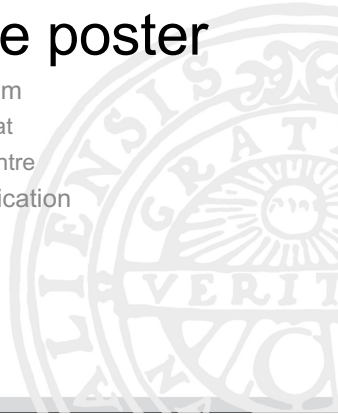




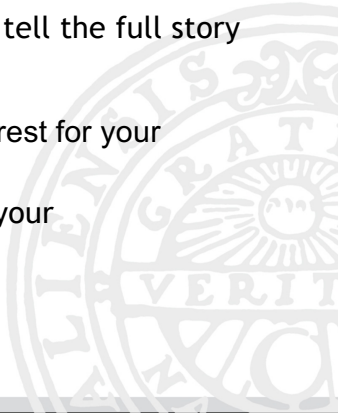
To make a science poster

Elisabeth Långström
Director of Studies at
Biology Education Centre
Information & communication



What is a poster?

- ✦ An enlarged book page/article page or something completely different?
 - ✦ Simplify and focus - should not tell the full story
- ✦ Why do we make posters?
 - ✦ Inform about and create an interest for your subject
 - ✦ Show who you are and market your research/subject
 - ✦ Make contacts - network



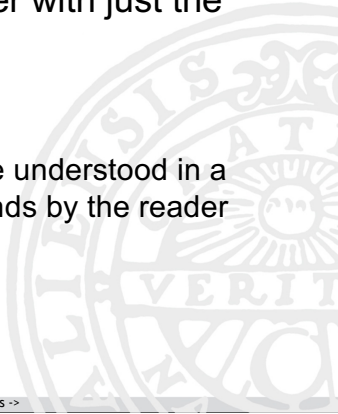
What is a poster?

- ✦ Reaction in your audience:
 - ✦ Know
 - ✦ Think
 - ✦ Feel
 - ✦ Do
 - ✦ Change their mind



See your poster as an ad

- An ad for your project! A teaser with just the essence of your project.
 - What is done?
 - Who did it?
 - Conclusion
- } Should be understood in a few seconds by the reader





General about posters

- ✦ If you are not seen, you do not exist.
- ✦ Do not hide your message in too much text



General about posters

- ✦ If you are not seen, you do not exist.
- ✦ Do not hide your message in too much text
- ✦ Use illustrations
 - ✦ A picture says more than a thousand words

General about posters



General about posters

- ✦ If you are not seen, you do not exist.
- ✦ Do not hide your message in too much text
- ✦ Use illustrations
 - ✦ A picture says more than a thousand words
- ✦ Focus on your main header, aim and conclusion
 - ✦ These should show what was done and what the findings were

How much time have you got?

- ✦ For how long time does one look at the poster before deciding to read it?
- ✦ How long time does one then spend reading the poster?



The practical work



The poster: Think before you start making it

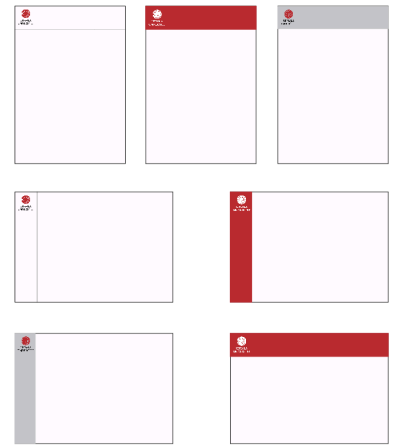


- ✦ What is your message?
- ✦ Focus on your audience
 - ✦ Who are the target persons?
 - ✦ Adapt your message to your target group
- ✦ How can you make people come to your poster?
- ✦ Always tell the most important first
 - ✦ You need to make you audience interested
- ✦ The headline and the general apperance decides if people want to keep reading



Uppsala University graphical profile

- ✦ Layout
 - ✦ 70 x 90 cm
 - ✦ Landscape or portrait
 - ✦ No images in the margin/top border
 - ✦ 2-4 colmns
 - ✦ Classic reading pattern: top left->bottom right
- ✦ Logo
- ✦ Fonts
- ✦ Colours



Poster title goes here, containing strictly only the essential number of words...

