

臺北護理健康大學100年度教學卓越計畫
分項計畫1－5全方位T型教師之成長

論文寫作工作坊 「十步結構式論文寫作」講座



陳甫州主任
台中榮總醫學研究部
幹細胞研究中心

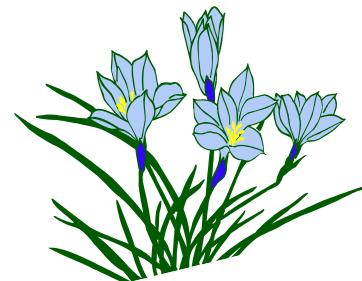
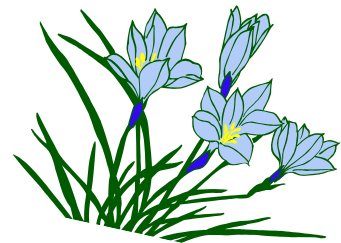
時間：100年4月12日(星期二)

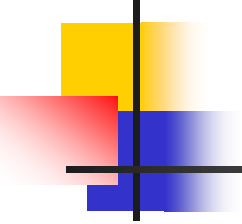
12:00 - 14:30

地點：親仁樓三樓B314教室

主辦單位：教師發展中心

※智慧財產權屬原作者所有，請勿不法重製





十步結構式論文寫作

陳甫州 博士

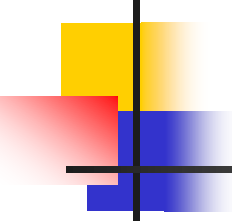
台中榮民總醫院

醫學研究部 幹細胞中心

Why am I qualified?

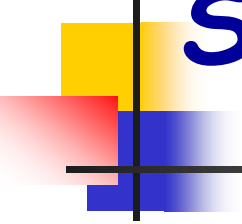
- 139 papers (1989-2011)
- 4 review articles
- 3 book chapters
- 1 patent
- Review 100+/year
Proposals/Reports/Manuscripts
- Technical writing/Experimental design courses





Review a manuscript

- READ Title & Authors
- READ Abstract
- LOOK 1st Paragraph
- LOOK 1st Sentence of Each paragraph
- LOOK Figure/Table and its title
- READ The last paragraph



Summary of my previous talk

- Endnote & Literature Search
- Title (What's the point)
- Introduction
- Methods & Results
- Discussion and Conclusion

SCIENTIFIC PAPER?

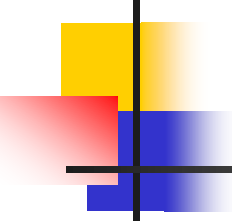
Sharks
(reviewers)

OCEAN OF
IGNORANCE

Island of
Human
Knowledge

your
paper

- A scientific paper **is not**:
 - a technical report or term paper
- your **role** as guiding the **future efforts**
 - being occasionally **wrong** is forgiven,
 - being **boring** is not



EndNote XIII, XIV

- Import Reference (Pdf)
- Management Reference
- Retrieval Reference
- Writing & Reference

My Libr...	fig.	0	Author	Year	Title
All References (115)			Barkauskas,...	2011	Quality of care in nurse-managed health centers
Unfiled (115)			Hanna, L. M....	2011	Cancer prevention and health promotion for people v
Trash (0)			Schmid-Buc...	2011	Factors associated with psychosocial needs of close
My Groups			Lin, Z. C.; Eff...	2011	Designing a tailored Web-based educational mamr
Online Search			Yang, C. Y.; ...	2011	Effects of a home-based walking program on perceiv
PubMed (NLM) (36)			Grimsbo, G. ...	2011	Left hanging in the air: experiences of living with can
more...			Jun, E. Y.; Ki...	2011	The effect of a sexual life reframing program on mari
EndNote Web			Radtke, J. V....	2011	The Menopause-Specific Quality of Life Questionnai
			McIlfratrick, S...	2011	Supporting women with intellectual disabilities to acc
			Wang, Y. J.; ...	2011	Effects of a 6-week walking program on Taiwanese v

The screenshot displays the PubMed MEDLINE search interface. At the top, there are tabs for 'Preview', 'Online Search - PubMed MEDLINE at PubMed (NLM)', and 'Quick Edit'. Below these tabs, there is a 'Search' button and an 'Options' button with a right-pointing arrow. To the right of these buttons is a dropdown menu labeled 'Search Remote Library' and a checkbox labeled 'Match'. The main search area contains three rows of search criteria, each separated by an 'And' operator with a dropdown arrow. The first row has 'All Fields' (dropdown), 'Contains' (dropdown), and 'Nursing care'. The second row has 'All Fields' (dropdown), 'Contains' (dropdown), and 'breast cancer'. The third row has 'Year' (dropdown), 'Contains' (dropdown), and '2011'.

Preview Online Search - PubMed MEDLINE at PubMed (NLM) Quick Edit

Search Options Search Remote Library Match

All Fields Contains Nursing care

And All Fields Contains breast cancer

And Year Contains 2011

EndNote X4 - [NurseLibrary.enl]

File Edit References Groups Tools Window Help

Annotated

My Libr...

- All References (115)
- Unfiled (115)
- Trash (0)
- My Groups**
- Online Search**
 - PubMed (NLM) (36)
 - more...
- EndNote Web**
 - transfer...
- Find Full Text**
 - Found PDF (10)
 - Found URL (10)
 - Not found (16)

Aranda,... 2011 Impact of a novel nurse-led prechemotherapy education in

Skrutko... 2011 The Breast Cancer Patient Navigation Kit: Development a

Lin, P. ... 2011 [Care of Hereditary Breast Cancer.]

