

# Technical Oral Communication

# Outline

- Presentations to a lay audience
- Narrative
- Appropriate use of Powerpoint for lay audience

# Some Presentation Types

- Elevator pitch
- Lab meeting
- Scientific conference
- Investor pitch
- **Public talk (lay audience)**

**You are ALWAYS marketing yourself or your work**

# Public talk

## **Audience:**

Lay-people. Eg. Saturday morning at Science World.

## **Purpose:**

To promote yourself, your work, your company or institution

To inspire and educate

To entertain

## **Tools:**

Powerpoint

Video / sound etc

Demos?



# Public talk

## Tips:

- **Know your Audience and purpose!!**
- **Make sure you deliver the big picture well**
- Avoid unnecessary detail, equations etc. They impress no one.
- Keeping the audience's attention is your biggest task
- Relate to topics your audience cares about
- **Make good use of narrative!!**

The first is by Chris Mason - speaking on a variety of topics to a lay audience. Of note:

- excellent speaking style and stage presence
- fantastic first sentence and opening
- somewhat scattered set of topics, but each is covered very well and without much need for slides in fact (you barely see them in this video).
- overall a great talk - interestingly, I saw it this year after much more of the NYC subway genome work was done, and the additional practice showed ( he must have given it many times in between). It was one of the best talks at AGBT. 11:47

<https://www.youtube.com/watch?v=mn5MkKXtxms>

Next - Anne Wojcicki (23 and me). Note the fantastic narrative start.

- great speaker and compelling narrative
- she "names the cat". In this case, it's Monica (see around 1:40)
- almost nails the ending. She could have had a stronger final sentence but was clearly unprepared for it. She does at least, end with a plain "thank you".

<https://www.youtube.com/watch?v=4g5pXnhEjA>

# Presentation 101 for Graduate Students

**J. Paul Robinson**

SVM Professor of Cytomics

Department of Basic Medical Science  
& Weldon School of Biomedical Engineering  
Purdue University



A set of suggestions and examples for creating good quality presentations.  
What to do and what not to do in your seminar!!

This presentation is available for download from  
<http://www.purdue.edu/education>

Presented to grad students each year since 2000



Boreal Genomics

# Zen and the Art of PowerPoint

David Broemeling

Garr Reynolds: Presentation Zen  
Seth Godin: Really bad PowerPoint  
Tom Peters: Presentation Excellence  
Guy Kawasaki: The Art of the Start

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# Keep slides simple

**You are the focus, not your slides.**

## Together we can bring order to galaxy

If you only knew the power of the Dark Side

- Force is with you — but you are not Jedi yet
- Join me and I will complete your training
- You can destroy the Emperor (I will help you with this)
  - *It is your destiny*
- I am your father
  - *Search your feelings. You know the truth. You were born for this. You were born to rule.*
- Together we shall rule the galaxy as father & son
- Come with me. It is the only way to peace.
- It is your destiny!













# Backgrounds

- Be careful when using backgrounds available from templates
- A more conservative approach is safer
- You want the audience to focus on your data not your background
- If you must, use a simple color like blue
- Some examples follow in the next 5 slides – the last 2 are not acceptable

**Lesson:** Pretty backgrounds are fun but foolish! It might seem like a good idea at the time, but your audience are saying ...”Oh no, not another symphony of colors....”

# What Resources are Required?

- Start with educational objectives and goals
- Define needs based only on the educational objectives
- Initially identify minimal hardware requirements, beg or borrow if necessary
- Integrate staff into lab with scientific staff to increase participation

**So:** Very plain example slide. No frills.

# What Resources are Required?

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**So:** Good example slide (side/top bar work OK)  
Colors are fine, note slide number on left.

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# Use of Color

- Color shows **emphasis**....BUT..
- It should be used sparingly
- Certain colors cannot be used together

- For example:

- Red text cannot be used on blue backgrounds or vice versa

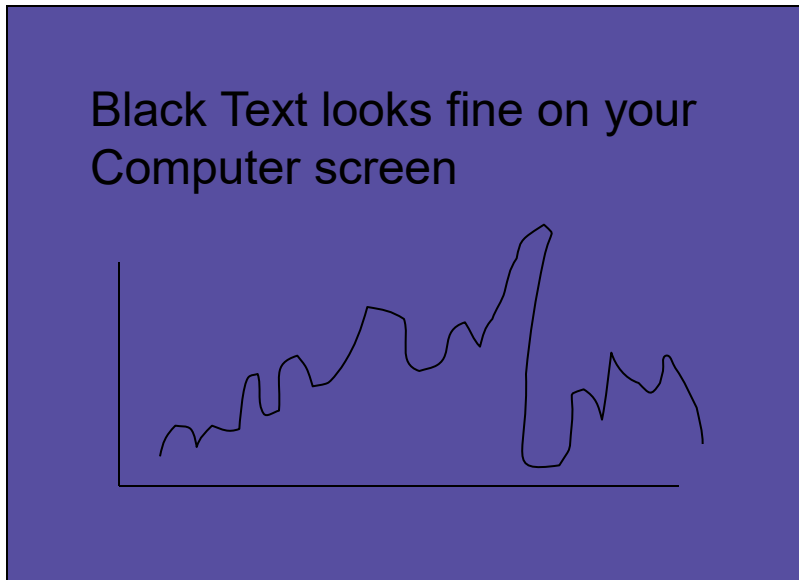
- Blue text cannot be used on red backgrounds or vice versa

- Colors that should virtually never be used are:
  - Purple, Pink and Bright Green
- Yellow can be used on black but never on white background

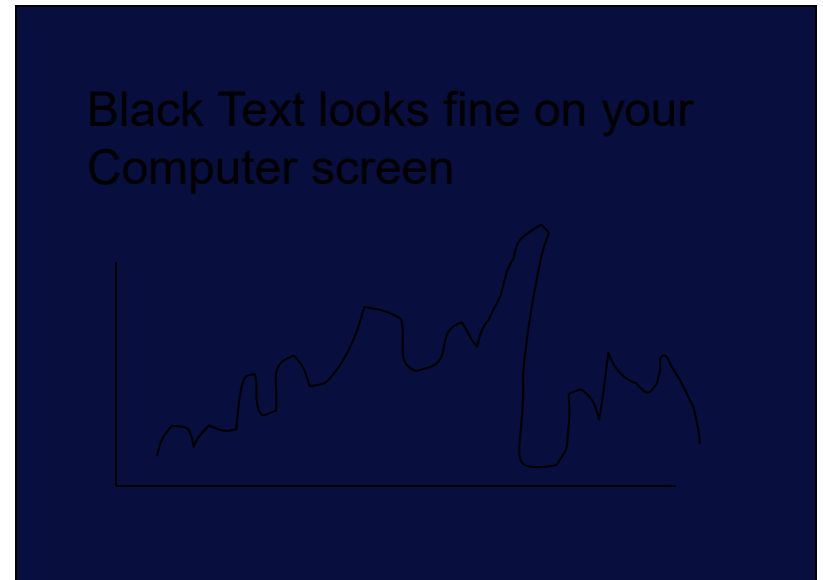
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# The difference between the computer screen and the projector screen

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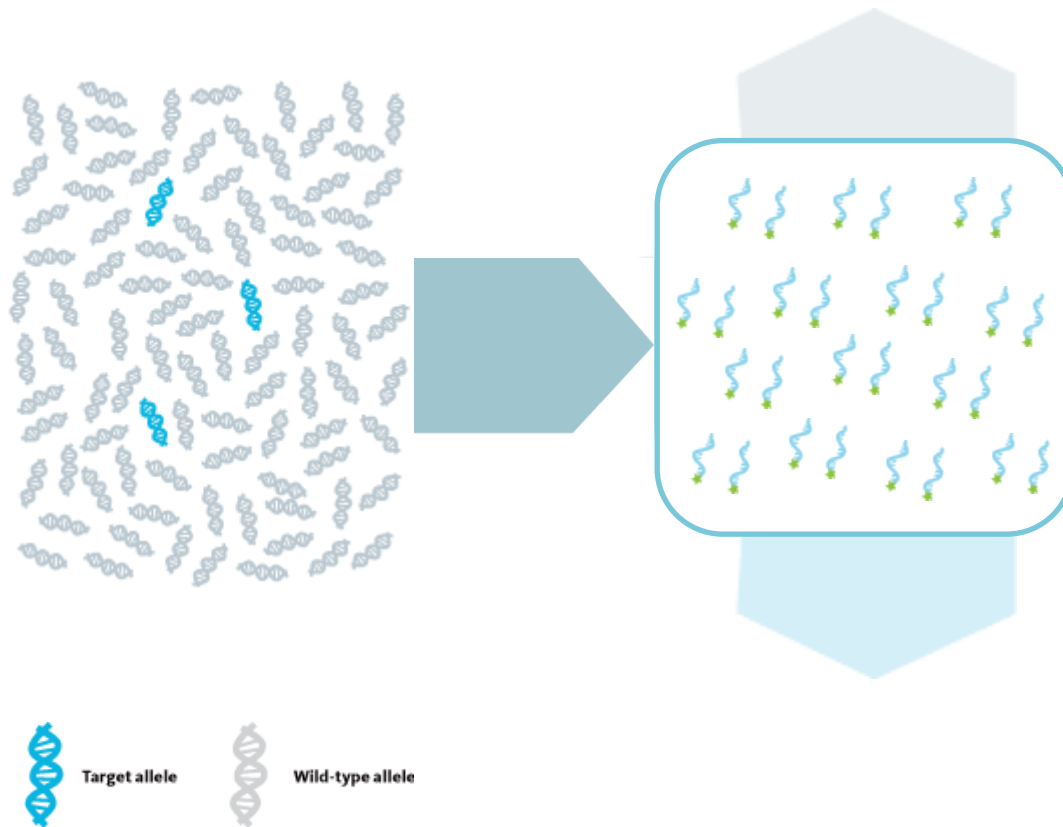
# Animation

- How much animation is right?
- Make sure you test it carefully!
- A small amount of animation is good
- Too much is “ditzy” and often annoys your audience

**So:** “Ditzy” animations are really off-putting to the audience. Good animations, such as how a reaction takes place are good.

# Mutation enrichment technology

*Selection of target alleles by repetitive transient hybridization*



1. Oligo probes are linked in the gel to match the mutant targets
2. Sample is denatured and injected into the gel
3. The gel is heated to the target-probe melting temperature and target DNA is selected by repeated electrophoretic interaction with probes
4. Target alleles are driven into collection well, while wild-type is rejected into waste well

