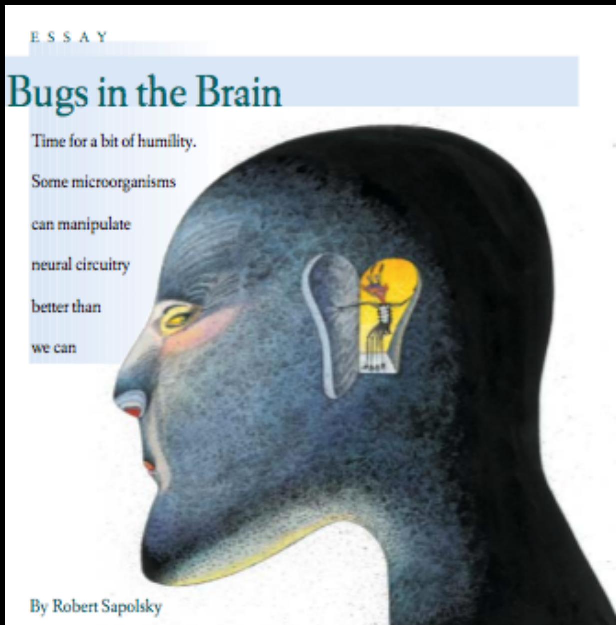


Convey more information than a talk

Receive more feedback

Allows networking

Scientific Posters are one of the most common and effective methods for disseminating scientific information

A Poster is an means to communicate Science.
A Poster is a tool with which to communicate with a person!
A Poster is an advertisement/reflection of you and your science.

Even the best science will go unnoticed unless the poster is well made.

What do you notice First?

- Layout
- Title
- Figures
- Color

What do you notice Next?

- Research question
- Approach
- Results
- Importance

What do you notice Last?

- Importance
- Logic of interpretation
- detailed methods
- Results
- Scientific Impact
- text

What do you care about most?

To get started ….