Trotter, ... 2011 Innovation in survivor care

Schulm... 2011 Self-Management and Transitions in Women with Advanc

Misra, R... 2011 Age- and Sex-Specific Cancer Prevention and Screening

Iihara, H... 2011 Pharmacists contribute to the improved efficiency of med

Cantare... 2011 Associations among musculoskeletal impairments, depre

Dickers... 2011 Surviving the wait: defining support while awaiting breast

Kim, S.;... 2011 The impact of breast cancer on mother-child relationships

Preview Online Search - PubMed MEDLINE at PubMed (NLM) Quick Edit

Search Options Search Remote Library Match

All Fields Contains Nursing care

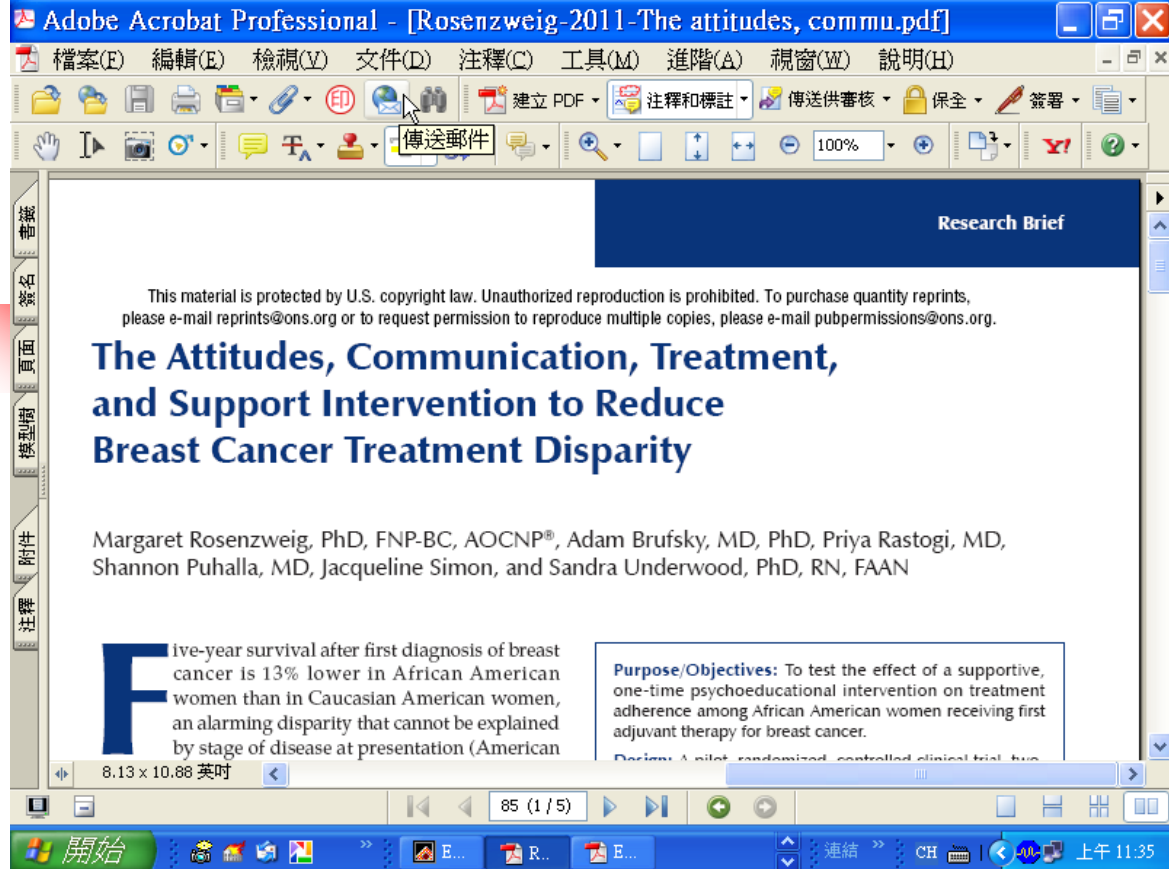
And All Fields Contains breast cancer

And Year Contains 2011

Showing 36 of 36 references in Group. (All References: 115)

Hide Tab Pane

NUM



URL

<http://www.ncbi.nlm.nih.gov/pubmed/21186164>

<http://ons.metapress.com/content/b0j3n71h15728787/fulltext.pdf>

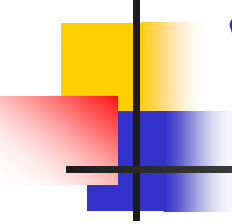
File Attachments



Rosenz...
attitudes,...

Author Address

University of Pittsburgh School of Nursing, Pennsylvania, USA. mros@pitt.edu



What's the **point**?-Title ?

- Describe: **Succinct** and **reflect** study contents
- Raise: the **interest** toward the paper
- Think: **many** people read the title, **few** read the abstract, **very few** people read the paper
- Read: some "**titles** of the Journal"

RELAX... AFTER THOSE STRESSFUL DAYS!!





凡事都有定期，天下萬務都有定時，生有時，死有時，
栽種有時，拔出所栽種的也有時。 傳道書 3:1-2

No short cut!

