How to Create and Deliver a Winning Poster

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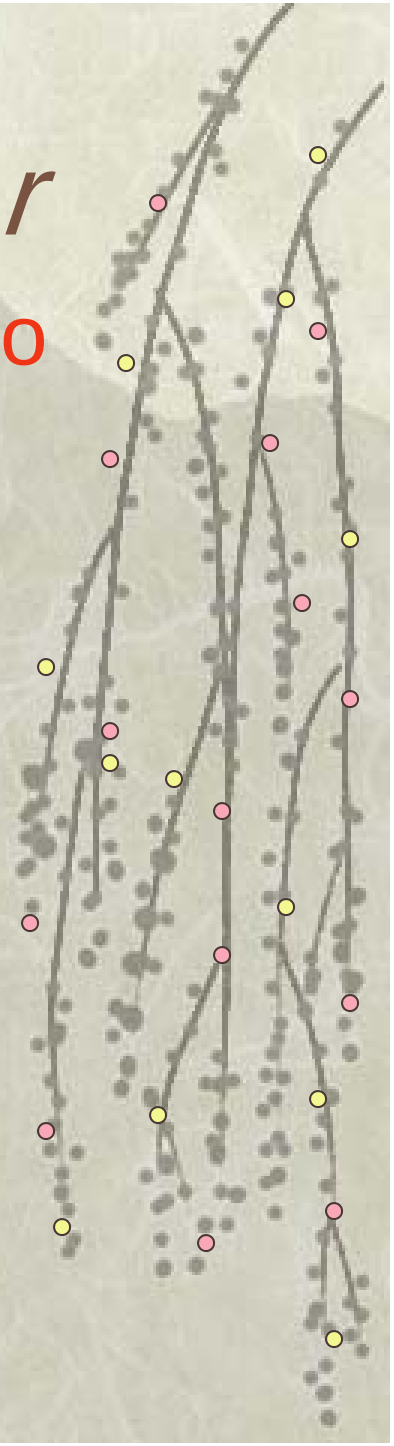
Purpose of a Poster

To communicate/publicize to others your:

- research/experiment results
- study reports
- project outcomes
- organization features
- business plans

in a way that is:

- clear
- effective



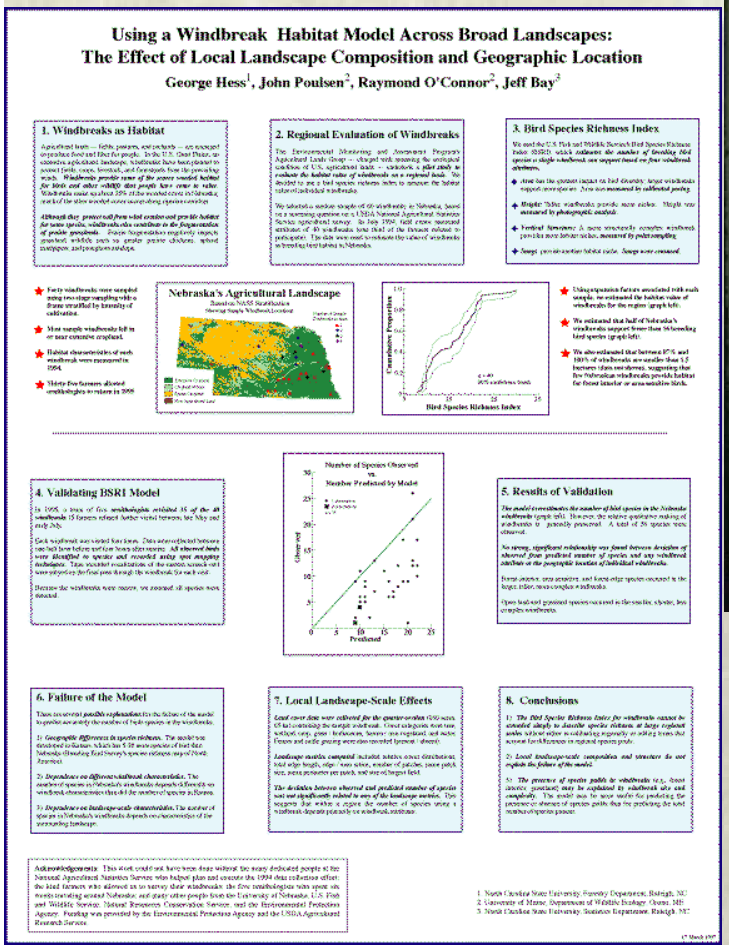
Effective and Clear Visual Communication

- Is able to catch as many viewers' attention as possible
- Is pleasing to the eye
- Is able to capture viewers' interest in less than 15 secs
- Is readable, succinct, and well organized
- Is informative
- Is legible from 3-6 feet
- Is a conversation starter

Types of Posters

Horizontal and vertical and panels

Multiple vertical panels



Using a Windbreak Habitat Model Across Broad Landscapes: The Effect of Local Landscape Composition and Geographic Location

George Hess[1], John Poulsen[2], Raymond O'Connor[2], Jeff Bay[3]

