

مركز بحوث

الدراسات العلمية و الطبية

RESEARCH CENTER

FOR FEMALE SCIENTIFIC AND MEDICAL COLLEGES

عمادة البحث العلمي

جامعة الملك سعود



W Welcome

A 3D white figure stands between the large red 'W' and the word 'Welcome', with its arms outstretched as if presenting the text.

HOW TO WRITE A RESEARCH PROPOSAL



What is a research proposal?

- ❑ A research proposal is your PLAN
- ❑ It describes in detail your study
- ❑ Decisions about your study are based on the quality of the proposal
 - ❑ Approvals to proceed by the Institutional Review Board



- What problem does your research address?**
- How will the research achieve its objective?**
- What will the research contribute?**



A Good Research Proposal is:

- **Focused** - The topic should be narrow. You should only present ideas.
- **Concise** - Ideas should be presented economically.
- **Logical** - The flow within and among paragraphs should be a smooth, logical progression from one idea to the next
- **Developed** - Don't leave the story half told.
- **Integrative** - Your paper should stress how the ideas in the studies are related.
- **Current** - Your review should focus on work being done on the cutting edge of your topic.



AIMS AND OBJECTIVES

Aims

- ❑ Short but **general statement of intent**

Objectives

- ❑ **Very specific statements** that define the practical steps, you will take to achieve your aim(s)



Writing Research Proposals

I. Introduction

A. Main jobs

- You have an exciting project
- You know what it takes to carry it out successfully
- You are the right person to carry it out

B. Have to team good idea and good writing

Parts of the Proposal Dealing with the Science

- Title
- Abstract
- Narrative—may have to follow a specific format for each agency
 - Introduction
 - Significance in context of other work
 - Bibliographic information; prior work
 - Description of hypotheses to be tested and the methods
 - Intellectual and other impacts of the research

The Title

Carry a lot of weight

- ❑ First impression
- ❑ Reviewers have a lot of other things to do
- ❑ They don't want to be “mystified” or “amused”
- ❑ Inform simply and efficiently



THE TITLE

- ❑ Titles should neither be **too short** nor **too long** as to be meaningless
- ❑ It should contain the **keywords that reflect** contents of the paper.
- ❑ It should be **meaningful** and **not general**.
- ❑ Make a list of the most important keywords
- ❑ Think of a title that contains these words
- ❑ The title could state the **conclusion** of the paper
- ❑ The title **NEVER** contains abbreviations, chemical formulas,
- ❑ Be **very careful of the grammatical errors**



The Title

Examples:

- ❑ In Vitro and In Vivo Control of Secondary Bacterial Infection Caused by *Leishmania major* in Balb/c Mice
- ❑ Anti-Leishmanial Activity (In Vitro and In Vivo) of Allicin and Allicin Cream Using *Leishmania major* in Balb/c Mice
- ❑ Improvement of Carotenoid Pigments Produced by *Rhodotorula glutinis*
- ❑ Neuroprotective Effects of *Citrus reticulata* in Scopolamine-Induced Dementia Oxidative Stress in Rats

- ❑ Ceratonia siliqua pod extract ameliorates *Schistosoma mansoni*-induced liver fibrosis and oxidative stress
- ❑ The protective properties of melatonin against aluminium-induced neuronal injury
- ❑ The Beneficial Effect of Cape Gooseberry Juice on Carbon Tetrachloride- Induced Neuronal Damage

RESEARCH PROPOSAL ELEMENTS

Research Proposal Writing



GETTING STARTED

Title

Outline

Literature Review

Methodology

Methods of data
collection and
analysis

Ethical Issues

Timeline

Resources

Outcomes

Reference list

Title

Background

Problem statement

Aim and objectives

Rationale and context

Methodology

Plan of work

Resources / Support


Outcomes

Reference list

RESEARCH PROPOSAL ELEMENTS

- Background/clinical significance
- Research Question/Aim/Purpose
- Methods
 - Design
 - Sample/Sample Size
 - Setting
 - Protocol
 - Analysis plan
- Timeline

BACKGROUND/CLINICAL SIGNIFICANCE

- Why is your study important?**
 - Describe the clinical significance of the research question or clinical problem**
 - Answer the “so what?” question**
- 