Summarize your question in 1 sentence

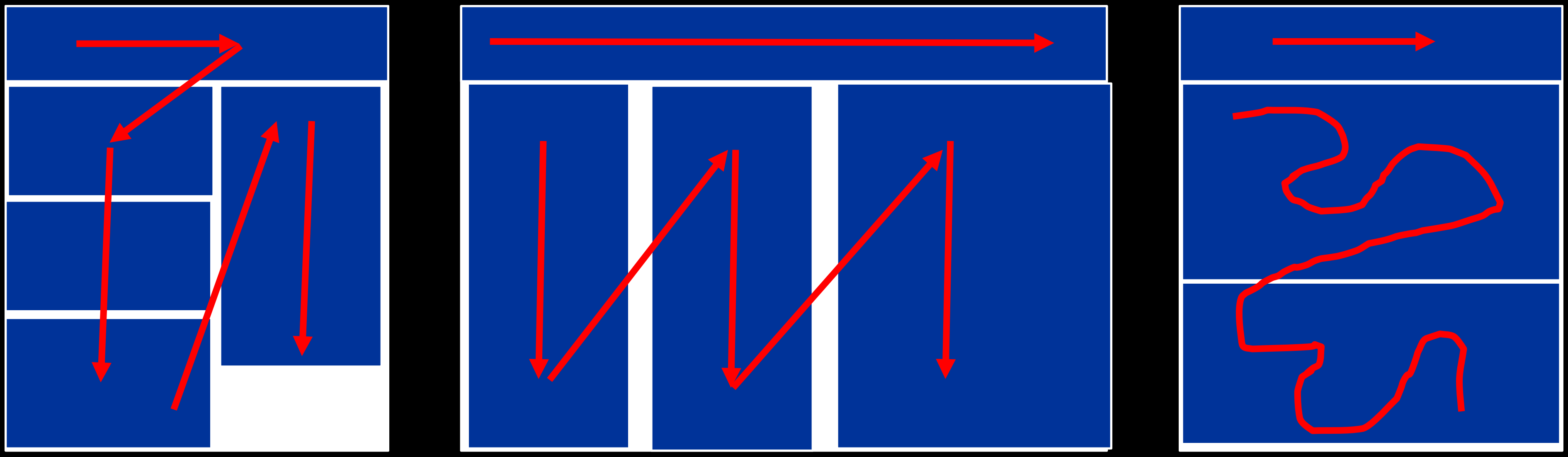
Summarize your result in 1 sentence

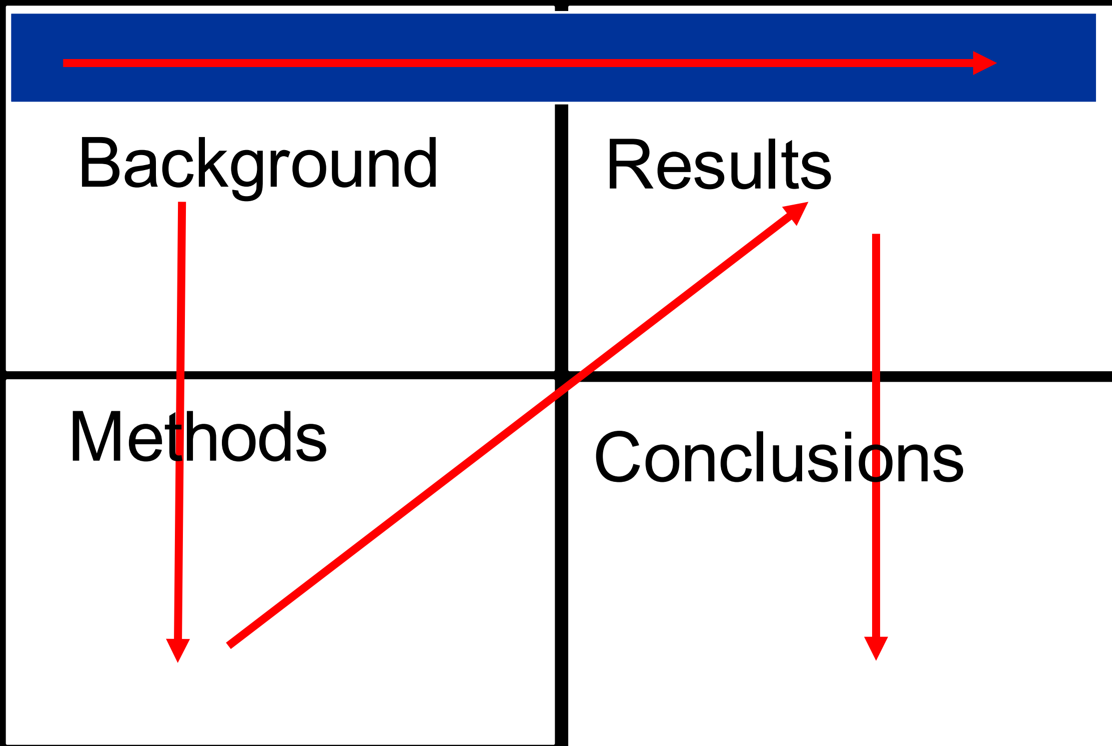
This will be your title

List your main points (there should be no more than 3)