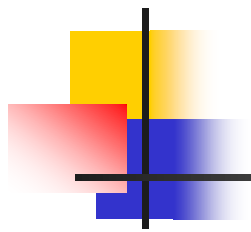
- Read More?!
- Learn More?!
- Think More!?
- Write More!?



Outlines

- IMRaD format
- Introduction
- Methods & Results
- Discussion and Conclusion
- Take home messages





Abstract

Introduction

Methods

Results

Discussion

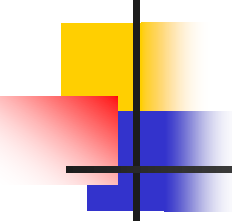
Results

Discussion

Results

Discussion

Conclusions



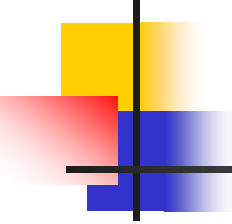
Abstract

Introduction

Results

Discussion

Methods



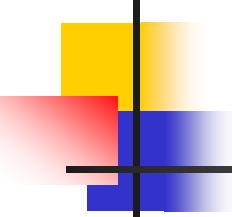
Abstract

Introduction
(1) (2) (3) (4)

Methods

Results

Discussion
(1) (2) (3) (4)
Conclusion



Abstract

Introduction
(1) (2) (3) (4)

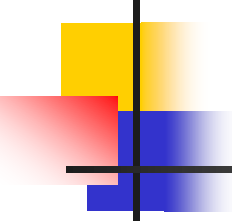
四段十句簡介寫作法

Methods

Results

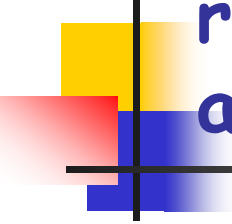
Discussion
(1) (2) (3) (4)
Conclusion





Introduction

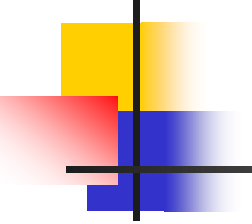
- Establish Facts and Problems
- Provide Previous and Current Research
- Locate a Gap to Solve the problems
- Describe the Present work



Cancer risk related to low-dose ionizing radiation from cardiac imaging in patients after acute myocardial infarction

Studies involving atomic bomb survivors have documented an increased incidence of malignant neoplasm related to the radiation exposure.¹⁻⁴ Survivors who were farther from the epicentre of the blast had a lower incidence of cancer, whereas those who were closer had a higher incidence.⁵ Similar risk estimates have been reported among workers in nuclear plants.⁶ However, little is known about the relation between exposure to low-dose ionizing radiation from medical procedures and the risk of cancer.

1. Establish Facts and Problems



2. Provide Previous Research

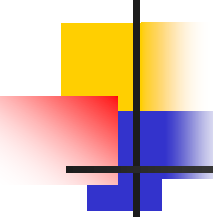
In the past six decades since the atomic bomb explosions, most individuals worldwide have had minimal exposure to ionizing radiation. However, the recent increase in the use of medical imaging and therapeutic procedures involving low-dose ionizing radiation has led to a growing concern that individual patients may be at increased risk of cancer.⁷⁻¹² Whereas strict regulatory control is placed on occupational expo-



It is not only the frequency of these procedures that is increasing. Newer types of imaging procedures are using higher doses of low-dose ionizing radiation than those used with more traditional procedures.^{8,11} Among patients being evaluated for coronary artery disease, for example, coronary computed tomography is increasingly being used. This test may be used in addition to other tests such as nuclear scans, coronary angiography and percutaneous coronary intervention, each of which exposes the patient to low-dose ionizing radiation.^{12,17-21} Imaging procedures provide information that can be used to predict the prognosis of patients with coronary artery disease. Since such predictions do not necessarily translate into better clinical outcomes,^{8,12} the prognostic value obtained from imaging procedures using low-dose ionizing radiation needs to be balanced against the potential for risk.

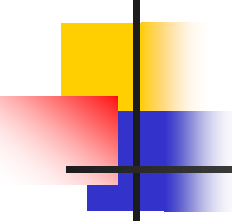
2. Current Research

3. Locate a Gap



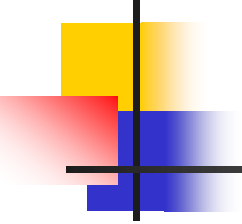
4. Describe the Present work

Authors of several studies have estimated that the risk of cancer is not negligible among patients exposed to low-dose ionizing radiation.²²⁻²⁷ To our knowledge, none of these studies directly linked cumulative exposure and cancer risk. We examined a cohort of patients who had acute myocardial infarction and measured the association between low-dose ionizing radiation from cardiac imaging and therapeutic procedures and the risk of cancer.



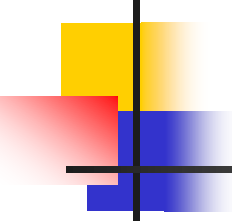
Establish Facts and Problems

- ESTABLISH THE IMPORTANCE OF YOUR FIELD
- PROVIDE BACKGROUND FACTS/INFORMATION
- DEFINE THE TERMINOLOGY IN THE TITLE/KEY WORDS
- PRESENT THE PROBLEM AREA/CURRENT RESEARCH FOCUS



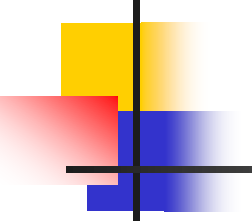
The synthesis of flexible polymer blends from polylactide and rubber

- In Sentence 1 the writer establishes the importance of this research topic.
- Polylactide (PLA) has received much attention in recent years due to its biodegradable properties, which offer important economic benefits.
- (Establish Facts and Problems)



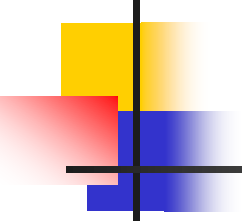
Establishes the importance

- The Present Simple or Present Perfect Tense
- Indicating **importance**:
 - Much study in recent years (in the past five years) has focused on....
- Establishing **significance**:
 - There are substantial benefits to be gained from....



