



如何進行學術 論文報告

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報告學術論文種類

個人的學術論文

他人的學術論文

個人學術論文報告

學位論文考試報告

受邀的特別演講

他人學術論文報告

專題研究報告

報告個人學術論文

報告他人學術論文

學術論點

Hypothesis

Definition of Science

knowledge acquired by careful observation, by deduction of the laws (Hypothesis) which govern changes and conditions, and by testing these deductions by experiments.

**告訴聽眾你面對問題的思
路以及你取得答案的方法**

Folic acid inhibits endothelial cell proliferation through activating the cSrc/ERK 2/NF- κ B/p53 pathway mediated by folic acid receptor

**Shyr-Yi Lin · Woan-Ruoh Lee · Yi-Fan Su · Sung-Po Hsu · Hsu-Chen Lin ·
Pei-Yin Ho · Tien-Chi Hou · Yu-Pei Chou · Chun-Ting Kuo · Wen-Sen Lee**

It has been well recognized that folic acid can help prevent birth defects in the brain and spinal cord. Thus, pregnant women have been recommended to take folic acid daily. Since the side effects caused by folic acid intake during pregnancy have not been reported, there should be some mechanisms to allow the pregnant mother and the fetus to escape from the folic acid-induced anti-angiogenic action.

Based on the results from our previous studies, we found that folic acid and progesterone share a similar signaling cascade involved in up-regulation of p53 and inhibition of endothelial cell proliferation. We also observed that folic acid receptor could form a complex with female sex hormone receptors. Accordingly, we hypothesize that high concentrations of female sex hormones in the maternal blood could reduce the folic acid-induced anti-angiogenic activity.

Here, we show that pregnancy levels of progesterone or estradiol prevented folic acid-induced inhibitions of proliferation and migration in cultured endothelial cells and angiogenesis in vivo.

專題研究報告

Seminar

Seminar provides not only a training
for speaker but also the education for
the audience

**What should the audience learn
from the seminar presentation?**

試著對聽眾講一個科學故事

數據是來幫助故事的可信度

**It will be helpful to start
with why you choose this
article for discussion**

How to present the Introduction section?

Introduction section of your talk is to help the audience to understand the literature background of the study.

What do the scientists concern in the research area you will introduce?

What have been done?

What does the main issue remain to be investigated?

What is the strategy (secret weapon) of this study?

**Introduction is not to
define the terminology**

Interleukin-18 Suppresses Adiponectin Expression in 3T3-L1 Adipocytes via a Novel Signal Transduction Pathway Involving ERK1/2-dependent NFATc4 Phosphorylation

In J. BIOL. CHEM., Feb 15, 2008

By Bysani Chandrasekar et al.

Student: XX Chen

Adviser: XX Fong, Ph. D

Introduction

Adiponectin

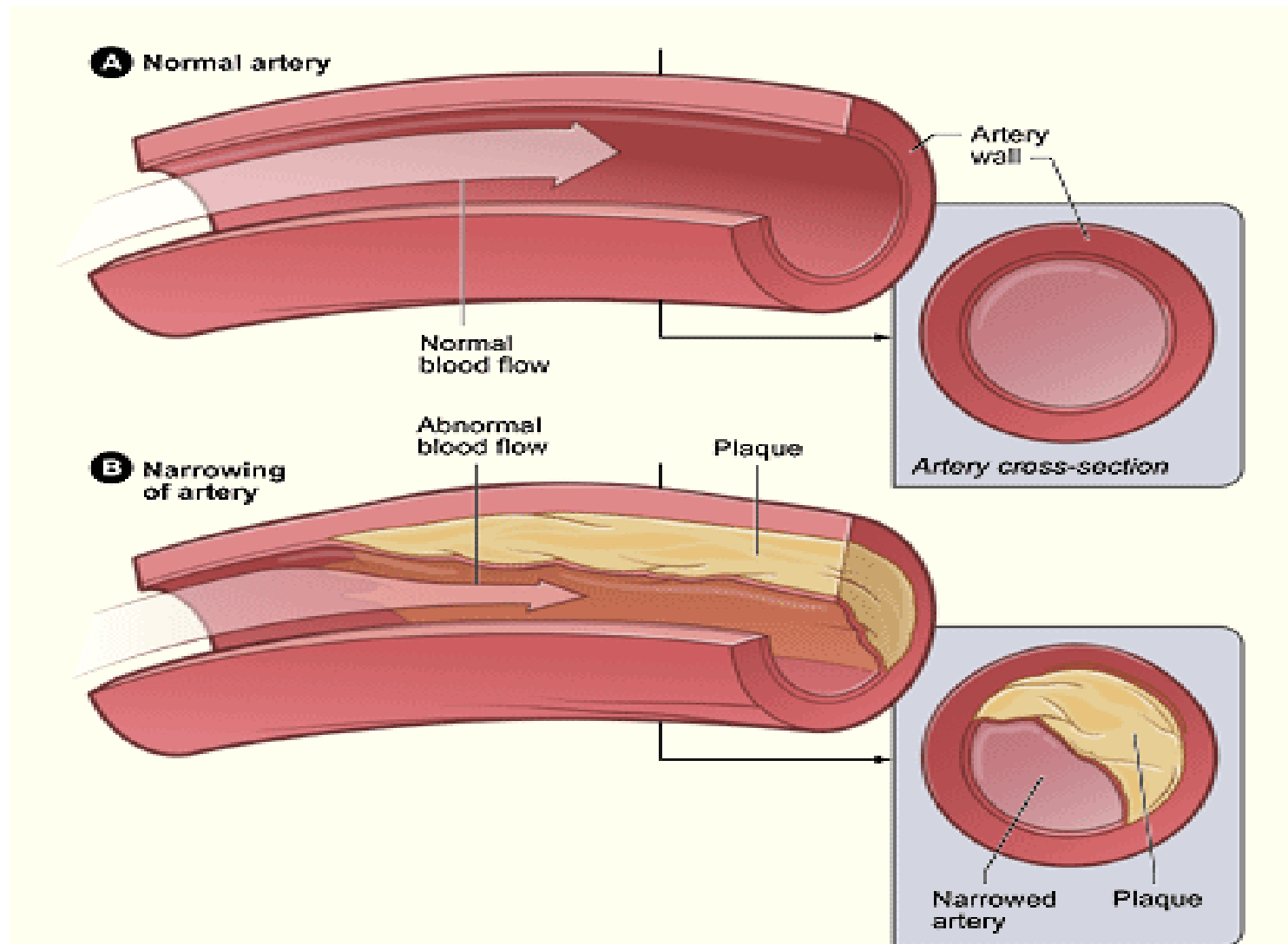
- ~~• 28 kDa protein~~
- Anti-inflammatory and anti-athrogenic
- Inverse relationship between adiponectin and pro-inflammatory cytokines levels