This will be the bulk of your poster

Decide on a layout that will let you tell your story



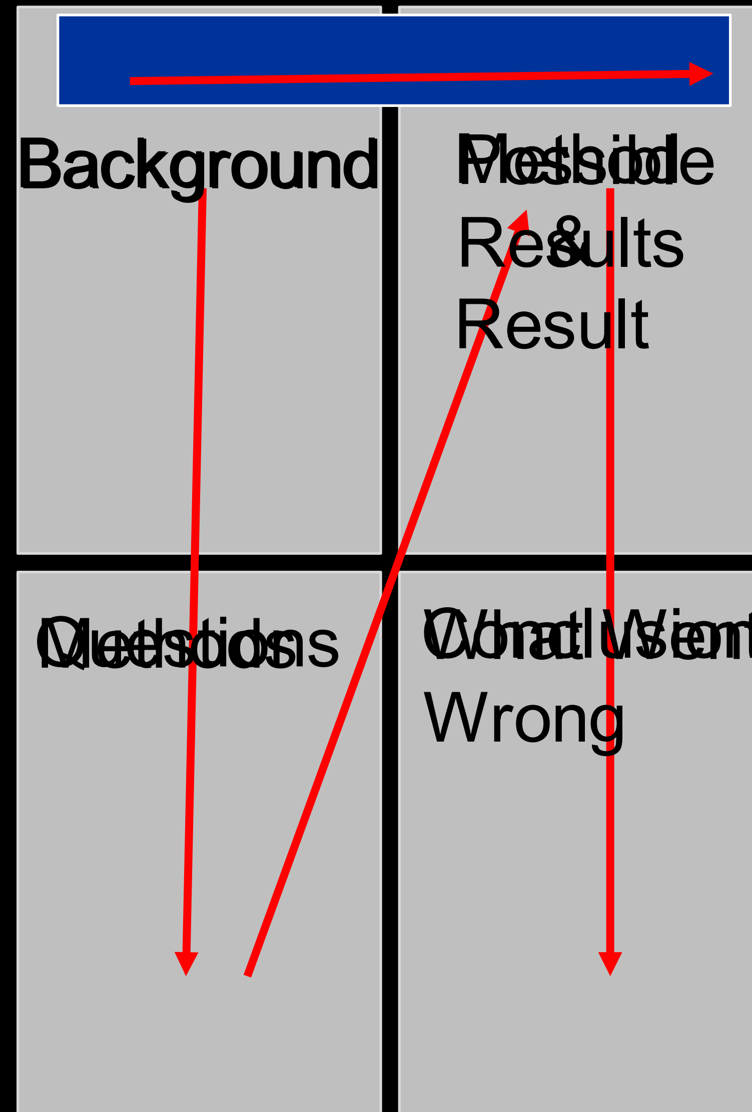


Landscape

Bio342 Constraints

nt Projects - Basic Assignment

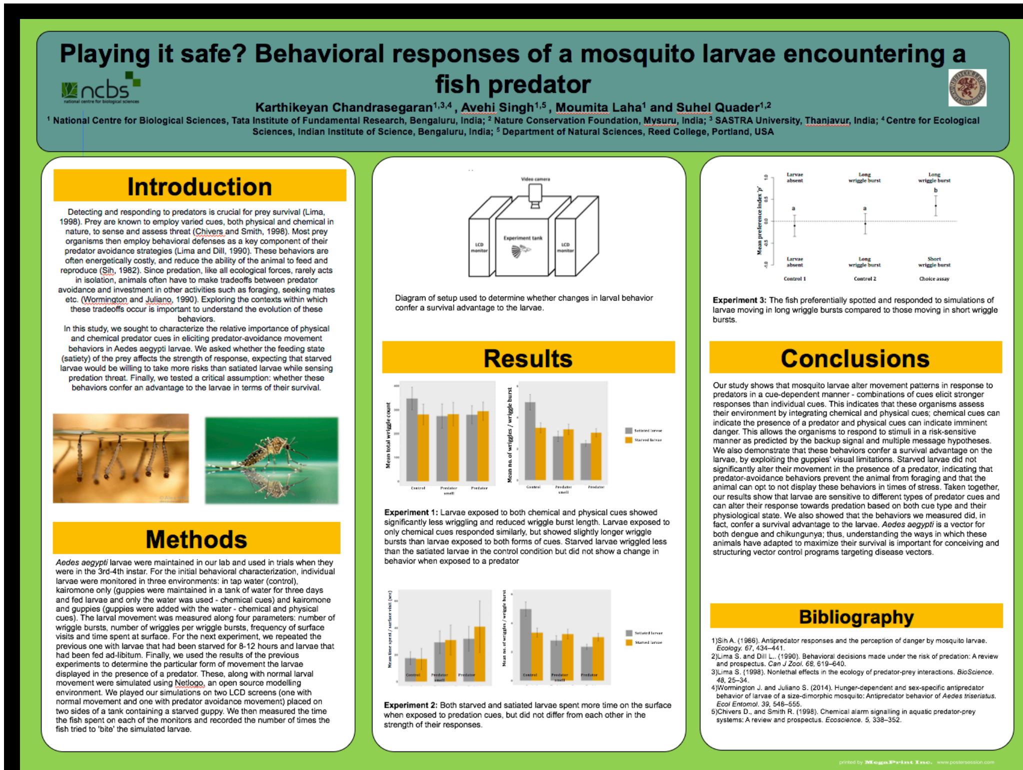
10/24-25 - Week 8 - pick a project
10/31-1 - Week 9 - Animal Care protocol
11/7-8 - Week 10 -
11/14-15 - Week 11 - Analysis M&B Chapter 9
11/28-29 - Week 12 (after Tday) - Presenting Findings M&B Chapter 10
12/8 - Week 13 - Abstract due on moodle (suggestions)
12/10 - print your poster at the Reed Print Shop (elliot basement)
- Post a .pdf of poster to Moodle
12/11 - Finals Week - Tuesday 9:00 AM - 11:30 - Poster Session (templates landscape, portrait)
12/11 - Bring Lab notebook to Poster Session
12/12 - Self Assessment - upload to moodle by 5:00 PM (template)