*J. Thompson et. al. 2012 PLoS ONE 7(2): e31597*

# Our proposed solution: Pasta-2-go

*Freshly made, high quality pasta in 10 seconds*

Slide from investor pitch

## ■ ***Vending machine format***

- Low footprint
- Easy to replenish
- Plumbed in to water/drain or standalone

## ■ ***Single product per machine***

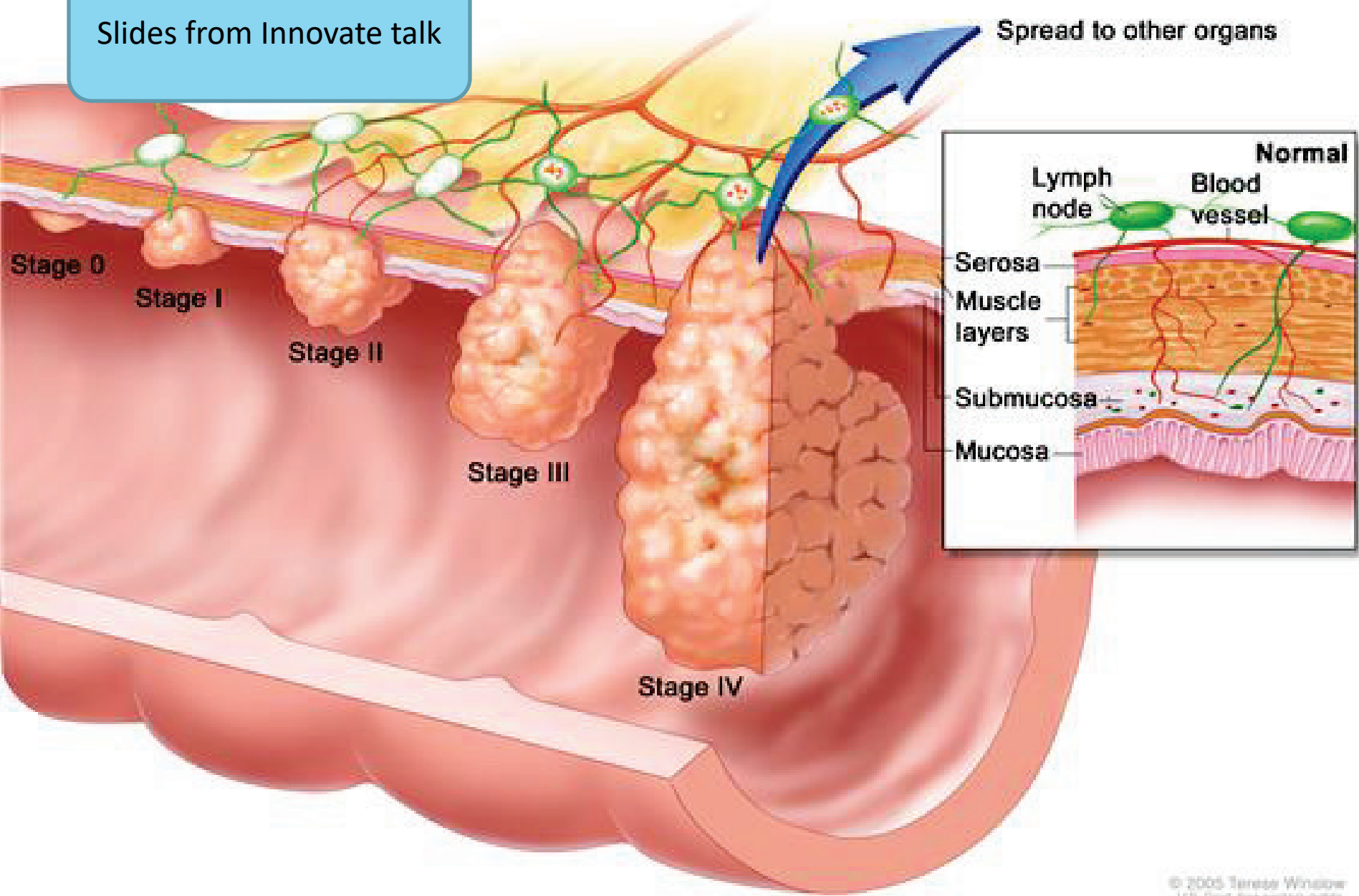
- Allows simple and rapid operation
- Change product day to day
- Multiple machines allow customer choice

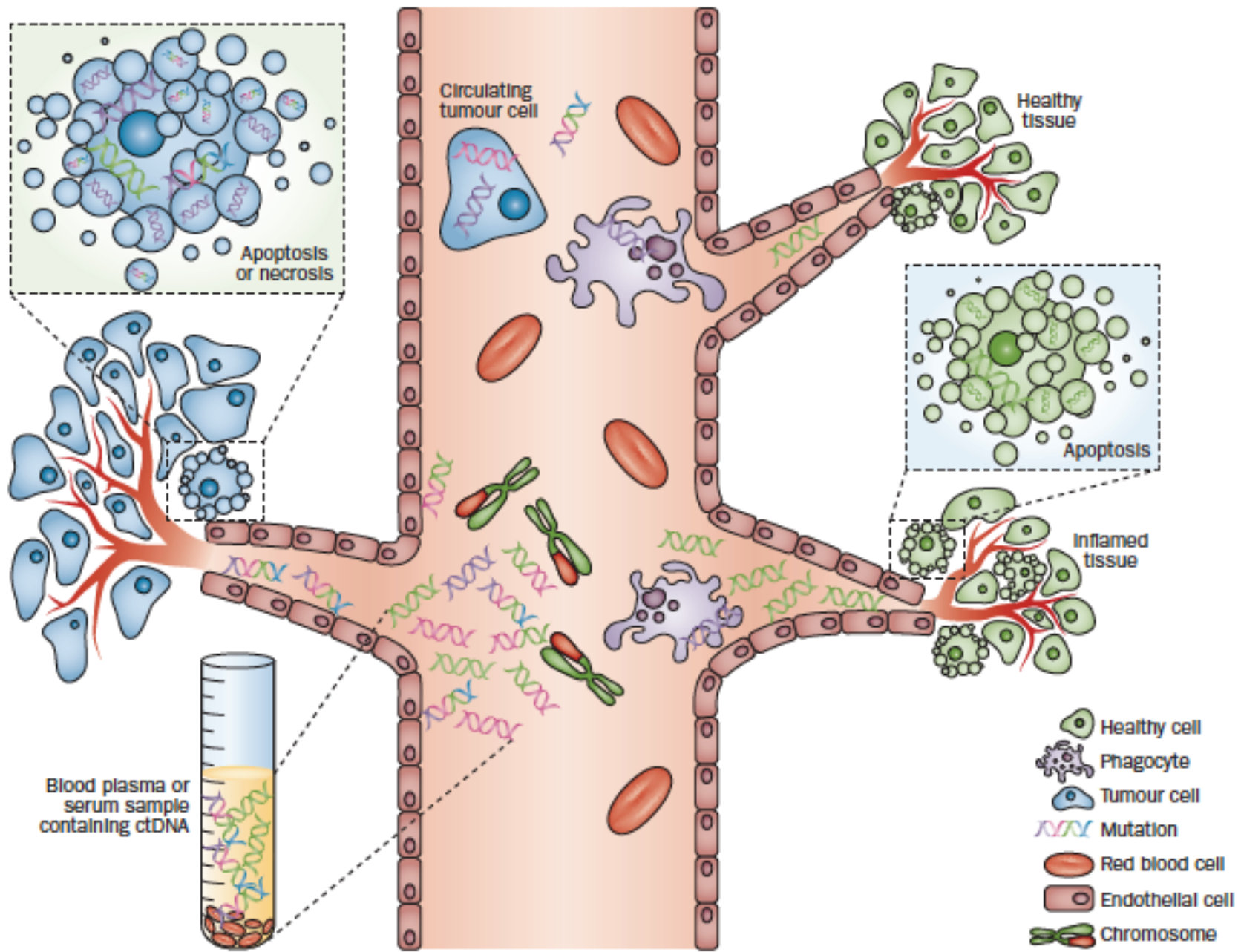
## ■ ***App controlled scheduling***

- Customer orders food from app
- Food pickup done by barcode on phone
- Payment through app



Slides from Innovate talk





Apoptosis or necrosis








Circulating tumour cell

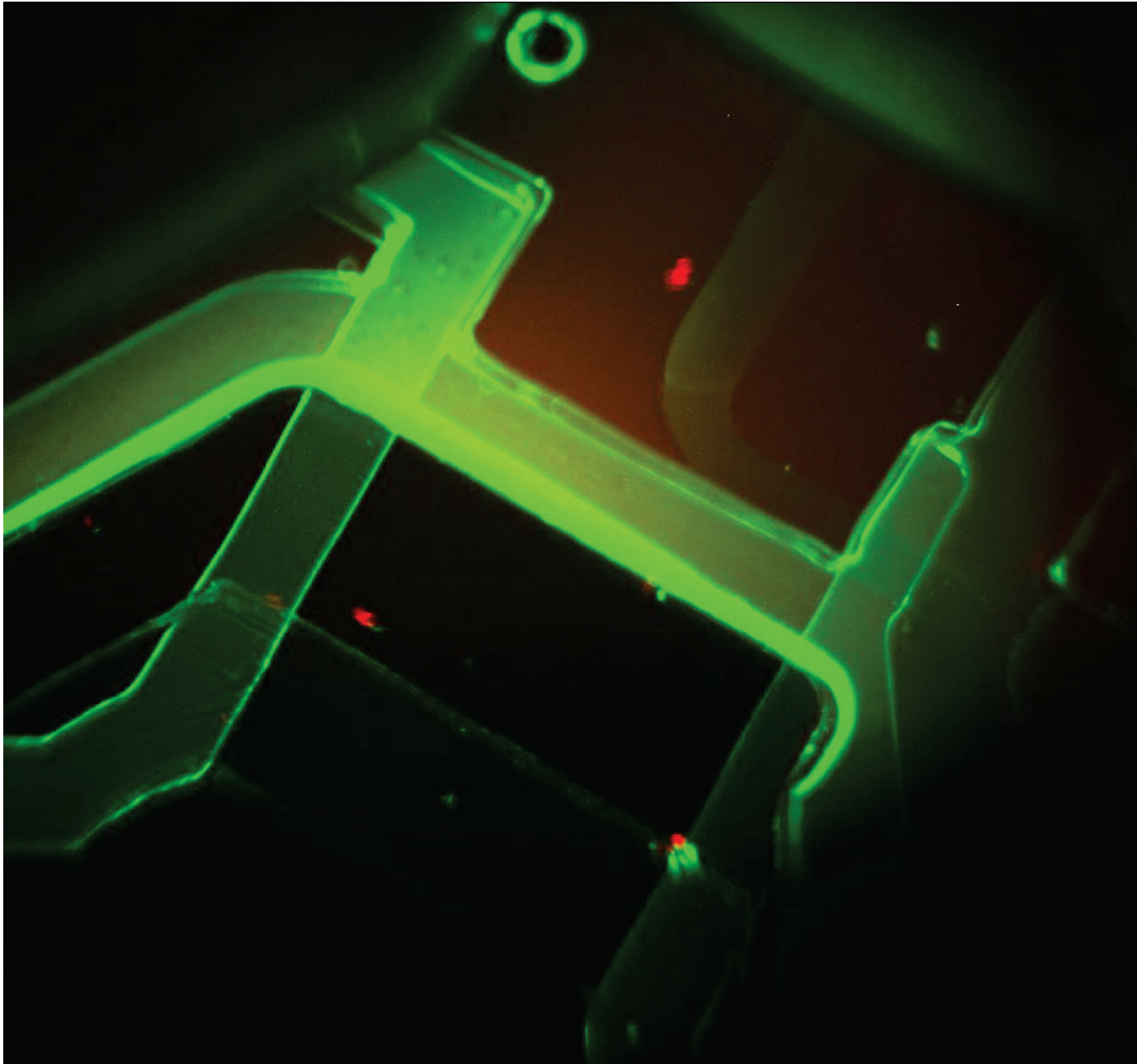
Healthy tissue

Apoptosis

Inflamed tissue

Blood plasma or serum sample containing ctDNA

-  Healthy cell
-  Phagocyte
-  Tumour cell
-  Mutation
-  Red blood cell
-  Endothelial cell
-  Chromosome







# Detecting cancer before you ever get ill: BC Cancer Agency's study hopes for paradigm shift



By Yuliya Talmazan

Online News Producer Global News

Comments 1

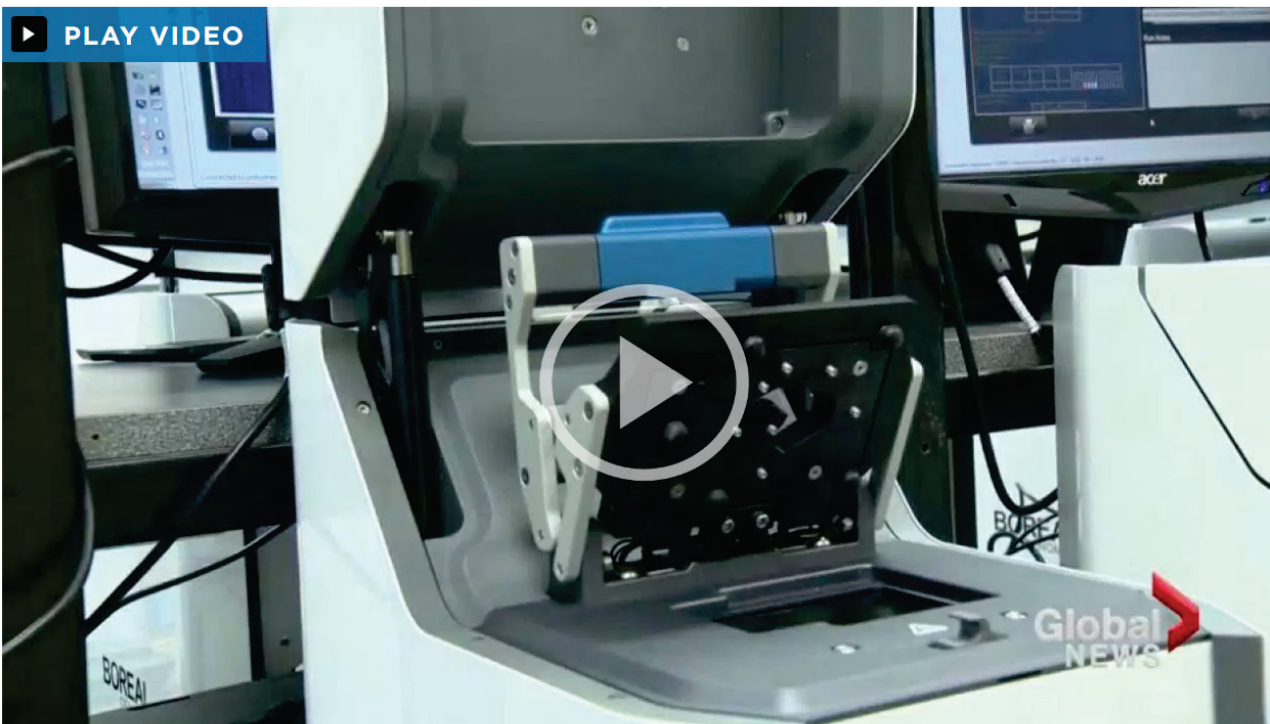
Facebook 1.1k

Twitter

Email

Print

...