1. Windbreaks as Habitat

2. Regional Evaluation of Windbreaks

3. Bird Species Richness Index

Nebraska's Agricultural Landscape

Bird Species Richness Index

4. Validating BSRI Model

Number of Species Observed vs. Number Predicted by Model

Observed

Predicted

5. Results of Validation

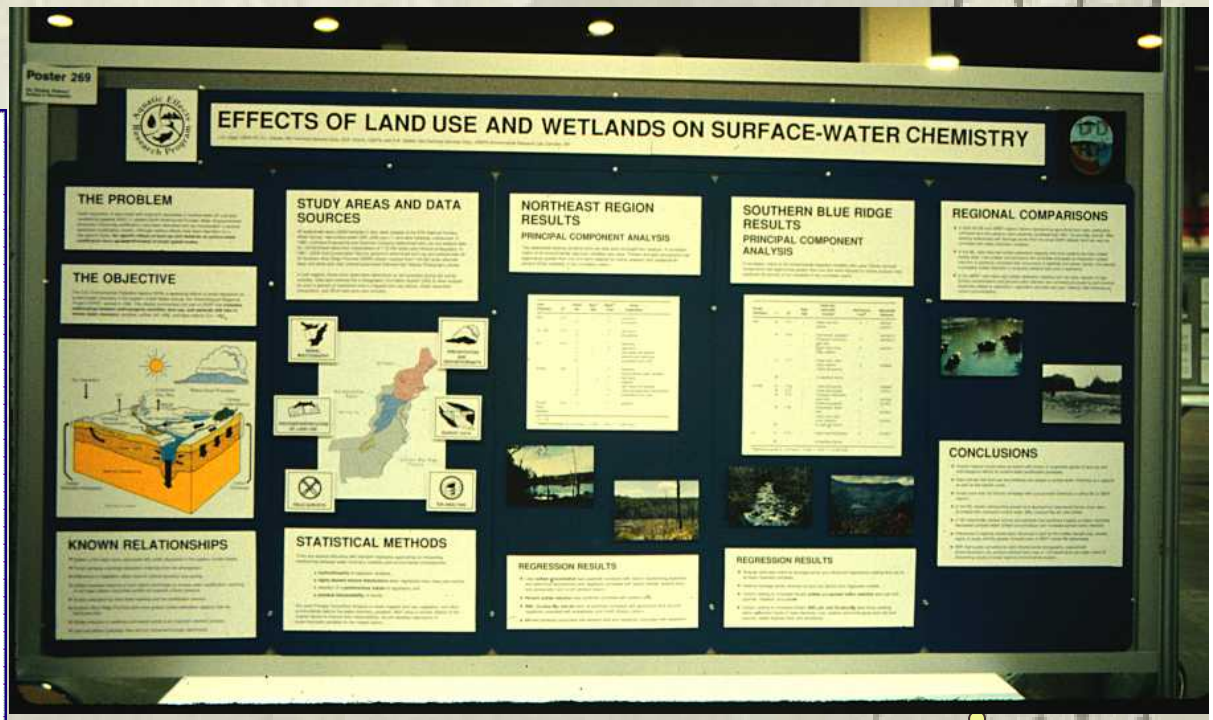
6. Failure of the Model

7. Local Landscape-Scale Effects

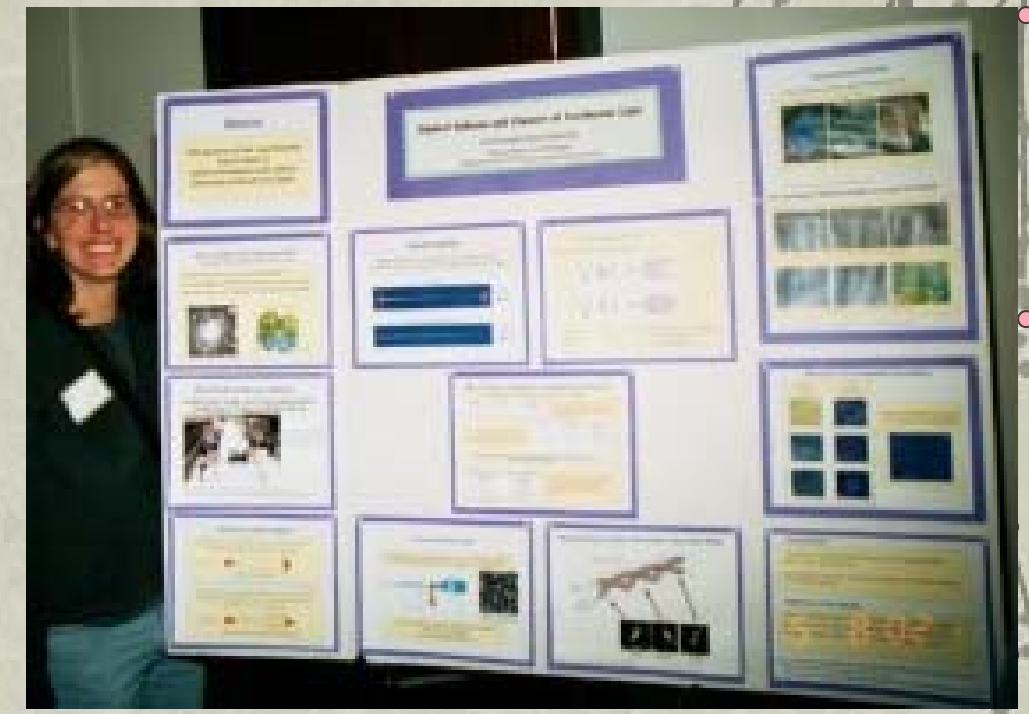
8. Conclusions

Acknowledgements

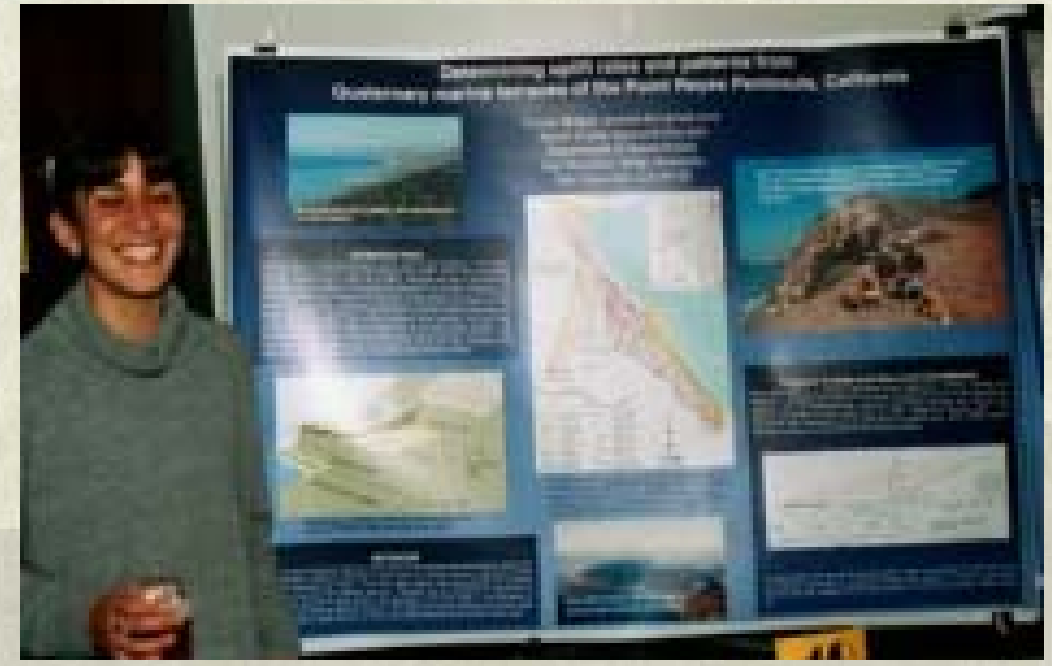
1. North Carolina State University, Forestry Department, Raleigh, NC
2. University of Maine, Department of Wildlife Ecology, Orono, ME
3. North Carolina State University, Statistics Department, Raleigh, NC



Types of Posters



Types of Posters



Three Panel Poster is Most Common

Effect of Hemodialysis on Hemostatic Platelet Function in Uremic Patients

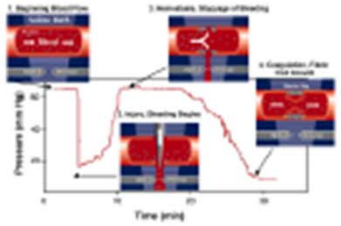
Sharad C. Mathur, M.D.[1], Jonathan L. Miller, M.D., Ph.D.[1], Sriram S. Narsipur, M.D.[2]
Departments of Pathology[1] and Medicine[2], SUNY Upstate Medical University, Syracuse, NY

Introduction

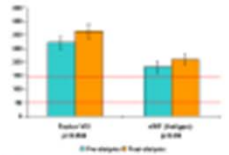
Anemia and platelet dysfunction are major contributors to the hemorrhagic diathesis seen in patients with end-stage renal disease (ESRD). Following hemodialysis, there is frequently a clinical improvement in bleeding. However, such clinical improvement is not typically accompanied by any consistent change using standard clotting assays. Evaluation of platelet function has shown a decrease in platelet membrane glycoprotein (GP) Ib and a functional improvement in GPIb/IIa following hemodialysis. Currently used laboratory tests separate the elements of primary hemostasis (platelet responses) from secondary hemostasis (coagulation cascade) and therefore are not sensitive to the effect of platelet procoagulant activity and platelet microparticle formation. We evaluated the effect of hemodialysis on coagulation using a new laboratory instrument, the Clot Signature Analyzer (CSA) (Xylum Corporation, Scarsdale, NY).