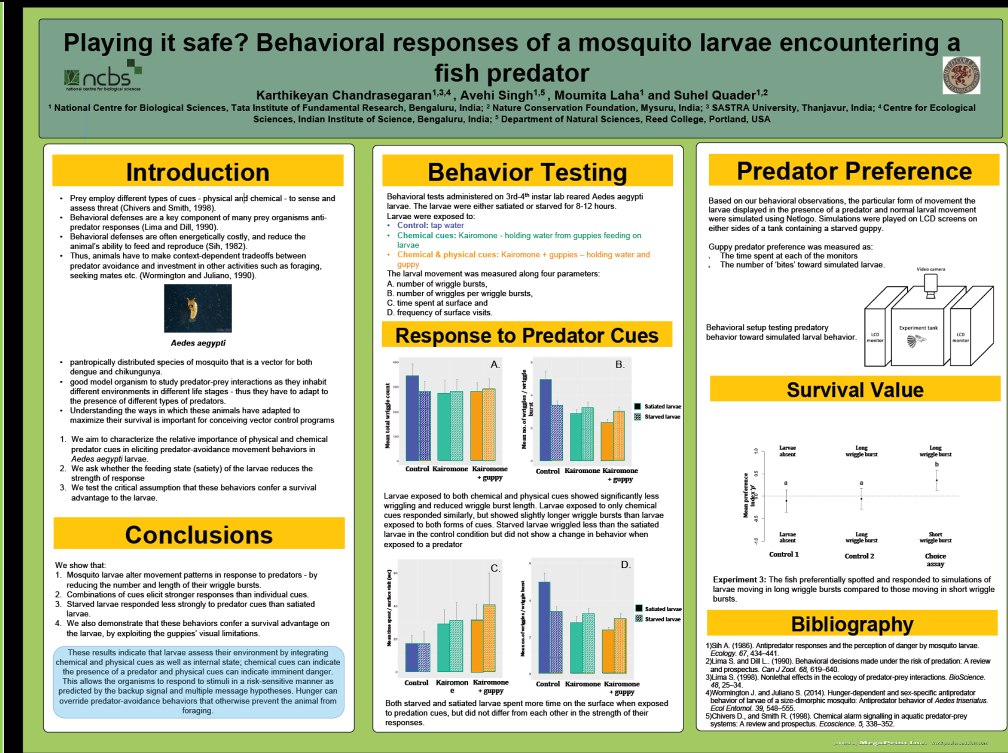


Portrait

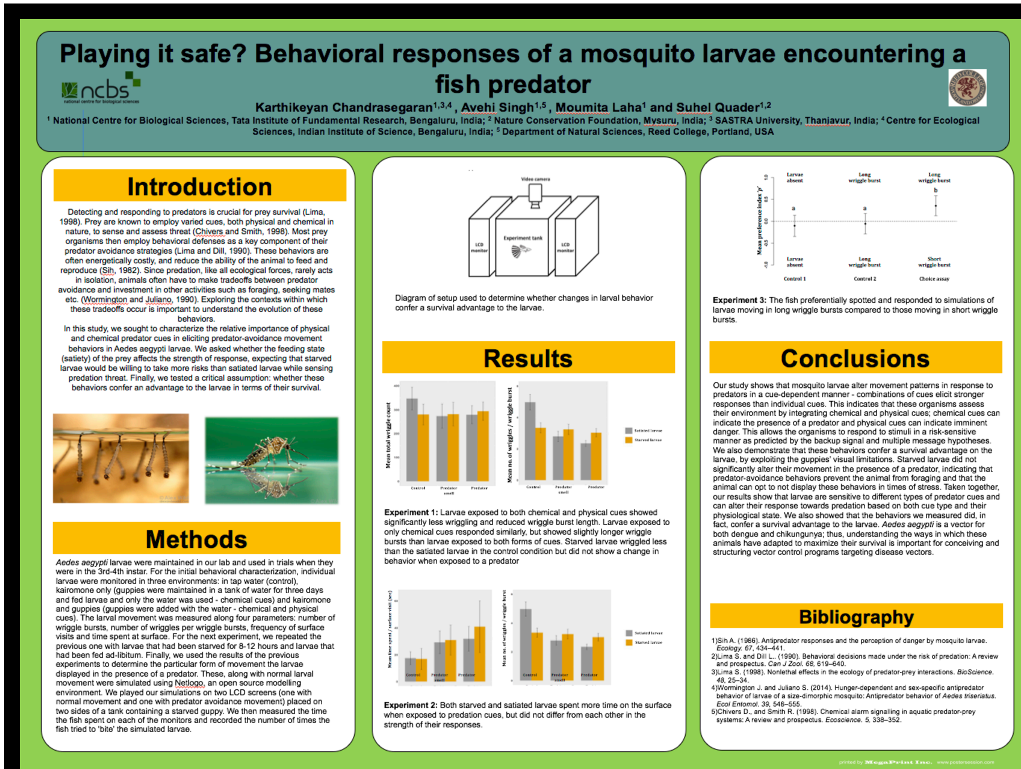
Avoid Excessive Text

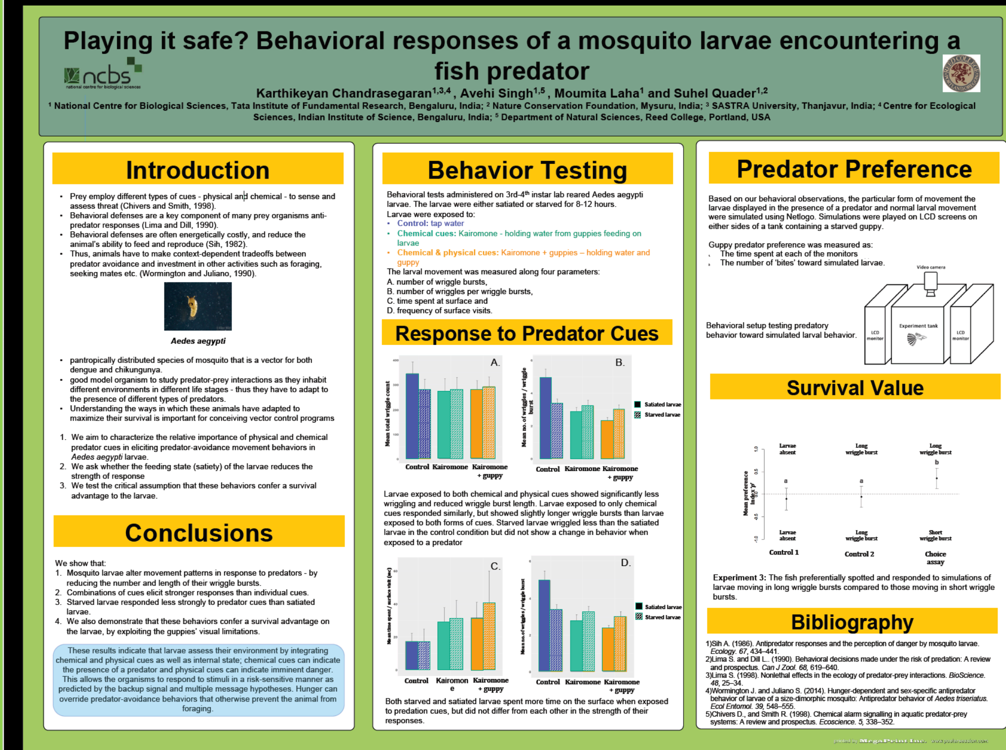
- Practice writing with as few words as possible
- Delete even more words
- Think of a way to use a picture
- Don’t include any superfluous words



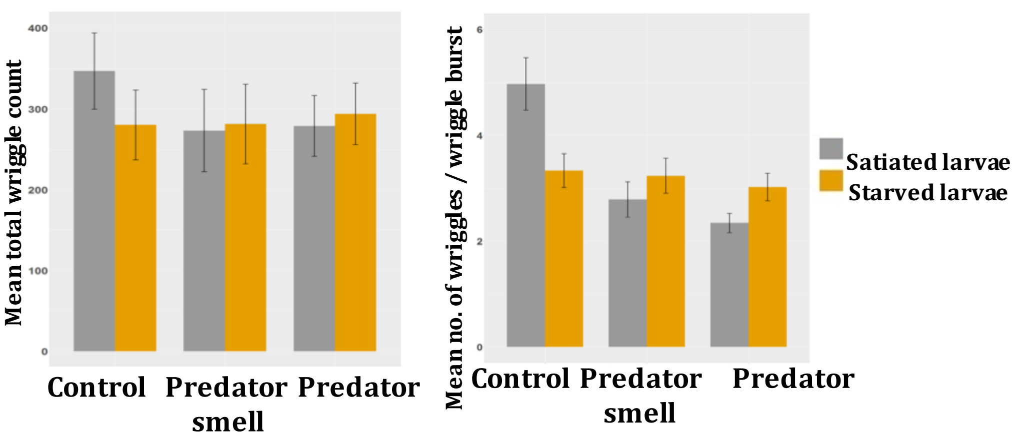


The audience should know what you did if they only read the bold headers.





