



**UNIVERSITATEA DE MEDICINĂ ȘI FARMACIE
„VICTOR BABEȘ” DIN TIMIȘOARA**

**PREPARATION OF BACHELOR DEGREE
PRACTICAL COURSES NR. 5-7**

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Abstract- Most Critical Part of Paper

- Should be informative, indicative and reflects the main 'story' of the article.
- The only chance you have to get the reader's attention.
- Should be crisp, concise and accurate.
- Gives the quick idea of the contents (**Stand alone**).
- What and how was done
- Provide a brief conclusions
- **I generally write abstract at the end**

The detailed information must be present in the body text, not in abstract.

Skeleton of an Article

- Structured
 - IMRaD formula (will discuss more on next slide)
- Unstructured
 - Paragraphs- few sentences summarizing each section

Skeleton of an Article-Continued

IMRaD structure- Writing a draft

Introduction--- **What is the?**

Materials and methods/experimental
procedures-- **What did you do?**

Results-- **What did you find?**

and

Discussion-- **What does it mean?**

Huth EJ. *Writing and Publishing in Medicine*, 3rd ed. Baltimore: Williams & Wilkins; 1999.

Scientific Writing: My Approach and Irreverent Opinions, Mark Yeager.

Introduction- *Setting the Scene*

- < 2% readers actually cite your article
 - And among these < 2% approximately 98% reader just read the introduction
- Brief background information of the current study
- Focused
- Integrated review of pertinent work
- Updated literature citation
- Should not be too long
- Importance of current study/advancement needed/summary of new findings



Introduction

- Ask question to yourself that why should anyone read your paper amongst the 1000's appearing that month?

Create-A-Research-Space

- It should introduce the topic and relates to the existing research.
- significance of your research.
- Capture your audience. Why is your experiment important?

Avoid comprehensive review, self citations, etc

Material and Methods

- Write the methods section first because it is the easiest to write.
- Provide enough details for competent researchers to repeat the experiment (Who, What, When, Where, How, and Why?)
- Start writing when experiments still in progress
- Sufficient information must be provided for reproducibility
- Study design-new methods must be described in detail
- Supplies, manufacturer, country needs to be added
- Animal, human, protections details
- Measurements/ instruments
- Statistical analysis and data collection
- Descriptive subheadings– general experimental methods, animals, spectral data, etc

You are not expected to do it....



<http://www.nature.com/scitable/ebooks/english-communication-for-scientists-14053993/writing-scientific-papers-14239285>

Results

- **Use descriptive headings that concisely state the results.**
- **Data representation-concise and accurate.**
- **Short and easy to understand**
- **Consistent with the abstract and introduction**
- **Give tables and figures where needed**
 - **With sufficient information so that minimum text is required.**
 - **Don't repeat information in graphics and text.**

Results

- Appropriate numbering of figures and table mentioned in the text.
- Use significant figures where required.
- Avoid speculations and over discussion.
- Avoid using words such as **proves, confirmed, removed all doubts**, etc. Remember science is dynamic and ever changing.

Discussion

- Hardest section to write, but it is also the most important.
- Use descriptive headings that concisely summarize the interpretation of the results.
- Answer the question posed in introduction
- Correlation of your finding with the existing knowledge
- Discrepancies between new results and previously reported results.

Discussion

- **What is new without exaggerating.**
- **Conclusion/summary, perspectives, implications.**
- **Research limitations and need for future research.**
- **Theoretical implications and possible practical applications.**

Conclusion

- Identify key findings and application
- Should not be a summary of the work done- abstract is doing fine with that.
- Consistent with experimental and introduction

References

- Cite current and key pertinent references
- Reference citations must be accurate and complete
- Read the references
- Use correct style for journal

ACS Style References Citations

- Abstract:

Beharry, S.; Bragg, P.D. Properties of Bound Inorganic Phosphate on Bovine Mitochondrial F₁F₀-ATP Synthase. *J. Bioenerg. Biomembr.* **2001**, **33**, 35-42

- Book:

Beall, H.; Trimbur, J. *A Short Guide to Writing about Chemistry*, 2nd ed.; Longman: New York, 2001; pp 17-32.