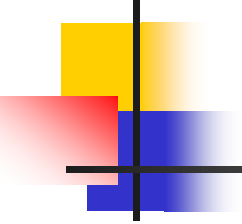
The synthesis of flexible polymer blends from polylactide and rubber

- In Sentence 2 the writer provides general background information.
- PLA is a polymer obtained from corn and is produced by the polymerisation of lactide.
- (Establish Facts and Problems)



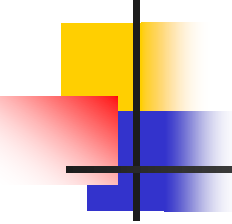
Provides background

- The Present Simple Tense
- Accepted/established facts
- This ensures that the reader shares the same level of background information
- The reader is therefore ready to read the article



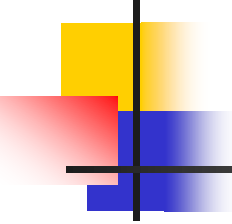
The synthesis of flexible polymer blends from polylactide and rubber

- In Sentence 3 the writer does the same as in Sentences 1 and 2, but in a more specific/detailed way.
- It has many possible uses in the biomedical field and has also been investigated as a potential engineering material. (2,3)
- (Establish Facts and Problems)



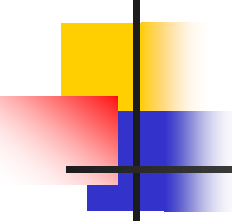
more specific/detailed background

- The Present Simple as part of the factual background
- The findings are **well-known** and considered **reliable** enough to be presented as **truths**
- The literature review **comes later** and is more likely to **deal with individual studies** and their methods or results



The synthesis of flexible polymer blends from polylactide and rubber

- In Sentence 4 the writer describes the general problem area or the current research focus of the field.
- However, PLA has been found to be too weak under impact to be used commercially.
- (Establish Facts and Problems)



describes the **general problem**

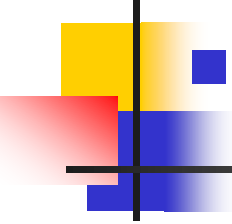
- An interesting problem in this field and may lead to the specific problem
- It is still not describing the specific problem (**too early!**)
- You may add **research references** when you describe the problem
- It is, in general, a **well-known problem**

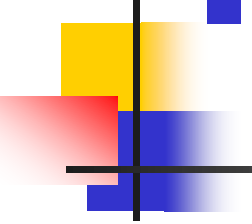


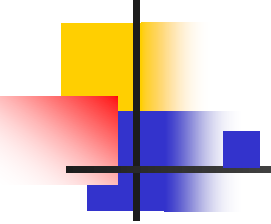
ESTABLISHING SIGNIFICANCE

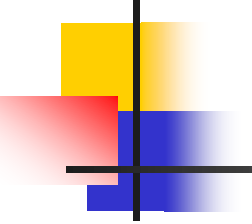
(a) basic issue	economically important
(a) central problem	(has) focused (on)
(a) challenging area	for a number of years
(a) classic feature	for many years
(a) common issue	frequent(ly)
(a) considerable number	generally
(a) crucial issue	(has been) extensively studied
(a) current problem	importance/important
(a) dramatic increase	many

- 
- A major **current focus** in population management is **how** to ensure sustainability of...
 - Numerous experiments **have established** that **ionising radiation** causes...
 - Low-dose responses to radiation **have generated considerable** research interest.

- 
- Analysis of change in the transportation sector is vital for two important reasons: ...
 - PDA accounts for over 90% of all pancreatic cancers.
 - It is generally accepted that joints in steel frames operate in a semi-rigid fashion.

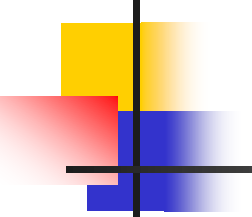
- 
- Nanocrystalline oxide films are attracting widespread interest in fields such as...
 - The importance of high throughput DNA sequencing has been demonstrated by...
 - Convection heat transfer phenomena play an important role in the development of...

- 
- For more than 100 years researchers have been observing the stress-strain behaviour of...
 - Much research in recent years has focused on carbon nanotubes.