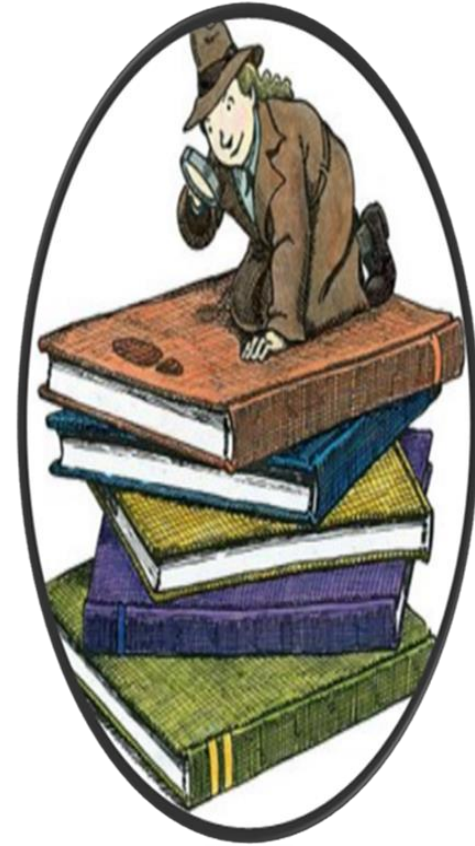
The Introduction

- Gives a **quick idea** of the topic of the literature review, such as the central theme or organizational pattern.



Reading and Researching

- Collect and read material.
- Summarize sources.
 - Who is the author?
 - What is the author's **main purpose**?
 - What is the author's theoretical perspective? Research methodology?
 - Who is the intended audience?
 - What is the **principal point**, conclusion, thesis, contention, or question?
 - How is the author's position supported?
 - How does this study relate to other studies of the problem or topic?
 - What does this study add to your project?



METHODOLOGY

Design of the study

- Population and sampling
- Research Instruments
- Pilot study
- Instrument Reliability and Validity
- Method of Data Collection
- Plan of Data Analysis

RESEARCH DESIGN

- **Design** – a description of the approach to be used to reach objectives.
- **Clearly** indicate the methods of data collection either within a quantitative or qualitative methodology; as well as the techniques for data collection, e.g. questionnaires, and measurement (the validation of the techniques). Indicate whether field workers will be used to **collect data** and whether computer programmes will be employed to **analyze** the data.

Data Analysis:

Specify the procedures you will use, and label them accurately (e.g., ANOVA, MANCOVA, HLM, ethnography, case study, grounded theory). If coding procedures are to be used, describe in reasonable detail. If you triangulated, carefully explain how you went about it. Communicate your precise intentions and reasons for these intentions to the reader. This helps you and the reader evaluate the choices you made and procedures you followed.

Indicate briefly any analytic tools you will have available and expect to use (e.g., Ethnograph, NUDIST, AQUAD, SAS, SPSS, SYSTAT).

Provide a well thought-out rationale for your decision to use the design, methodology, and analyses you have selected.

Materials and Methods

Provide full details so that the experiments are reproducible

Describe the **experimental design in detail.**

Must identify accurately experimental animals, plants, and microorganisms used by genus, species and strain.

The source of subjects studied, number of individuals in each group used, their sex, age, and weight must be clearly stated.

Methods used for statistical analyses must be mentioned

Do not mix some of the results in this section

Write in the past tense



METHODOLOGY

❑ Section used to JUDGE the validity of results and conclusions

❑ This section of your proposal has multiple parts

- Instrumentation and infrastructure
- Study groups and ethics
- Access to samples
- Data analysis

