A series of training workshops to help researchers succeed in today’s competitive academic landscape

★★★★★★ 98.8% of participants ‘very satisfied’ or ‘satisfied’
## CONTENTS

Introducing *Nature Research Academies* 3

Workshops in...
- Getting Published 4-6
- Applying for Research Positions 8
- Scientific Communication 10
- Clinical Research Methodology 12
- Systematic Reviews and Meta-Analyses 14
- Bioethics 16
- Being an Effective Peer Reviewer 18
- Journal Editing 20
- Research Data 22-24

Workshop Trainers 26
In today’s competitive academic landscape, it’s important for researchers to build their skills and confidence. Drawing on our vast experience within Nature Research we have developed a series of workshops to support researchers, called *Nature Research Academies*. The academies are available to institutions worldwide, to host for their researchers.

**High quality**
- All our academy content is reviewed by Nature Research editors.
- The content and workbooks are customised to meet the needs of the host institution.
- 98.8% of participants are ‘very satisfied’ or ‘satisfied’
- Every institution receives a report after their academy containing participant feedback on the value of the training.

**Your institution**
- Support the professional development of your researchers
- Raise the quality and visibility of your institution’s research
- Grow the international profile of your institution

“I wanted to show my genuine gratitude for your enthusiastic and inspiring teaching. I have acquired profound insights and I hope I can make huge strides in my own academic research.”

China

“Thank you for the great boost! The presenter was very well qualified. The overall presentation was great. Every idea, every statement of the presenter was very meaningful and valuable.”

Russia

*Survey of 2,900 academy participants in 2017.*
Great seminar by a real professional who really knows publishing. He explained in detail the important matters for publication. I liked how he provided editor's perspectives… One of the most meaningful workshops.

Japan
WORKSHOP IN GETTING PUBLISHED

1-day or 2-day workshop

For up to 250 early- and mid-career researchers

Publishing is an integral part of the research process. However, it is not enough to simply publish research. It needs to be published in the appropriate journals to reach the right audience and be communicated clearly to have impact in the field. This workshop aims to help early-and mid-career researchers learn effective publishing strategies to achieve these goals.

Tailored

The workshop content can be tailored to one of four disciplines depending on your needs: life sciences, physical sciences, clinical research, or social sciences.

You can choose from a 1-day workshop, covering 3 to 4 modules, or a 2-day workshop with 7 to 8 modules. Or if you would like us to place special attention on some modules (‘Effective Academic Writing’ for example), we can extend modules or create a 1-day agenda devoted to a particular module.

Interactive

The academy includes interactive slides, as well as interactive activities at the end of each module to ensure participants understand how to implement the presented content.
1. Introduction to Academic Publishing

This is an optional module for graduate students with little publishing experience. Here, we discuss the importance of publishing to build your international reputation and establishing international collaborations. We then cover different journal types and publication models, followed by a discussion about open access. Lastly, we will discuss evaluation metrics for journals (e.g., Impact Factor), articles (e.g., Altmetrics), and authors (e.g., H-index).

2. Publication Ethics

This module covers important issues related to ethical conduct in both research and writing. We first discuss acceptable and unacceptable modifications of your images. Then, we cover what qualifies someone to be an author on your paper and ethical issues surrounding conflicts of interest, as well as how to properly submit and/or divide your study into multiple papers. We will then cover plagiarism and how to properly paraphrase. Lastly, we will discuss the importance of transparency in reporting and sharing all the results from your study.

3. Effective Academic Writing

This module does not focus on grammar, but rather how to clearly communicate your ideas in English. Therefore, it is suitable for all levels of English proficiency. In the first section, we discuss three cognitive learning principles: cognitive load theory, cognitive bias, and reader expectations. The section gives advice on how to keep sentences concise, avoid ambiguity, and use logical sentence structure to improve reader understanding. The second section focuses on improving readability, such as through active voice and appropriate word choice, to better engage readers. Lastly, we cover some common writing mistakes, as well as appropriate verb tense for manuscripts.