Methods

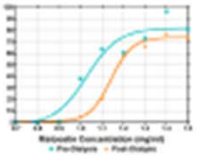
Blood was collected before and immediately following hemodialysis in ten patients with ESRD. Platelet GPIb function was analyzed by platelet aggregation in response to incremental concentrations of ristocetin. Hemostatic function was further evaluated by the CSA instrument. This instrument uses a continuous flow system to determine the time to platelet plug formation and platelet-dependent fibrin clot formation the non-anticoagulated whole blood. Whole blood flows through a tube that is punctured by a needle to cause a sudden increase in shear stress and activation of hemostatic pathways (figure 1). Because it uses non-anticoagulated whole blood, this system is sensitive to platelet procoagulant function and platelet microparticle formation. Statistical significance was assessed using a two-tailed student's t-test for paired data. Differences in pre-dialysis and post-dialysis values were considered significant at $p < 0.05$.



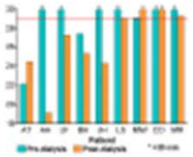
Results

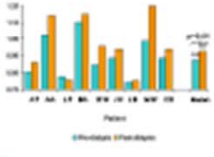


Screening tests of secondary hemostasis (prothrombin time, partial thromboplastin time, and thrombin time) were not significantly different following dialysis. Post-dialysis values of factor VIII and von Willebrand factor were significantly higher than pre-dialysis values (figure 2).



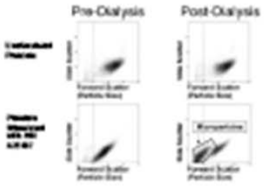
GPIb activity following hemodialysis was consistently decreased, as shown by diminished aggregation in response to incremental concentrations of ristocetin (figure 3). The EC50 for ristocetin following hemodialysis was 0.93 mg/ml, a statistically significant increase of 0.07 mg/ml over the pre-dialysis value ($p<0.01$) (figure 4)





Baseline CSA platelet plug formation was abnormally prolonged in 6 patients and platelet-dependent fibrin clot formation was abnormally prolonged in 7 patients. In 6 patients, a clot had still not formed after the 30 minute observation period. Following dialysis, the time to platelet-dependent clot formation was shortened for 6 of the 6 patients for whom data could be analyzed (figure 5).

Platelet microparticle formation was evaluated using flow cytometry in two patients. In response to 4 uM calcium ionophore A23187, there was a dramatic increase in platelet microparticles following hemodialysis (figure 6).



Discussion

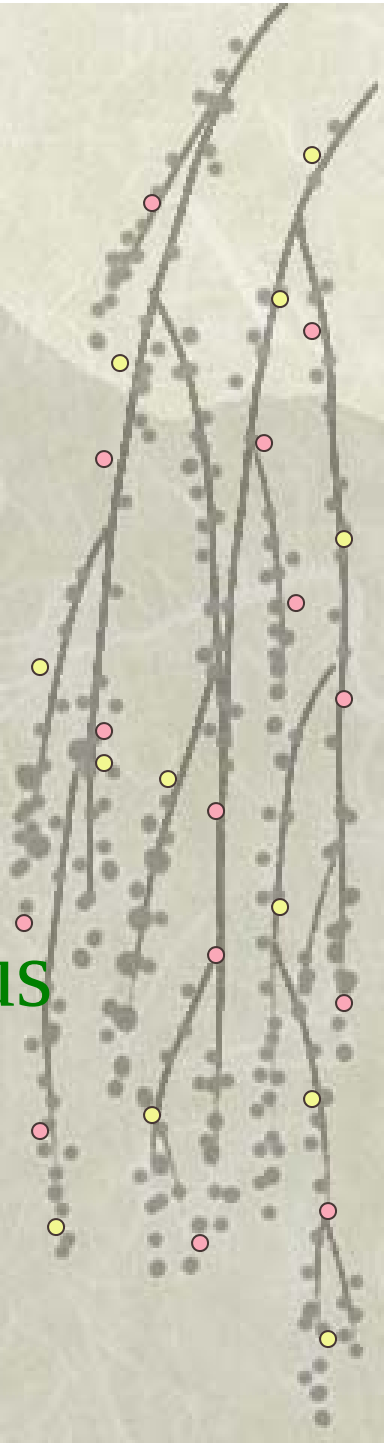
The bleeding diathesis of ESRD and the effect of hemodialysis on it are incompletely understood. Traditional measures of platelet function show a decrease in platelet GPIb function following hemodialysis. Current laboratory tests are limited by the fact that they separate primary hemostasis from secondary hemostasis and therefore do not evaluate the role played by platelets in the coagulation cascade through their procoagulant activity and microparticle formation. The CSA instrument shows a strong trend toward shortening of the time to platelet-dependent fibrin clot formation for whole blood. This assay is sensitive to defects in platelet procoagulant function and platelet microparticle formation. Improvement in these parameters is, therefore, a possible mechanism by which hemodialysis produces an improvement in the bleeding diathesis of ESRD. Preliminary data on platelet microparticle formation from two patients supports this hypothesis. Studies are ongoing to assess platelet procoagulant function following hemodialysis.

Conclusions

- Shear-dependent platelet plug formation is defective in ESRD patients.
- Hemodialysis results in decreased GPIb function manifested by decreased GPIb mediated platelet aggregation in response to ristocetin even in the presence of increased von Willebrand factor levels.
- Platelet-dependent fibrin clot formation is defective in ESRD patients despite normal screening studies of secondary hemostasis. (prothrombin time, partial thromboplastin time)
- Platelet-dependent fibrin clot formation is improved by hemodialysis, which may be related to improvement in platelet procoagulant activity or platelet microparticle formation.

Before starting

- Know the intended audience
- Decide what the main message is
- List text, diagrams, tables, photos, etc. to be included
- Budget the space needs for various elements
- Sketch a layout

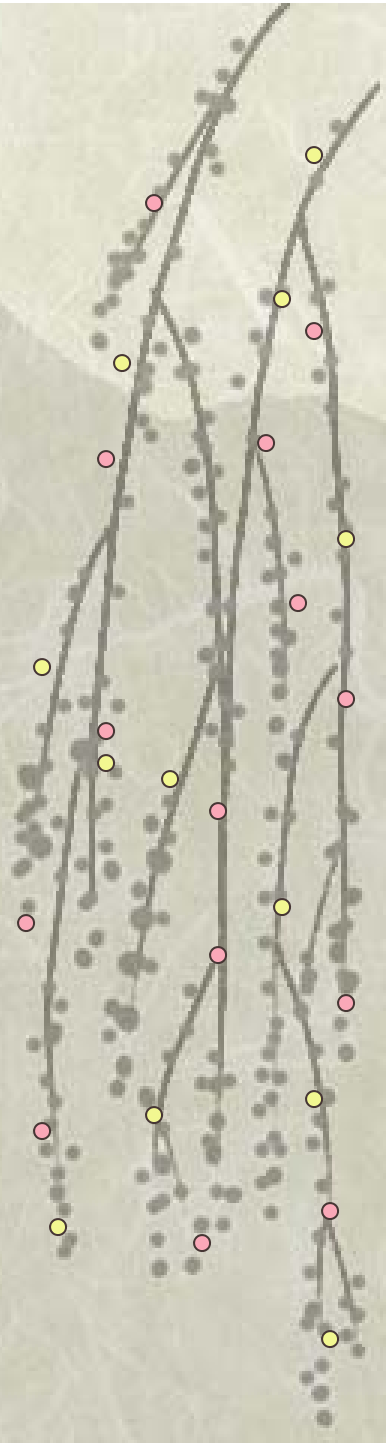


Who is the audience?