**WATCH:** The BC Cancer Agency is working to develop a blood test that could detect early signs of cancer in healthy people.



-3-

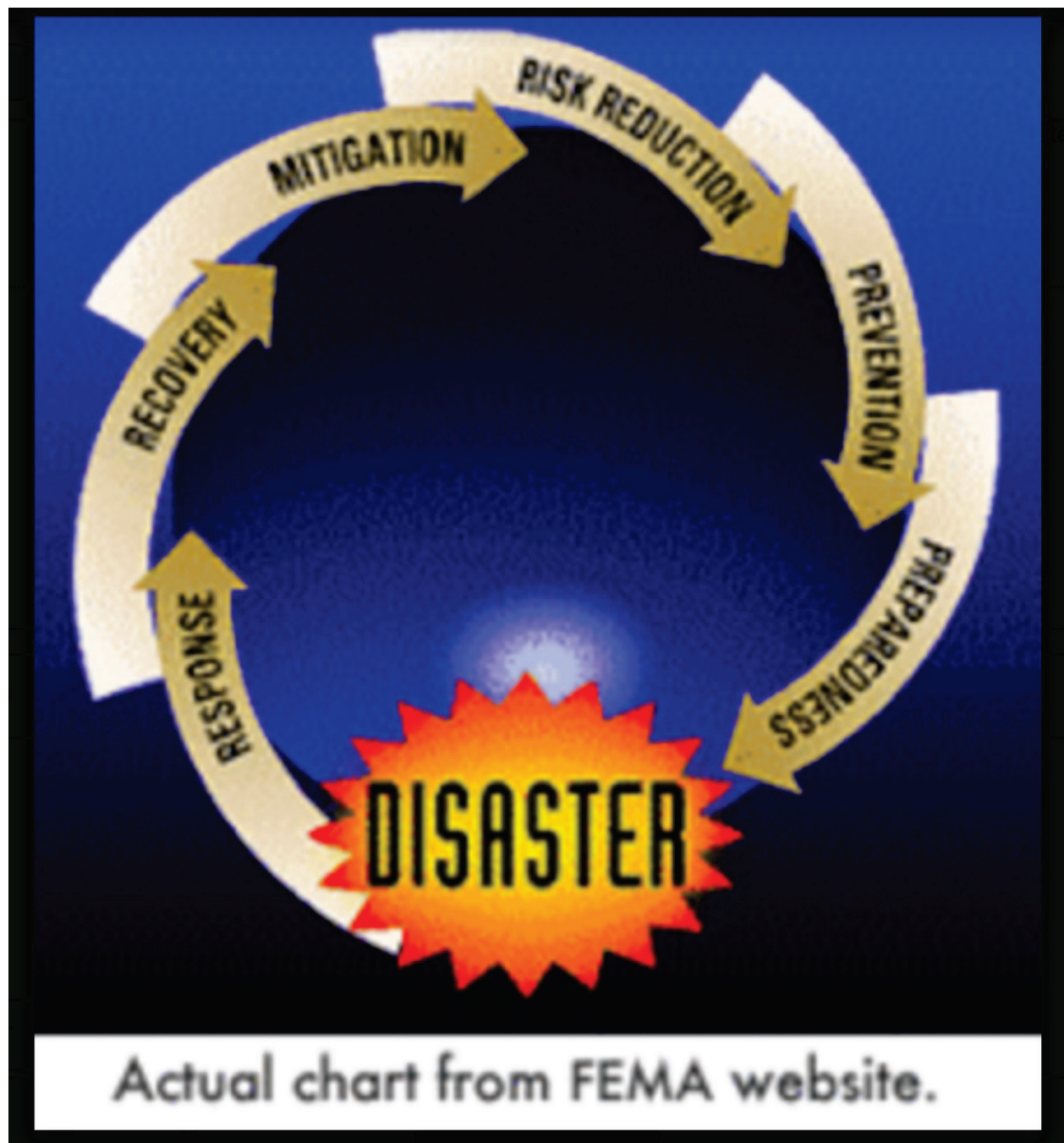
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A *good* picture is...



# Adoption and Delivery Model

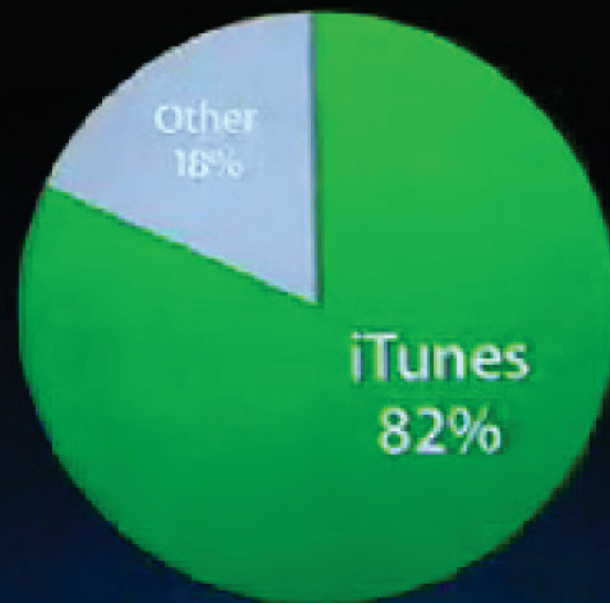




Actual chart from FEMA website.



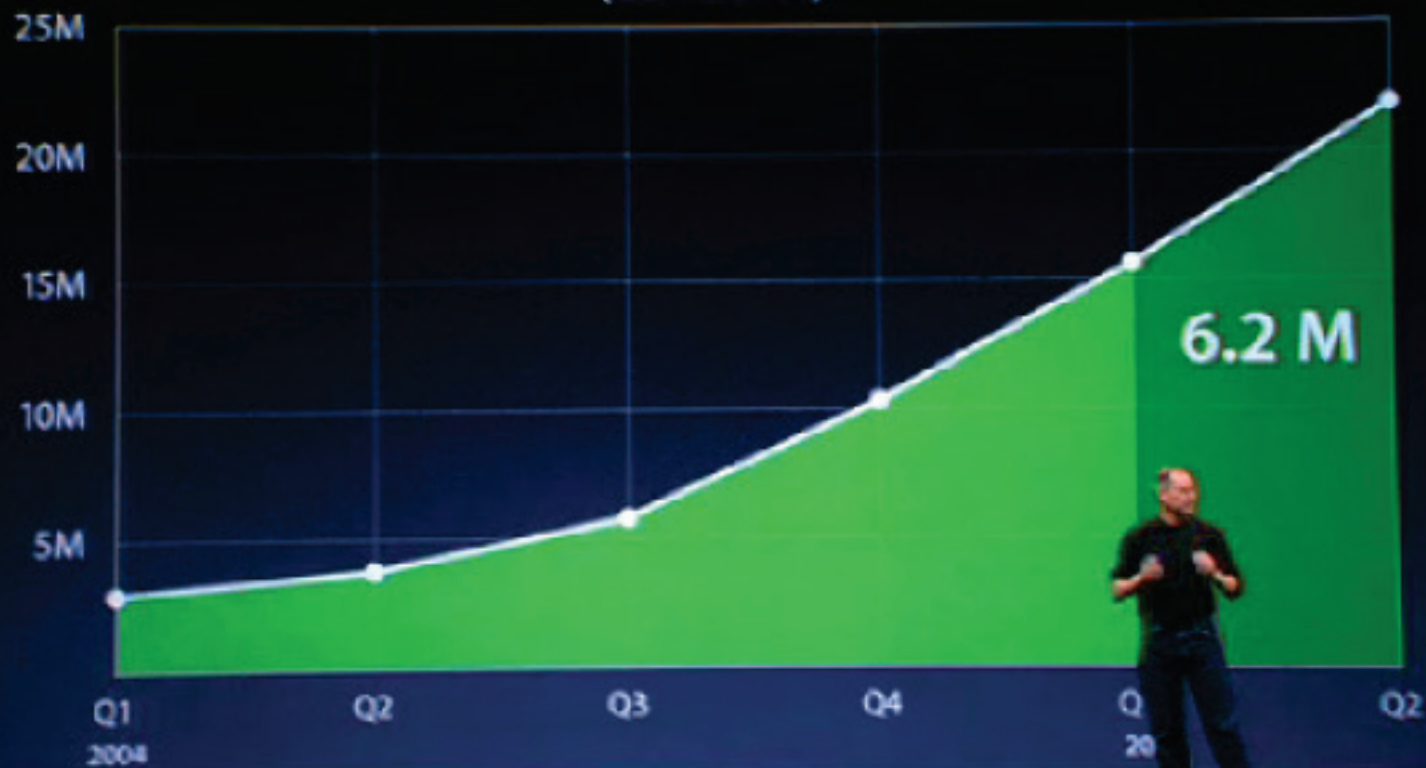
# Market Share

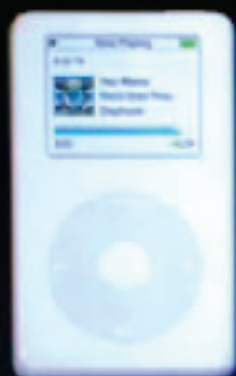


Nielsen Soundscan: U.S. market share for July 2005

# iPods Sold

(Cumulative)





6M



2M



## Steve Jobs

<https://www.youtube.com/watch?v=x7qPAY9JqE4>

1:24

# Speaking tips

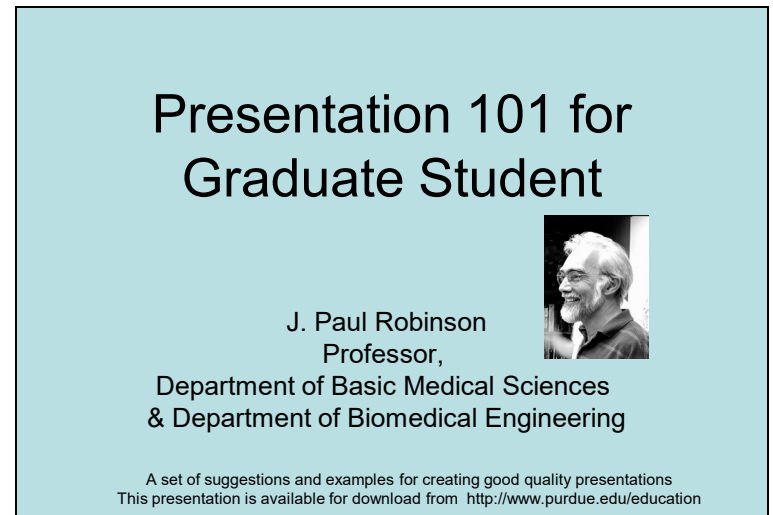
(some of this was presented in 259)



# Opening your presentation

1. You should be early (10 Min) for your presentation.
2. You should have checked with the person who will chair the session
3. You should have already checked the projector and computer
4. You should be ready to begin when invited
5. Your first slide should be on the screen before you begin
6. It should have your presentation title on it and information about you

(Example opening slide from this presentation)



Have the projector and computer set up with the opening slide well before the presentation is due to start

# Your Opening Statement

- **If you are an Invited Speaker:**

- *“Thank you very much for that generous introduction. I would like to thank the organizers for inviting me to give this presentation. It is an honor to be here at Purdue.*

- Today I would like to talk about the invention of the wheel.*

**Not generally  
appropriate for a  
lay talk**

- **If you are a Seminar (or a Panelist):**

- *“Thank you very much for the opportunity to present some ideas on the invention of the wheel”*

Your opening statement should be strong, and well prepared. It should be short and it can also be an expression of thanks to your host if appropriate.

# Your Closing Statement

- Do**
- “In my last slide I would like to acknowledge the participation of my colleagues Jim Lane, Alphonse, and Dr. Jones. I of the National study.” (pause much for you)
- Acknowledgement not generally appropriate for a lay talk**

- Don't**
- Don't just stop!
  - Don't say “*that's it*” .... “*that's the end*” .....: “*I'm finished*”
  - NEVER offer to answer questions if there is a chairperson - it is the role of the chairperson, not you to ask for questions!!!! (Don't invite questions - it's rude!!!)