ACS Style References Citations

- Journals:

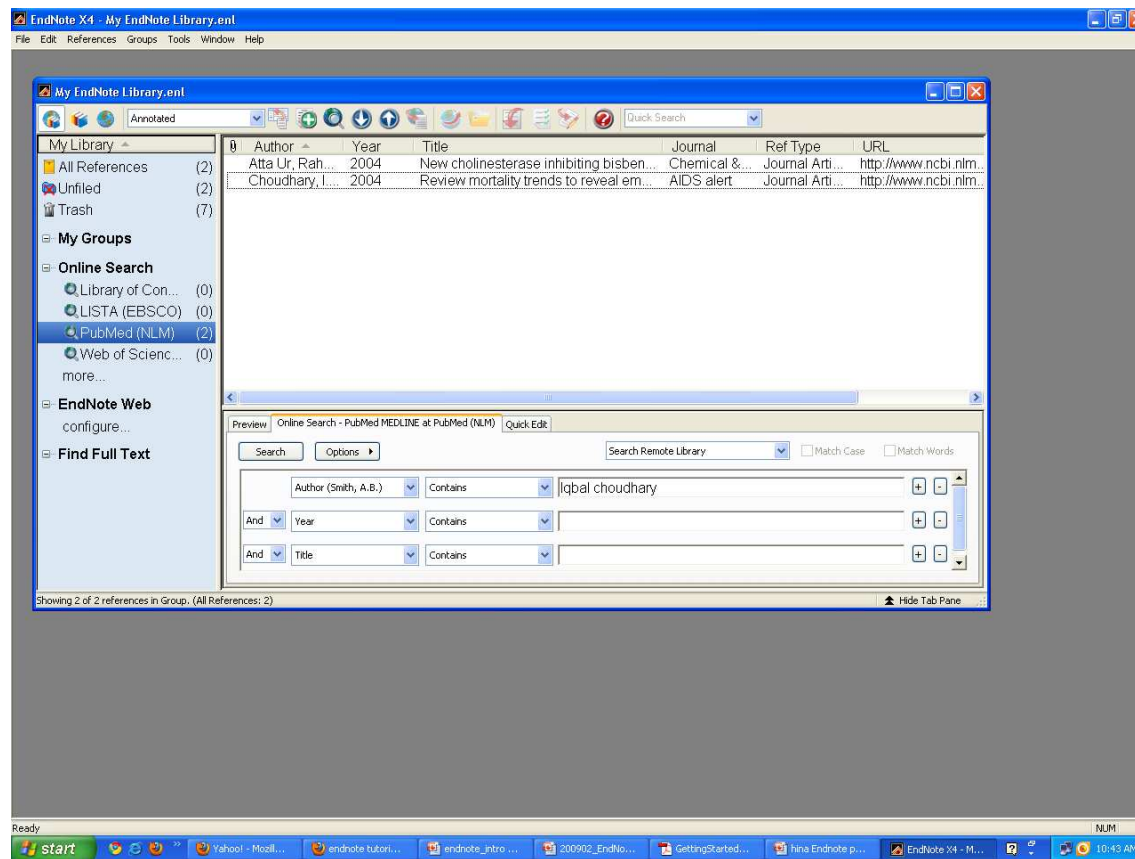
Labaree, D.C.; Reynolds, T.Y.; Hochberg, R.B. Estradiol-16 α -carboxylic Acid Esters as Locally Active Estrogens. *J. Med. Chem.* **2001**, *44*, **1802-1814**.

- Encyclopedias:

Diagnostic Reagents. *Ullmann's Encyclopedia of Industrial Chemistry*, 5th ed; VCH: Weinheim, Germany, 1985, p. 196

Modern electronic tools for writing manuscripts

Use **EndNote** for references
...Bibliographies Made Easy™



Acknowledgments

- Funding agencies
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- Notes