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Presenting your research: Quality abstracts, posters, and presentations

An ARVO-AAO collaborative webinar

February 16, 2022
8pm ET/ 5pm CT



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Program organizers & moderators



Maria Fernanda Abalem, MD, MSc, PhD
Adjunct Research Assistant Professor
Kellogg Eye Center, Michigan Medicine



Alice Lorch, MD, MPH
Assistant Professor of Ophthalmology
Massachusetts Eye and Ear, Harvard Medical School



Daisy Shu
Postdoctoral Research Fellow, Schepens Eye Research Institute, Mass Eye and Ear
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Edmund Tsui, MD
Assistant Professor of Ophthalmology
Stein Eye Institute, David Geffen School of Medicine at UCLA



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Speakers



Frank Lovicu, PhD, FARVO
Professor of Ocular Cell and Developmental Biology, School of Medical Sciences, The University of Sydney, NSW, Australia



Emily Chew, MD
Director of Epidemiology & Clinical Applications,
NEI/NIH Editor-in-Chief, Ophthalmology Science



Jarrod C. Harman, PhD
Postdoctoral Research Fellow, Department of Ophthalmology
Boston Children's Hospital / Harvard Medical School



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Disclosures

No one in control of content of this educational activity have reported any relevant financial disclosures.

- Fernanda Abalem, MD, PhD (no relationships to disclose)
- Emily Chew (no relationships to disclose)
- Jarrod C. Harman, PhD (no relationships to disclose)
- Alice Lorch, MD, PhD (R; Regeneron)
- Frank Lovicu, PhD, FARVO (no relationships to disclose)
- Daisy Shu (no relationships to disclose)
- Edmund Tsui, MD (NEI: F; Kowa Company Ltd: F, C; EyePoint Pharmaceuticals: C; Cylite Pty Ltd: F)



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What makes a quality abstract?

Prof Frank J. Lovicu, PhD, FARVO
Save Sight Institute &
School of Medical Sciences.
The University of Sydney, NSW, Australia

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Tips for writing your abstract for approval by meeting committees and journal editors.


Abstract: short '*Summary*' of a larger body of work.

A quality Abstract


- needs to be clear and concise
- allows reader to gauge your work quickly;
-to decide whether to Read it in full?
- prepares reader for content of full body of work
- afterwards, helps reader remember key points of your work

When do I write up my abstract?


Layman Abstract (optional extra)
Short descriptor for non-scientific readers/general public. What is the big picture and why are your findings important. No details of your study.



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***Despite being short (typically 150-300 words), an Abstract is an important part of writing.**

***Done well, an Abstract should create enough interest that readers will want to read more!**

***An Abstract provides an overview of your entire project, in particular its findings and contribution to the field.**

***It should be a standalone summary of your work, that readers can use to decide whether it's relevant to them, before they want more.**

***An abstract should include points covering these questions.**

What is your study about?

Why is it important?

How did you do it?

What did you find?

Why are your findings important?



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Different Societies or Journals will have different guidelines for preparing an Abstract that must be adhered to.

ARVO has [Successful Abstract Submission Guidelines](#) that highlight expectations to assist authors.

The type of Scientific study (clinical vs basic research) will determine the Abstract Content, but each Abstract is expected to have a consistent structure.

For ARVO,

Purpose (brief background and objective of study)

Methods (experiments performed incl. controls)

Results (outcome of experiments, quantified)

Conclusions (brief discussion of findings, linked back to objectives)



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ARVO Abstracts are reviewed by the Annual Meeting Program Committee (AMPC), that includes elected representatives of each Scientific Section.

This committee is responsible for the scientific content of the ARVO meeting.

This committee reserves the right to reject abstracts according to the [Abstract Rejection Criteria](#)

Includes Abstracts:

- do not adhere to ethical standards (human subjects and animals)
- non-compliance with ARVO statements (e.g. clinical trials, commercial COI)
- lack of new scientific research (already published)
- overlapping/redundant data (from same group at the meeting)
- inappropriate methodology; Results not supporting Conclusions
- lack of control groups, insufficient sample sizes
- non-compliance with ARVO abstract guidelines



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A quality abstract is short but impactful. Every word must count.