- People in your specialty
  (may use jargon and other professional shortcuts)
- People in related fields
  (minimize jargon but may assume basic knowledge)
- People in unrelated fields
  (assume no prior knowledge; use the most basic terms)

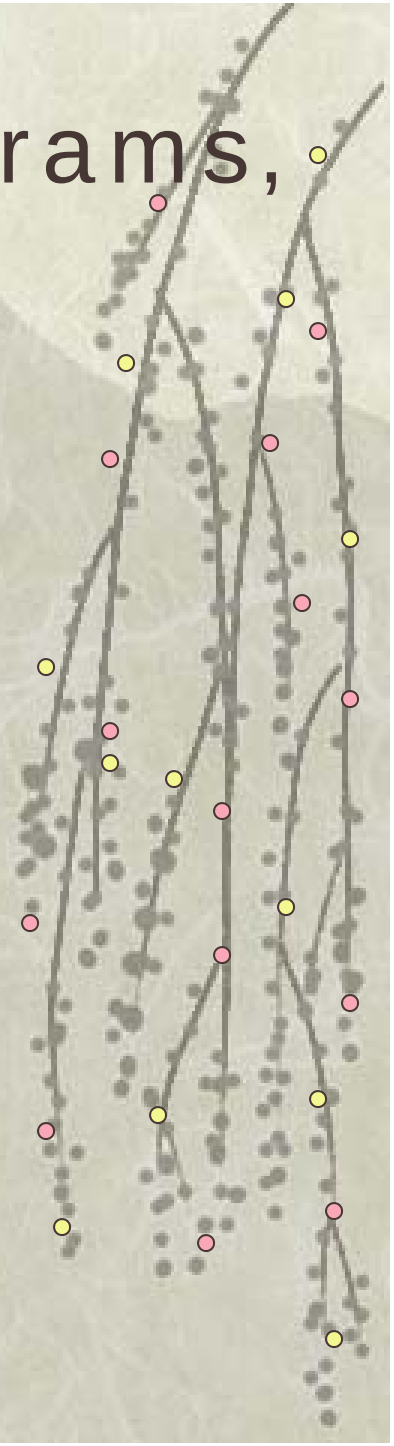
What is the message?

- State the main point(s) and conclusion(s) succinctly
  (a catchy but descriptive title, an effective abstract or introduction)
- Focus everything else on those points and conclusions
  (do not try to include everything in a poster)

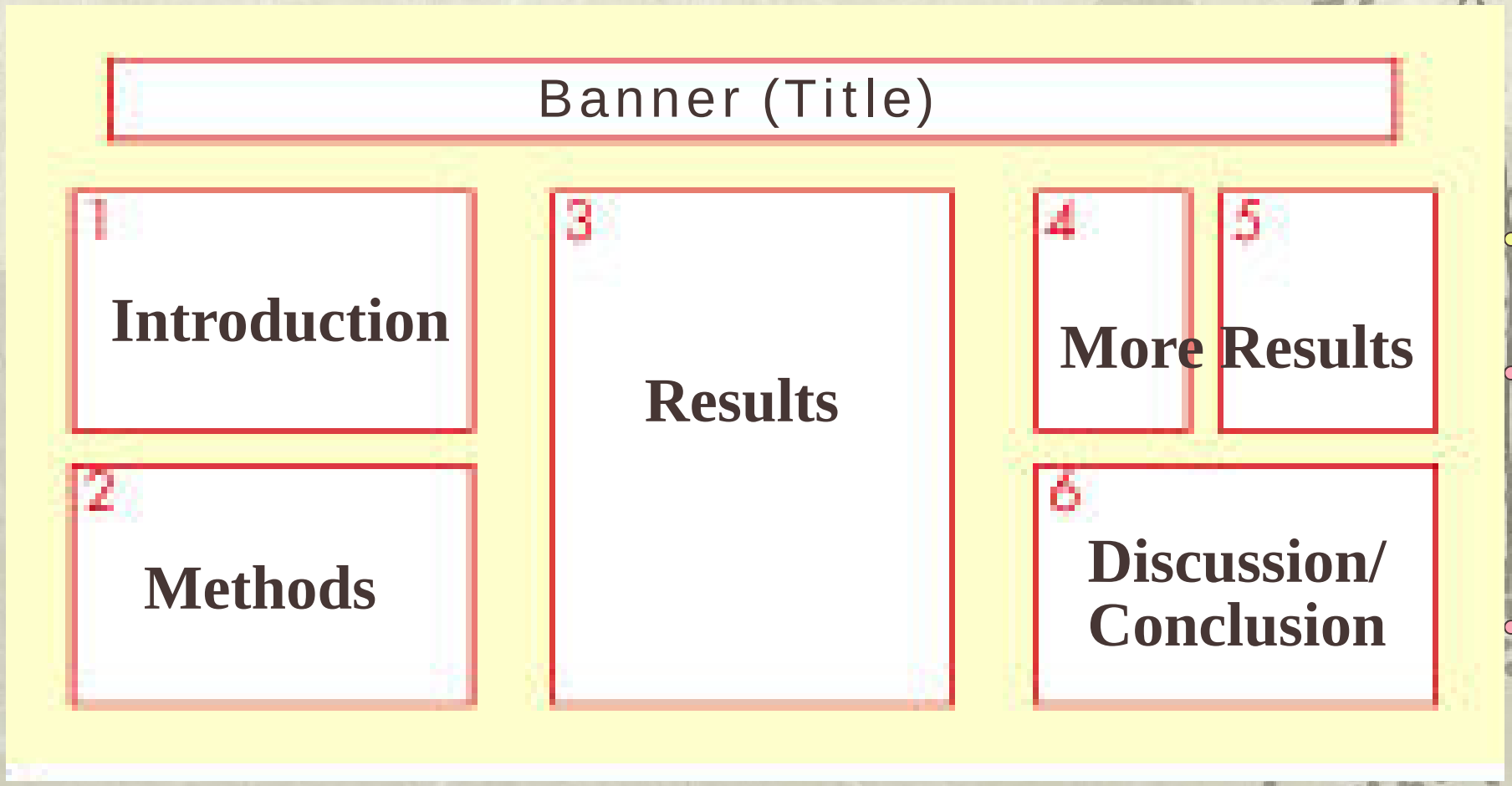


Should you use text, diagrams, tables or photos?

- Utilize all but be strategic and space-conscious.
- Follow: “A picture is worth ten thousand words”
- Tables are more effective than text, figures are better than tables.
- Use short sentences
- Check spelling and grammar
- Include titles and legends