Progesterone inhibits vascular smooth muscle cell proliferation

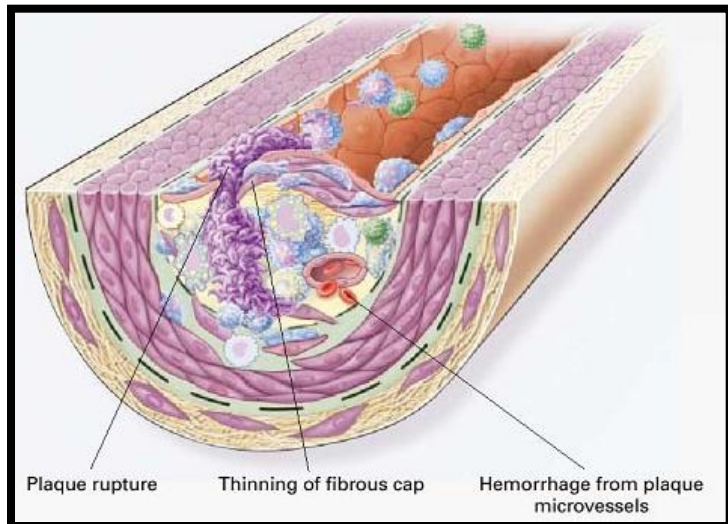
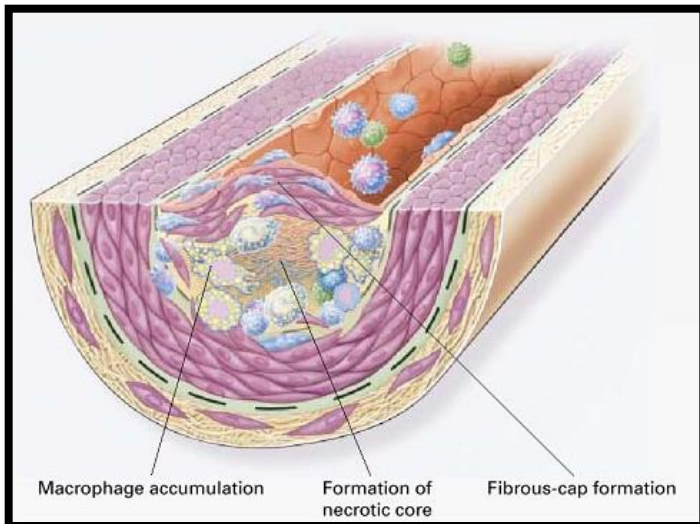
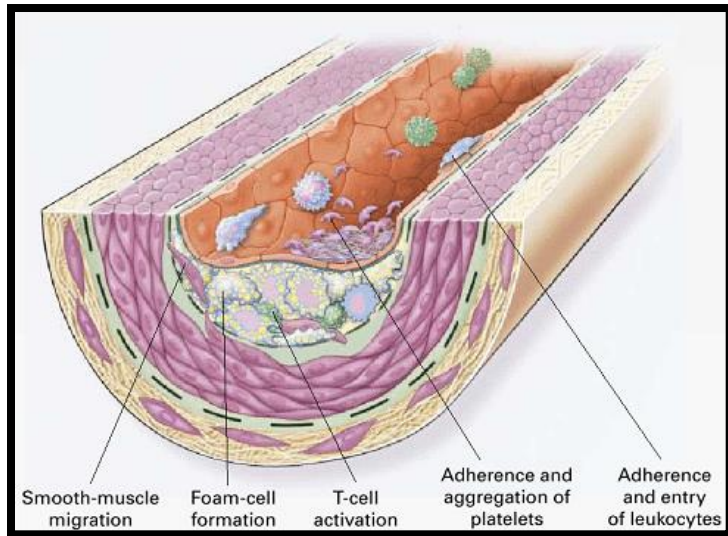
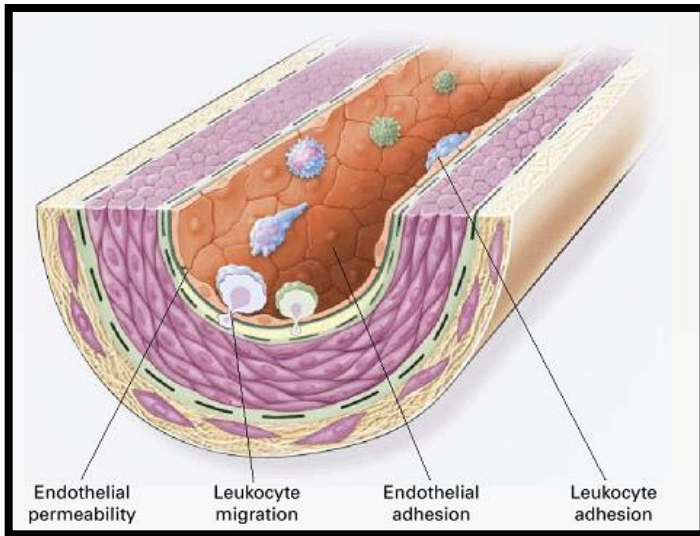
Supervisor: XX Lee