Author's Name Goes Here, Author's Name Goes Here
Biology Department, Skyline College, San Bruno CA

<p>Abstract</p> <p>First... Check with conference organisers on their specifications of size and orientation, before you start your poster eg. maximum poster size; landscape, portrait or square. The page size of this poster template is A0 (84x119cm), landscape (horizontal) format. Do not change this page size, this printer can scale-to-fit a smaller or larger size, when printing. If you need a different shape start with either a portrait (vertical) or a square poster template. Bear in mind you do not need to fill up the whole space allocated by some conference organisers (eg. 84x119 in the USA). Do not make your poster bigger than necessary just to fill that given size.</p>	<p>Methods</p> <p>Tips for making a successful poster...</p> <ul style="list-style-type: none"> • Rewrite your paper into poster format ie. Simplify everything, avoid data overload. • Headings of more than 6 words should be in upper and lower case, not all capitals. • Never do whole sentences in capitals or underline to stress your point, use bold characters instead. • When laying out your poster leave breathing space around you text. Don't overcrowd your poster. • Try using photographs or colored graphs. Avoid long numerical tables. • Spell check and get someone else to proof-read. 	<p>Results</p> <p>Importing / inserting files...</p> <p>Images such as photographs, graphs, diagrams, logos, etc. can be added to the poster. To insert scanned images into your poster, go through the menus as follows: Insert / Picture / From File... then find the file on your computer, select it, and press OK. The best type of image files to insert are JPEG or TIFF. JPEG is the preferred format. Be aware of the image size you are importing. The average color photo (13 x 18cm at 180dpi) would be about 3Mb (1Mb for BW greyscale).</p> <p>Notes about graphs... For graphs use MS Excel</p>	<p>Discussion & Conclusion</p> <p>Printing and Laminating...</p> <p>Note: Do not leave your poster until the last minute. Simply highlight this text and replace.</p>
<p>Aim</p>	<p>Background</p> <p>How to use this poster template...</p> <p>Simply highlight this text and replace it by typing in your own text, or copy and paste your text from a MS Word document or a PowerPoint slide presentation. The body text / font size should be between 24 and 32 points. Arial, Helvetica or equivalent. Keep body text left-aligned, do not justify text. The color of the text, title and poster background can be changed to the color of your choice.</p> <p>Illustrate the procedure in figure (flow chart)</p>	<p>Literature Cited</p>	<p>Acknowledgements</p> <p>Just highlight this text and replace with your own text. Replace this with your text.</p>



What should you include?

- Pictures (relevant photos, tables etc)



- Robust Jeep with 4WD
- Will take you over obstacles



What should you include?

- Pictures (relevant photos, tables etc)



- Robust Jeep with 4WD
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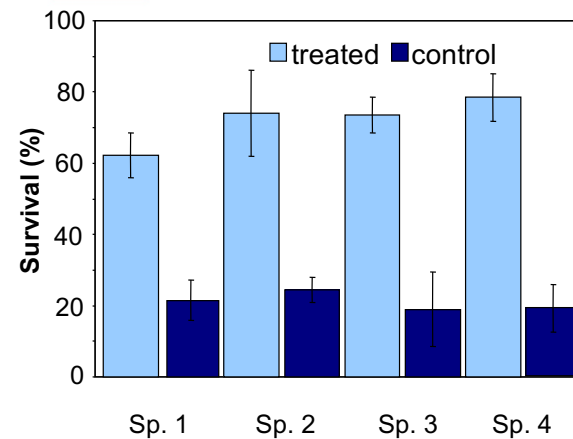


What should you include?