Put the Method with the Result (same as you would in a talk) (different than you do in a paper)



Use color to your advantage.

Behavior Testing

Behavioral tests administered on 3rd-4th instar lab reared Aedes aegypti larvae. The larvae were either satiated or starved for 8-12 hours.

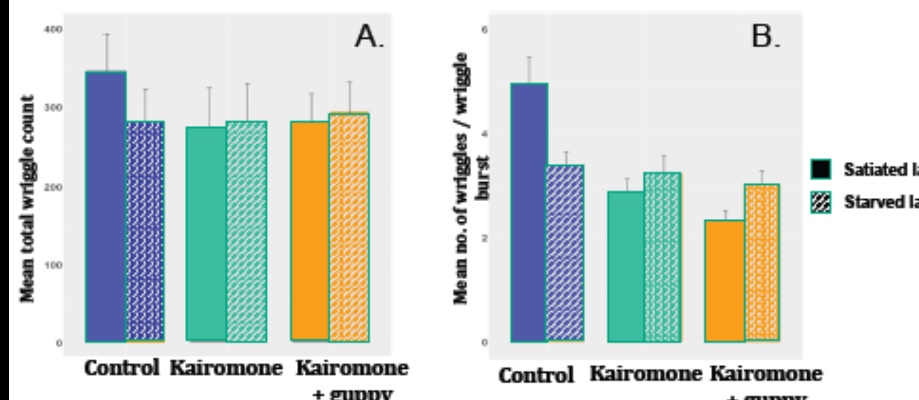
Larvae were exposed to:

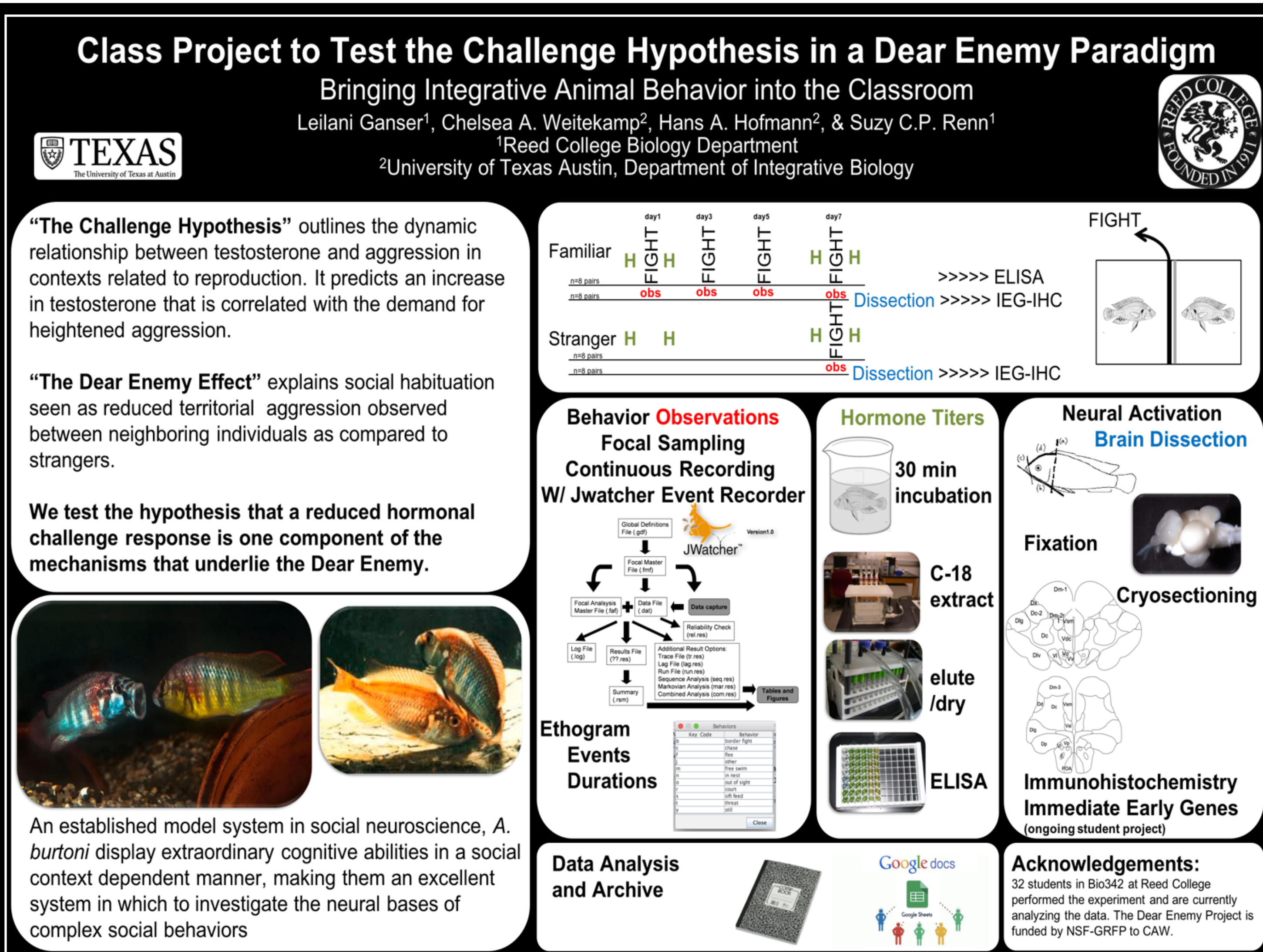
- **Control:** tap water
- **Chemical cues:** Kairomone - holding water from guppies feeding on larvae
- **Chemical & physical cues:** Kairomone + guppies – holding water and guppy

The larval movement was measured along four parameters:

A. number of wriggle bursts,
B. number of wriggles per wriggle bursts,
C. time spent at surface and
D. frequency of surface visits.

