



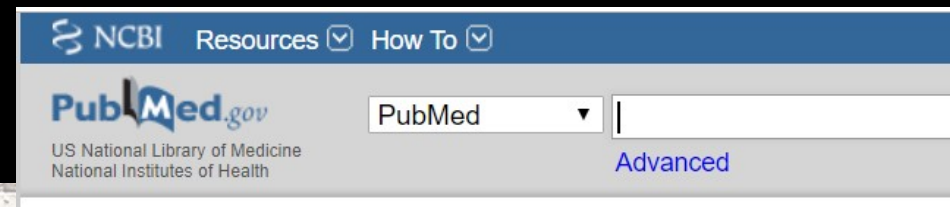
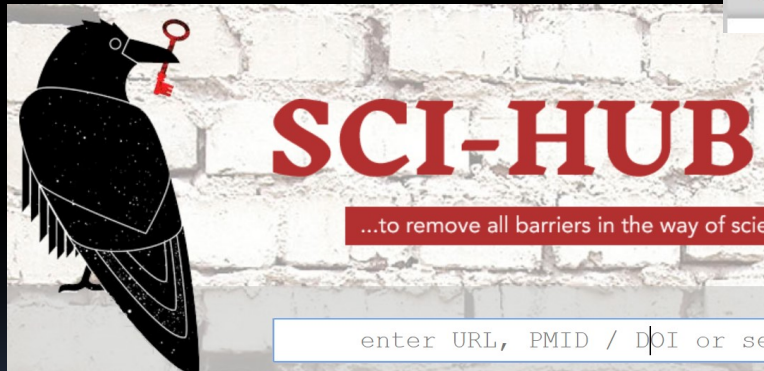
HOW TO READ A PAPER ?



WHY TO READ SCIENTIFIC PAPER?

- Learn latest knowledge
- Cultivate reading ability
- Broaden your horizon

HOW TO FIND A PAPER?





DIFFICULTIES

- Words • Concepts • Methods



The Structure

- Abstract
- Introduction
- Results
- Discussion
- Methods

THE THREE-PASS APPROACH



■ THE FIRST PASS

Gives you a **general idea** about the paper

■ THE SECOND PASS

Lets you **grasp** the paper's **content**, but not its details

■ THE THIRD PASS

Helps you **understand** the paper **in depth**

THE FIRST PASS



1. Carefully read **the title, abstract, and introduction**
2. Read **the section and sub-section headings**, but ignore everything else
3. Glance at the **mathematical content** (if any) to determine the underlying theoretical foundations
4. Read the **conclusions**
5. Glance over the references, mentally ticking off the ones you've already read



At the end of the first pass, you should be able to answer the **five Cs**:

1. **Category**: What type of paper is this? A measurement paper? An analysis of an existing system? A description of a research prototype?
2. **Context**: Which other papers is it related to? Which theoretical bases were used to analyze the problem?
3. **Correctness**: Do the assumptions appear to be valid?
4. **Contributions**: What are the paper's main contributions?
5. **Clarity**: Is the paper well written?

THE SECOND PASS



1. Look carefully at the **figures, diagrams and other illustrations** in the paper.
2. Remember **to mark relevant unread references** for further reading (this is a good way to learn more about the background of the paper).

After this pass, you should be able to :

1. **grasp the content of the paper.**
2. **summarize the main thrust of the paper**, with supporting evidence, to someone else.

THE THIRD PASS



1. Identify and challenge every assumption in every statement.
2. Think about how you yourself would present a particular idea.
3. Jot down ideas for future work.

At the end of this pass, you should be able to

1. Reconstruct the entire structure of the paper from memory
2. Identify its strong and weak points
3. Pinpoint implicit assumptions, missing citations to relevant work, and potential issues with experimental or analytical techniques.

PRACTICE 1



RESEARCH ARTICLE | NK CELLS

A discrete subset of epigenetically primed cells mediates antigen-specific immunity

Victoria Stary¹, Ram Vinay Pandey², Johanna Strobl², Lisa Kleissl^{2,3}, Patrik

+ See all authors and affiliations

Scie
Vol.
DOI

Abstract

Adaptive features of natural killer (NK) cells have been reported with different underlying mechanisms. It is unclear, however, which subset is capable of mounting antigen-specific recall responses and how this is regulated at the molecular level. Here, we identify and characterize CD49a⁺CD16⁻ NK cells in the human liver that displays increased antigen-specific memory responses and has the functional properties to elicit immunity in the skin as an effector site. Integrated chromatin-based transcriptomic profiling revealed unique characteristics of hepatic CD49a⁺CD16⁻ NK cells when compared with conventional CD49a⁻CD16⁺ NK cells, thereby identifying genomic regions and molecules underpinning distinct NK cell reactivity. In NK cells, our results suggest that adaptive CD49a⁺CD16⁻ NK cells utilize the KIR receptor-ligand system upon antigen-specific stimulation. F

THE FIRST PASS

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3. Glance at the **mathematical content** (if any) to determine the underlying theoretical foundations
4. Read the **conclusions**
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Answer the five Cs:

1. **Category:** What type of paper is this?
2. **Context:** Which other papers is it related to? Which theoretical bases were used to analyze the problem?
3. **Correctness:** Do the assumptions appear to be valid?
4. **Contributions:** What are the paper's main contributions?
5. **Clarity:** Is the paper well written?

THE SECOND PASS



1. Look carefully at the **figures, diagrams and other illustrations** in the paper.
2. Remember **to mark relevant unread references** for further reading (this is a good way to learn more about the background of the paper).

After this pass, you should be able to :

1. **grasp the content of the paper.**
2. **summarize the main thrust of the paper**, with supporting evidence, to someone else.



THANKS!