- Pictures (relevant photos, tables etc)
- Text (title, attracting lead, subtitles, body text)
- Image captions
- References – not always necessary – depends ...
- Contact information
- Acknowledgements (important contributions, funding)
- Picture of the author (small)
- Handout optional
- White space!!!



Figures/Diagrams



- Avoid complex diagrams
- At least A5 size
- Explanation in the caption, not in the text.

Fig. 1. The survival increased after treatment for all species. The bars show the \pm sd.



The text - be concise...

- Do not use too much text
- Every word on the poster should be important. "Wash" your text carefully.
- Aim for short concise sentences illustrated by the images.
- Also image captions should be short and readable (well written, adapted to the audience, good size).



The text

- Short striking header (lowe case/upper case) – ca 4–5 cm high – try it by printing parts in full size!
- Conclusions and intro
- Explaining subtitles → a little less text
- Running text: all that information you want to give and write about – leave it out – "Kill your darlings" ☺
- Length of text lines – ca 35-40 letters (never more than 60), and up to ca 6 lines per paragraph
- References smaller font size (if included)
- Text adjustment left or straight right margin? -> two examples



The text

Arial Sed ut perspiciatis, unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam eaque ipsa, quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt, explicabo.

Gill Sans 24–30 pt. Normal space between words. Straight left margin.

Times New Roman Sed ut perspiciatis, unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam eaque ipsa, quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt, explicabo.

Times New Roman 24–30 pt. Normal space between words. Straight left margin.



The text

Arial Sed ut perspiciatis, unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam eaque ipsa, quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt, explicabo.

Gill Sans 24–30 pt. More space between words. Straight margins, both left and right.

Times New Roman Sed ut perspiciatis, unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam eaque ipsa, quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt, explicabo.

Times New Roman 24–30 pt. More space between words. Straight margins, left and right.



The text

- Short striking header (lowe case/upper case) – ca 4–5 cm high – try it by printing parts in full size!
- Conclusions and intro
- Explaining subtitles → a little less text
- Running text: all that information you want to give and write about – leave it out – “*Kill your darlings*” ©
- Length of text lines – ca 35-40 letters (never more than 60), and up to ca 6 lines per paragraph
- References smaller font size (if included)
- Text adjustment left or straight right margin?
- Use a clean font without feet (sans serif) – not more than two different on one screen. UU: Times New Roman and Arial



Pictures

- **Images**
 - Start with high resolution pictures (300 dpi or more) since posters are quite large and you might have to use large pictures.
 - Try printing parts of the images in full poster format on a regular printer to get and idea about the resulting quality.
- **Copyright**
 - You have to have permission to reproduce someone elses images and tables.
 - You have to give references also to images (that you have permission to reproduce).



Handouts

- Handouts and business cards in a box or plastic folder hanging by your poster is a possibility
- It is a good idea to have handouts with the main message, explanation and contact information. It may be a small size copy of the poster.



Some examples

STRATEGIC PLANNING TOOLS FOR MOUNTAIN CARIBOU CONSERVATION

CLAYTON APPS¹, TREVOR KINLEY², JOE SCOTT³, CANDACE BATICCK¹, JOHN BERGENSKÉ³

¹ Aspen Wildlife Research Inc. (clayton@appswild.com); ² Sylvan Consulting Ltd. (trevor@sylvan.com); ³ Northeast Ecosystem Alliance (joe@neea.com); ⁴ Forest Ethics (candace@forestethics.com); ⁵ East Kootenay Environmental Society (john@eastkootenay.com)

MOUNTAIN CARIBOU & OLD-GROWTH FORESTS

Mountain caribou are restricted to high elevation habitat by the presence of carbon-hydrogen and spruce-fir forests. This region of carbon-hydrogen and spruce-fir forests is the most important habitat quality and population distribution areas for mountain caribou. This region is also the most important habitat quality and population distribution areas for mountain caribou. This region is also the most important habitat quality and population distribution areas for mountain caribou.