4. Manuscript Structure

This module covers how to logically structure your manuscript. We begin by discussing strategies to make the writing process more efficient and then review the importance of the Introduction. For social science attendees, this section also includes how to write a clear Literature Review. We look at how to write the methodology to validate the study design and how to clearly present the findings in the figures, tables, graphs, and equations (dependent on the field of the attendees). For physical sciences attendees, we also review combined Results–Discussion sections. Lastly, we discuss how to convey the impact of the study in the Discussion section and how to write a strong conclusion.
5. Maximizing Discoverability

This module discusses how to improve the chances that your paper will be downloaded and read by others in your field. We begin by discussing how to write a title that clearly describes what your paper is about and helps it to stand out. We then review the importance of keywords and using search engine optimization to improve the visibility of articles. Lastly, we focus on how to write effective abstracts that summarize what you have done. We also discuss how to write structured, unstructured, and graphical abstracts.

6. Successful Submission Strategies

This module discusses how to determine the most appropriate target audience. We then review strategies on how to identify the best journal, as well as how to improve the suitability of the manuscript for a particular journal. Lastly, we highlight what journal editors are looking for when evaluating submitted manuscripts, and how to communicate the significance and relevance of the study to the journal editor in your cover letter.

7. Navigating Peer Review and Monitoring your Impact

This module covers what reviewers are evaluating, how to interpret the journal editor’s decision letter, and strategies for next steps upon receiving the decision letter. We will then look at how to write an effective response letter with point-by-point responses to all the reviewer comments. Lastly, we will discuss how to promote your article after publication, as well as strategies to consider if your manuscript is rejected.

8. Impressive Academic Presentations

This module discusses not only the importance of presenting your work, but also how to make effective slides and posters. We will discuss professional presentation skills, both verbal and non-verbal, and how to handle questions from the audience that builds your credibility and reputation in the field.
1. Finding job opportunities
   - Staying up-to-date with trends in the literature
   - Networking at conferences
   - Using job databases

2. Contacting the employer
   - Understanding the position
   - Writing effective CVs/cover letters/personal statements
   - Business email etiquette

3. Preparing impressive research presentations
   - Deciding on which information to present
   - Logically organizing your presentation for clarity
   - Emphasizing the implications of your experience and skills for the position

4. Job presentation skills
   - Communicating with confidence in English
   - Non-verbal presentation tips
   - Verbal presentation tips
   - Effective Q&A

5. Next steps
   - Following up with the employer after the interview
   - Negotiating contracts and salaries
   - Moving tips and settling into your new position
Finding the most appropriate research position for graduating students and post-docs completing their contract can be a formidable task, and one that will further shape the researcher’s career. Therefore, this pivotal transition step needs to be done carefully and thoughtfully. This 1-day workshop aims to give these transitioning researchers the necessary skills to find and secure the right position for their next step in the careers.
MODULES: WORKSHOP IN SCIENTIFIC COMMUNICATION

1. The importance of communicating science to the public
   - Common misconceptions by the public
   - How companies manipulate scientific findings to improve their revenue
   - Important case studies and their societal impact

2. Platforms for communicating science to the public
   - Social media
   - Blogs and Wikipedia
   - Press releases and news stories

3. Effective writing strategies
   - Logical structure and flow
   - Improving readability for a broad audience
   - Avoiding ambiguity with the public

4. Communicating your research effectively to the public
   - What does the public need to know about your research?
   - Describing your key findings in an easy-to-understand manner
   - Highlighting the impact of your research for society
It is becoming increasingly important for researchers to be able to clearly communicate their research to a broader audience, such as the public, the press, and even funding organizations. However, communicating complex specialized findings in an understandable and general manner is challenging for many researchers. This 1-day workshop will give researchers the foundations necessary to communicate their studies, as well as platforms they should be using to do so.
1. Planning a clinical study
   - Identifying a strong research problem
   - Assessing the quality of your research question
   - Deciding the right outcomes to measure

2. Appropriately sampling your participants
   - Performing a power calculation
   - Deciding inclusion and exclusion criteria for participant selection
   - Recruitment methods that avoid sampling bias

3. Choosing the right study design
   - Pyramid of clinical relevance
   - Strengths and weaknesses of study designs
   - Designing a randomized controlled trial
   - Choosing the right control

4. Avoiding common biases
   - Most common biases in clinical studies
   - Strategies to avoid those biases

5. Properly collecting and analyzing data
   - Managing data
   - Handling missing data
   - Performing multiple comparisons
   - Clinical vs. statistical relevance
Understanding the elements of robust research methodology is essential to any researcher in order to avoid problems such as research waste, manuscript rejections and/or long peer-review process. This 1-day interactive workshop provides clinicians with tools and strategies to write solid research protocols and avoid common problems in data collection and analysis.
MODULES: WORKSHOP IN SYSTEMATIC REVIEWS AND META-ANALYSES