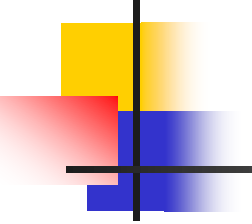
Provide Previous and Current Research

- PREVIOUS RESEARCH
- CURRENT RESEARCH
- CONTRIBUTIONS



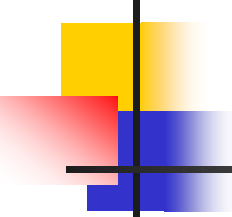
The synthesis of flexible polymer blends from polylactide and rubber

- In Sentence 5 the writer provides a transition between the general problem area and the literature review.
- One way to toughen polymers is to incorporate a layer of rubber particles (5) and there has been extensive research regarding the rubber modification of PLA.
- (Provide Previous and Current Research)



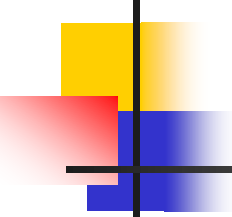
The synthesis of flexible polymer blends from polylactide and rubber

- In Sentence 6 the writer provides a brief overview of key research projects in this area.
- For example, Penney et al. showed that PLA composites could be prepared using blending techniques (6) and more recently, Hillier established the toughness of such composites. (7)
- (Provide Previous and Current Research)



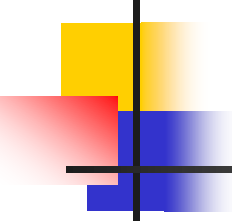
The literature review

- References to **previous & current research** wherever it is useful
- References to **research**
- Providing **a transition** between previous and current research
- Arranging **the order of** all references
 - Chronological
 - Different approaches/models
 - General/Specific to your own



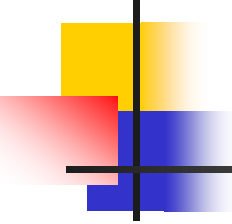
Literature review

- Achieve develop obtain address
- Adopt analyse apply argue
- Assume attempt calculate categorise
- Carry out choose claim classify
- Collect compare concentrate (on)
- Conclude conduct confirm consider
- Construct correlate deal with debate



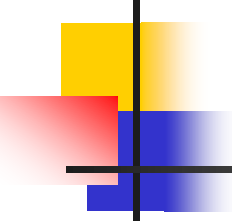
Previous/Current Research

- Define demonstrate describe
- Design detect determine discover
- Discuss enhance establish estimate
- Evaluate examine explain explore
- Generate identify illustrate
- Improve incorporate indicate



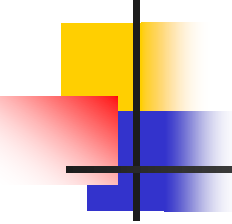
Previous/Current Research

- Interpret introduce investigate
- Measure model monitor note
- Observe overcome prefer perform
- point out predict present produce
- Propose prove provide publish
- Put forward realise recognise
- Recommend record report reveal



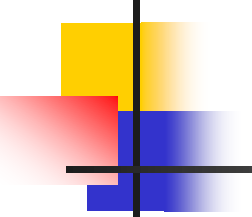
Previous/Current Research

- Revise review show simulate
- Solve state study
- Support suggest
- Test undertake use utilise



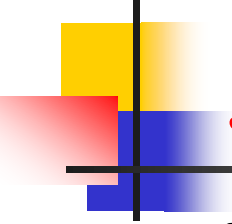
Locate a Gap to Solve the problems

- LOCATE A **GAP** IN THE RESEARCH
- DESCRIBE **THE PROBLEM** YOU WILL ADDRESS
- PRESENT A PREDICTION TO BE TESTED



The synthesis of flexible polymer blends from polylactide and rubber

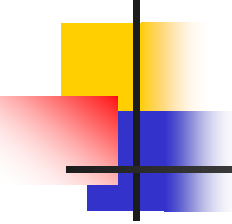
- **In Sentence 7** the writer describes a **gap** in the research.
- **Although** the effect of the rubber particles on the mechanical properties of copolymer systems was demonstrated over two years ago (8) , **little attention has been paid** to the selection of an appropriate rubber component.
- (Locate a Gap to Solve the problems)



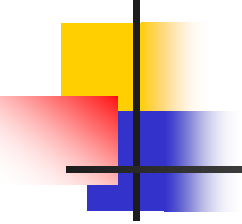
Create a gap (a research space)

- Introducing **the purpose** of your paper and the specific problem
- Describing **a problem** in the previous research or by indicating that there is **a gap** in the research
- (**However/Although**) **respectful and impersonal**, and is therefore not considered **offensive** to other researchers

GAP/QUESTION/PROBLEM /CRITICISM



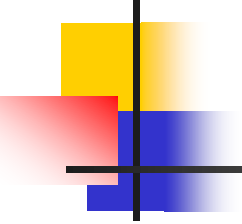
- Ambiguous computationally demanding
- Confused deficient doubtful expensive
- False far from perfect ill-defined
- Impractical improbable inaccurate
- Inadequate incapable (of)
- Incompatible (with) incomplete
- Inconclusive inconsistent



Describe the Present work

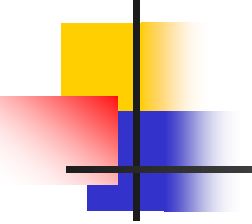
- the **paper** itself
- details about the **methodology**
- announces the **findings**





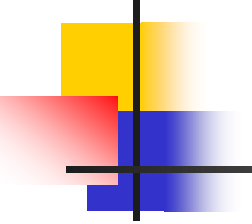
The synthesis of flexible polymer blends from polylactide and rubber

- In Sentence 8 the writer describes the paper itself.
- The present paper presents a set of criteria for selecting such a component.
- (Describe the Present work)



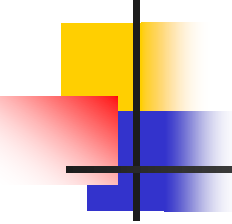
The synthesis of flexible polymer blends from polylactide and rubber

- In Sentence 9 the writer gives details about the methodology reported in the paper.
- On the basis of these criteria it then describes the preparation of a set of polymer blends using PLA and a hydrocarbon rubber.
- (Describe the Present work)



The synthesis of flexible polymer blends from polylactide and rubber

- In Sentence 10 the writer announces the findings.
- This combination of two mechanistically distinct polymerisations formed a novel copolymer in which the incorporation of polylactide significantly increased flexibility.
- (Describe the Present work)



the Present work

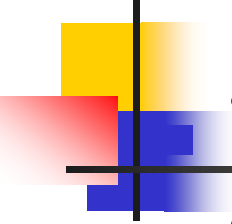
- What its purpose or focus is,
- What its structure is
- The Present Simple Tense
 - This paper is organized as follows..
 - This study focuses on..
- The Past Simple Tense
 - The aim of this project was...