Speaker: XX Chou

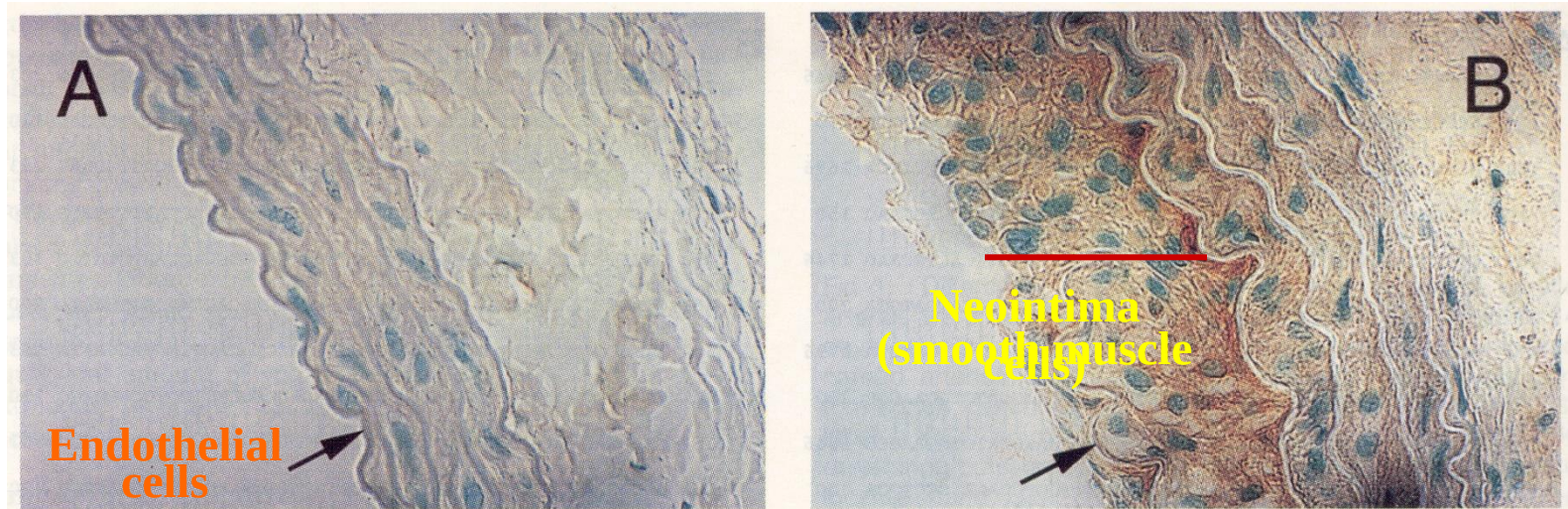
What is atherosclerosis?



Pathology of atherosclerosis



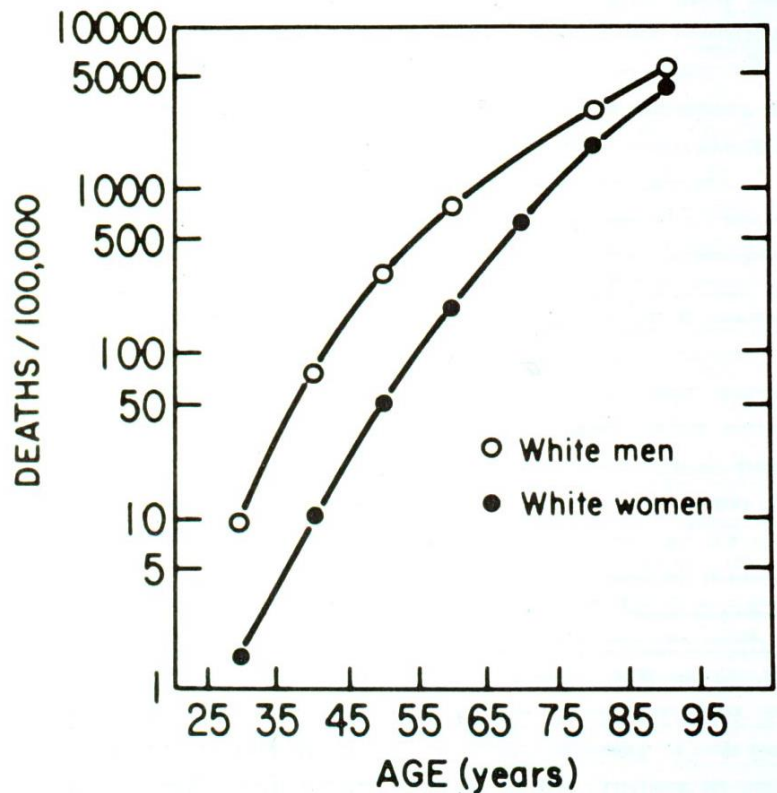
In response to injury and to various stimuli, the activated vascular endothelium produces cytokines and growth factors to promote the **growth** and the **migration** of vascular smooth muscle cells.



Epidemiological studies

Premenopausal women have a much lower mortality from atherosclerotic cardiovascular disease than men.

Epidemiological study



Furman RH Ann NY Acad. Sci. 1968,
149: 822-33.