Response to Predator Cues

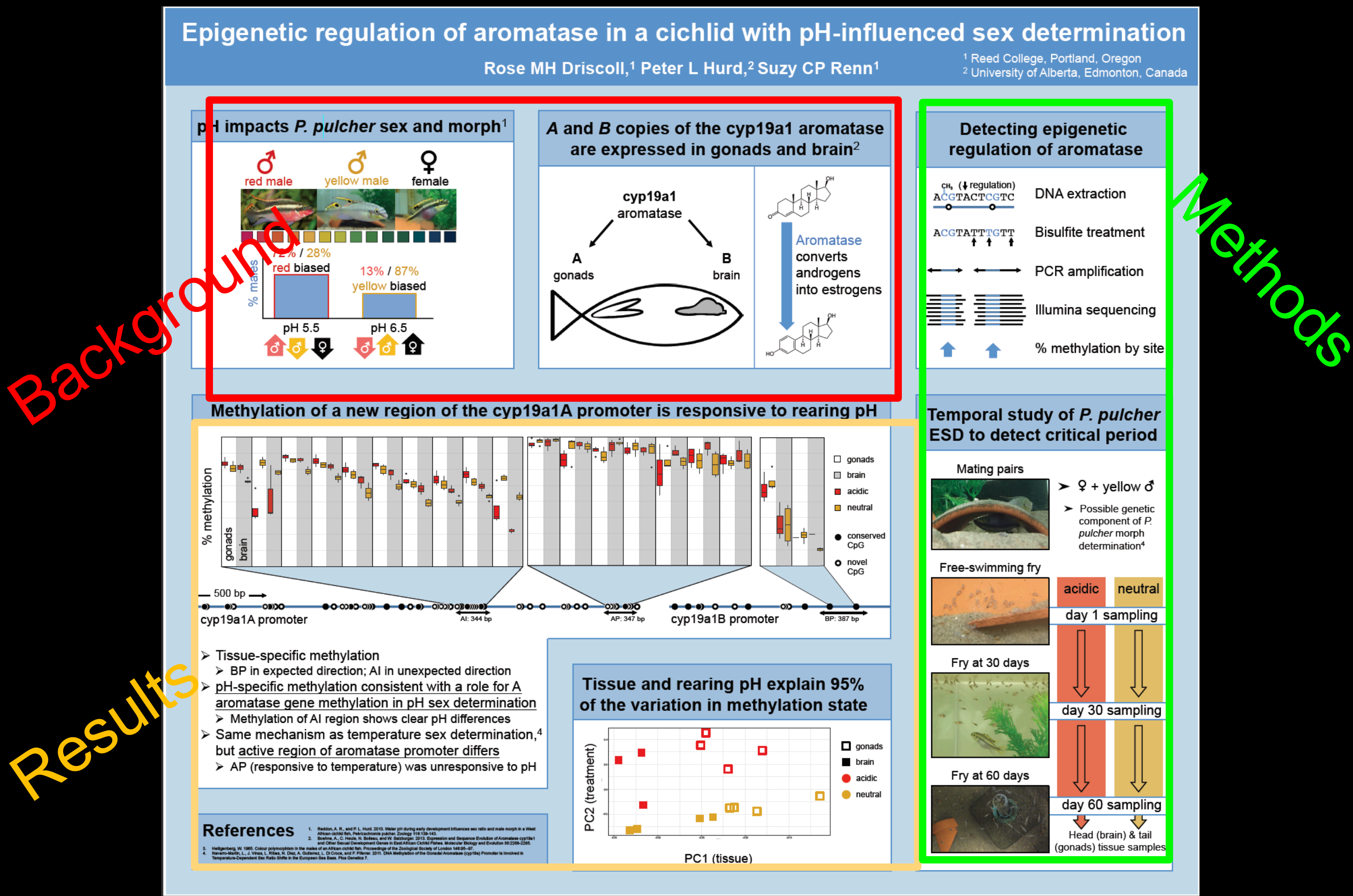




Your poster is a tool for you to interact with your audience

Make your poster visually appealing

Use as many images as possible in place of text