1. Types of reviews
   - Differences between literature review, systematic review and meta-analysis
   - Strengths and weaknesses of systematic reviews and meta-analysis
   - Ethical consideration: prior registration

2. Searching and selecting studies
   - Searching the white and grey literature
   - The importance of exploring multiple databases
   - Deciding the inclusion and exclusion criteria
   - Duplicate publications

3. Extracting data
   - Using a standardized format
   - Effect sizes and precision of estimates

4. Presenting data
   - Summarizing data using a forest plot
   - Estimating publication bias using a funnel plot
   - Alternatives to forest plot and funnel plot

5. Analyzing data
   - Random effect vs. fixed effect analysis models
   - Evaluating heterogeneity between studies
   - Rating the quality of evidence
Systematic reviews and meta-analyses are crucial in synthesizing clinical research to determine the efficacy of an intervention. However, conducting high-quality systematic reviews and meta-analyses that have clinical impact on the field takes time and expertise. This 1-day interactive workshop explains how to conduct a systematic review or a meta-analysis and is developed for clinical researchers.
1. **History of bioethics**
   - Unethical human experimentation
   - The Doctors’ trial and the Nuremberg Code
   - International ethical guidelines

2. **Research Ethics Committees (REC)**
   - Roles of Research Ethics Committees
   - Evaluating risks and benefits
   - Problems with lack of REC approval

3. **Free informed consent**
   - Involving the community in developing countries
   - Who can consent?
   - Communicating all information
   - Inducement to participate

4. **Standards of care**
   - Choosing the right control
   - Universal standard of care
   - Non-universal standard of care

5. **Post-trial provisions**
   - What happens when research is over?
   - Access to treatment
   - Publish all results from clinical trials
Involving humans in experimental research is essential to advance science and drug discovery. As more and more clinical trials are conducted in developing countries, protecting the rights and welfare of vulnerable participants is essential but also necessary to avoid desktop rejection, retraction and poor reputation. This 1-day interactive workshop, developed for clinical researchers, explains how to ethically conduct research with human participants.
MODULES: WORKSHOP IN BEING AN EFFECTIVE PEER REVIEWER

1. Responsibilities and ethics
   - Accepting reviewer invitations and timeliness
   - Confidentiality and conflicts of interest
   - Communicating with journal editors

2. Assessing the relevance of the manuscript
   - Determining the usefulness of the research question and study objectives
   - Evaluating originality and novelty
   - Assessing the appropriateness of the study design
   - Initial evaluation and writing the summary for the reviewer report

3. Abstracts, Introduction and Methods
   - Evaluating titles, keywords and abstracts
   - Assessing the clarity of the Introduction
   - Determining the breadth of the literature review
   - Evaluating the appropriateness and transparency of the methodology

4. Results and Discussions
   - Evaluating the clarity of figures
   - Assessing the significance of findings
   - Reviewing the thoroughness of the Discussion
   - Determining the validity of the conclusion
Peer review is an essential component in academic publishing. However, many researchers do not receive training on how to be an effective peer reviewer. This can lead to a lack of confidence in accepting a reviewer invitation or a poorly prepared reviewer report that can affect the reputation of the researcher and their institution. Because of this, many researchers have stated that they would like formal peer reviewer training to give them the skills and confidence to be effective reviewers and fulfill their obligations to the academic community. Drawing on our breadth of experience in scholarly publishing, this 1-day training workshop aims to achieve these goals. To increase interaction and stimulate discussion, this workshop is limited to 30 participants.
MODULES: WORKSHOP FOR JOURNAL EDITORS

1. Responsibilities and ethics
   - Maintaining the integrity of your journal
   - Avoid bias and conflicts of interest
   - Maintaining confidentiality
   - Retractions and corrections

2. Developing a journal that is useful for the field
   - Evaluating trends and bibliometrics in the field
   - Ensuring your journal is adding value to the field
   - Writing a useful aims and scope

3. Establishing an efficient editorial workflow
   - Choosing the best associate editors
   - Identifying a strong editorial board
   - Evaluating key performance indicators for your journal for yearly board meetings

4. Positive author and peer reviewer experiences
   - Improving website readability
   - Clear author and reviewer guidelines
   - Working well with reviewers
   - Determining the validity of the conclusion