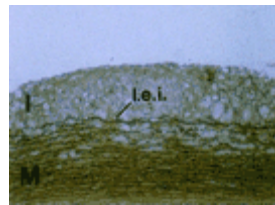
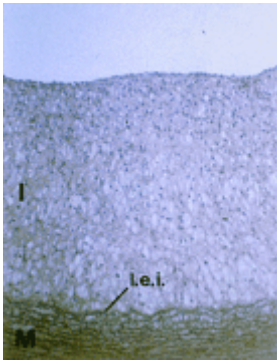
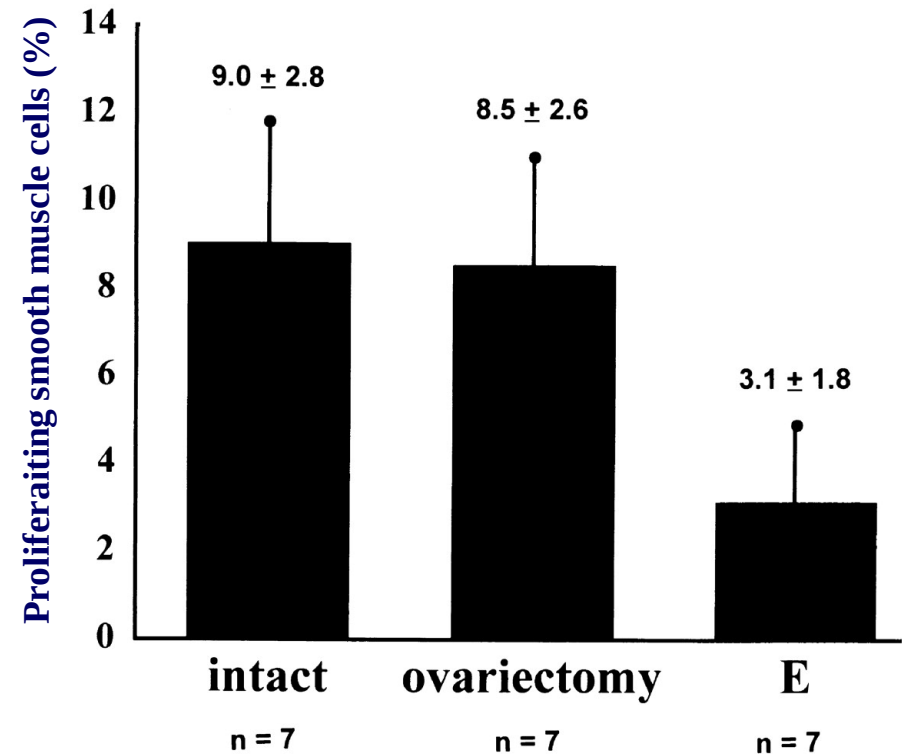
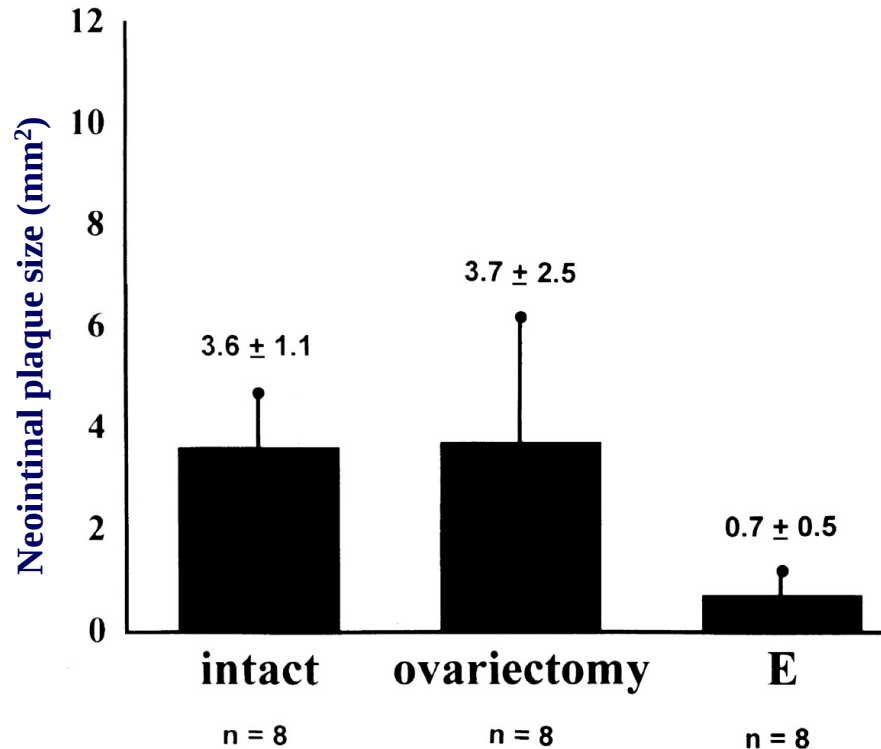
Pre-menopausal women have a much lower mortality from atherosclerotic cardiovascular disease than men. However, during their postmenopausal years, cardiovascular disease in women gradually approaches that of men.

Epidemiological study

Estrogen replacement reduces the incidence of cardiovascular diseases in the postmenopausal women

Stampfer MJ et al., N Engl J Med. 1991 325(11):756-62.

Effect of estrogen on experimental atherosclerosis in female rats



Hanke H et al. Circulation 94:175-181, 1996

Effect of 18 months of hormone therapy on plasma cholesterol and lipoprotein cholesterol concentrations in the baboon

Treatment	n	Plasma cholesterol (mg/dl)	VLDL+LDL cholesterol (mg/dl)	LDL cholesterol (mg/dl)	VLDL+LDL/HDL cholesterol (ratio)
Control	6	161 (133-195)	77 (58-101)	80 (62-104)	0.95 (0.54-1.40)
Estrogen	6	144 (129-160)	55* (47-66)	87 (76-99)	0.63* (0.52-0.63)

Kushwaha et al., Arterioscler Thromb. 11:23-31, 1991

Epidemiological study

The relative risk of major coronary heart disease among post-menopausal women who took estrogen with progesterone was lower as compared with the risk of those who took estrogen alone. [The relative risk of major coronary heart disease among post-menopausal women who took estrogen with progesterone was 0.39, as compared with the risk of those who took estrogen alone that was 0.60 (where the risk among women who took no hormones was set at 1.0)].

Animal study

In castrated baboon receiving estradiol and progesterone together had fewer vascular lesions than those receiving estradiol alone.

Hypothesis

**Progesterone can direct inhibit
vascular smooth muscle cell
proliferation**

**Whether there are enough
evidences to support the
hypothesis**

Specific questions the authors would like to ask

- 1. Does vascular smooth muscle cells express progesterone receptor?**
- 2. Does progesterone inhibit the growth of vascular smooth muscle cells?**
- 3. Does progesterone cause the death of vascular smooth muscle cells?**
- 4. Does progesterone affect the proliferation of vascular smooth muscle cells**
- 5. The underlying mechanism of progesterone's effect**

How to present the Materials and Methods?