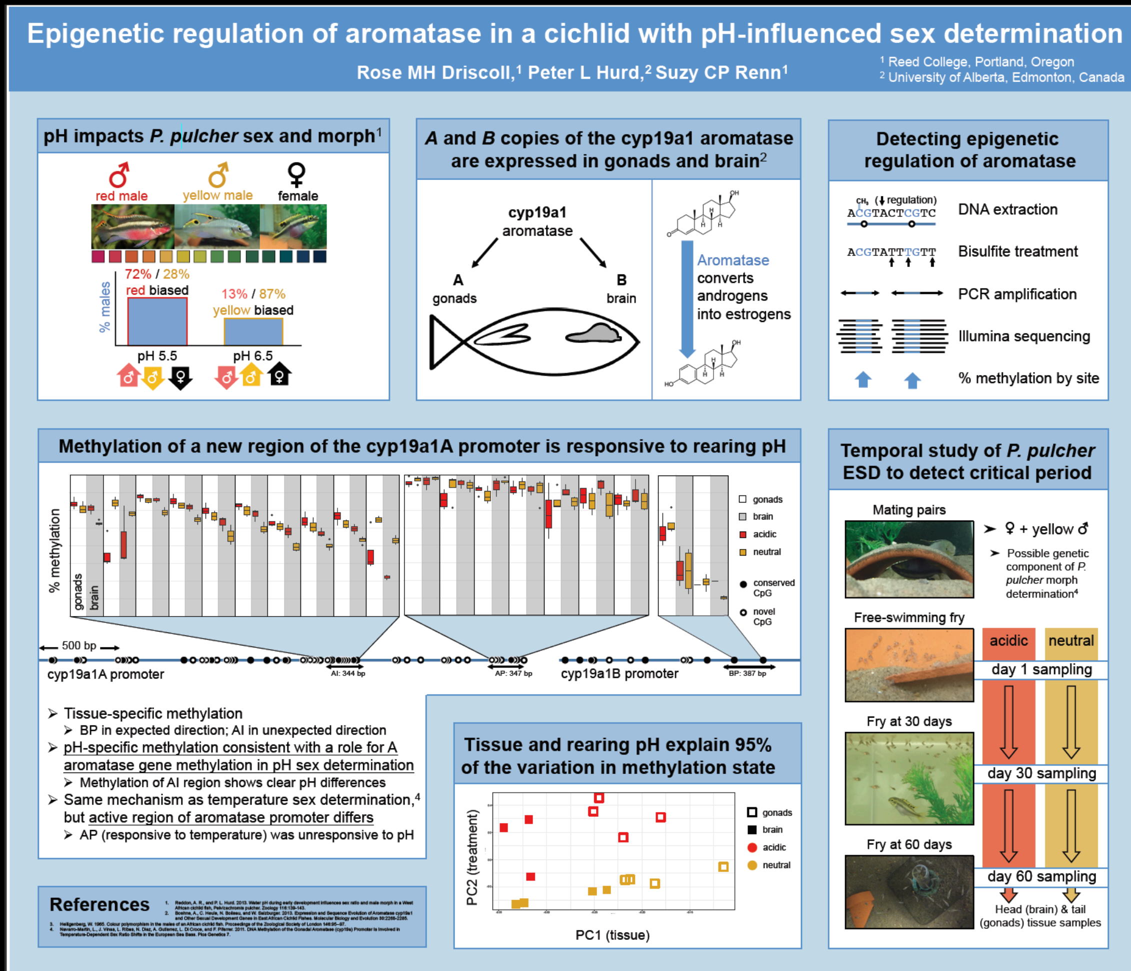


Leave plenty of open space

text = < 20%

Figures = 40%

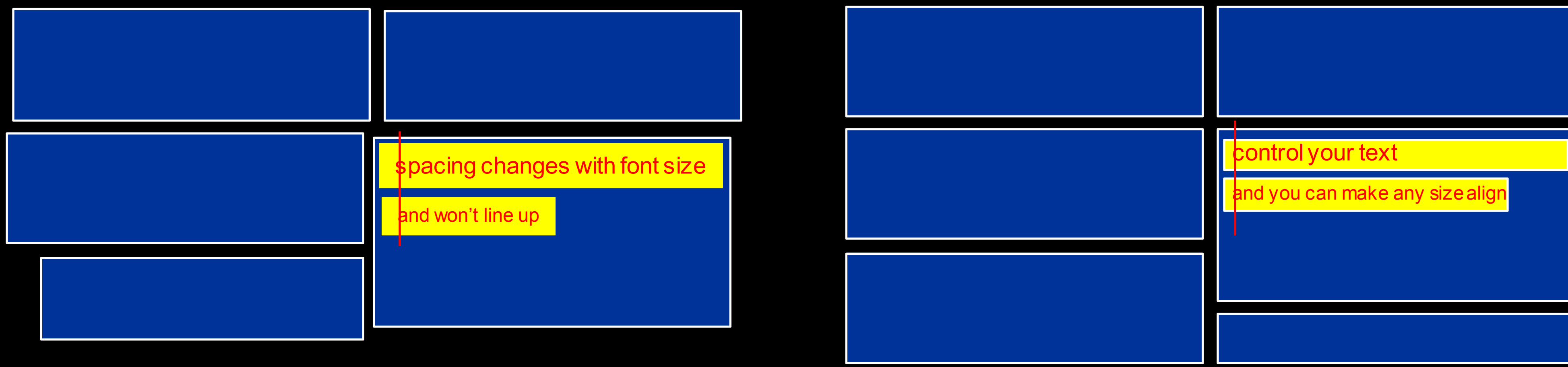
Open Space = 40%



Make background and box colors subtle, not jarring