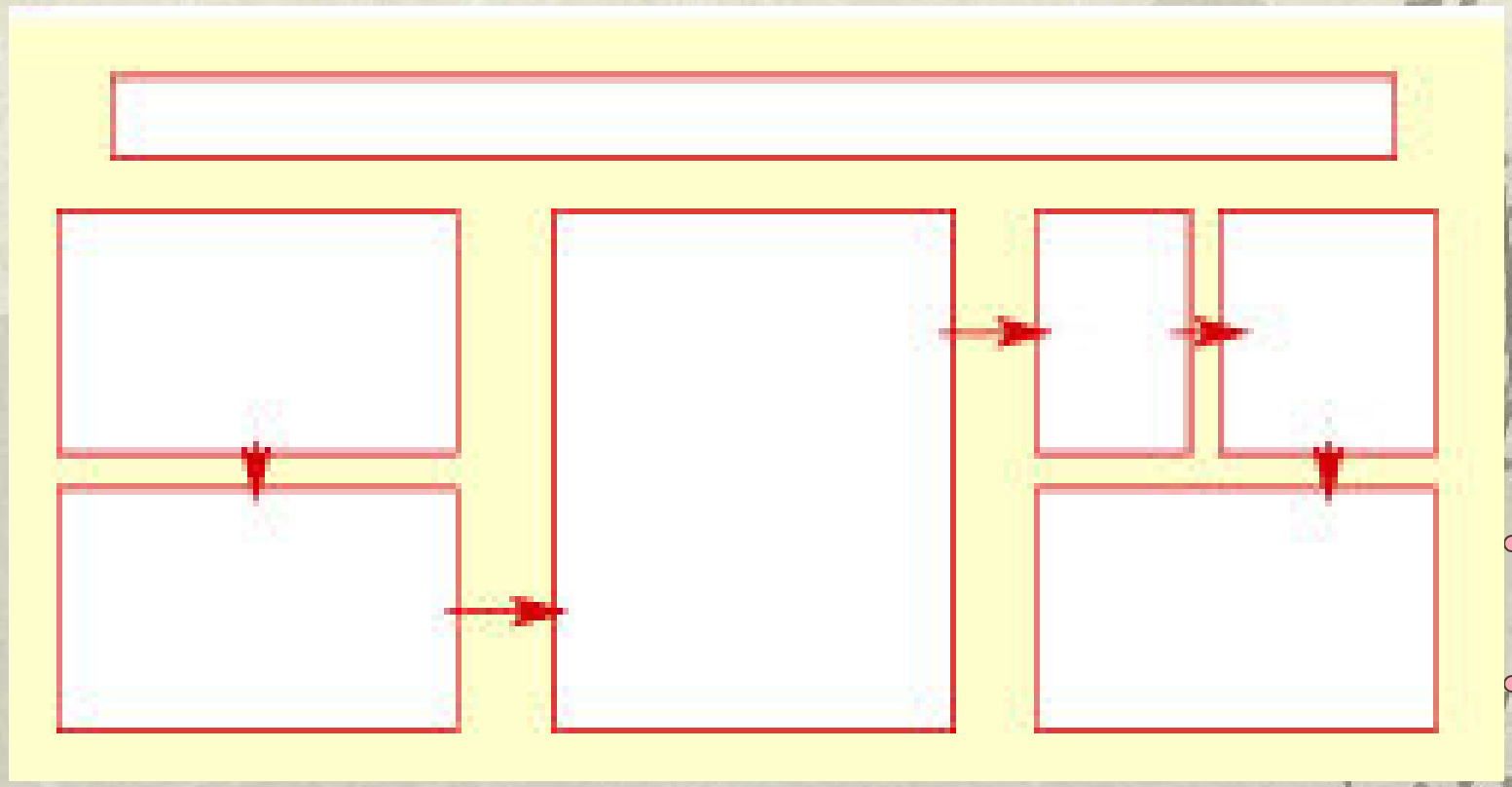


Three Panel Poster Layout



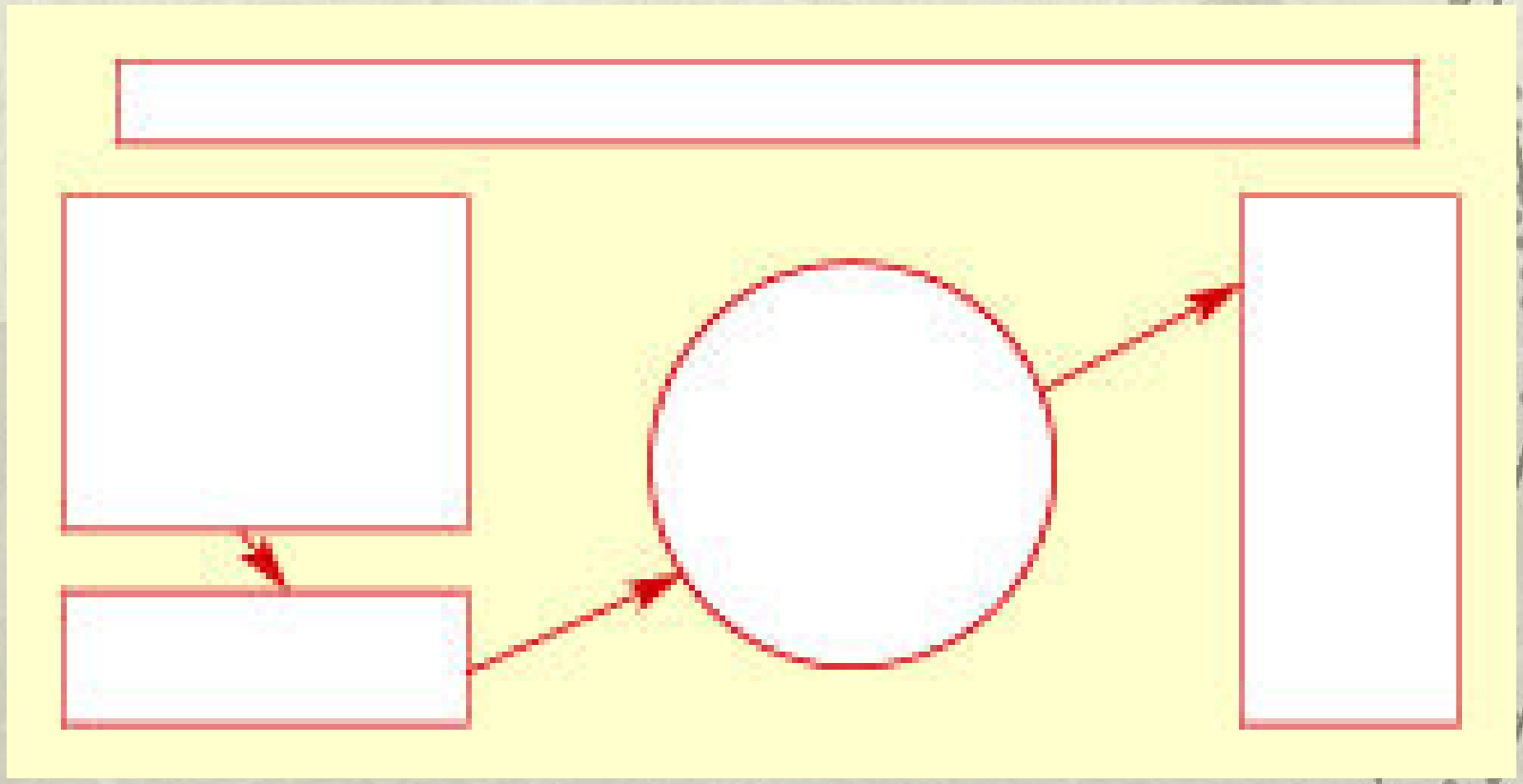
Numbering the panels to guide readers with the flow

Three Panel Poster Layout



Use of arrows instead of numbers

Three Panel Poster Layout

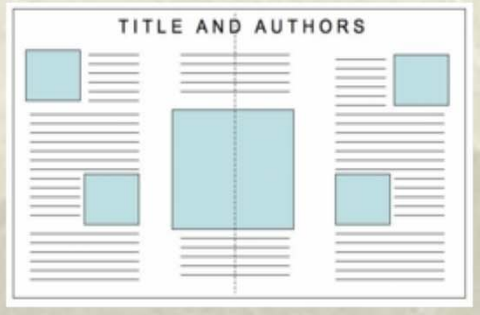


Use of elements of different sizes, shapes, and proportions.