This paper introduces a scheme which solves these problems.

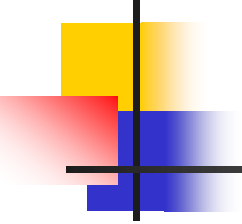
- **The approach** we have used in this study aims to...
- **This study** investigated the use of...
- **In this report** we test the hypothesis that...
- **This paper** is organized as follows:...

Some more examples



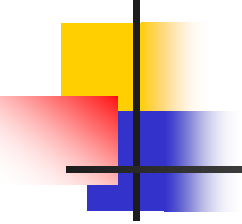
This paper focuses on...

- **The purpose of this study** is to describe and examine...
- **In order to investigate** the biological significance...
- **In this paper** we present...
- New correlations were developed with **excellent results**...
- **In the present study** we performed...



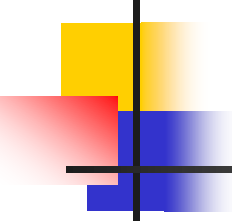
VIEW PAPER WRITING AS PART OF YOUR RESEARCH, NOT A POST-RESEARCH ACCOUNT

- Start writing the paper as soon as possible – view it as a tool of your research.
- Write the **introduction** as you engage into your research
 - What are you trying to do?
 - Why is it important?
 - What has been done before?



The IMRaD Format

- Introduction: What was the **question**?
 - **M**ethods: How did you try to **answer** it?
 - **R**esults: What did you **find**?
 - **D**iscussion: What does it **mean**?
-
- A format used in some journals: **IRDaM**
 - People read **sections** in various orders.

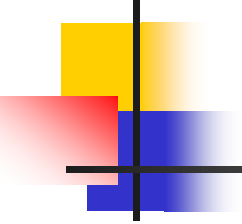


MATERIALS AND METHODS

- A general overview of the entire subsection, **background**, and **procedures**
- Details about what **was done** and care **was taken**
- A **limitation/possible difficulty** in the methodology when compared to conventional methods

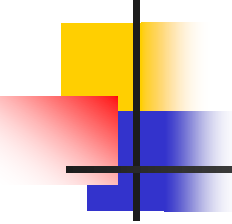
MATERIALS AND METHODS

- Six male gerbils (65-85 g) were allowed to acclimate to their environmentally controlled quarters (25 °C and 12:12 h light-dark cycle) before the experiments. The gerbils were anesthetized with chloral hydrate (400 mg/kg body weight, i.p.) and the body temperature was maintained at 37 °C with a heating pad (CMA/150).
- Following a midline incision, the skull was craniectomized to expose the right middle cerebral artery (MCA). An 8-0 suture was encircled the middle cerebral artery for later ligation.
- Two microdialysis probes (CMA/20-4, and a cut-off at 20 kDa) were stereotaxically implanted into the cortex (AP 0 mm, ML + 5 mm, DV - 5.0 mm from Bregma). A Perkin-Elmer Model Analyst 300 atomic absorption spectrometer (Perkin-Elmer, Uberlingen, Germany) was used for analyzing extracellular Mg concentrations. For atomization of Mg, the temperature was controlled at 1700°C and Mg was detected at a wavelength of 285.2 nm.



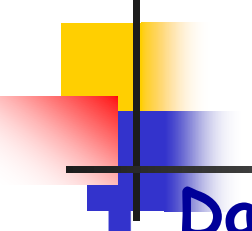
Results to be Presented

- The **core** of the paper
- Often includes tables, figures, and the text should overlap with that in the tables and figures
- Should present results **but not comment on them**



Results Section

- Maintain a balance between **brevity** and **completeness**
- Describe experimental design including treatments measured, how many **replicates**, **controls** etc
- Present the results in an **orderly sequence**