IDENTIFYING HABITAT

Habitat quality is determined by the presence of carbon-hydrogen and spruce-fir forests. This region is also the most important habitat quality and population distribution areas for mountain caribou. This region is also the most important habitat quality and population distribution areas for mountain caribou.

LOSSING GROUND

Over time, the forest structure and habitat quality of the region has degraded. This is due to a variety of factors, including logging, fire, and climate change. This degradation has led to a loss of habitat quality and population distribution areas for mountain caribou.

WHAT DO THE MODELS SHOW?

Models indicate that habitat quality is a key factor in determining mountain caribou population trends. This is because habitat quality affects the availability of food and shelter, and the risk of predation and disease. Therefore, maintaining high habitat quality is essential for the conservation of mountain caribou.

LITERATURE CITED

Appel, D. D., and J. N. Madsen. 2004. Factors affecting the Population of Mountain Caribou in the West. *Wildlife Conservation Society*.
 Apples, C. L., and J. N. Madsen. 2004. Factors affecting the Population of Mountain Caribou in the West. *Wildlife Conservation Society*.
 Apples, C. L., and J. N. Madsen. 2004. Factors affecting the Population of Mountain Caribou in the West. *Wildlife Conservation Society*.

Biosgenic VOC Distributions in the Arctic Ocean During Spring: Preliminary Results From the AO-02 Cruise

Jacques Provost¹, Mikael Danneberg², Karoline Clayson³, Peter S. Liss⁴, Pauli Snoeijs⁵ and Katarina Abrahamsson⁶

¹CEMOS, School of Environmental Science, University of East Anglia, Norwich, NR4 7TJ, United Kingdom
²Department of Chemistry, University of Gothenburg, S-412 96, Gothenburg, SE-412 96, Sweden
³Department of Chemistry, University of Gothenburg, S-412 96, Gothenburg, SE-412 96, Sweden
⁴Department of Chemistry, University of Gothenburg, S-412 96, Gothenburg, SE-412 96, Sweden
⁵Department of Chemistry, University of Gothenburg, S-412 96, Gothenburg, SE-412 96, Sweden
⁶Department of Chemistry, University of Gothenburg, S-412 96, Gothenburg, SE-412 96, Sweden

Introduction

Volatile Halogenated Organic Compounds (VHOC) are present in trace concentrations in the ocean and in the atmosphere. They are strong sources of halogens to the atmosphere and have a great potential for ozone depletion, as well as being involved in numerous other chemical reactions in the atmosphere. VHOCs have therefore important implications for changes in atmospheric composition and global climate. Biosgenic VHOC are produced in the surface micellar layer and are transferred from surface ocean to lower atmosphere by exchange across the air-sea interface. Some biosgenic VHOC measurements have already been performed in the Pacific, Southern and Atlantic Oceans, but they were often restricted to limited periods of these oceans.

Material and Methods

The AO-02 cruise lasted from 20th April to 7th June 2002. Seawater was sampled with a 24 bottle rosette at 45 stations from 42.4°N to 67.8°N. Samples were collected from the surface bottles with a number of three replicates connected to a Heptameter Vial (Sable) or with glass syringes. The extractive WAXOC from the major neutral, and their concentrations as a step were determined with a Purge and Trap system. When the extraction was completed, the WAXOC were analysed at a Gas Chromatography-Mass Spectrometry for quantification and identification.

Brominated compounds

The distributions of the concentrations of CH₂Br₂ and CHBr₃ are presented for the entire section. The concentrations are comprised between 0 and 4.7 pmol L⁻¹ for CH₂Br₂ and between 0 and 17.3 pmol L⁻¹ for CHBr₃. The highest concentrations are observed mainly in the upper layer, however relatively high levels can be observed at depth.

Iodinated compounds

The distributions of the concentrations of CH₂I₂ and CHI₃ are presented for the entire section. The concentrations are comprised between 0 and 4.0 pmol L⁻¹ for CH₂I₂ and between 0 and 6.7 pmol L⁻¹ for CHI₃. The highest concentrations are observed mainly in the upper layer, however relatively high levels of CHI₃ can be observed at depth.

