



Summary Exercise – Journal Club

As part of the course, you will participate in a Journal Club to enhance your ability to critically evaluate scientific literature and effectively communicate research findings. This exercise is designed to develop skills in scientific analysis, presentation, and discussion. Furthermore, the presented scientific papers are related to the following weeks' lecture.

Journal Club Guidelines:

- **Paper to present:** Each group will receive a recent scientific manuscript related to the course and the lecture of the following week. Groups will be responsible for thoroughly reading and analyzing the manuscript, focusing on understanding the background, novelty, limitations, challenges, and open questions presented by the study.
- **Duration presentation:** Each group will deliver a 15-minute presentation followed by a 10-minute Q&A session.
- **Content:** Presentations should cover the following aspects of the manuscript:
 - **Background:** Provide an overview of the study's context, including key concepts, objectives, and the significance of the research question. Summarize the methodological approach.
 - **Novelty:** Highlight the unique contributions and innovative aspects of the study. Discuss what sets this research apart from previous work in the field.
 - **Limitations:** Critically assess the study's limitations, such as methodological constraints, sample size, potential biases, or areas where the data may be lacking.
 - **Challenges:** Identify any challenges encountered in the research process, including technical difficulties, ethical considerations, or interpretative complexities.
 - **Open Questions:** Discuss any unresolved issues or questions that arise from the study, suggesting possible directions for future research.
- **Preparation:** Groups should thoroughly understand the manuscript and be prepared to discuss it in depth. This includes anticipating potential questions from peers and preparing thoughtful, evidence-based responses.
- **Q&A Session:** Following each presentation, a 10-minute Q&A session will allow other students and instructors to ask questions. Presenters should be prepared to engage in a constructive discussion, demonstrating a deep understanding of the study and its broader implications.

- **Participation:** Each student should participate in the JC and should have read the paper to profit from the presentation and to be able to participate in the informed discussion. This will allow relevant learning with the JC.

This JC will help to empower you to analyze scientific literature in a critical way as a critical prerequisite for scientific and technological innovation in the field of neuromodulation. By participating in the Journal Club, you will gain valuable experience in reviewing scientific literature, understanding current research trends, and communicating complex information effectively. It will also help to be better prepared for the lectures of the course.

Evaluation Guidelines:

- **Percentage of the JC for the final grade:** 10%
- **Evaluation criteria for the presentation:**
 - Background knowledge, critical thinking, depth of analyses
 - Clarity of the presentation incl. slides
 - Readiness/responses to answers