

Trafficking of the secretory granule- associated enzyme PAM

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Outline

□ Introduction

The secretory pathway in neuroendocrine cells
peptide processing enzymes
protein trafficking signals
Why study PAM trafficking?

□ Data

Site-directed mutagenesis
Expression of mutants in fibroblasts and AtT-20 cells
Chimeric proteins

□ Conclusions

Applicability of our work with PAM to other proteins
Future directions

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The secretory pathway in neuroendocrine cells



- ❖ Constitutive and regulated pathways diverge at the TGN
- ❖ Peptide processing is unique to the regulated pathway
- ❖ What signals selectively target proteins to the regulated pathway?

Giving effective job talks



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Seven simple rules

1. Know your audience
2. Know the rules
3. Understand what the audience is evaluating
4. Tell a story
5. Have crisp, clean data slides
6. Be engaging and personable
7. Start early and practice

#1: Know your audience

- Who typically attends?

 - R1: scientists at all levels

 - Teaching institution: faculty, administrators and students

 - Industry: scientists and non-scientists, including HR reps

- You are talking to experts and outsiders

- Everyone in the audience matters

#2: Know the rules

- Be clear about what the host is asking for
 - Science talk
 - Teaching talk
 - Chalk talk
- Don't assume anything about computer and AV equipment
- Know how long you have to speak

Know how long you have to speak

- Science talk: 45 - 50 minutes
- Teaching talk: 45 - 90 minutes
- Chalk talk: 60 - 75 minutes
- Leave time for questions -- it is a time when you can really “seal the deal”
- Consider in advance what you will do if you get a late start and have to adjust

#3: Understand what the audience is evaluating

- You
- Your science
- Your “fit” in the department/division
- Your teaching ability
- Your leadership and management style

#4: Tell a story

- A talk is **NOT** a spoken paper
- Rewrite experimental history for better telling
- Hit the “high points”
- Highlight key points with repetition
- Use intonation, body language, and gestures to embellish, but not distract

Strategies for telling your story

➤ The mystery thriller approach

Benefits: can build excitement

Risks: If attentions wander, it can be difficult to come back

➤ The sneak preview approach

Benefits: key findings introduced when the audience is fresh and can be reiterated multiple times

Risks: Audience says “I got it” and stops listening

The beginning is the “hook”

- You have 2 minutes to grab attention and commitment from listeners
- Paints the “big picture”
- Addresses two questions
 - Why do we care?
 - What do we know already?
- Figures are better than words
- Typically longer in a job talk

The middle is the “meat”

- Addresses two key questions:
 - What is exciting about my work?
 - What is unique about my model system and approach?
- Avoid the “royal we”
- Use to show how critical and thoughtful you are
- No need to show ALL your data

The ending looks to the “future”

- Very different - academic vs. industry
- Very different - research vs. teaching
- Can be grant style or not
- A chance to hammer home what YOU uniquely bring to the department
- Make sure it is clear when you are finished talking

A long talk is the kiss of death

- Talking fast or skipping slides is not the optimal strategy
- Use “guideposts” to help
- Generally, no more than 30 - 35 slides for 50 minutes
- Practice!

Answering questions is an art-form

- Make sure you understand what is being asked
- Repeat the question
- Avoid long digressions
- Don't take the "bait"
- Not all questions are "great"
- OK to say "I don't know", but follow-up may be important

5: Have crisp, clean data slides

- Use a clean, readable, cohesive color scheme and layout
- San-serif fonts are easier to read at a distance
- Take out extraneous words and data
- Minimize the use of word slides

Slides must be readable from a distance

- **Titles: 40 point bold**
- Major points: 28 - 32 point
- Labels on graphs: never less than 18 point, but 24 is better
- All lines should be 3 point or thicker 
- AVOID USING ALL CAPS - IT'S HARDER TO READ
- Use **bolded** text rather than *italics* or underline for emphasis

All slides should have titles

- Helps you and the listener refocus if necessary
- Avoid using titles to set up surprise or mystery
- A declarative sentence that states the point directly is often most effective

Color schemes, backgrounds, and layouts

- Avoid anything but a simple background and layout
- Some people in the audience will be red-green colorblind
- The million+ palette in PowerPoint is not a good thing
- Use primary colors, not pastels

Animation & movies

- Over-animation can make a talk awkward
- Elaborate transitions are distracting
- If you have critical movies, bring your own computer or let your host know in advance
- Avoid making a scene if your movie won't play

6: Be engaging and personable

- First impressions are based on your dress, body language, and movements
- Use your introductory remarks to “connect”
- Never read your talk
- Step away from the podium if possible
- Never turn your back to the audience
- Make eye contact throughout the audience
- Genuinely welcome questions

Humor

- Is often used to hide nervousness
- Can easily backfire & offend
- Can add a lot if used well AND if it reflects who you are

7: Start early and practice

- Attend job seminars now - especially outside your field
- Find colleagues outside your field to attend your polished practice talk
- Talk with mentors who have served on search committees
- Discuss job talk strategies at informational interviews
- Attend the OITE Fall Jobs Workshop series

Parting thoughts

- Never read your talk
- Do not overdo PowerPoint
- No more than 30 words on a slide
- No extraneous data on a slide
- Repetition helps an audience remember key points
- Clearly point out where you will fit into the department
- Learn how to calm yourself and make yourself comfortable well in advance of your job search

The Chalk talk

- No slides and very informal
- Shows that you can think on your feet
- Expect many interruptions
- Expect vigorous debate - it can be a very good sign
- Everyone is watching how well you take criticism and when/how you back down
- Tells you a lot about the department

How to prepare for a chalk talk

- Draw a model right away
- Plan and practice how you will start
- Handouts are a distraction
- Practice with colleagues who will give you a hard time, not a pat on the back
- Begin talking about your future work far in advance
- Begin mapping out grant proposals early

The teaching talk

- May be given a specific topic or you may get to choose
- Learn about the students in advance
- Decide formal *vs.* informal
- Decide high tech *vs.* low tech
- Talk to the students and not the faculty or administrators sitting at the back
- Don't just a lecture - engage the students

How to prepare for a teaching talk

- Participate in “Scientists Teaching Science” next year
- Talk to undergraduate faculty at comparable institutions
- Practice with colleagues then find a group of college students or postbacs

Preparation begins now

- Develop outstanding communication skills before you start looking for jobs
- Give as many talks as you possibly can - at NIH and beyond
- Ask for honest feedback, not a pat on the back
- Deal with your nerves now
- Effective public speaking can be learned but it takes practice and commitment