**So:** Make the audience feel comfortable about the end of your presentation by telling them when it is finished.

# More tips (again)

**Start with a strong statement**

**Finish with a strong statement**

**Memorize both**

Avoid long start and final thank you's – let people read acknowledgements

Always end with simply **“Thank you.”**

And now some physics - this is Lenny Susskind explaining how the higgs boson works WITH HARDLY ANY EQUATIONS. Brilliant.

- Consider that 5-10 min in he has been speaking without any visual aids, and, I for one, was still riveted.

- great ability to lay things out logically. Consider how hard a topic he's picked to relay to what was clearly a non-expert audience.

- sadly he also finished with "That's it" (while taking a bite of candy...)

<https://www.youtube.com/watch?v=JqNg819PiZY>

My innovation 2016 talk:

[https://www.youtube.com/watch?v=ay\\_LrU2MsRc](https://www.youtube.com/watch?v=ay_LrU2MsRc)

# More tips (again)

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**Speaking is performance art.**

**Practice, practice, practice.....**

**You are a storyteller – be enthusiastic!! Tell a great story!!**

**You will be NERVOUS at first – that's ok.**

**Structure talk accordingly**

**Pauses are ok**

**Avoid “Umm” “Ah,” etc..**

## More tips (again)

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**Use one slide per minute max (I use one slide per two minutes)**

**Leave time for questions.**

**NEVER go over your scheduled time. NEVER!!!!**

**People WILL believe what you tell them!! Don't say:**

“I'm doing such a bad job explaining this..”

“I'm a bit over time...”

etc..

## A reminder...

- **Body Language**
  - Keep it open and inviting
  - Face the audience
  - Do not cross your arms, slouch etc
  - Smile 😊
- **Eye contact**
  - Make eye contact
  - Vary who you connect with
- **Gestures, mannerisms**
  - Can be really helpful in conveying your message and keeping your audience engaged
  - Can detract from your talk and distract
- **Enthusiasm, facial expression**
  - If you're not enthusiastic, your audience won't be either
  - Match your facial expression to your topic or desired effect



# ENPH 253 Public talk

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## Example topics:

- Machine Learning
- Block chain technology
- Fusion Energy
- Global energy issues and warming
- Sustainability in food production
- Diversity and engineering design
- Ethics of autonomous systems

5 min each. Individual.

Submit to me by email: Title, Purpose

# Grading rubric

**Notes:**

	<b>Audience/ purpose, narrative:</b>	<b>Presence, voice, and eye contact:</b>	<b>Style and mannerisms:</b>	<b>Structure and slides:</b>
	<i>Talk contained appropriate content and narrative to engage a lay audience, and the appropriate amount of detail and “big picture” overview.</i>	<i>Speaker commands attention and interest, appears enthusiastic and engaged. Makes eye contact with the whole room. Easy to hear.</i>	<i>Speaker’s style is professional and doesn’t suffer from any detracting mannerisms.</i>	<i>The talk structure leads the audience into caring about the topic and presents it in a compelling way. The talk is easy to follow and flows logically. Slides, if used, are appropriate.</i>
<b>Mark</b>	/10	/10	/10	/10

End of ENPH 259 presentation.

The following slides contain Dr. Robinson's entire slide deck.

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Presented to grad students each year since 2000

## Note for those reading this presentation from this online version

It is not ideal to review a set of slides without having heard the presentation. However, I have put them on line to assist new students when they have to give seminars or conference talks. My suggestions are mainly for beginners, but some things carry all the way to experienced speakers. My goals were to increase the confidence of students by giving them a solid basis to use when preparing their slides. To understand each slide, I suggest you download the PPT file and play it on your computer. I have added explanations to the slides that give my key pointers.

**So:** These are in the boxes that look like this at the bottom of most slides

*J. Paul Robinson, Purdue University*

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# Goals of this Presentation

- To demonstrate good principles for public presentations using PowerPoint™ and computer projectors
- To show how slides might be better used
- To show by demonstration, good and bad slides, distracting habits, some suggestions to assist your presentation
- To suggest a baseline for a good presentation

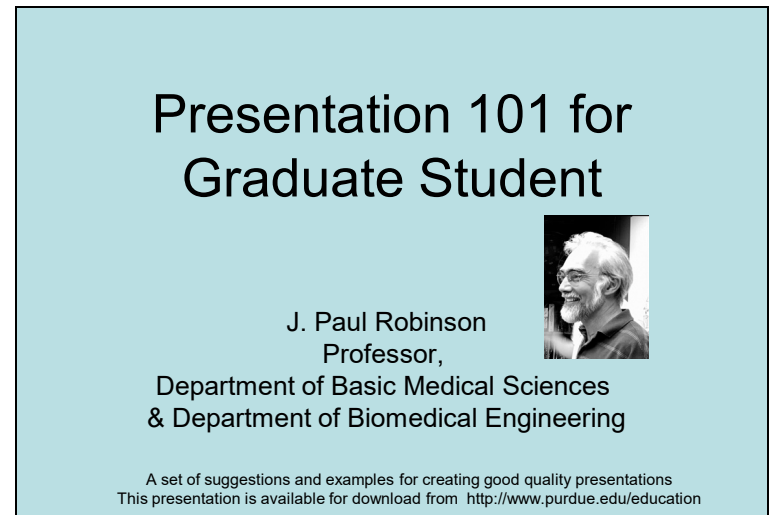
# The Three Essential Features of a Good Presentation

- Tell people what you are going to tell them → Introduction & Summary
- Tell them the material → Your core materials in necessary detail
- Tell them what you told them → Summarize your findings and close your presentation

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  - *“Thank you very much for that generous introduction. I would like to thank the organizers for inviting me to give this presentation. It is an honor to be here at Purdue. Today I would like to present some ideas on the invention of the wheel...”*
- **If you are a Seminar Speaker (more informal):**
  - *“Thank you very much Professor X. Today I would like to present some ideas on the invention of the wheel”*

Your opening statement should be strong, and well prepared. It should be short and it can also be an expression of thanks to your host if appropriate.

# Your Closing Statement

- Do**
- “In my last slide I would like to acknowledge the participation of my colleagues Jim, Jane, Alphonso, and Dr. Jones. I would also like to acknowledge the support of the National Science Foundation for funding this study.” (*pause here very briefly*) ... “Thank you very much for your attention.” (**Don’t say anything else!!!!**)

- Don’t**
- Don’t just stop!
  - Don’t say “*that’s it*” .... “*that’s the end*” .....: “*I’m finished*”
  - NEVER offer to answer questions if there is a chairperson - it is the role of the chairperson, not you to ask for questions!!!! (**Don’t invite questions - it’s rude!!!**)

**So:** Make the audience feel comfortable about the end of your presentation by telling them when it is finished.

# **Imaging, Flow Cytometry, and Functional Cytomics**

**Applications of  
current cell analysis techniques**

J. Paul Robinson, PhD & Bartek Rajwa, PhD.  
Purdue University Cytometry Laboratories

**So:** Example Opening Slide – Has complex background  
– OK for one slide, but don't use it for all the rest!

# Imaging, Flow Cytometry, and Functional Cytomics:

## Applications of current cell analysis techniques

J. Paul Robinson, PhD

Purdue University Cytometry Laboratories

**So:** Example Opening Slide – Has plain background – not so exciting, but very effective when the goal is to talk science!! Note that the Copyright statement at the bottom in black and is now virtually unreadable! (so don't use black on blue!!)

56 of 46

# Your personal habits

- **Standing:** Face your audience, but if you are very nervous, look only at people in the middle or back rows
- **Pacing:** Sometimes pacing helps when you are nervous – it can also help to keep the audience’s attention – but it can also be distracting – if you pace, pace slowly and deliberately
- **Speech:** Speak slowly, clearly, & deliberately
  - don’t say “Ummm”...or “Ah....” ....between every sentence
  - don’t say “You know....” when you pause
- **Fidgeting:** Don’t play with the toys (like keys) or put your hands in your pockets – hold the lectern if you have to
- **Humor:** Use very sparingly, it can be an ice-breaker but it is very hard to do – my suggestion is to avoid it

# Key Material Items to consider

- Use of the laser pointer
- The slide background
- Use of color
- Use of animation tools
- Use diagrams or flow charts if possible
- Amount of material per slide
- Number of slides in the presentation
- Your first and last slides



# Using a pointer

- Use the pointer to add emphasis and assist the audience follow your ideas

- Do:**
- Use sparingly
  - Only hold on for a second at a time
  - Hold it steady
- Don't:**
- Hold the pointer on!!
  - Spray the audience...ouch!
  - Flash the pointer all over the slide

**So In Emergency:** If the pointer dies: don't panic. A good chairperson will observe and deal with it. If not, find a stick, pen, or some long object and use that to point to the screen. Don't let this put you off your presentation.

# Pointer use example

- There are 4 main points:
  - The length of time you leave the pointer on
  - How steady your hand is
  - Are you “firing” at the audience?
  - Are you distracting your audience rather than focusing them?

**Example:** When you mention the first point – put the laser at the “-”. Discuss this point, then move to the next point. Mostly pointers are useful when dealing with figures and images. It is unnecessary to point to each line of text, but for learners, it is a good way to keep yourself on track.

# Pointer hints for nervous people (that's most people actually!)



- Hold the lectern when you talk – it stops your hands doing funny things. When you become more confident, you can walk away from the lectern.
- Hold the laser pointer on the edge of the lectern when you point it – then your quivering fingers won't make the pointer bounce everywhere!!

# Using Backgrounds

- Backgrounds are fun, but they can be distracting
- Sometimes you cannot read the text
- Sometimes they are more interesting than the data
- They significantly increase the size of the file
- Sometimes they just look ridiculous
- It is a well known fact that the most important factor in reading text is .....contrast
- The best contrast is.....Black and **White**

**So:** Sometimes boring old black and white slides are easier to see!!

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- Be careful when using backgrounds available from templates
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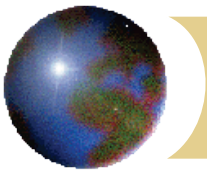
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## *What Resources are Required?*

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**So:** BAD example slide - nasty background – its very distracting and much more interesting than the text!!

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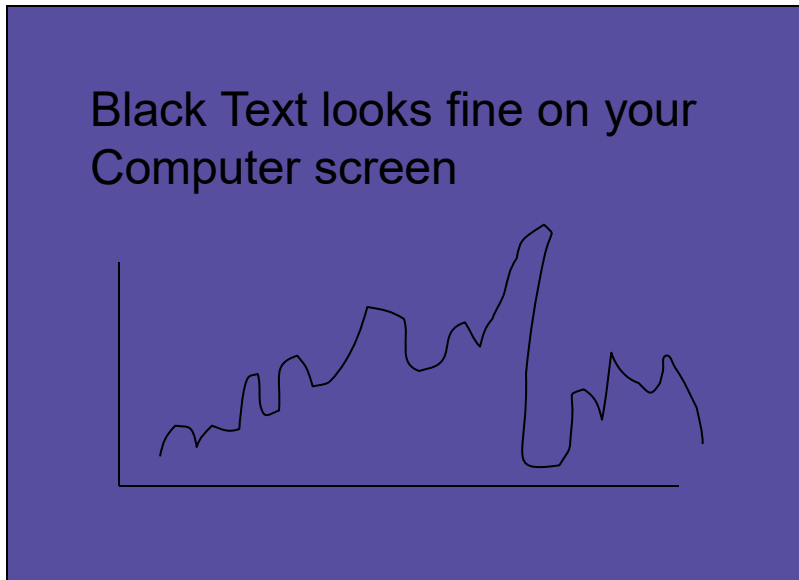
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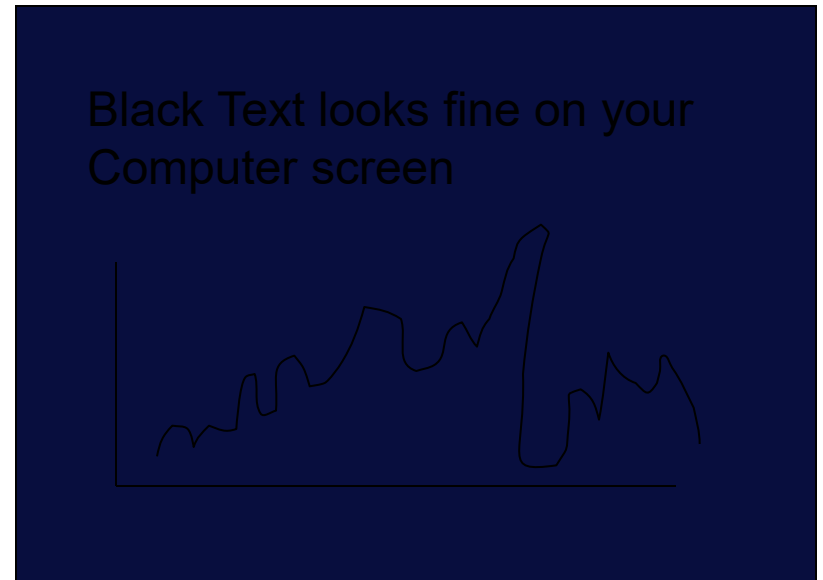
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# Advantages

---

## Standard Assay

- Uses Whole Blood
- Cheaper than Microdrop

## Gel Microdrop

- Rare Populations
- Short Incubation
- Sort and Recover live cells

**So:** EXAMPLE: bad color, way too much animation – its just a bad slide



# Advantages

---

## Standard Assay

- Uses Whole Blood
- Cheaper than Microdrop

## Gel Microdrop

- Rare Populations
- Short Incubation
- Sort and Recover live cells

**So:** OK – it might look boring, but this is a very basic slide and really does not need any enhancement. Audience is focusing on just the text.