How to approach?

**You need to introduce the aim and rationale
of each experiment**

**To make the presentation more
interesting and exciting, you
could raise the question before
you introduce the experiment**

How to present the results section?

Five important issues should be addressed in the results section

- **What experiment was conducted**
- **The rationale of this study**
- **How was the experiment performed**
- **The experimental results**
- **The implications of the results**

The speaker should give the audience a well guidance. Do not leave the audience to find the answer.

Question 1

**Does progesterone affect the DNA
synthesis of rat aortic smooth
muscle cells?**

Materials and methods

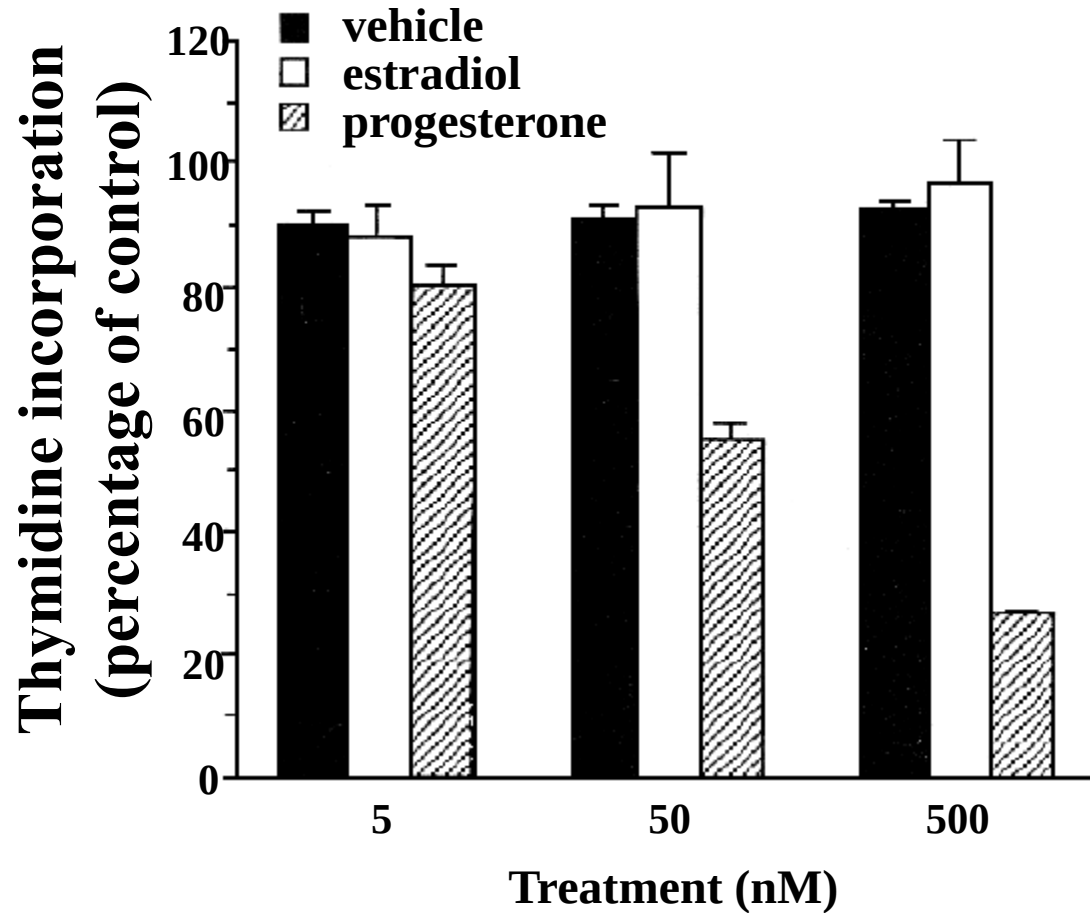
Cell culture:

rat aortic smooth muscle cells

DNA synthesis assay:

[3H]thymidine incorporation

Concentration-dependent inhibition of [3H]thymidine incorporation into RASMCs by progesterone