Each sentence should clearly communicate one main point.

Avoid unnecessary filler words, and avoid obscure jargon—the abstract should be understandable to readers who are not familiar with your topic.

Know and cater for your readers!

With a never-ending supply of papers and reports to read, the two chances to engage your reader and convince them to keep reading is the title and the abstract (include all important keywords).

Title and Abstract keywords:
also help search engines find your work.

A well-written abstract will maximise the chances of your document being read, understood and even enjoyed, maximising your publication success.



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Thank you!



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Quality Abstract

Tips for writing abstract for approval by meeting
committees and journal editors

Emily Y Chew, MD

Div. of Epidemiology & Clinical Applications, NEI/NIH
Editor-in-Chief, Ophthalmology Science

Wednesday February 16, 2022

No financial disclosures

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Importance of a well-written Abstract (Manuscript)

- focus this discussion to abstract for journal submission
- perspective of an editor as well as a researcher



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Value of the Abstract-its importance

- First encounter of your research
- Key to inviting reviewers, readers to consider reviewing and reading your research.....leading eventually to potentially funding your work or citation and recognition of your research.
- The ABSTRACT is the culmination of your work
- Abstract is often the last part of the paper that one writes along with the TITLE



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Sequence of Paper Writing

- Research begins with asking the important research question---in both basic science and clinical research---
Why is this question important?
- Begin writing with tables and figures (data to prove the results)
- Write the methods, results, discussion
- Write the introduction to give context for you research
- Finally: Abstract and Title



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Sequence of Paper Writing

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Sequence of Paper Writing

- Research begins with asking the important research question---in both
Why is this question important?
- Begin writing with tables and figures (data to prove the results)
- Write the **methods**
- Write the introduction
- Finally: Abstract and Title

Are the methods rigorous? All the details provided? Can other researchers replicate exactly what was done? Sound statistical analyses? Clinical research: manual of operations & statistical analyses plan are submitted



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ABSTRACT:

- **PURPOSE:** Why is this research question important?
Why did you study this?
- **METHOD:** What did you do? Brief analytic models.
Adequate sample size. Rigorous protocol. Well
described so that the experiments can be replicated
- **RESULTS:** Findings to support conclusions, highlight
core findings
- **CONCLUSIONS:** State the findings, be direct....do not
overstate the significance of the results. Can discuss the
next step of your research.



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In Addition to Abstract

- **TITLE:** The first contact for reviewers and readers to entice them to want to read your paper
 - Informative
 - Spark interest
 - May have subtitles in some journals
- **KEYWORDS:** Key words or phrases for searching the study. Be specific and make sure they relate to your research



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In Addition to Abstract

- **USE active voice:** Passive voice might be vague and can be long winded (need to be succinct!)
- **Limited space:** typically, 250 to 350 words. Be succinct and direct
- **Accuracy:** Abstract reflects the data accurately
- **CONCLUSIONS:** Send to trusted colleagues for assessment for reasonable conclusions



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Summary

- **Abstract:** hugely important in publication of your research
 - Important for funding (reviewers involved)
 - Impact of paper, attract readers and eventually citation
- **Purpose:** How does it fit into the scientific question
- **Methodology:** Must be reproducible....rigorous protocol well described and can be replicated
- **Do not overstate the findings:** share your message and test the waters before submitting it.
- Important **first encounter** for others to view your work.



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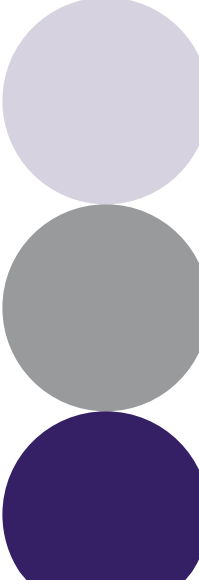
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Presenting your abstract: poster format, presentations, and using effective graphics

Jarrod C. Harman, PhD
Postdoctoral Research Fellow: Dept. of Ophthalmology,
Boston Children's Hospital / Harvard Medical School