5. Improving visibility
   - Getting indexed in online databases
   - Promoting your journal to the field
   - Soliciting manuscripts and organizing special issues
Establishing and managing your own journal is always an exciting adventure, but if not properly managed, the journal can lead to frustrations and disappointments. This workshop aims to help journal editors establish the foundations of what it takes to develop a successful and competitive journal in their field. These workshops are limited to 30 participants to provide more active discussion and interaction.
WORKSHOP IN RESEARCH DATA

1-day or 2-day workshop

For up to 30 researchers – appropriate for those new to data sharing, at any career stage

While stakeholders including funding agencies and publishers increasingly require researchers to share their data openly, researchers report that they are unsure about how to manage and share their data properly\(^1\). To meet the growing demand for research data management support, our training workshop helps participants understand the value of research data and how data can be shared effectively.

**Tailored**

You can choose from a 1-day workshop or a 2-day workshop, and we will assist you in selecting modules to create a relevant and engaging agenda for your researchers.

**Interactive**

The academy includes interactive slides, as well as interactive activities throughout each module to ensure participants understand how to implement the presented content.

---

1. **The context for data sharing**

This module provides the context for Open Science and data sharing, and why it is important for researchers to share their data. The module covers the common drivers for data sharing, including institutional, funder and journal policies, as well as the ways that data sharing requirements impact directly on researchers. Participants also learn how they can ensure compliance with data policies. The benefits to both researchers and the wider researcher community are also discussed.

2. **Allowing reuse and gaining credit for your research**

In this module, external data sharing is considered. Copyright for data and data licensing options are reviewed and their value is described. The importance of data citation is discussed, and participants will prepare data citations based on best practice examples.

3. **Standards for data sharing**

This module introduces concepts in planning for data management, including elements of data management plans which allow researchers to plan their approach for data management and sharing. The FAIR Principles which outline the ways which data can be made Findable, Accessible, Interoperable and Reusable are reviewed, as well as the practical ways that these can be applied.

4. **Data Publishing**

In this module, we explain the breadth of options for data publication. Participants learn about publishing options for data papers and data journals, as well as the way metrics can be used to track use and citation of their data. Data indexing is also discussed.
5. From active data to archived data

This module introduces the practical aspects of data sharing, which researchers will need to understand before making their data openly available. We discuss the importance of metadata and practical ways to capture it, as well as the necessity of storage and back-up while research is being conducted. Participants also learn how to identify appropriate repositories for data sharing.

6. Preparing data files for sharing

In this module, we discuss practical skills for data sharing. We consider the impacts of poor file naming and badly organized data, as well as techniques for making data more accessible both for the researcher and for others who may wish to reuse their data. Participants also learn how to create or edit spreadsheets to ensure that their data are reusable in the future.

7. Practical Application of the FAIR Data Principles

This module gives an in-depth introduction to the practical applications of the FAIR Data Principles; a standard for data sharing all researchers should be familiar with. Using contextual examples, we discuss the ways that researchers can apply the principles to their own data, as well as the relevance of these standards to all aspects of data infrastructure.

8. Sharing sensitive research data

This module addresses the challenges and techniques in sensitive data sharing. Participants learn how to address the collection and dissemination of sensitive data, including preparation before their research begins. Techniques for anonymizing or de-identifying data are also discussed, with reference to both qualitative and quantitative sensitive data.

9. Practical data management planning

This module teaches hands-on skills for data management planning with practical exercises to ensure that participants are confident in planning data management for their own research projects. Templates and tools for data management planning are discussed, and approaches to identifying and allocating resources are outlined.
Our experts trainers include:

Dr Jeffrey Robens is an Editorial Development Manager at Nature Research and conducts Nature Research Academies training workshops worldwide. He has strong scientific qualifications with 20 years of academic experience and numerous publications and awards. He received his PhD from the University of Pennsylvania and then worked at premier research institutes in Singapore and Japan. Since leaving academia in 2012, he has conducted over 300 academic training workshops worldwide to help researchers improve their publication quality and impact.

Dr Lea Gagnon is an Editorial Development Advisor at Nature Research and is responsible for conducting the Nature Research Academies workshops across Eastern Europe, Middle East and Africa. She acquired eight years of academic experience in North America and Europe. With a PhD from the University of Montreal and a postdoctoral position from the University of Copenhagen, she possesses a strong publication record and has received numerous prizes at international conferences. She joined Nature Research in 2017 and has helped over 1500 researchers increase their research output, quality and impact.
Visit partnerships.nature.com/academies to discover more and request an academy