Give a title to each data figure

Title helps the audience to understand what the experiment finding is about

Title should be concise

Title does not need to be a complete sentence

**Do not leave the results un-
explained**

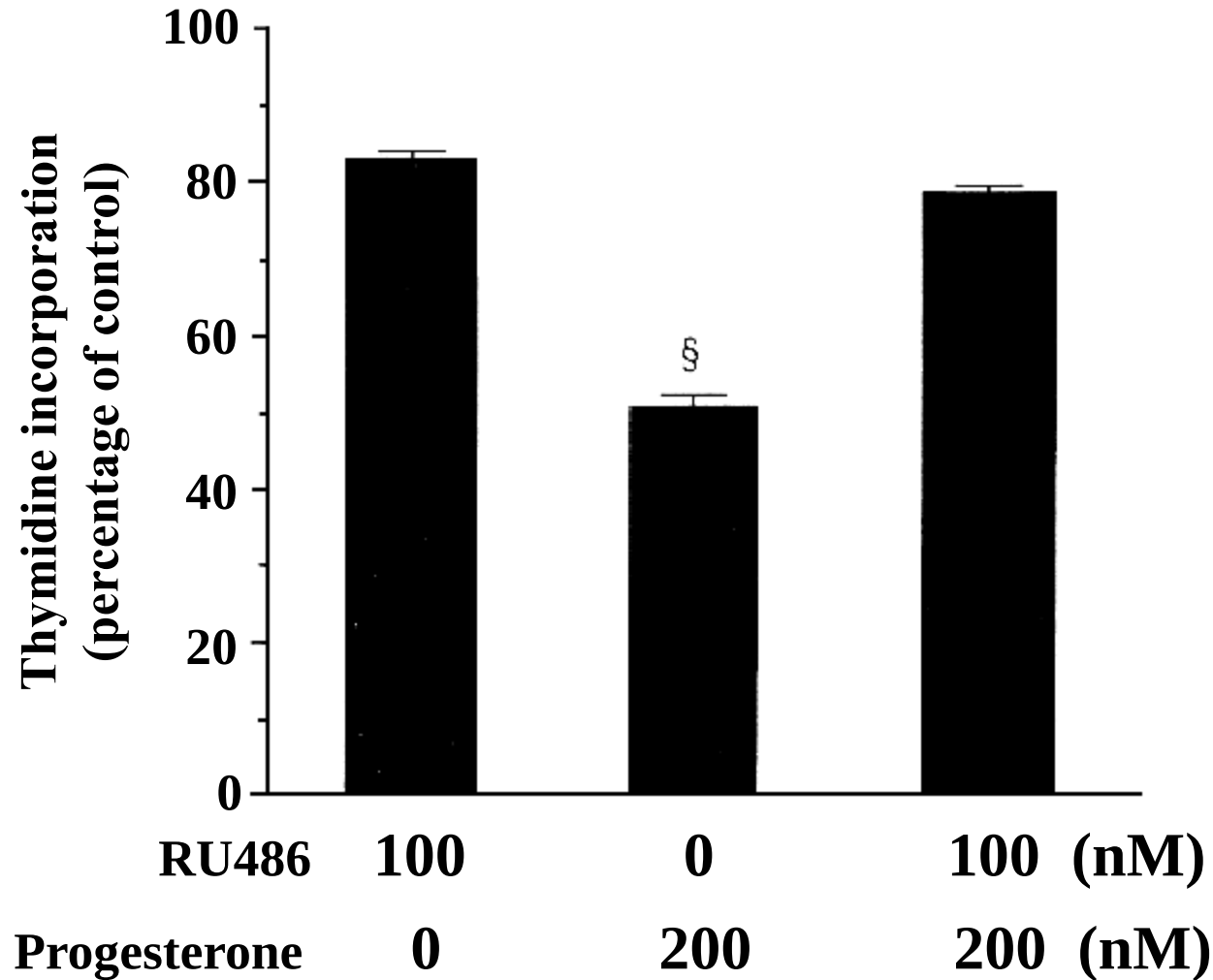
**Remove the data, which are
not going to be introduced**

**It is important to explain the
meaning of the research findings**

Conclusion 1

It seems that progesterone, but not estrogen, inhibits the DNA synthesis in aortic smooth muscle cell.

Progesterone-inhibited DNA synthesis in RASMCs through activating the progesterone receptor



Conclusion 2

The data suggest that progesterone inhibited the DNA synthesis in arterial smooth muscle cell through progesterone receptor.

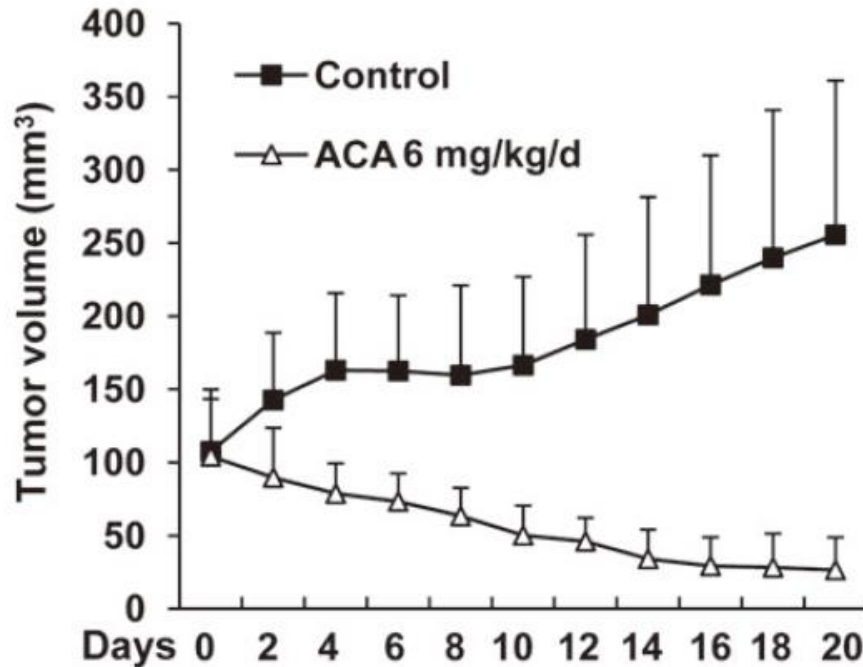
What to be criticized?

先打破權威的心態

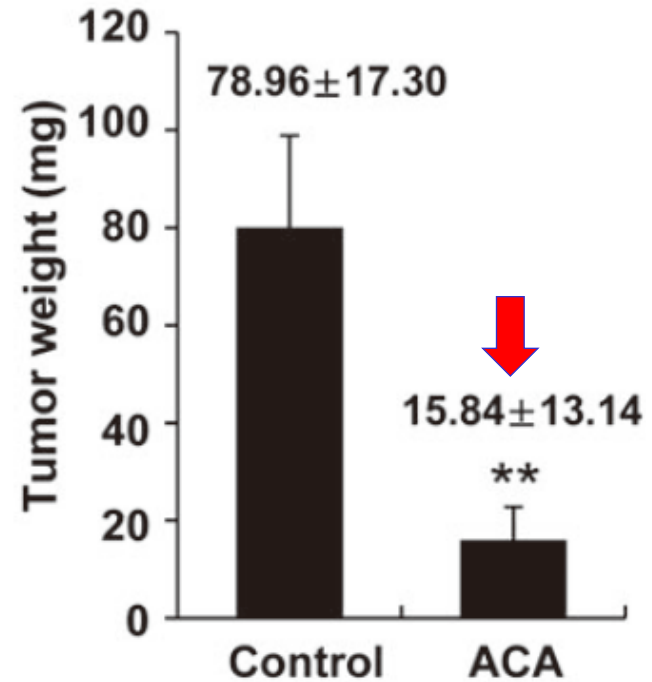
- 假說的陳述是否很明確?且是否與所欲提問的問題有相關?
- 實驗的方法與步驟是否陳述清楚?
- 所有的圖表是否正確的標示,且這些圖表是否清處的解釋了實驗的結果?
- 所有的實驗數據是否與假說有相關?
- 所以的實驗結果是否有明確的說明清楚?
這些實驗結果是否可支持假說?
- 實驗是否回答了問題?
- 結論下的是否適當?