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## Gel Microdrop

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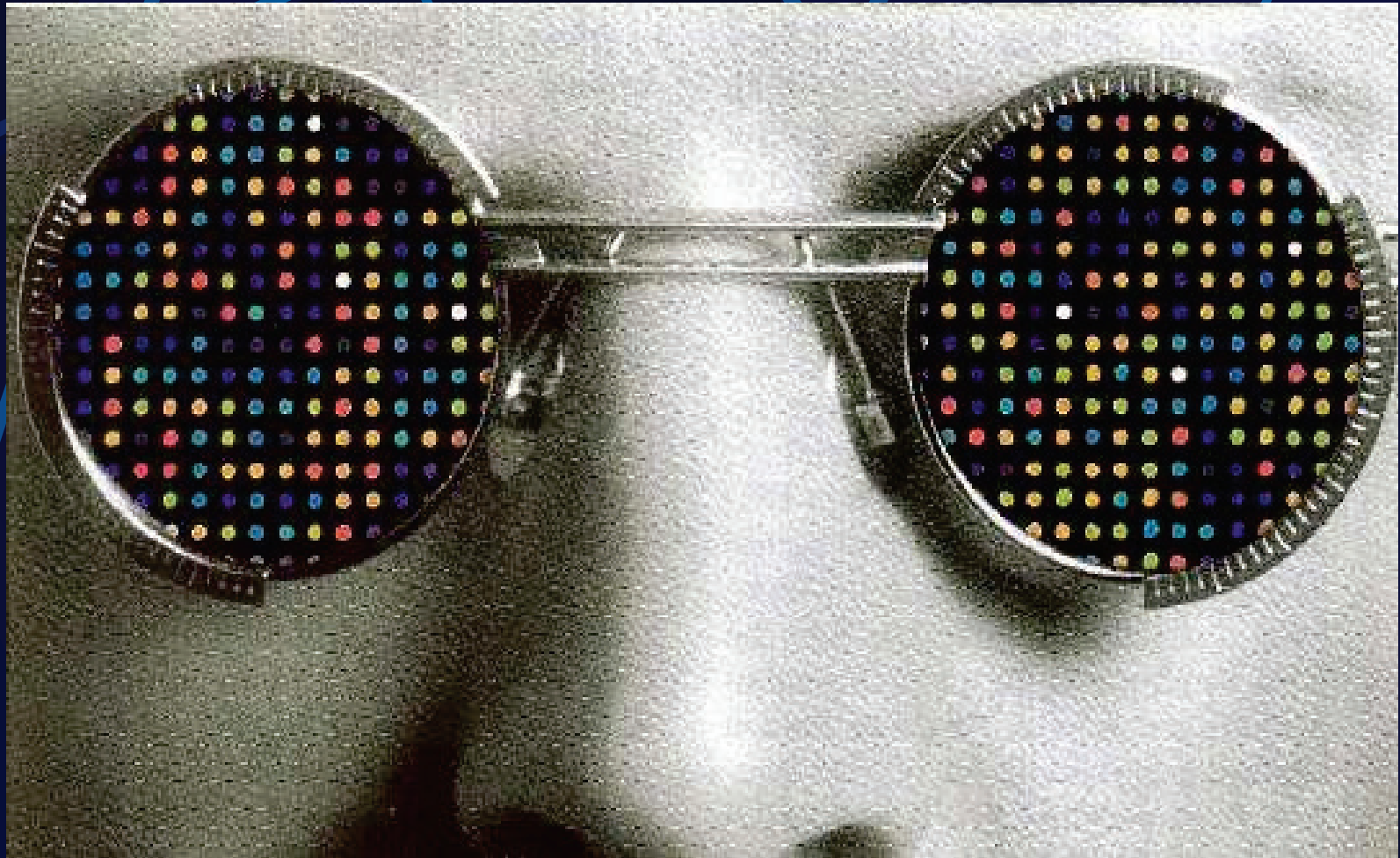
**So:** If you want to make it a little more attractive...this works well.

# Animation

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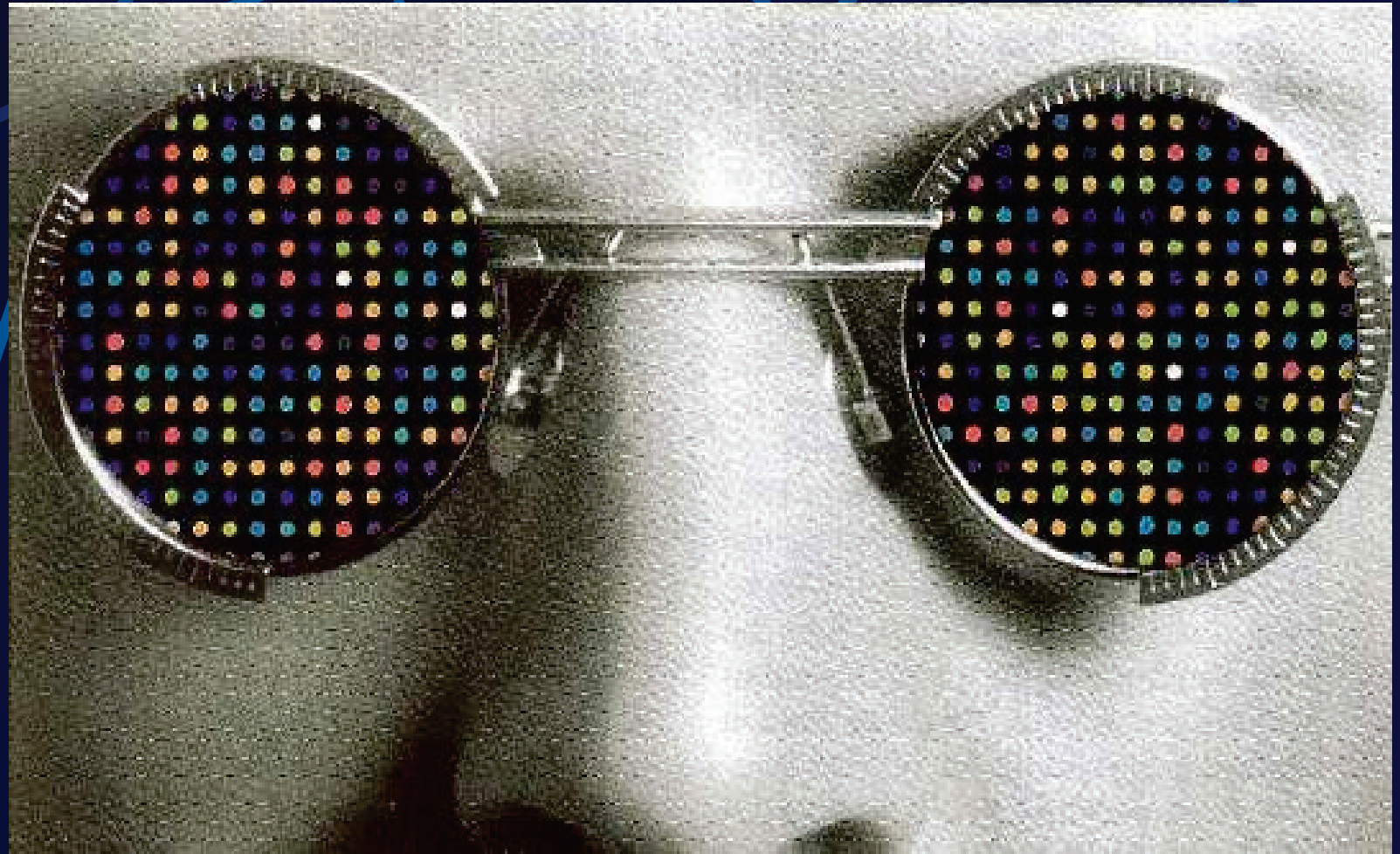
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# And for Imaging Technologies?



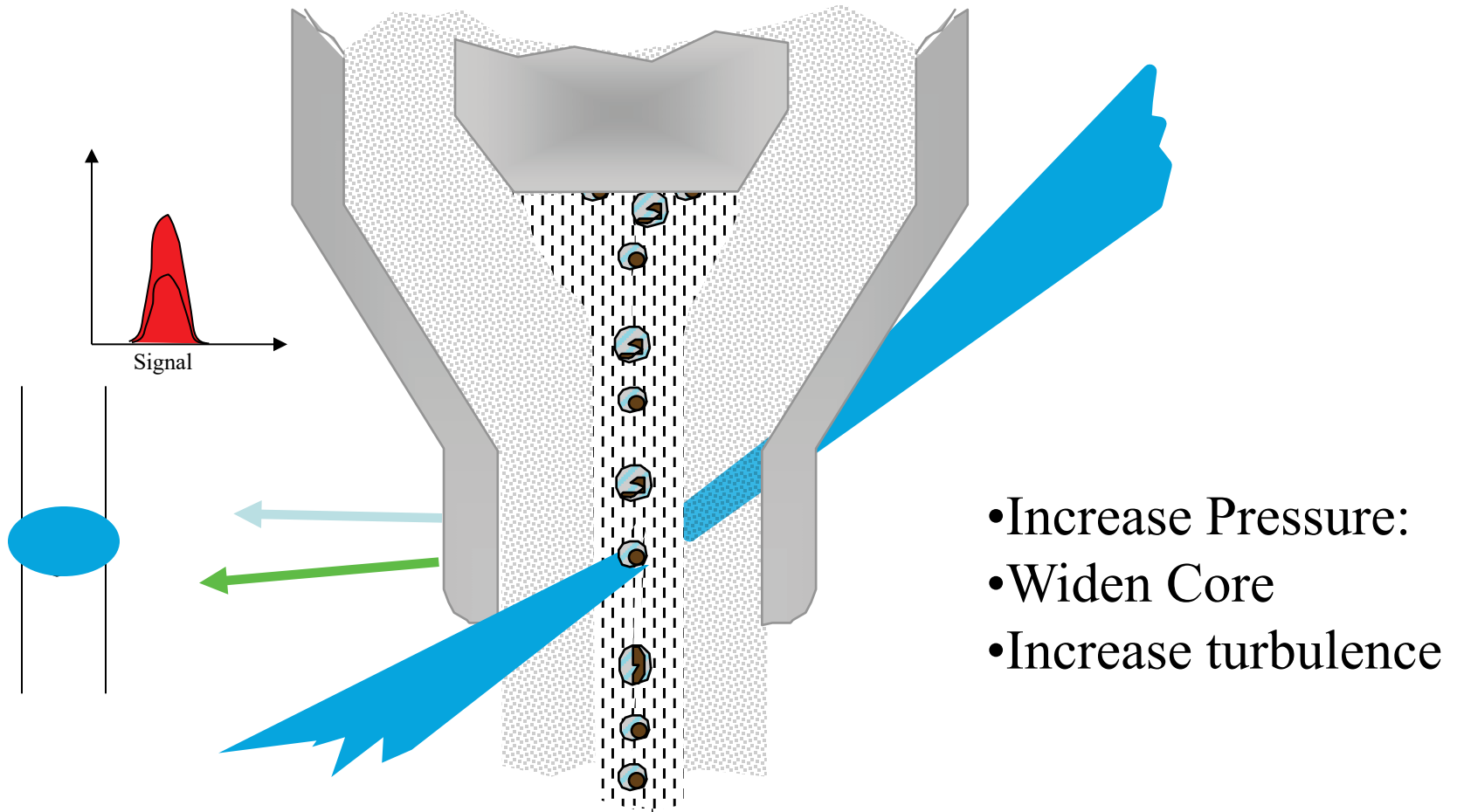
So: Example - simple animation – it works