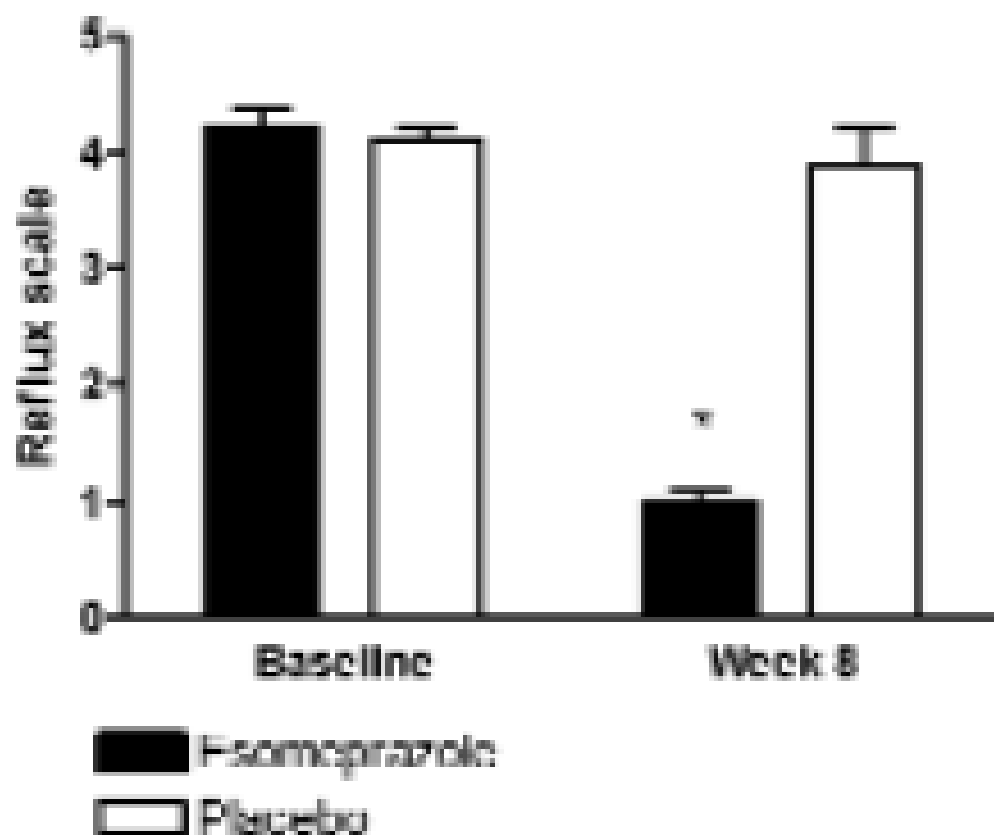


Statistical analysis

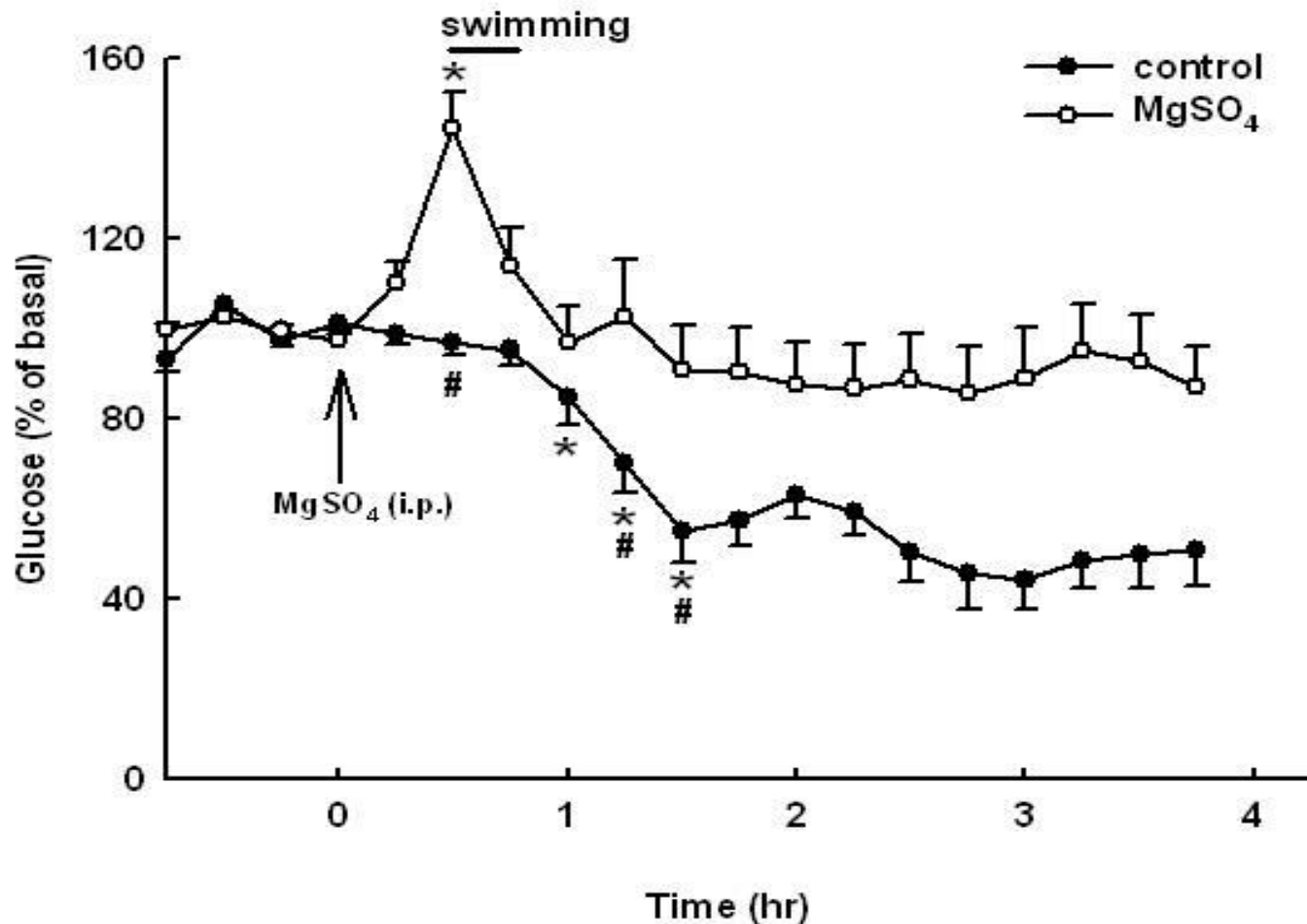
- Data are expressed as a ratio between the ipsilateral (right) hind paw and contralateral (left) hind paw where possible. The nature of data on animal weight, SSI data, and also on (the **CatWalk** derived) normal step sequence patterns (NSSP) and couplings did not allow for a ratio-presentation of the data.
- Data are expressed as mean $\pm$ standard-error-of-the-mean (S.E.M.). Statistical analysis included analysis of variance (**ANOVA**) with repeated measures over time. This ANOVA was combined with a **Bonferroni *post hoc*** correction to detect which times points differed from each other.
- A ***p*-value of 0.05** was regarded as the level of statistical significance.