ACA inhibits prostate tumor growth

A

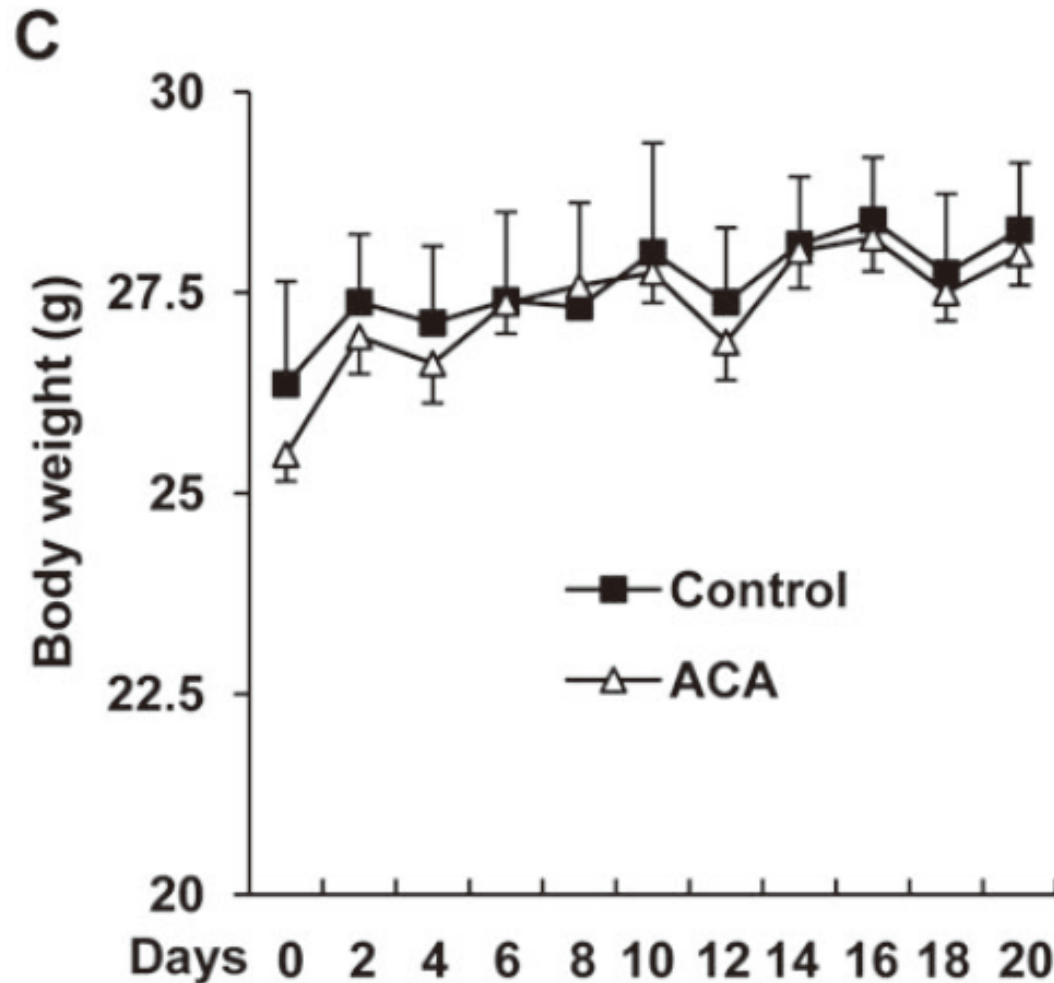


B



是否老鼠的壽命有延長？

ACA has little toxicity at the tested dose



是否老鼠體重的變化
足以反映藥物的毒性？

**How to draw the
conclusion?**

Take home message

The difference between conclusion and Summary

下結論可以是文章作者的
結論，但報告者可以試著
去批判其結論的可信度，
而提出自己的結論

**Make sure to finish your
talk in time**

Slide number

**All the data should be
readable**

**Seminar不是幫文章做整理報告
而是介紹作者想要傳達的訊息。
因此沒有理由一定要把所有的實
驗結果都全盤介紹，也沒有必要
照著文章內結果的順序進行報告**

可試著不用幻燈片練習
介紹整篇文章的概要

Seminar 常見的共通問題

- 沒有提出假說
- 過於直述
- 對於聽眾沒有適當的引導
- 沒有適當的批判
- 報告時沒有看聽眾
- 幻燈片的製作不當(字太小)
- 沒有下結論

報告的儀態

- 眼睛要看著觀眾
- 要注意聽眾的反應
- 動作與表情要適切
- 衣著要得體

報告的用語

- 文字及語言要精準
- 注意口頭語
- 盡量壓低嗓門
- 音調要顯現情緒

如何回答問題

首先要確定對問題的了解

答案簡潔扼要

不要答非所問

用詞要精準

語氣要肯定

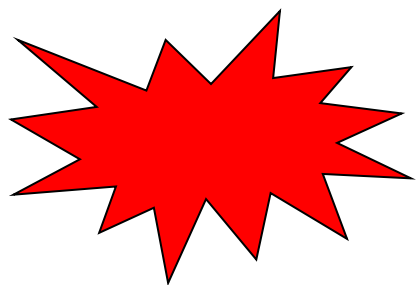
回答問題時面帶笑容

遇到不會回答的問題
怎麼辦？

知之為知之

不知為不知

切勿站著發呆不答



千萬記住

你不是作者

練習是成功的重要因素

練習需要有人指導

100次錯誤的練習仍是錯誤

一個好的專題研究報告者
自然將會是一個好的研究
設計者與論文書寫者

Seminar 課程的目的及 重點

What is seminar?