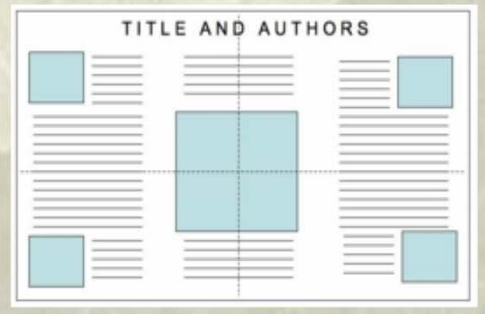
Poster Templates, Pictures and Graphics

Balance and White Space

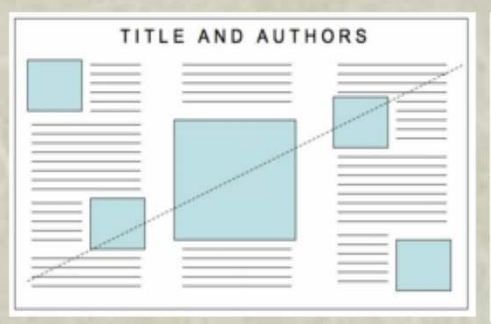
Your poster should have a good visual balance of figures and text, separated by white space. Balance occurs when images and text are reflected (at least approximately) across a central horizontal, vertical, or diagonal axis of symmetry.



Horizontal Symmetry



Horizontal & Vertical Symmetry



Diagonal Symmetry

Asymmetry
(text-heavy on left, image-heavy on right)

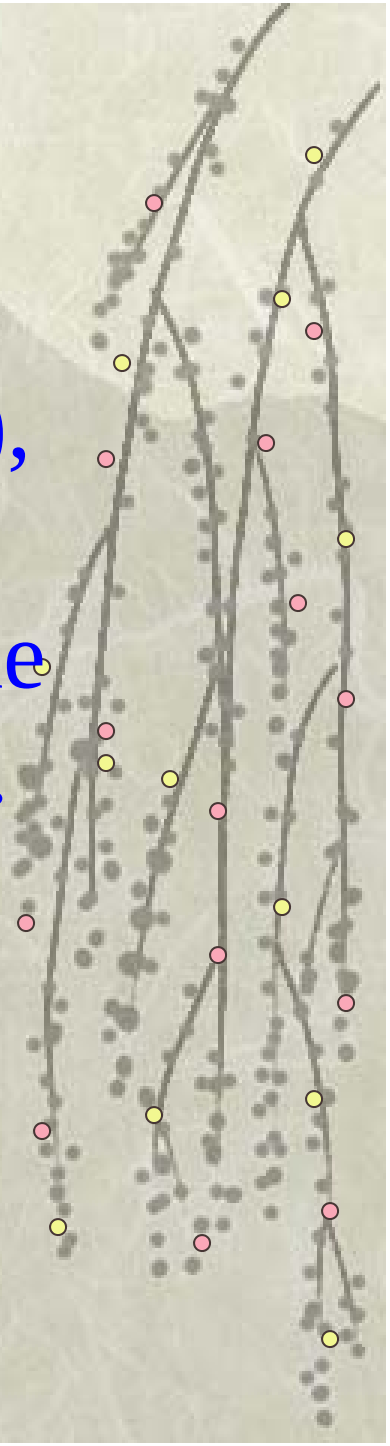
Text Blocks

Keep text blocks to below 50 words.

Banner (Title box)

- A banner shows the title, author (s), and affiliation. The banners should be 10–12 inches tall and 4 feet wide with 1-inch margins on all sides.

- The title should be concise and depict the project. It should be legible at 20 feet.



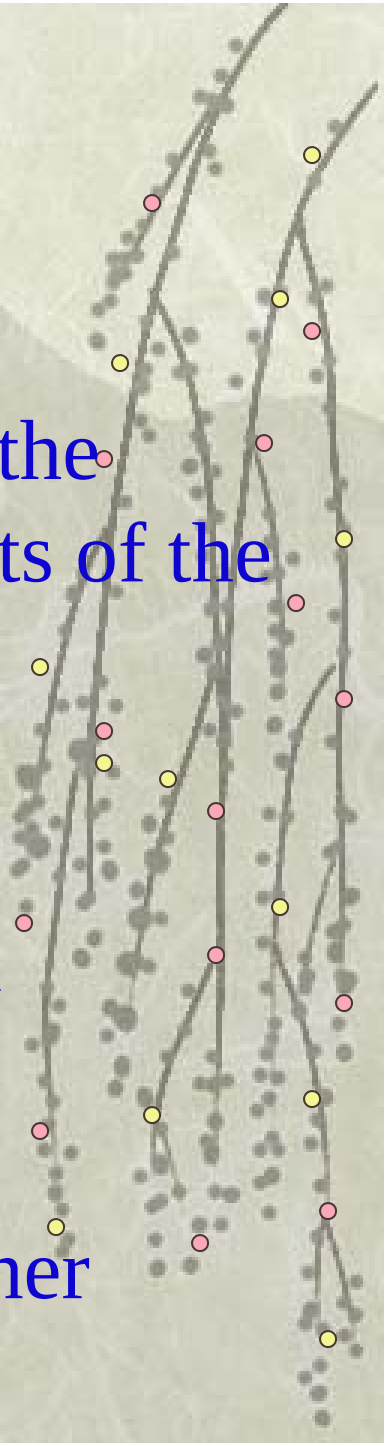
Abstract

- Optional on a poster depending on the desire of the author or the requirements of the organization.
- It must accurately summarize the

  -hypothesis or research question

  -methods and data

  -conclusions described in the other sections of the poster.



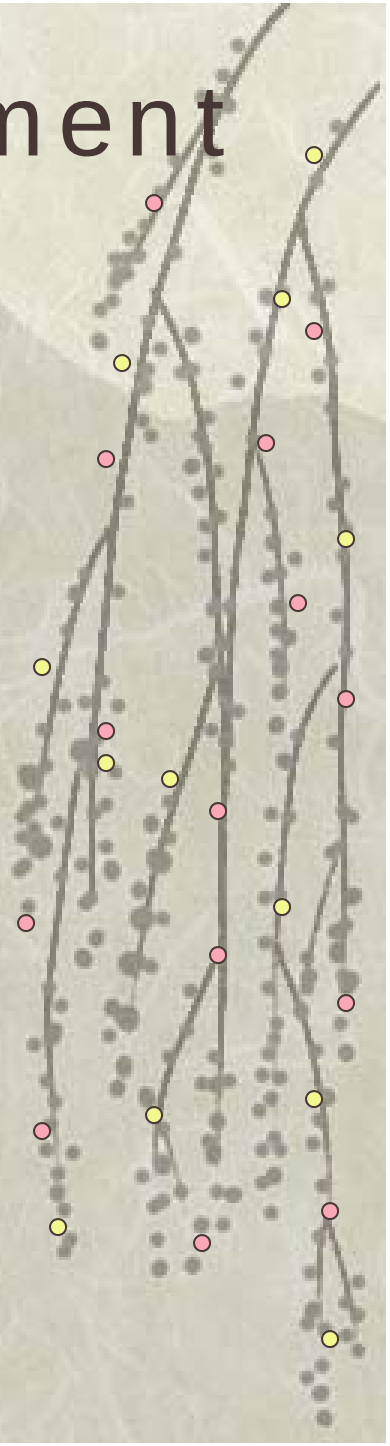
Introduction

- The introduction should address the question:
  - Why did you start this project?
  - It defines the topic and explains the rationale and importance of your study.

- It includes your research question(s) and/ or the hypotheses you tested.
- Significance and originality of the work should be clear.