# And for Imaging Technologies?



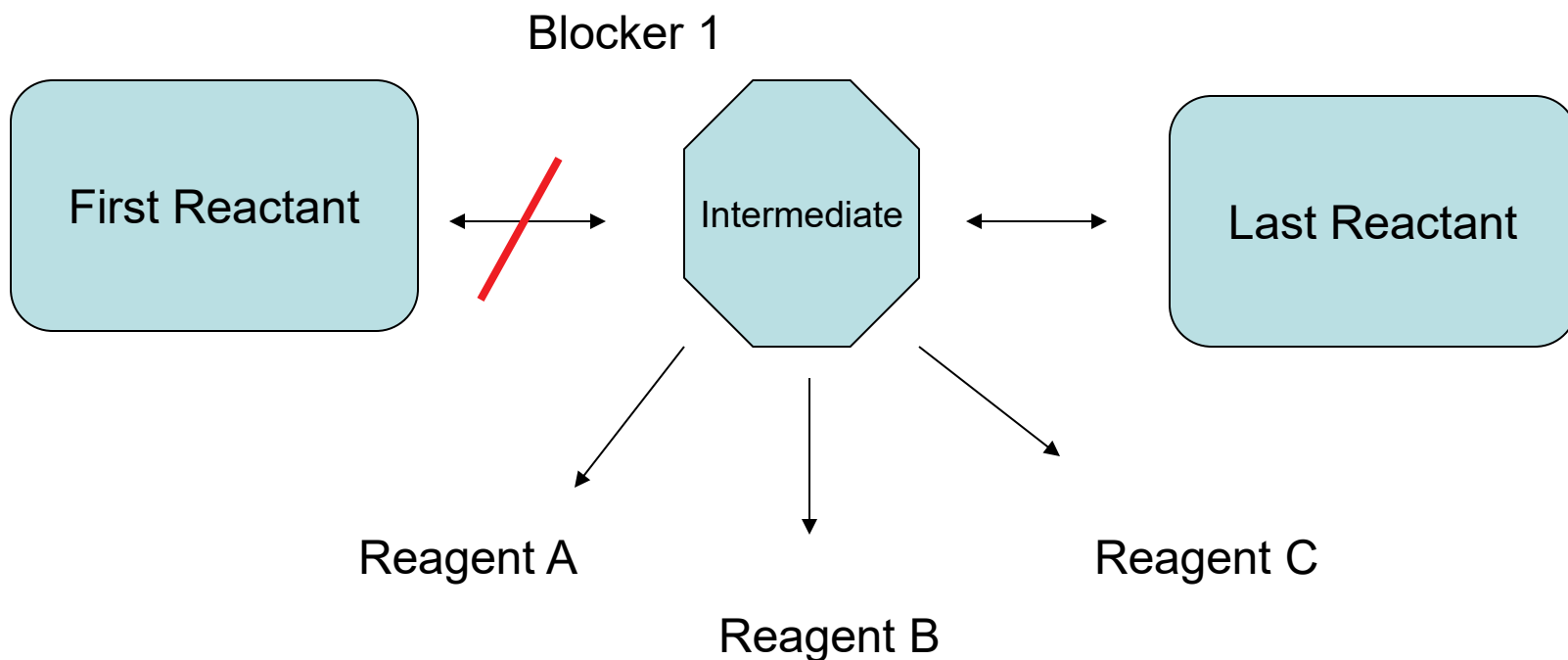
So: Example – gratuitous animation – plain annoying!!

# Hydrodynamically focused fluidics



**So:** you have to explain each step in the process – this animation give time to do that – and the star on the right indicates how many mouse clicks to perform the entire animation sequence – add stars for each click necessary and animate them to disappear at each click

# Use diagrams or flow charts if possible



**So:** Simple – very simple is good.

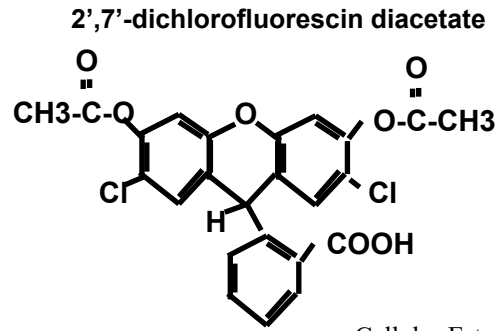
# DCFH-DA



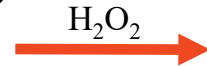
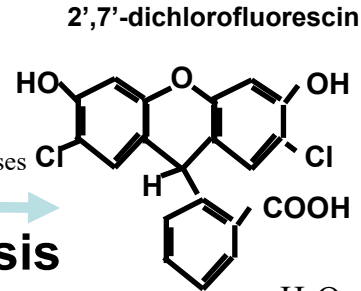
# DCFH



# DCF

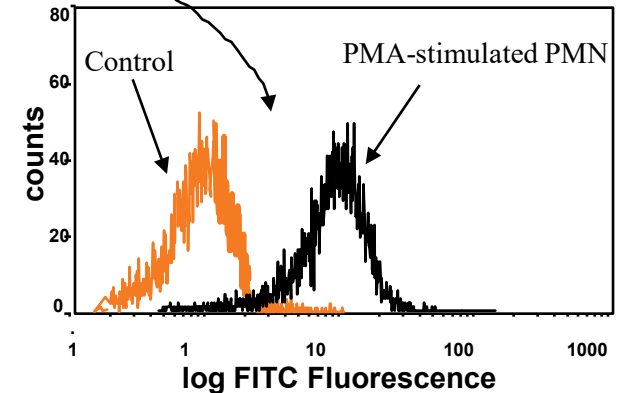
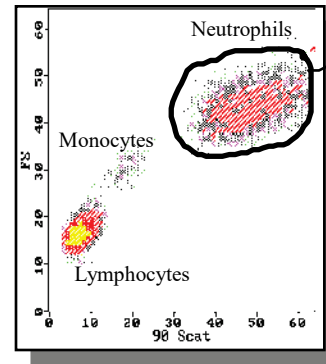
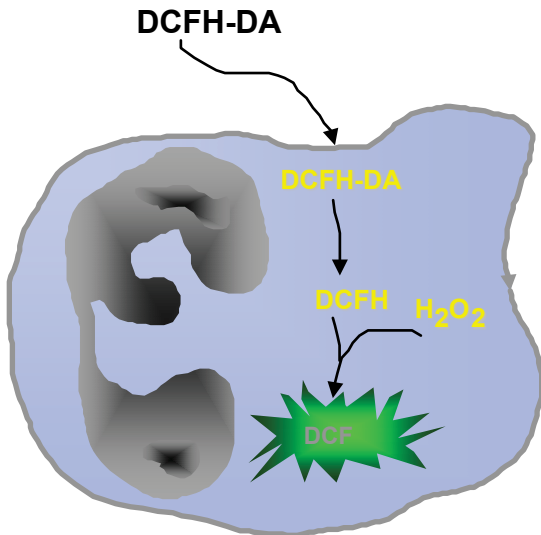
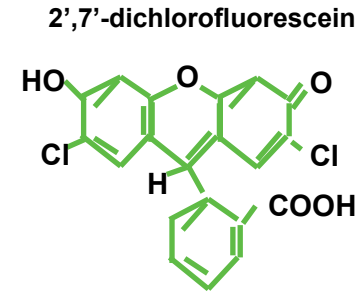


Cellular Esterases  
**Hydrolysis**



**Oxidation**

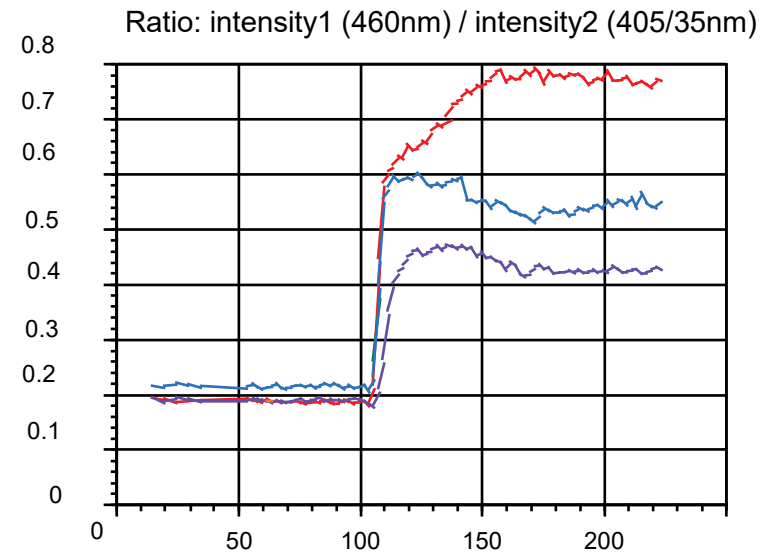
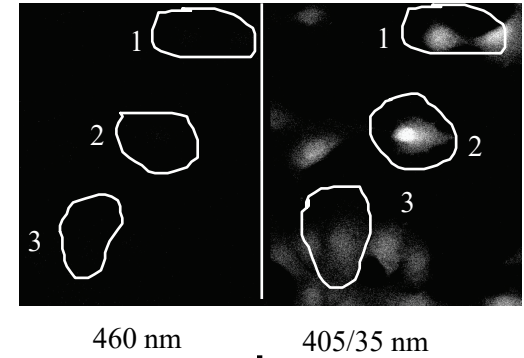
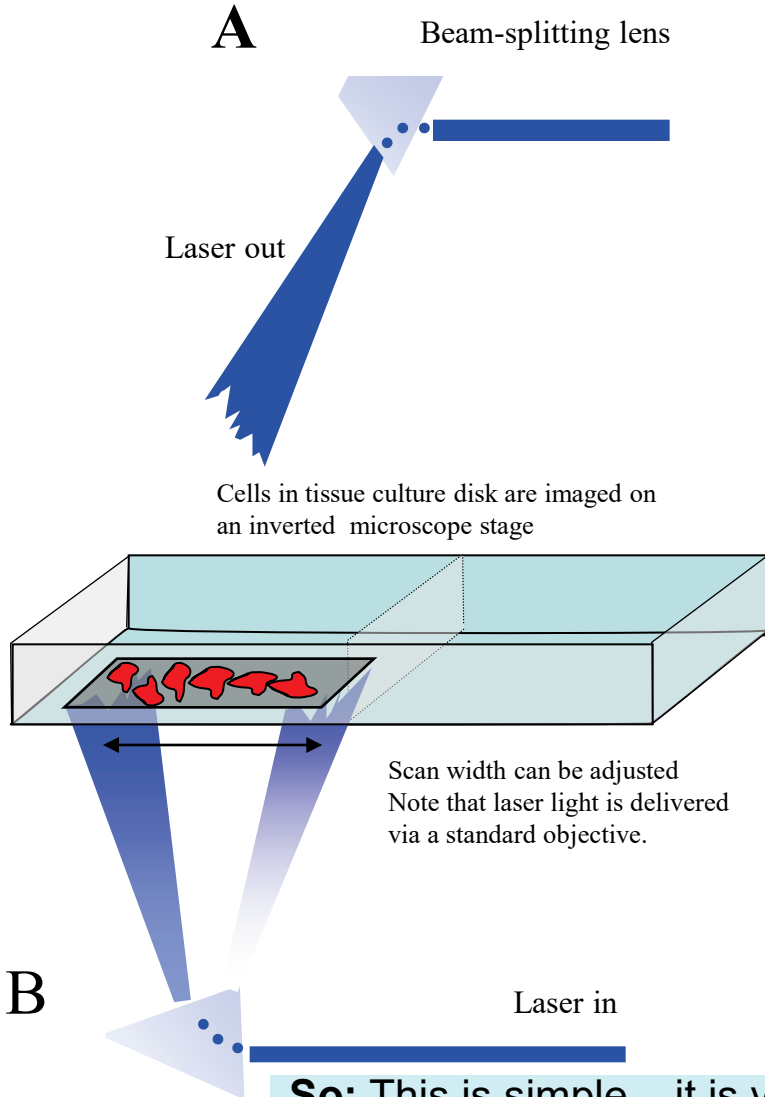
**Fluorescent**



