WORKSHOP: VISUAL COMMUNICATION - CREATING SCIENTIFIC ILLUSTRATIONS

DAY 1: PRINCIPLES OF DESIGN AND VISUAL COMMUNICATION

Date: February 25, 2025
Time: 9 am - 4 pm, incl. 1 hour lunch break and short breaks (10-15 minutes)
Participants: max. 20

Design principles for scientific illustrations will be discussed and explained using practical examples. Participants are welcome to bring their own illustrations/figures and obtain feedback as well as possible suggestions for improvements.

9 - 12 am   **1. BASICS OF SCIENTIFIC GRAPHIC DESIGN**

1.1 Visual communication
Context, key message, data vizualization types and generation of individual components

1.2 Design principles
Image properties
Pre-attentive visual attributes: Color
Clarity
Graphic elements
Typography
Layout
> Quiz (multiple choice)

1 - 4 pm   **1.3 Types of visualization (best practice for journal figures)**
Images (ethically acceptable modifications)
Tables
Charts
Graphics

2. IMPLEMENTATION

2.1 Feedback and suggestions for improvement
Feedback and possible suggestions for improvement on practical examples from the literature and participants
> Group work: Develop suggestions for improvement of selected illustrations.

2.2   Copyright and resources
Copyright
Resources for free scientific images
Programs

QUESTIONS

The lecture/information will be distributed as a hand-out after the workshop, including material on the topics that might not be covered during the course (e.g. graphical abstracts).

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SCIENTIFIC ILLUSTRATIONS

DAY 2: CREATE YOUR FIGURES IN ADOBE ILLUSTRATOR

Date(s):   February 26 + 27, 2025
Time: 9 am - 4 pm, incl. 1 hour lunch break and short breaks (10-15 minutes)
Participants: max. 10

In a digital hands-on training session, I first demonstrate the important fundamentals of Adobe Illustrator (AI) by creating an illustration in screen-sharing mode. Participants then practice implementing these basics independently in corresponding exercises. Participants can ask questions at any time.

9 - 12 am

1. BASICS

1.1 Create, define, and save new files
          Key parameters
          File size and resolution units
          Color mode
          > Exercise: Create an AI file based on the specifications/guidelines of a journal.

1.2 Workspace setup, artboards, and layers
          Customizing the user interface, panels, and tool bars
          Workspace and essential windows for figure builder
          Manage your artboard
          Layers and sublayers
          Rulers, smart guides, and grids
          Grouping elements
          > Exercise: Create a layout for a journal figure with x panels.

1.3 Basic tools for building a figure
          Selection/direct selection tool
          Shape tool
          Line segment tool
          Pen/pencil tool
          Width tool
          Swatches and color windows
          Stroke window
          Alignment window
          Appearance window
          Seperate, cut, and erase
          Arrange elements
          > Exercise: Create, color, and arrange selected objects.

1.4 Drawing tools and transparency
          Pathfinder tool
          Working with gradients and transparency
          > Joined exercise: Create diverse cell types and/or a (simple) DNA helix.

1.5 Text and formats
          Import text and type tool
          Character window
          > Exercise: Label your cell types and/or DNA helix.

1.6 Save or export figures for any application
          Safe and export files as a vector or raster
          File compression

THANK YOU FOR YOUR PARTICIPATION!

I look forward to seeing you at the workshop.

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SCIENTIFIC ILLUSTRATIONS

DAY 2: CREATE YOUR FIGURES IN ADOBE ILLUSTRATOR (CONTINUED)

1 - 4 pm **2. APPLICATION - CREATE A SIMPLE JOURNAL FIGURE** (option: participants can bring their own figures)

2.1 Crop, scale, and manage images and photos
Managing images and photos
Import
Crop image (crop and clipping masks)
Scaling
Alignment
> Practise task: Insert three microscopy images, align them, and add a scale bar.

2.2 Edit graphs exported from other software
Import graphs from *e.g.* GraphPad Prism or Excel
Solutions for graphs and traces that cannot be imported or are missing sources
> Practise task: Import a file from external software and adjust according to journal guidelines.

2.3 Create charts, simple illustrations, and models
Bar graph, line, and pie chart
DNA, cell, membrane, or signaling pathway
> Practise task: Create a model of your choice.

Optional: Tips and tricks
Open end, here participants have the opportunity to work on their own illustrations. I am happy to guide and support them in this task.

THANK YOU FOR YOUR PARTICIPATION!

I look forward to seeing you at the workshop.