

Tips on Preparing and Giving a Scientific Talk for MSFP

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I. General

First, there is not just one best way to give all seminars; content, style and details vary for **who the audience is**, what information you're trying to communicate, type of seminar, the length of the seminar, etc.

Mentors can help with advice on how to match your talk with these factors

How can you learn to give better seminars?

Give seminars and get feedback

Attend a lot of seminars given by people with experience - departmental seminars, scientific meetings, etc. Ask yourself: What are they doing that is good, or not good? What do their slides look like? What do they include in their intro? How do they explain their hypothesis and data? Etc.

II. Parts of the talk

Title Slide

Include title, your name, lab (add institution and e-mail address for off-campus talks)

The title should be appropriate for a scientific presentation

Introduction

Relate your work to broader biological picture – What is the hypothesis or the question you want to answer? In other words, why should we care about this pathway? Mechanism?

Organ? Protein? Structure?

Describe what your research project is, and what you have, or hope to, achieve.

Outline briefly tell the audience how the talk will be organized and in general what you intend to cover.

Experiments/Results

Explain each hypothesis you are testing and then how each experiment and its potential results relates to the hypothesis - if you get results A then it means X, if you get results B, then it means Y

When showing results, start with stating whether or not the experiment worked (e.g., "90% of the colonies turned blue"), present the data and explain whether it supports or contradicts the hypothesis; then add additional information as appropriate (e.g., "I noticed something unexpected");

Walk through each slide showing results, describing the content of tables and figures in an orderly fashion

Always identify the row and column headings on tables and the axis and labels on graphs.

Direct the audience to pertinent data by pointing at specific information while talking

When showing a slide, use directive or informative statements such as, "This graph plots the relationship of..." or, "Focus your attention on these data..." or, "This table summarizes..."

Conclusions: short summary or recap of the entire talk
describe relevance of your findings to other published work
talk about future directions.

Acknowledgements – Mention mentor and others who helped produce any of the data and/or figures/results, etc.,

III. Preparing the Slides

Number

Allow at least 1 minutes per slide; a 7 minute seminar would have no more than 7 slides (although maybe not counting the title slide)

All

Black text on a white background is fine or other simple overall design. It makes printing handouts easier and doesn't waste as much toner ink in printers and copiers as a colored background does.

Certain text colors may not be visible to people with some types of colorblindness. (red/green is the most common type of colorblindness)

Use **large font** to be easily seen by anyone sitting anywhere in the room

Include citations when appropriate

Slides that are mainly Text

Not too many words and/or sentences per slide

Use keywords and phrases, not complete sentences (except question and conclusion slides)

Do not place information on a slide that you do not intend the audience to read.

Present only one big idea per slide - prevents the audience from reading ahead instead of listening to you. (The exceptions are the outline and summary slides.)

SPELL-CHECK!

Graphs

Label them so that the audience knows what they are

Label all axes (big enough type to read), and provide a legend for all curves and data.

The axis and tick labels on your graphs should be easily readable

Orient the labels to be horizontal whenever you have the space.

Tables

Label them so that the audience knows what they are

Don't include too many cells in the table

Use colored arrows or boxes to direct the audience's attention to particular parts or cells.

Figures

Label them so that the audience knows what they are

Do not use complex diagrams that you do not intend to discuss thoroughly

*** also if use any figures or other information from another source, for example in intro, include a reference

IV. Additional notes for Giving a Talk for when a talk is given in Person - Notes on Presentation Style

You can bring an outline of the talk that you refer to unobtrusively without detracting from spontaneity, but don't give the whole seminar by reading your notes

Never read aloud from your slides!

Speak clearly to the audience, not the screen

SPEAK UP - practice giving your seminar with a friend sitting in the back row - if s/he can't hear you when the room is empty, your audience won't hear you when it is full. (You may want to ask a labmate to sit in the back of the room and signal if she cannot hear you.)

Do not mumble

Use good English and correct scientific terms- if you don't know how to say something correctly, find out from your professor, labmates, etc. how to say it ahead of time and practice

Avoid slang and jargon

Avoid wordiness

Pay attention to your audience when you're speaking. If everyone is watching you and listening, you are succeeding! If people look lost or sleepy, you may need to slow down, speak more loudly, and/or explain better. If people look confused, you can ask if there are any questions.

When you are speaking, you are in charge. Don't get into a lengthy discussion or debate with someone in the audience. If the discussion seems to have no end, say that you'll be pleased to continue the discussion after the talk and then resume. However, people have a right to ask questions. Never appear annoyed by a question; do not sigh or be sarcastic.

When verbally referring to a specific portion of a slide, use a pointer to briefly orient the audience, but when you are not using it, do not distract the audience by playing with it.

When using a stick pointer, touch the image on the screen rather than situating the pointer in the projection beam to throw a shadow. Do not whack the stick against the screen.

Do not chew gum or fiddle with your jewelry.

Do not draw more attention to bad slides by apologizing for them.

Minimize your use of, "OK," "like," "um," "er," "sort of," "ya know," and "kind of." If you need to pause, then just pause.

Etc. is pronounced, "Et cetera," rather than, "Eck cetera."

Avoid using unusual terms, abbreviations, and symbols when possible, but when you do use them, define them (also gene names, whatever name you are giving control samples, etc.).

You can define such terms unobtrusively (e.g., "These are the results we see with strain DDA24, the wild type strain.").

BUT - don't assume that the audience will remember for more than 2 slides what DDA24 signifies. Remind the audience verbally or put a definition bar at the bottom of later slides (i.e. DDA24 = wild type, N = negative control, AA527 = mutant with deletion of gene ABC) so that even people who slept through the earlier slides will be able to follow your presentation.

Better yet - put a few terms and their definitions on the white board ahead of time if you will be using them repeatedly

Generally, it's a good idea to have the talk divided into several distinct parts, usually built around the main points you want to convey

Each part, although distinct, should lead logically to the next

Use transitions

Preparation ahead of time

Practice. Practice. Practice. Practice. Practice. Practice. Practice. Practice.

Stand in front of a seminar room and present to an imagined audience or to a friend. Identify parts where you have trouble finding the right words and work on those parts.

You should present your talk to others multiple times prior to your seminar date exactly as you intend to present it, including using visual aids!

Benefit from other people's opinions of your talk. Parts of your talk may be less clear than you imagined. Even a criticism that is incorrect can be helpful: if one person misunderstood or thought your talk had an error, someone else probably will also.

Practice on the computer you will actually use, in the room it will actually be given.

Know how to use and adjust the lights, computer, pointer, etc.

Make sure the talk is about the right length.