their figures in a production-quality format, which may delay publication.

Vector and Raster formats

## There are two categories of Digital Artwork:

1. Vector Artwork (i.e. object-based; PDF, EPS, AI, and PPT files support both vector and raster data.)

This type of artwork is preferred when possible because it is resolution-independent and can be scaled to any size without quality loss, so it will produce the best results in publication.

Vector artwork is typically generated using drawing or illustration programs (e.g., Adobe Illustrator) and are composed of mathematically defined geometric shapes—lines, objects, and fills. It cannot be used for photographic images.

Vector line art: Common examples are graphs and charts created in illustration programs. It is preferable to have these saved as EPS files, with all fonts embedded or converted to outlines, and graph lines at least 0.25 points thick.

Combination line/halftone: Common examples are color or grayscale figures containing halftone and line art elements. The halftone elements should be processed in Photoshop and the line elements in Illustrator, and the two elements from the two applications should be combined in Illustrator. It is preferable to have these saved as EPS files, with all fonts embedded or converted to outlines, and graph lines at least 0.25 points thick.
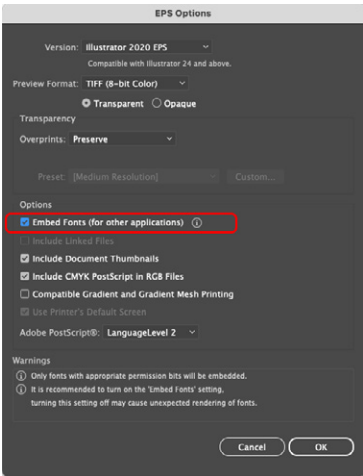
2. Raster Artwork (i.e., pixel-based; also called bitmapped images. TIF, PNG, and JPG files support raster data only.)

This type of artwork is resolution-dependent, so does not have the same quality for text and line-art that can be provided with vector data, but it is the only option for photographic images.

Resolution: Low-resolution images are one of the leading causes of art resubmission and schedule delays.
Submitted raster (i.e., pixel-based) images must meet the minimum resolution requirements.
Raster images can be classified as monochrome (line-art), halftone, or combination halftone.
TIF file format using LZW compression is preferred. Preferably, provide text and line-art in vector format (see above).

- **Monochrome (1-bit) images (line-art):** Common examples are graphs and charts made of solid black and white, with no gray values. The suggested minimum resolution for this type of image is 1000 ppi at publication size.
- **Combination Halftones:** Common examples are color or grayscale figures containing halftone and line art elements. The suggested minimum resolution for this type of image is 600 ppi at publication size so that the raster text and line art elements will reproduce with good quality.
- **Halftones:** Common examples are color or grayscale figures containing pictures only, with no text or line art. The suggested minimum resolution for this type of image is 300 ppi at publication size.

Monochrome (line-art)	Combination Halftones (grayscale or color images **with** text or line-art)	Halftones (grayscale or color images with **no** text or line-art)
1000 ppi at publication size	**600 ppi at publication size**	**300 ppi at publication size**