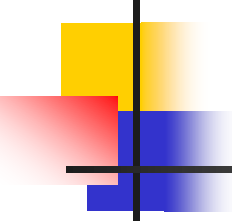
FIGURE 1

Reflux symptom scale using the Gastrointestinal Rating Scale. The reflux symptom decreased significantly from 4.2 at baseline to 1.0 in week 8 in the esomeprazole group ($*P < 0.001$).



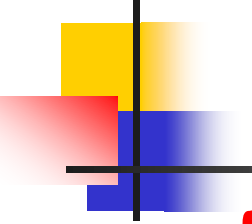
Time profiles of the effect of magnesium sulfate on dynamic changes in glucose levels at rest, during swimming and in the recovery period.





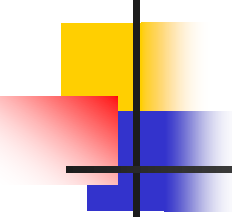
Discussion

- The **heart** of the paper
- State the **interpretations and opinions**, explain the implications of findings and make suggestions **for future research**
- Organization of discussion
 - Outline items from **specific to general**
 - Expand each item



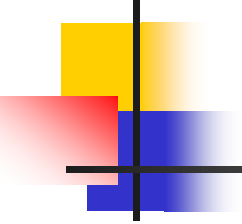
Discussion-2

- **Point out** major findings/contribution
- **Explain** how your results relate to expectations and literature
- **Discuss** and evaluate conflicting explanations of the results
- **Defend** your answer, *if necessary*, by explaining **why** yes, **why** not?



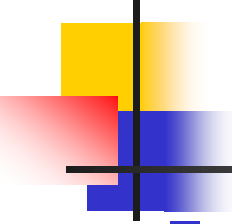
The paper is not a description of the work, **it IS the work**

- Write the **Methods** once you think they're mature - can you defend them in writing? If you have difficulty in the writing that often means there's a problem with the methods
- Write **results and discussion** as the ideas come to you - spend an hour here and there writing them down in paper form. That will help crystallize them in your mind and may lead to new ideas
- Spend a bit of time each day with your evolving paper. Try to go through it with the eyes of a critical reader (**be your own worst critic!**)



Conclusion

- A default approach is to treat it as **an extended abstract**. But this is also an opportunity to be reflective about what you learned, the uncertainties remaining, the links to other problems, etc.
 - **First paragraph:** focus on what you did. Begin with “We have used...”, “We have investigated...”
 - **Following paragraphs:** one major finding per paragraph. First sentence states the finding, following sentences elaborate.
 - **Final paragraph:** should have some forward-looking perspective. Don't let paper finish on a whimper!

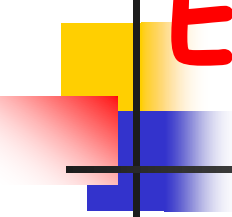


Abstract

- The first section read and sets the tone of the paper for the editor & reviewers
- A condensed version of the manuscript
 - Objective, method and materials
 - Major observations, Result (no discussion)
 - Conclusion
- Conveys only the essential information
- (<160-300 words)

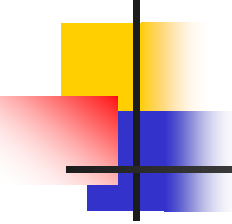


- **即時翻譯 即時辭典** 英英/英漢 雙解大辭典
- **書信助理 即時語音** 中、英、日文三種語言的單字、片語、句子、整篇文章
- **全文翻譯** 不論整句、整段、整篇，只要輕輕一按，英文翻中文、中文翻英文、日文翻中文、中文翻日文，查看整篇外國文章。
- **網頁翻譯** 瀏覽中、英、日文網站，輕輕一按，英文、日文網頁立刻變中文網頁，中文網頁立刻變英文、日英網頁，讓您迅速了解最新消息，同時支援簡、繁體網頁互相翻譯。
- **檔案翻譯** 快速將簡、繁體檔案檔互相翻譯；中、英文檔案文件互相翻譯；中、日文檔案檔互相翻譯，支援檔案格式包含*.txt、*.htm、*.html、*.doc、*.xls、*.ppt、*.rtf。



English Writing & Grammar

- 專門替中國人寫的英文基本文法(李家同聯經出版社2004/12/30)
- 一生必學的英文文法 (陳超明 2009/10/15)
- 科技論文寫作與發表 (毛正倫新文京出版社2009/7/25)
- Websites (Google, ICiba愛詞霸 www.iciba.com...)



Take home messages

- Introduction (Problems)
- Methods (Design)
- Results (Core)
- Discussion (Heart)

After service

fucheng@vghtc.gov.tw

當將你的事交託耶和華，並
倚靠他，他就必成全。