February 16th, 2022


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@JCHarmanLSU




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Presentation Preview

- Hardware considerations
- Professionalism during presentations
- Tips for poster design
- Resources for effective graphics
- Summary
- Q & A



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Hardware considerations

How you present yourself matters



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Hardware Considerations: Audio

- Consider your options:
 - AirPods vs headset vs microphone
- Perform a test with a friend or colleague
 - Consider recording w/ playback
- Adjust settings to optimize audio output
- **Have a quiet space!**



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Hardware Considerations: Visual

- Be aware of your background
- Avoid light behind you
- Be centered in view of camera
- Consider additional lighting tools:
i.e., ring light



<https://www.nytimes.com/wirecutter/reviews/best-ring-lights/>



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Professionalism during presentations

Strategies for improving your delivery



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Position yourself properly



<https://www.ryerson.ca/journalism/news-events/2020/04/how-to-look-and-sound-fabulous-on-a-webcam/>



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Own the stage

1. You are the expert, don't be anxious:
 - Judges look for professionalism & communication skills
2. Introduce yourself before your work:
 - connect w/ your audience
 - Be mindful of those who prefer to read your work
3. Be strategic: design the poster so that you can tell a story
4. Be consistent and concise in layout & presentation
5. Amplify points via effective figures & presentation of data
6. Be confident: Practice ahead of time & anticipate questions



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Poster Design

Tips for effective poster presentation



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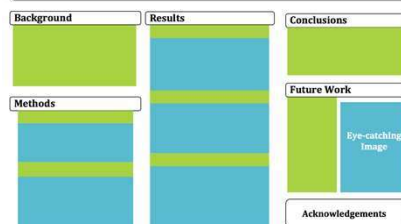


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Poster Design Basics:

A1 Landscape Poster Design



<https://labcoatlucy.wordpress.com/2015/07/14/how-to-design-a-prize-winning-scientific-poster-10-simple-steps/>



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- **Layout Matters:**
 - Symmetry is preferred
 - Be consistent in design
 - Sections should be brief & concise
- **Use high quality figures**
 - 150 DPI minimum : (higher = better)
 - PNG yields high quality
 - Figure to text ratio
- **Check conference specifications for size:**
 - ARVO: 44" x 66" (height x width)
 - AAO: 44" x 44"

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Poster Considerations:

- Include Poster ID/ Session information/ abstract number
- Sans Serif font is easy to read; *i.e.*, arial font
- Use QR codes to increase resource sharing/networking
- Include digital networking info: Twitter, LinkedIn, etc
- Include animal care statements & funding sources
- Be mindful of color blindness: avoid red/green graphics
- Print final version of poster to proofread



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Resources

Tools for producing effective graphics



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Design Resources:



https://learn.biorender.com/?utm_source=marketing_site_topnav

- **Biorender**
 - Free online training material
 - Free access for posters/presentations (license required for manuscripts)
 - Easy to use
 - Drag & drop vector icons
 - Hundreds of premade templates
- **Bioicons**
 - Truly free program
 - 1500+ editable vector icons
 - Compatible with Inkscape library
- **Biovinci**
 - Data visualization & statistical software
 - Great for data visualization beginners
- **Graphpad/Prism**
 - Data visualization & statistical software
 - Free online training material
 - Easy to use



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QR Code generators:

<https://www.qr-code-generator.com/>

<https://www.the-qrcode-generator.com/>

<https://www.qrcode-monkey.com/>

https://workspace.google.com/marketplace/app/qr_code_generator/283497561682



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Summary



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Summary:

- Hardware considerations for audio & visual
- Proper background & position for remote interactions
- Owning the stage
- Tips for poster design
- Resources for posters & presentations
- Networking: Twitter, LinkedIn, etc
- Remember, this is a learning process!



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Special Thanks To:

- **ARVO & AAO**
- **BCH/HMS**
 - Smith & Fu Laboratories
- **All of you!**



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Let's Connect - Jarrod C. Harman



@JCharmanLSU



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<https://www.researchgate.net/profile/Jarrod-Harman>



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