Complexity in the antisense regulation of SOS-induced toxicity in *E. coli*

Cecilia Unoson¹, Fabien Darfeuille¹, Jörg Vogel², and E. Gerhart H. Wagner¹

¹Uppsala University, Institute of Cell & Molecular Biology, Uppsala, Sweden
²Max Planck Institute for Infection Biology, Berlin, Germany

An active *tisAB* mRNA species

The *tisAB* locus encodes a toxin-antitoxin (TA) system. This locus encodes two small RNAs (*tisA* and *tisB*), and a toxic peptide, *TisB*. Transcription of *tisAB* and *tisB-1* SOS-regulated whereas *tisA* is present throughout growth. *tisA* and *tisB-1* transcription initiates from two different promoters, *tisA* and *tisB-1*, which are divergently transcribed *tisAB* mRNA. This antisense interaction occurs 100 nt upstream of the *tisB* ORF, arising from *tisA* cleavage. This indicates the mRNA and toxicity is preserved. In the absence of the SOS response, *tisA-1* is present in high concentrations over *tisAB* mRNA. Upon SOS induction, the *tisA-1* pool is depleted, *tisAB* mRNA accumulates, and toxicity is conferred (1, 2).

Three different ways to inhibit TisB translation

In the cell, *tisAB* mRNA appears as three species with different 5' ends. In vitro experiments show that both the full-length and the Pribnow box-ligated *tisB* can be translated, whereas a 3'-processed version in higher active - and this must be the active mRNA (Fig. 1 and 2). Activity in the translation assay matches heptamer signals at the 5' RBS (Fig. 2).

Only TisB is translated from *tisAB* mRNA

There are two ORFs (*tisA* and *tisB*) in *tisAB*. Metabolic analysis had shown before that toxicity resides in *TisB*, but translational coupling could be an option, since the mRNA binds near the RBS, upstream of *TisB* to inhibit toxicity. Differential labeling showed that only *TisB* is translated (Fig. 1). This was also confirmed by metabolic analysis (Fig. 1). Thus, translational coupling does not occur.

TisB - the toxin

TisB is a small (29 aa) hydrophobic, entirely helical peptide with a predicted membrane localization. Primarily in vivo results suggest that *TisB* inhibits translation, transcription and translation (toxic labelling experiment), and that membrane integrity is affected (lytic gene deletion). Loss of protein motor force might inhibit macromolecular synthesis during SOS. The toxicity of *TisB* also seems to be reversible. Thus, *TisB* would slow down growth due to DNA damage to facilitate SOS-related adjustments of metabolism.

Conclusions

Three *tisAB* mRNA species, only a processed (+41) *tisB* is active. *tisB-1* contains two ORFs, but only *TisB* is translated. *tisB-1* binds 100 nt upstream to inhibit translation of *TisB*. This does not involve translational coupling. *tisA* binds 20 nt to have another target. The RNA cleavage site (involved in many RNA-targeted RNA interactions), is not required for regulation. Toxicity induced by *TisB* seems to be reversible. *TisB* inhibits macromolecular synthesis and may affect membrane potential. Questions: Target for *tisB-2*, how is the primary mRNA processed (+41)? Induced regulation of *tisB*?

Don't call me Lobelia

UPPSALA UNIVERSITET

UPPSALA UNIVERSITET



Printing the poster

- Find out where.
- When: Normally you should have at least a week extra in case something goes wrong.
- Spell check and read through carefully before print. Send it in as a pdf and check that the pdf looks the same as your original file.
- Avoid strange fonts and symbols if you can. They might cause problems...



This is how it may look in a science conference



The poster exhibition

- Think through how you want to present your poster to your audience and practice. You will have ca 3–5 minutes – several times if you are lucky 😊

15 January
14.45–15.45