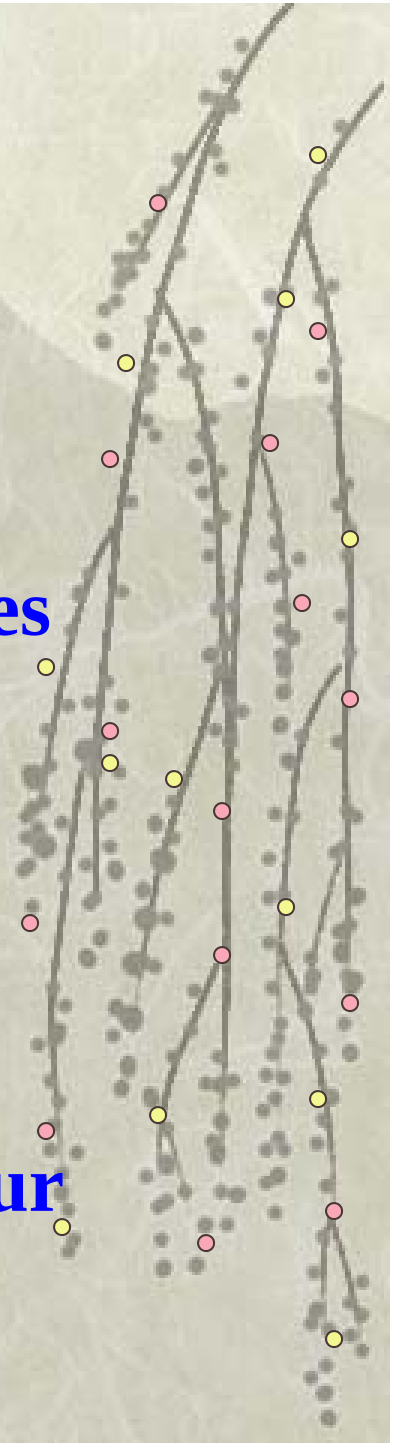
Methods, materials, equipment

- Explain what you did. Ideally, this section gives enough information to allow another researcher to replicate the study.
- Provide enough detail to allow another researcher to judge if the study design was adequate (and thus to judge the validity of your study).
- Flow diagrams work well instead of written text. List major materials and equipment used.



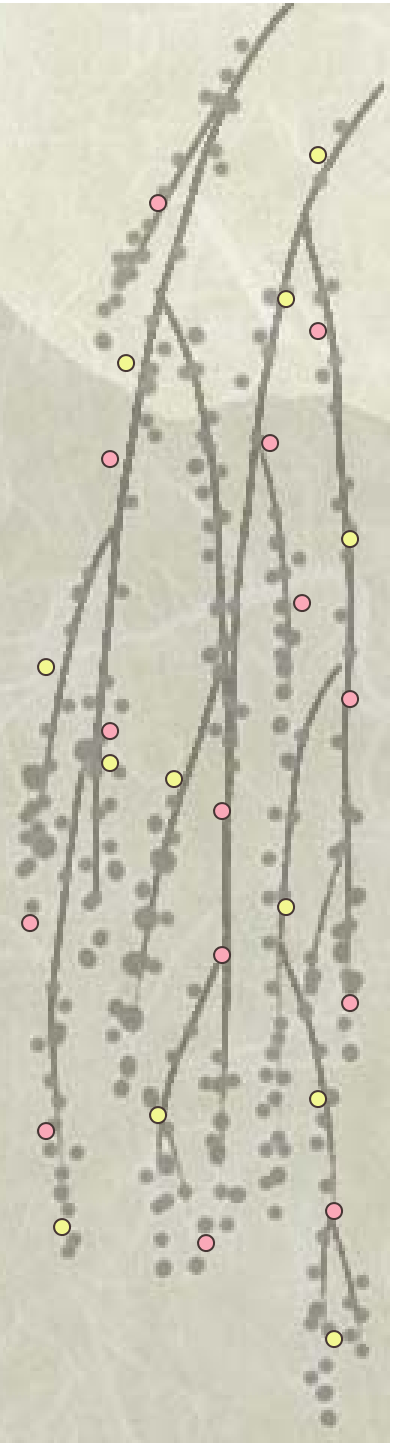
Results

- **This section presents what you have found in your research or the outcome of your project.**
- **It may include statistical analyses, tables and/or figures showing your data.**
- **Arrange your results in a logical order according to the point(s) you want to get across.**
- **Present only enough data to support your conclusions.**



Discussion/Conclusion

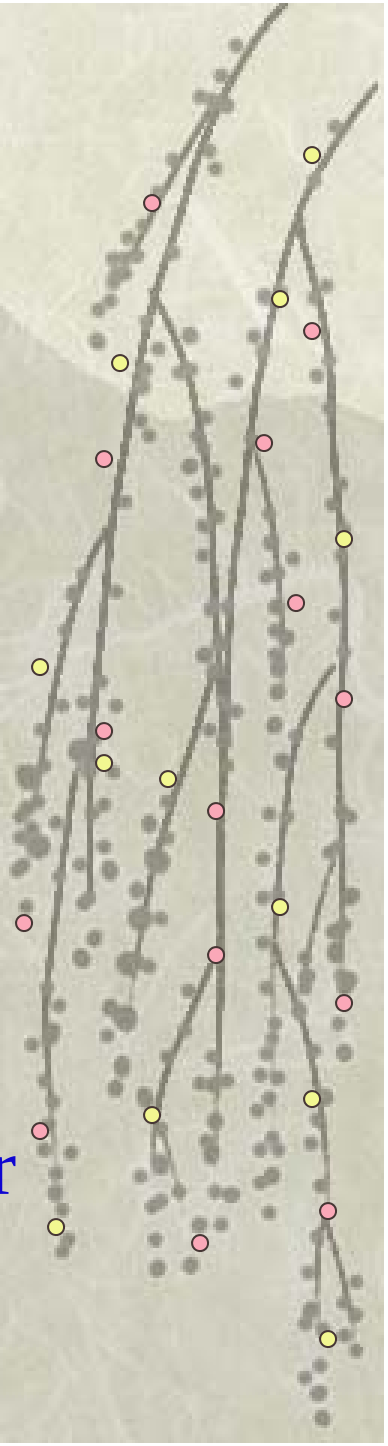
- **What do your results mean?**
- **Present supporting evidence from published reports.**
- **Any contradictory findings should be addressed, and any limitations of your study.**
- **The conclusion section should directly relate to the research question and hypotheses and supported by the results.**



General suggestions

Layout

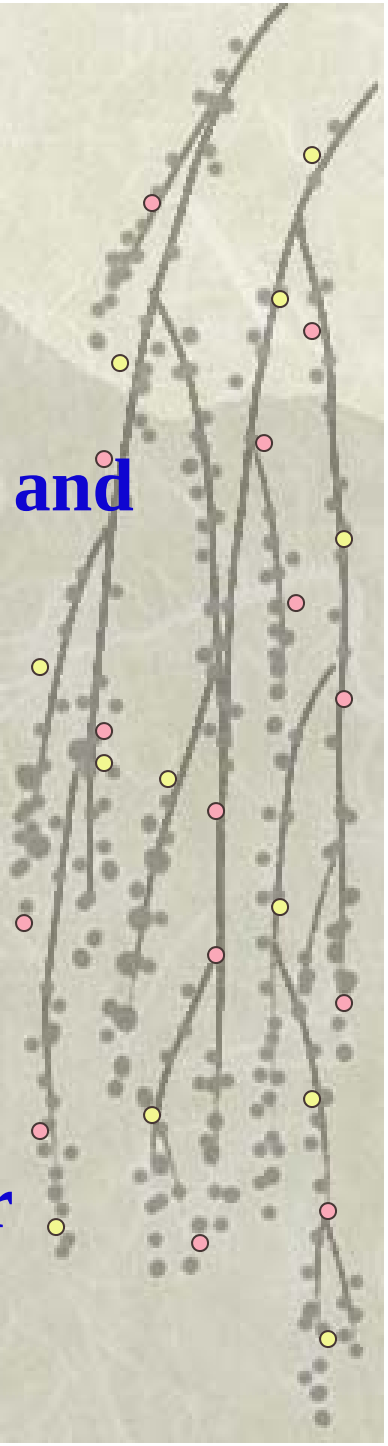
- Use headings to help readers find key sections.
- Balance the placement of text and graphics.
- Use white space creatively to grab viewers' attention.
- Follow the normal flow of reading: top to bottom and left to right.
- Use column format to make poster easier to read in a crowd.