**So:** This is pretty complex – it needs a long time to explain.

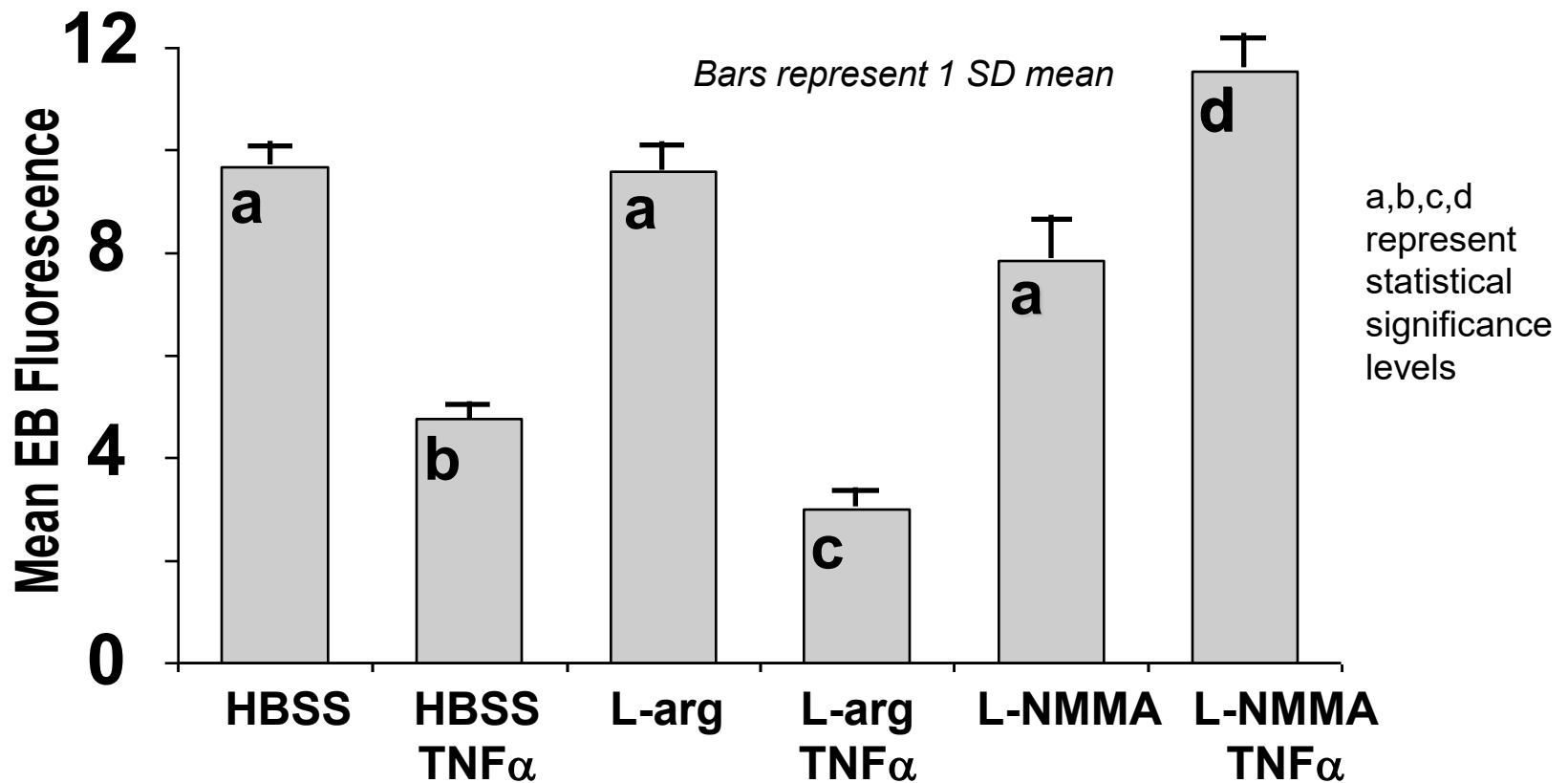


# How a line scanning confocal images



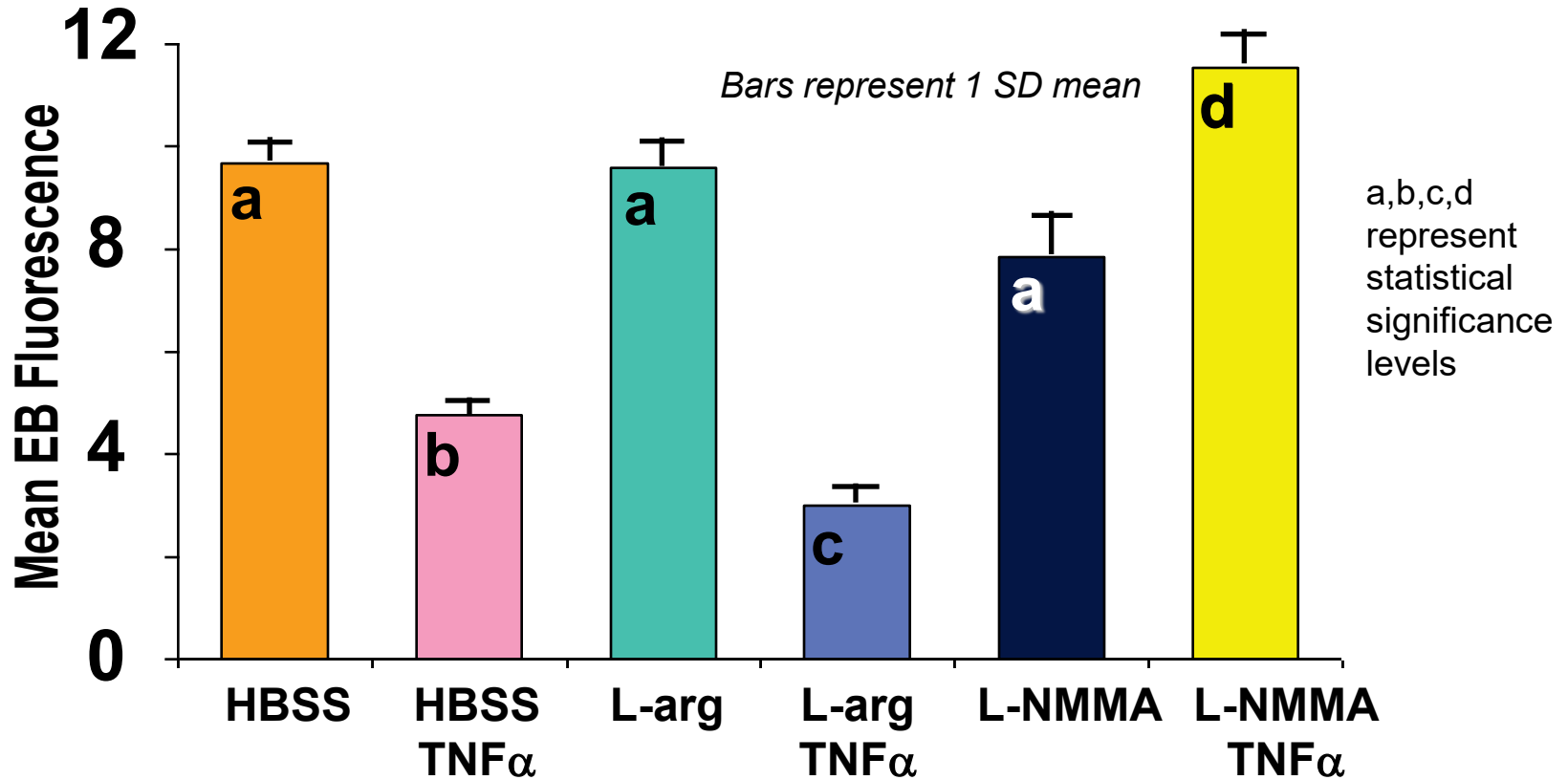
**So:** This is simple – it is very straightforward – explanation is easy. 80 of 46

# Rat neutrophil oxidative burst with nitric oxide modulators



NO modulators increase superoxide, TNK reduces  $O_2^-$

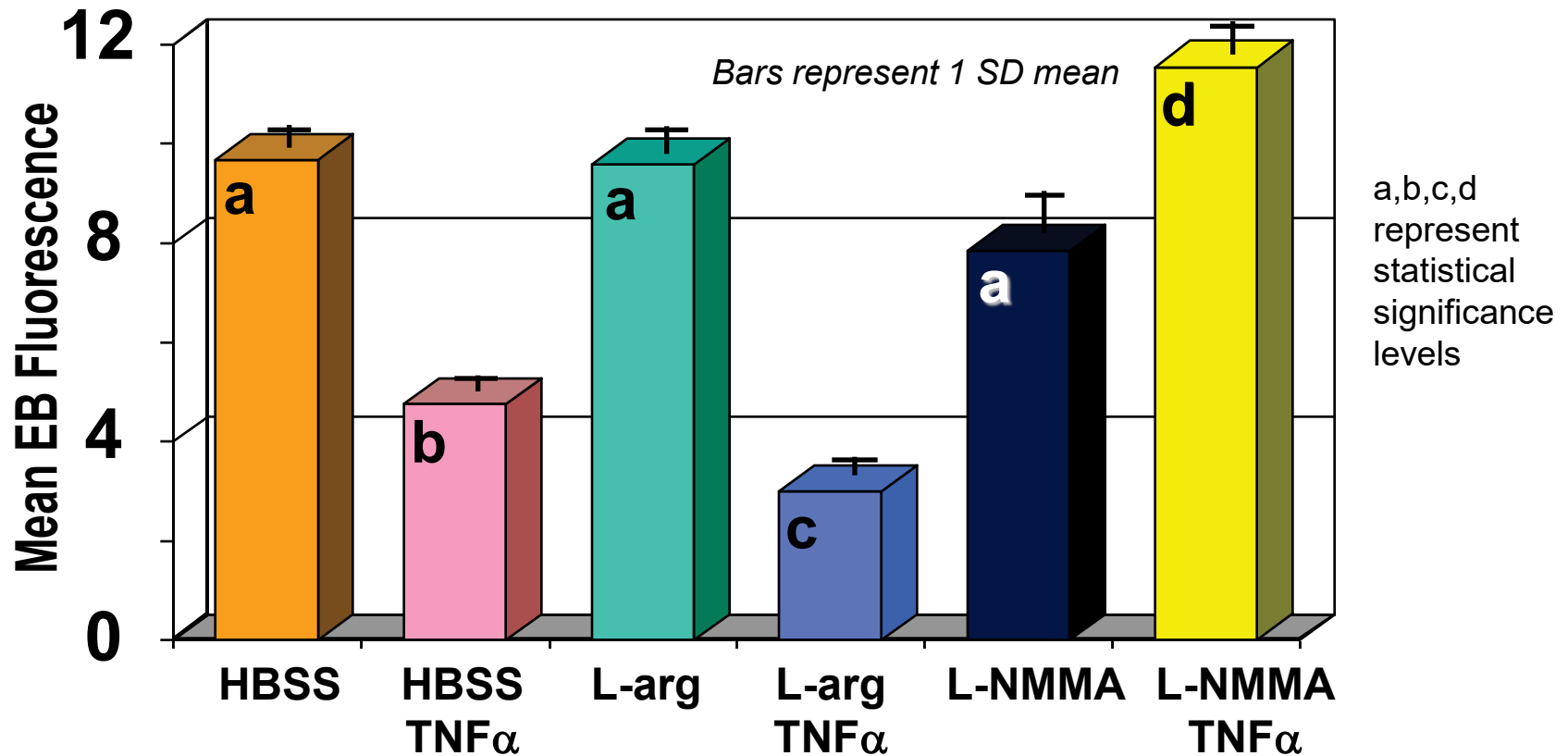
# Rat neutrophil oxidative burst with nitric oxide modulators



NO modulators increase superoxide, TNK reduces O<sub>2</sub><sup>-</sup>

**So:** Basic data, but color enhanced...careful tho' not to confuse what you are trying to explain. Do the colors add value to the data?

