PRBB Intervals Course Proposal

1. ***Course Title*** Principles of scientific data visualization and creating great visual aids

2. ***Proposed date(s):*** 26 March and 9 April 2025

3. ***Course Language***
    English

4. ***Course Leader(s) and very brief summary of relevant qualifications and experience***
    Jaume Fatjó is a doctor in veterinary medicine. Assistant Professor of Psychiatry (UAB). Over the past 20 years he has delivered scientific and continuing education lectures, courses and seminars on animal behaviour, comparative psychology, and the human-animal relationships in 19 countries.

    Marina Alvarez Estapé holds a PhD in Biomedicine from IBE-UPF. During her PhD, she was recognized for her scientific communication skills in the RIN4' 2021 edition and actively engaged in outreach initiatives. She has extensive experience creating visual materials, such as graphic abstracts, summary figures, and presentations, used in high-impact research publications and scientific events. As a Data Analyst at Hospital Sant Joan de Déu, she worked on various digital transformation projects, creating dashboards used in the hospital's command center. Currently, at AstraZeneca, she works on Operational Data Strategy projects, developing data products that showcase key metrics and KPIs to enable data-driven decision-making.

5. ***General description of the course (relevance and context for the PRBB)***
    Visual presentations can be a very valuable tool in helping to communicate science. Nevertheless, data from scientific studies needs to be processed and properly visualized to be time effective as well as visually attractive.

6. ***Course Aim***
    The aim of the course is to provide attendants with practical knowledge to improve their skills in creating effective scientific visual aids/slide presentations and data visualizations.

7. ***Learning objectives (what new skills, knowledge &/or attitudes will participants go away from the course with?)***
    Main learning objectives:
    -   To identify the key aspects of a good scientific visual aid/slide presentation.
    -   To know which is the best data visualization for each specific data type.
    -   To be able to identify and to correct the most common pitfalls and mistakes in creating visual aids for scientific presentations.

8. ***Training methods***
    -   Day 1: participants will learn about the basics of data visualization and 10 fundamental tips to develop a good presentation. Each point will be illustrated with practical examples.

- Between sessions: After Part 1 attendants will be asked to select some slides or visual representations from their own, which they think could be improved following the tips discussed in Part 1.
  Attendants will be asked to submit a PowerPoint/Keynote file containing the initial and final version of the selected slides/visuals. The document could include comments on issues they could not address.

- Day 2: feedback and group discussion on the progress made and difficulties found.

Please note:
- Participants need to commit to attend both sessions and do and send the task between sessions.
- Participants need to have a presentation/selection of slides to work on during the course and be prepared to share them with the rest of the group.

9. *Target group in PRBB (Senior scientists, postdocs, predocs, management/admin staff, all residents)*
   All PRBB

10. *Number of participants (maximum)*
    12

11. *Total course hours (Please specify): a) direct training with instructor present b) required self-study.*
    Note: only the direct training hours will be included in the post-course certificate.
    8 hours

12. *Distribution of course (hours/days)*
    Two in-person 4-hour sessions

13. *Course programme (outline of topics to be covered)*
    Topics covered in the practical situations/challenges include but are not restricted to the following:
    - Understanding how visual aids fit into your presentation.
    - Reducing the amount of text.
    - Reducing the number of slides.
    - Adding different levels of information complexity.
    - Dealing with complex graphics/figures.
    - Selecting the best chart for each data type.
    - Preattentive attributes and typography.
    - Choosing the right colour palette.
    - Available resources to select typography, colour palette
    - Slide composition and overall design.

14. *Pre-course preparation (what preparation should participants do before the course – reading, online study, prepare ideas etc?)*
    Participants should have a basic understanding of at least one of the following tools:
    - o Microsoft PowerPoint.
    - o Apple KeyNote.

15.   ***Material participants need to bring (laptops, etc…)***
- One laptop per participant.
- All laptops should have either PowerPoint or Keynote installed.
- Two weeks before the course, participants should send samples of slides from their work that they would like to improve or they are facing difficulties with.

16.   ***Relevant background reading/ audiovisual/websites or other materials: --***