General suggestions

Text and Font

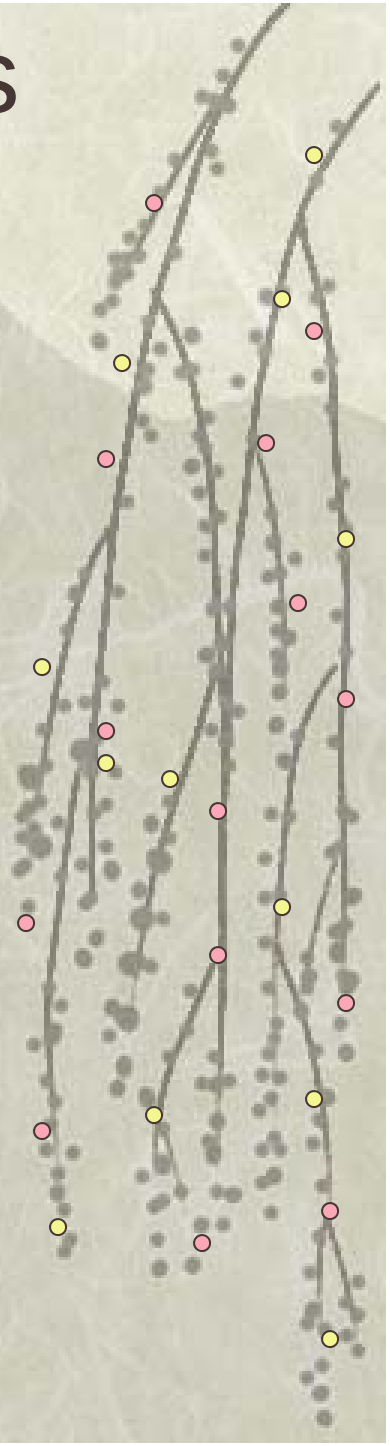
- **Write simple, easily readable texts.**
- **Omit extraneous text by using key words and phrases.**
- **Highlight important words or phrases by switching styles: bold, underline, italic, shadow, etc.**
- **Do not use all capitals except in headings.**
- **Do not use too many different font types.**
- **Use large fonts: 18-point for the smallest text, 24-point for normal text, 28-point for heading, 48-point for title.**



General suggestions

Photos, figures and tables

- Should be clear, self explanatory, uncomplicated, and of sufficient size.
- Tables and figures must have titles.
- Figures must include legends.
- Borders on photos and figures can enhance presentation



General suggestions

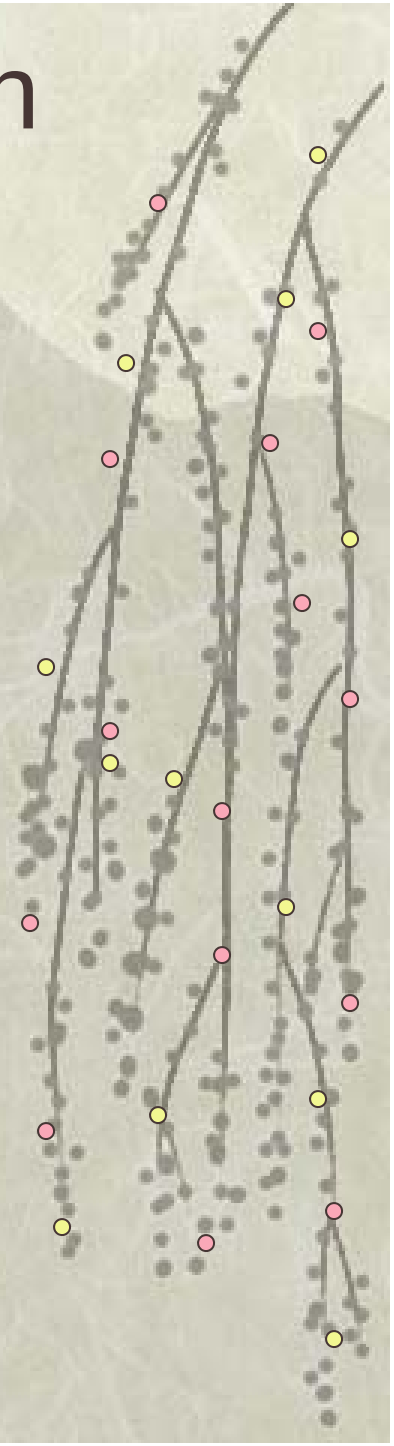
Color and contrast

- **Use color to draw attention to particularly important parts of your poster (but do not use everywhere)**
- **Use pleasing contrast to reduce eye strain and make the poster more legible and interesting**
- **Note that printed color may be different from what appear on the computer monitor**

Additional information

Useful Website

http://www.aspb.org/education/poster.cfm



Software

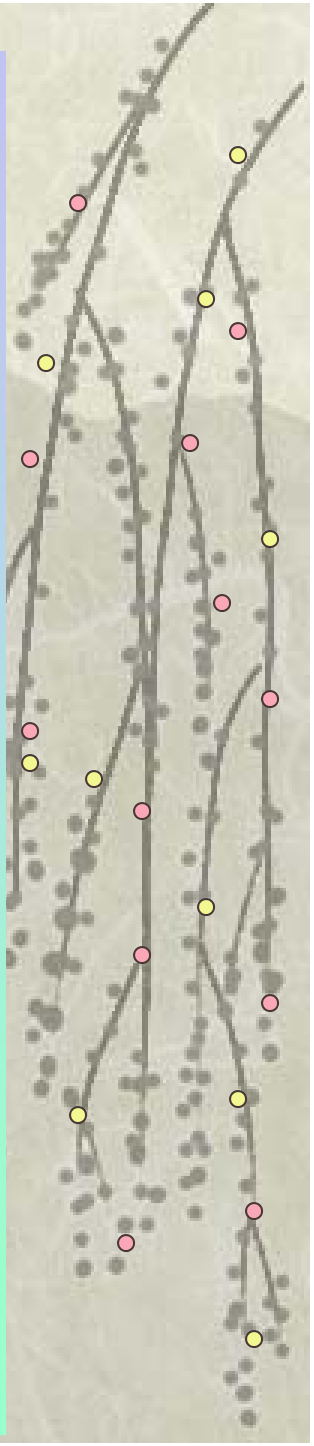
MS Word, MS PowerPoint, Adobe Illustrator, LaTeX
InDesign

On Showcase Day

- **Be prepared to give a 2-minute presentation to judges**

- **Focus on the big picture, explain why the problem is important, and use the graphics to illustrate and support your key points.**

- **Limit jargon, judges may be from a mix of specialties in the discipline.**



On Showcase Day

- **Arrive early at the display site. Set up display before 1 pm.**
- **Bring the poster and all accessories.**
- **Bring copies of a handout (optional)**
- **Be there between 3 and 6:30 pm.**