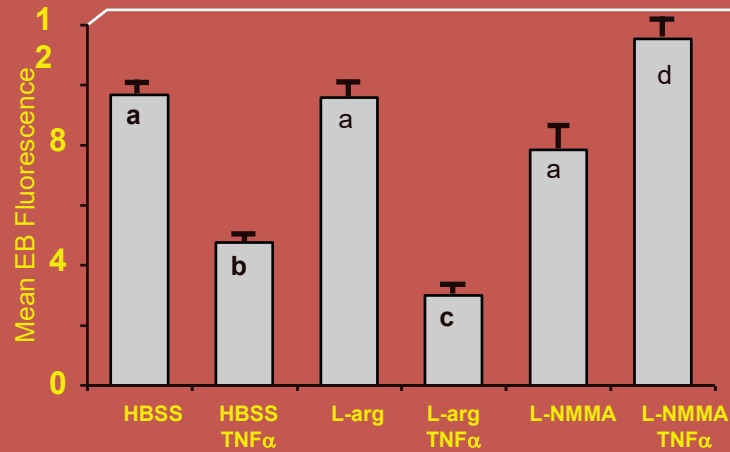
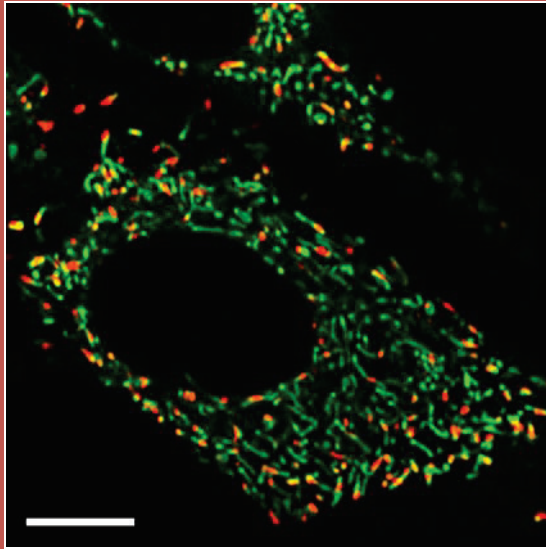
# Rat neutrophil oxidative burst with nitric oxide modulators



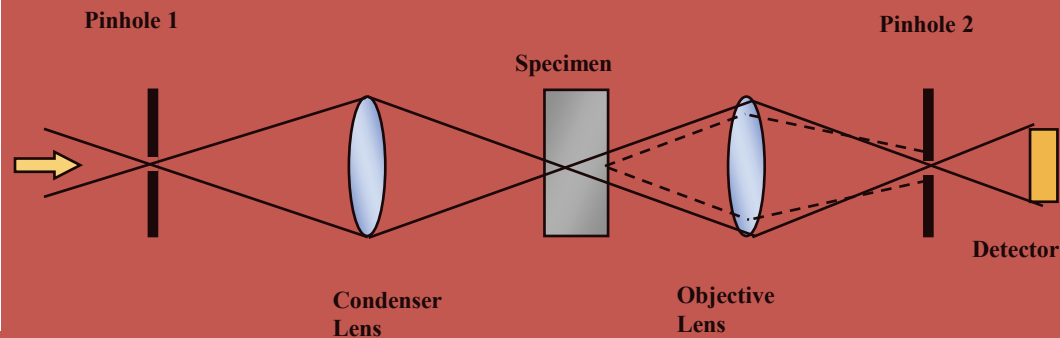
NO modulators increase superoxide, TNK reduces  $O_2^-$

**So:** Be careful when you use enhancement features. This is OK, but much more would become very distracting.

# Rat neutrophil oxidative burst with nitric oxide modulators



NO modulators increase superoxide, TNK reduces  $O_2^-$



**So:** This is overboard – background is horribly distracting, and it's just a bad slide. The audience is wincing.....it's not acceptable!!

# Data Slides

```
GAATTCTCTTTGGTATCCAATGAAGAAATCGAATCCATACCCATAGCTATAAAAAACAT
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CAACCATTATTTAAAGTCGCATTTAAAAAACTTGTTGAAAAATTTTTTAAATATACTTG
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CTAATATCCAATCTGGTATATAAAAAAGATCAGAAGGGTTACTATTAACATCCAACC
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TTGTTAATGTTACAACCTGGTACTTCACAAACAGGATTTTTGGGGAAAAAATGTTAAA
ATGGCTTCTGAATTC
```

```
Sequence 10 (11307600) (h) AAATATAT... 1310 bp...
Sequence 11 (11307600) (h) AAATATAT... 1310 bp...
Sequence 12 (11307600) (h) AAATATAT... 1310 bp...
Sequence 13 (11307600) (h) AAATATAT... 1310 bp...
Sequence 14 (11307600) (h) AAATATAT... 1310 bp...
Sequence 15 (11307600) (h) AAATATAT... 1310 bp...
Sequence 16 (11307600) (h) AAATATAT... 1310 bp...
Sequence 17 (11307600) (h) AAATATAT... 1310 bp...
Sequence 18 (11307600) (h) AAATATAT... 1310 bp...
Sequence 19 (11307600) (h) AAATATAT... 1310 bp...
Sequence 20 (11307600) (h) AAATATAT... 1310 bp...
Sequence 21 (11307600) (h) AAATATAT... 1310 bp...
Sequence 22 (11307600) (h) AAATATAT... 1310 bp...
Sequence 23 (11307600) (h) AAATATAT... 1310 bp...
Sequence 24 (11307600) (h) AAATATAT... 1310 bp...
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Sequence 27 (11307600) (h) AAATATAT... 1310 bp...
Sequence 28 (11307600) (h) AAATATAT... 1310 bp...
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Sequence 30 (11307600) (h) AAATATAT... 1310 bp...
Sequence 31 (11307600) (h) AAATATAT... 1310 bp...
Sequence 32 (11307600) (h) AAATATAT... 1310 bp...
Sequence 33 (11307600) (h) AAATATAT... 1310 bp...
Sequence 34 (11307600) (h) AAATATAT... 1310 bp...
Sequence 35 (11307600) (h) AAATATAT... 1310 bp...
Sequence 36 (11307600) (h) AAATATAT... 1310 bp...
Sequence 37 (11307600) (h) AAATATAT... 1310 bp...
Sequence 38 (11307600) (h) AAATATAT... 1310 bp...
Sequence 39 (11307600) (h) AAATATAT... 1310 bp...
Sequence 40 (11307600) (h) AAATATAT... 1310 bp...
```

So: No – bad idea – if you have to tell the audience “*I know you can’t read this....but...*” - don’t show it. This is a totally unacceptable slide!

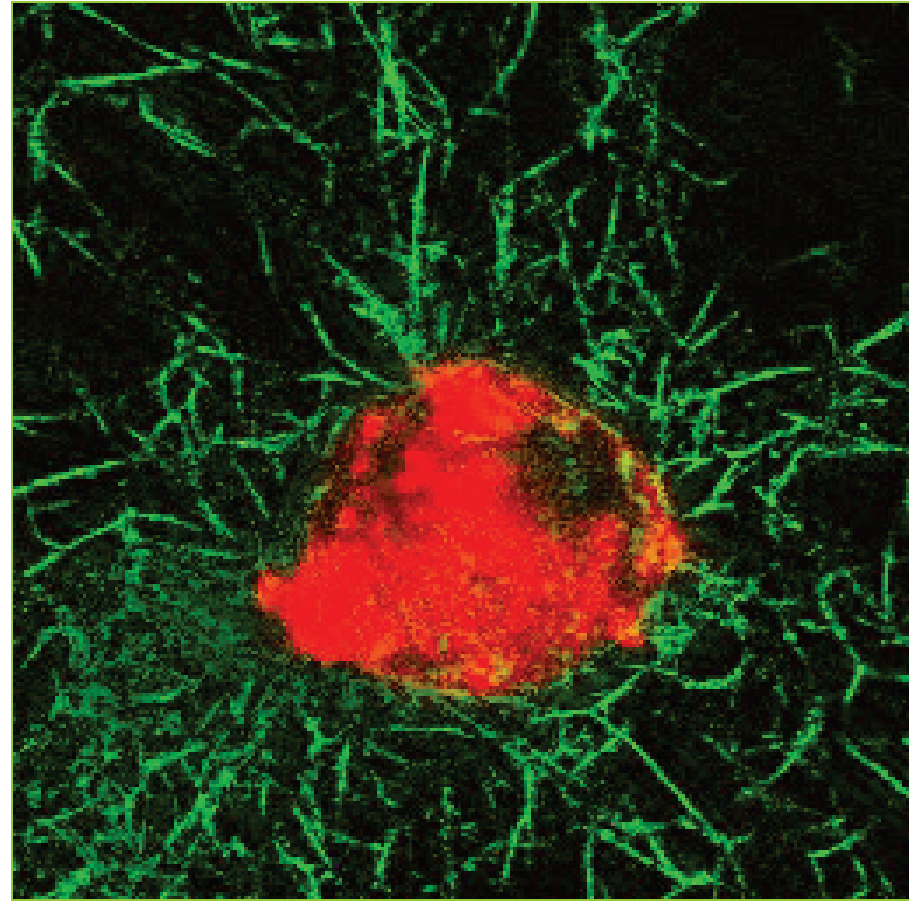
# Some things you should know about projectors and computers

- All projectors should be considered the “enemy”
- All projectors are different
- There are often 3 modes for your computer
  - Mode 1: Laptop screen only
  - Mode 2: Laptop and external monitor (Projector) (Fn/F8)
  - Mode 3: External Monitor (projector) only (Fn/F8)
- Be careful using Mode 2 – Movies may not play on the projector
- At most meetings, KVM switches are used to connect laptops

**So:** Bottom line is check out the projector with ALL your slides before you give the presentation....make sure your movies work! How many times have I seen presentations where movies don't work? - HUNDREDS!!

# Example of movie not playing in mode 2

The movie on the right plays OK on mode 2 but may not play on the projector. Some newer computers will play it regardless.



**So:** It's a great movie, but when it does not work and you say "...well if you were able to see this movie, you would see.."...it's not good!



# How Many Slides?

- Rule of thumb: Use 1 slide per minute of your allotted time including your opening and closing slides.
- You will spend much longer on some slides than you think.
- For a 20 minute talk, I suggest only 20 slides. If you fill up your 20 minutes, there is no time for questions.
- Don't you hate being the last speaker in a session where everyone has gone 5 minutes over and your 30 minute talk now has 15 minutes left? Don't do that to other speakers – its PLAIN RUDE!!
- This presentation was designed for a 45-50 minute talk with 10-15 minutes for discussion. There are 44 slides in the presentation including the opening and ending slides. The last 2 slides are explanations as to how the slides were made – an example of adding extra slides in case a question is asked about a topic. Slide #2 was added to give some “online” explanation.

**So:** 90 slides for a 45 minute presentation says “I am going to blow you away with data, but I don't care if you really understand what I am saying. My huge number of slides says *‘I can't organize myself!’*”

# Answering Questions

- Listen carefully to the question
- Do not interrupt or finish the question for the questioner
- Repeat the question for the audience in shortened form
- If you do not know the answer or how to approach, ask for more guidance
  - e.g. *“I am not sure I understand the question, could you elaborate”*
- If you then do not know the answer, don’t ramble, try this:
  - *“I am not sure of the answer, but one possible reason might be”*
  - *“I’d be happy to get back to you with the answer to your question after I do some research on the issue”*
- You can also shift the responsibility to your supervisor/boss if you are not sure what to do
  - e.g. *“Perhaps Professor X can answer that better than I”*
- NEVER argue with the questioner...if they become really “pushy” and are being difficult just say
  - *“Perhaps we can talk about this after the seminar”*

# Summary

- A good presentation requires much preparation
- Make a proper introduction and use a slide that shows the structure of your talk
- Slides should be clean, clear and readable
- Use approximately 1 slide per minute
- At the end show a summary slide
- The final slide should be an acknowledgement slide
- You may want to add a few extra slides AFTER your last slide to use in case questions arise in those areas
- Conclude by saying : “*Thank you very much for your attention*”. Stop and let the audience clap!!!
- Do NOT ask for questions!!!!!!!!!!
- Never Ask for Questions!!
- It's NOT your right to ask for questions!!!

**So: Do NOT ask for questions!!**

# Acknowledgements

- **Tissue Engineering Studies**

- Sherry Harbin
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- Bev Waisner

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- Stephanie Sincock
- John Thomas
- Gerald Gregori
- Kathy Ragheb

- **Oxidative Metabolism Studies**

- Carl-Fredrick Bassoe
- Nianyu Li
- Kathy Ragheb
- Gretchen Lawler



## Funding Sources

National Institutes for Health  
National Science Foundation

**So:** List names of those who contributed to the work. Also list your funding sources, and acknowledge any companies that contributed. People must know if your work has been funded by a corporate sponsor. It's the law to identify them!

# How were the Printouts Prepared?

- Slides were made in PowerPoint™
- They were “printed” to Adobe Acrobat™ to create a PDF file
- The PDF was printed 6 per page, framed in Acrobat which allows you to fill the page
- This gives a larger slide than printing directly to the printer from PowerPoint

# About this Presentation

- It was designed to assist graduate students to create quality presentations
- You may copy this and use it for any purpose, it may not be commercialized
- If you do use it, please acknowledge the source as:

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This talk has been presented several times since 2000. This current version 09/02/03