❑ Justify your method choice

Show you understand the principles

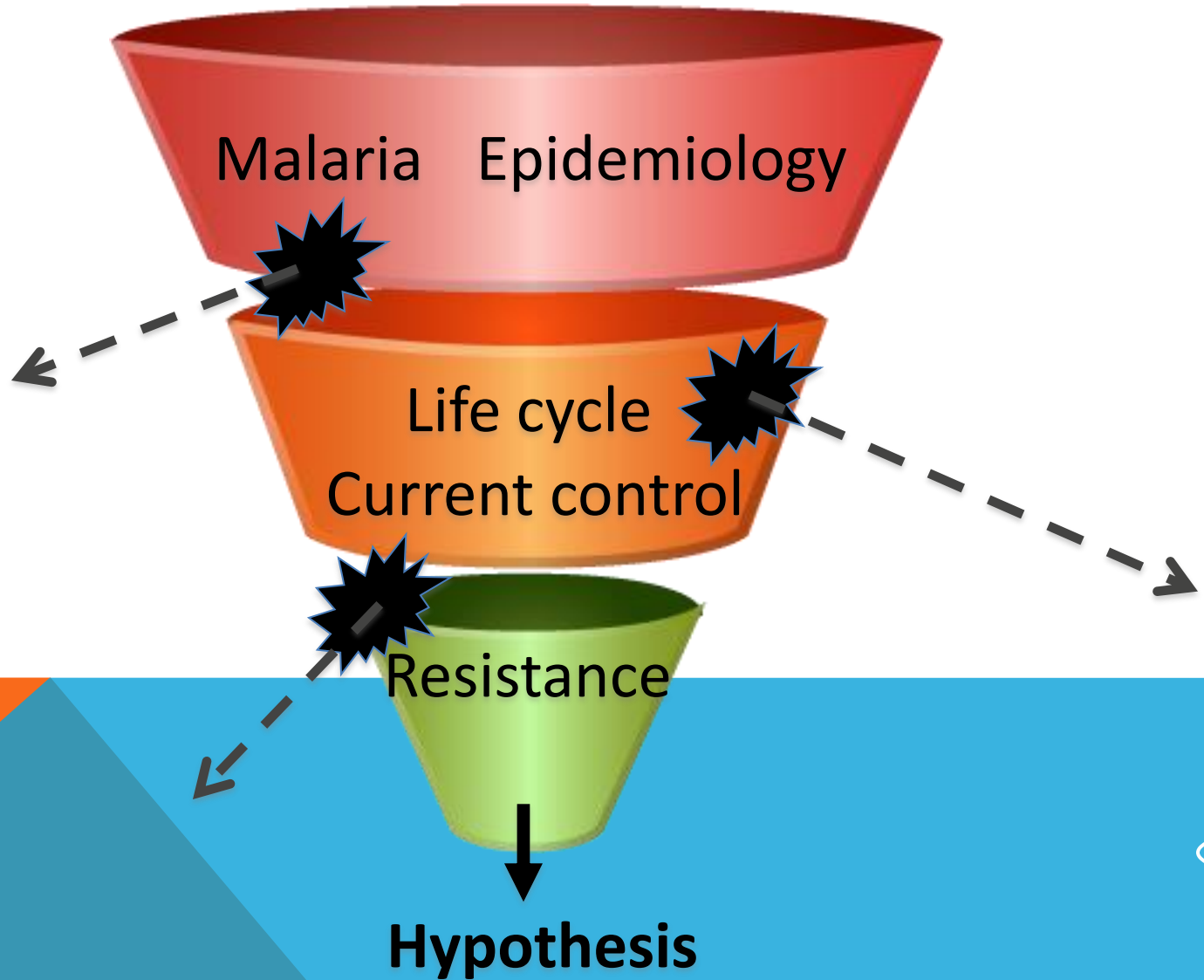
Prove feasibility of your study



Ethical/ Legal Consideration

- Human research participants need:
- Informed consent
- Voluntary participation
- Restricted use of deception
- Debriefing
- Confidentiality

SUPPORT THE HYPOTHESIS



TIMELINE

Helps you keep your experimental design in the correct order

Avoids “dead” time

When building your timeline

- Consult with other students in your lab that have done similar studies

Describe how long it will take to do your study

Provide timeline benchmarks

Example:

- | | |
|--------------|---------------------|
| Months 1 - 3 | Prepare study tools |
| Months 4-10 | Collect data |
| Months 11-12 | Analyze data |



BUDGET

- ❑ Give you an appreciation of research costs
- ❑ Prevents you from overspending!
- ❑ Provide specific explanations for:
 - Need for specific technologies
 - Need for other financial requests (e.g. conference, instrumentation, staff, bursaries etc).
 - Do you really need this kit?



PLAGIARISM

Reference immediately after mentioning

- Not end of paragraph

ALWAYS identify source

Summarise useful points



Acknowledgments

You should acknowledge:

1. Any significant **technical help** that you have received from any individual in your lab or elsewhere
2. The **source of special equipment**, cultures, or any other material
3. Any outside **financial assistance**, such as grants, contracts or fellowships

Do not use the word “wish”, simply write “I thank” and not “I wish to thank...”



References

Referencing is a standardized way of acknowledging the sources of information and ideas that you have used in your document.

A list of ALL the **references used in the text must be written.**

Any papers not cited in the text should not be included.

Reference format varies widely:

- Harvard format (the name and year system) is the most widely used
Numerical system



SOME IMPORTANT LANGUAGE POINTS:

Avoid complex sentence structure

Use simple and clear English.





**Thank
You!!!**

www.thebodytransformation.com