The word **seminar** is
derived from the Latin
word *seminarium*, meaning
“seminary, breeding ground
or plant nursery”



**seedbed
of thought**

The purpose to have a seminar is to bring some important scientific issues for discussion



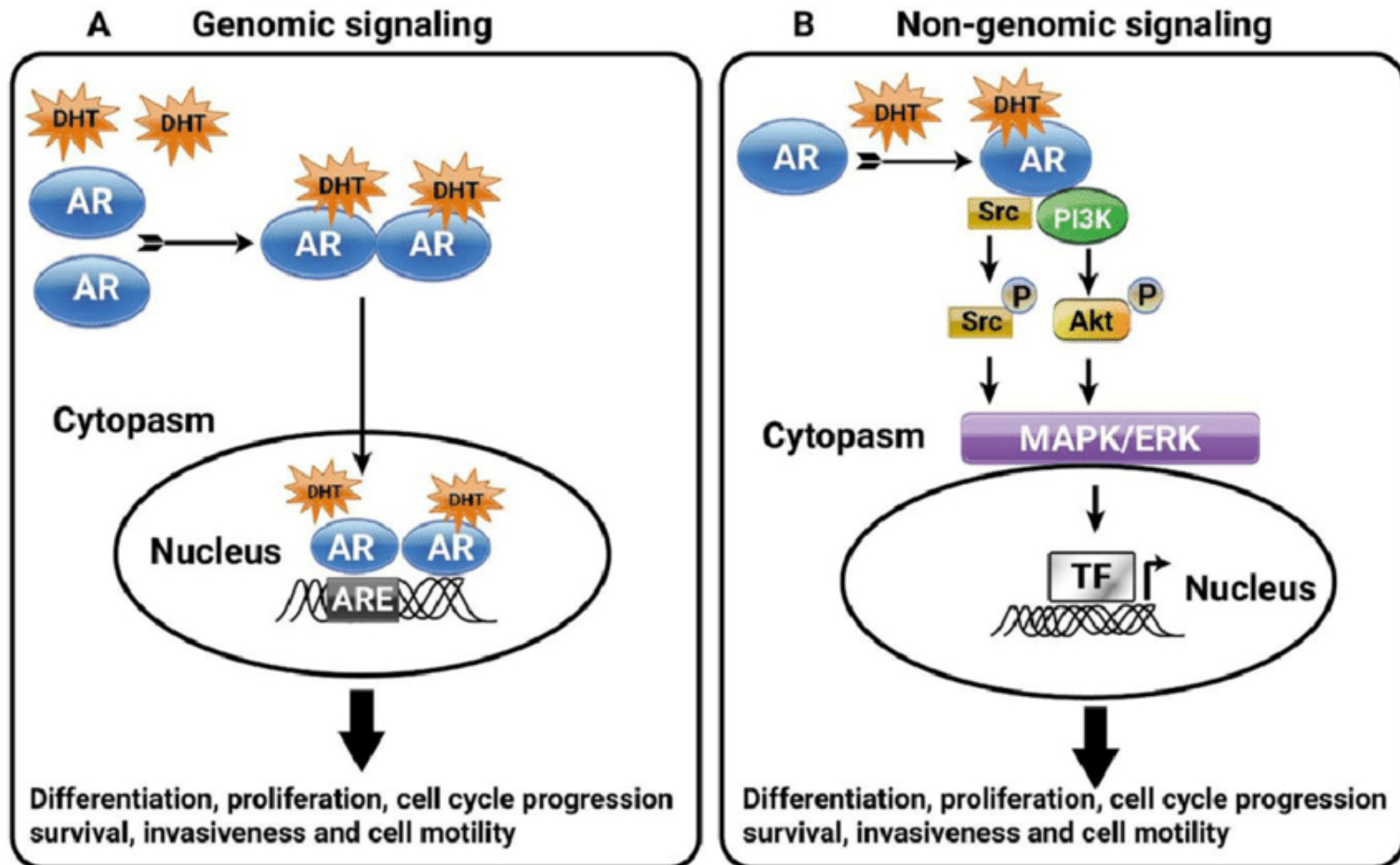
**What kind articles are
suitable for seminar
presentation?**

- **Seminar**
- **Journal club**
- **Lab meeting**

Articles suitable for seminar will provide

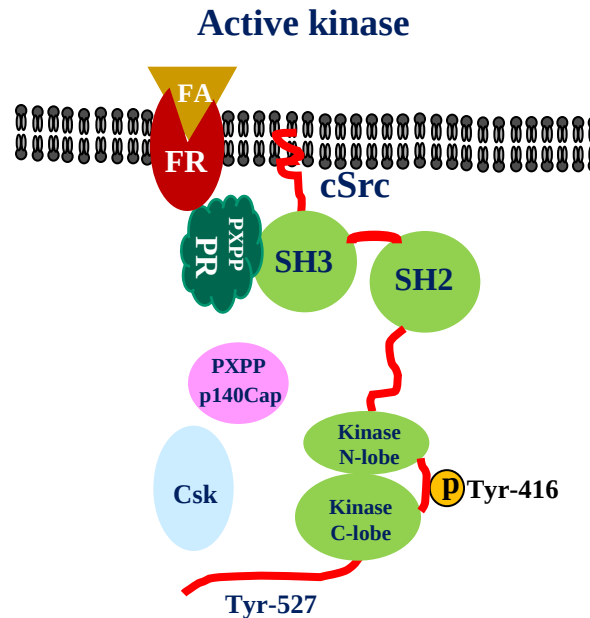
- **New concept**
- **New technique**
- **The hypothesis is still debating**

New concept



Al-Othman et al., Breast Disease I (2019) 1-3

New concept



FA: folic acid
FR: folic acid receptor
PR: progesterone receptor

Wang et al., Eur J Nutr 2020, 59:2333-2344

**Your supervisor will be helpful in
deciding which article is suitable
for seminar presentation**