pH of Acid and Neutral

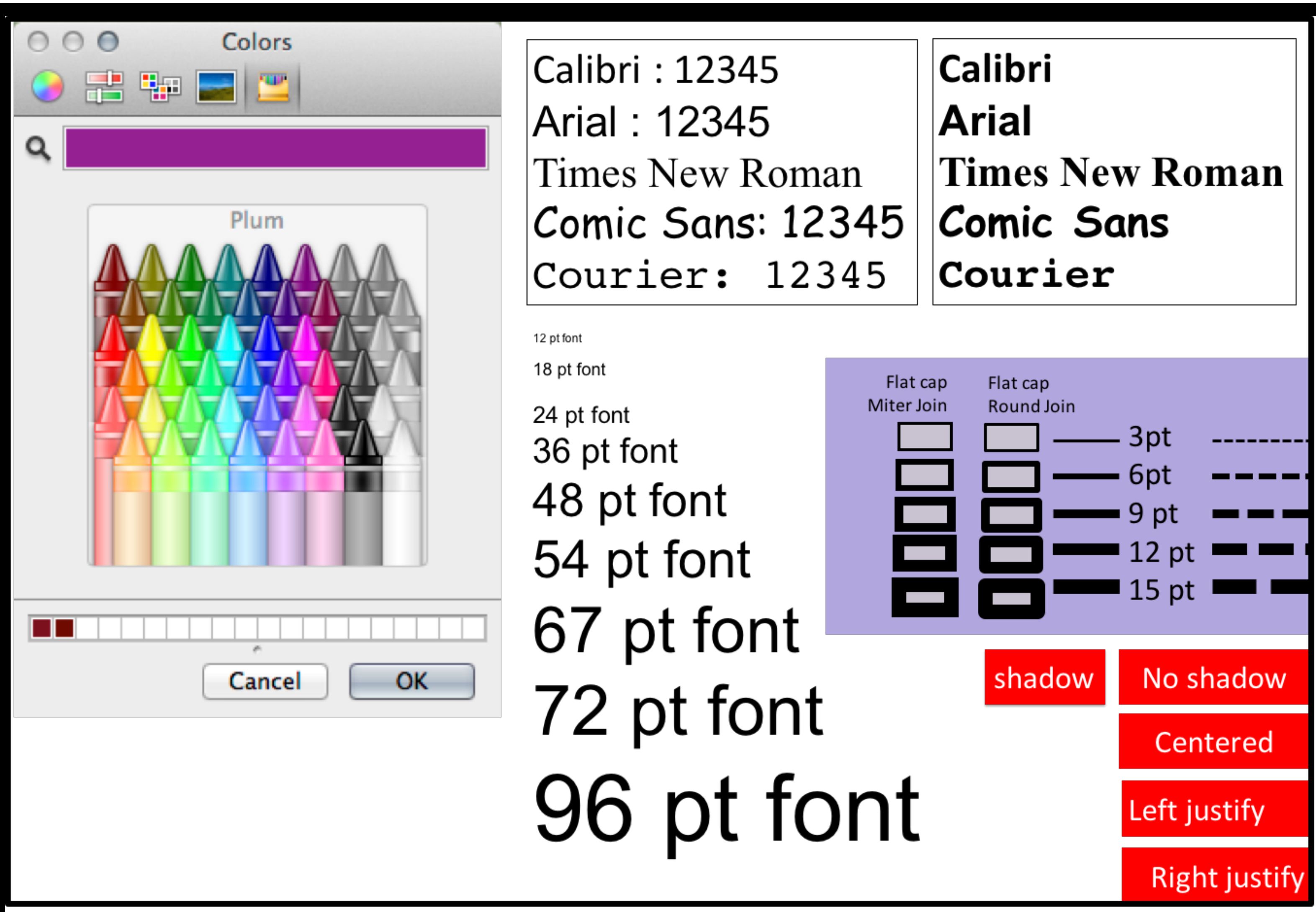
Make your colors work for you



Take the time to align everything

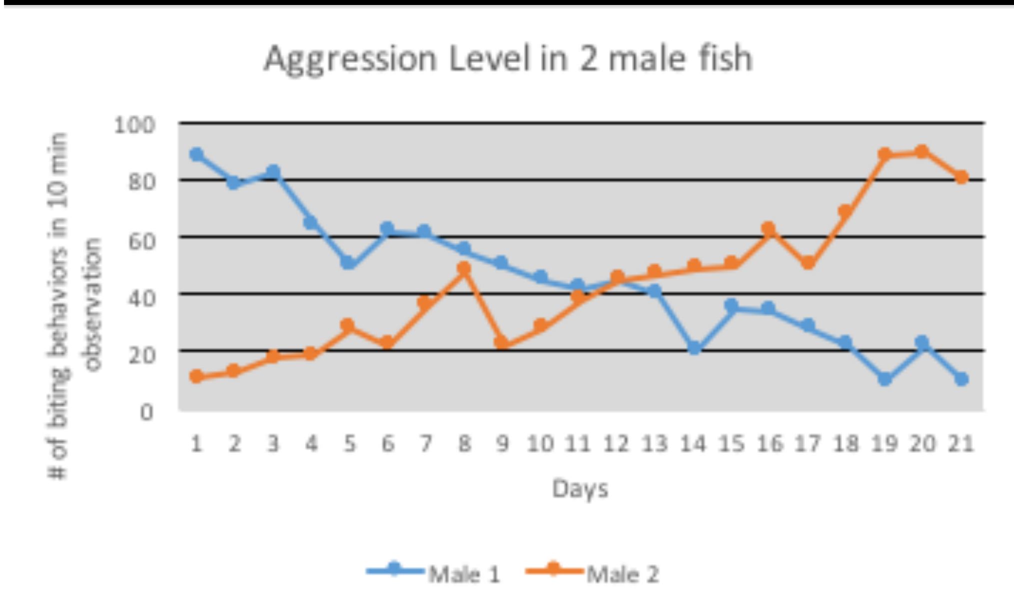
Don't use color filled text boxes

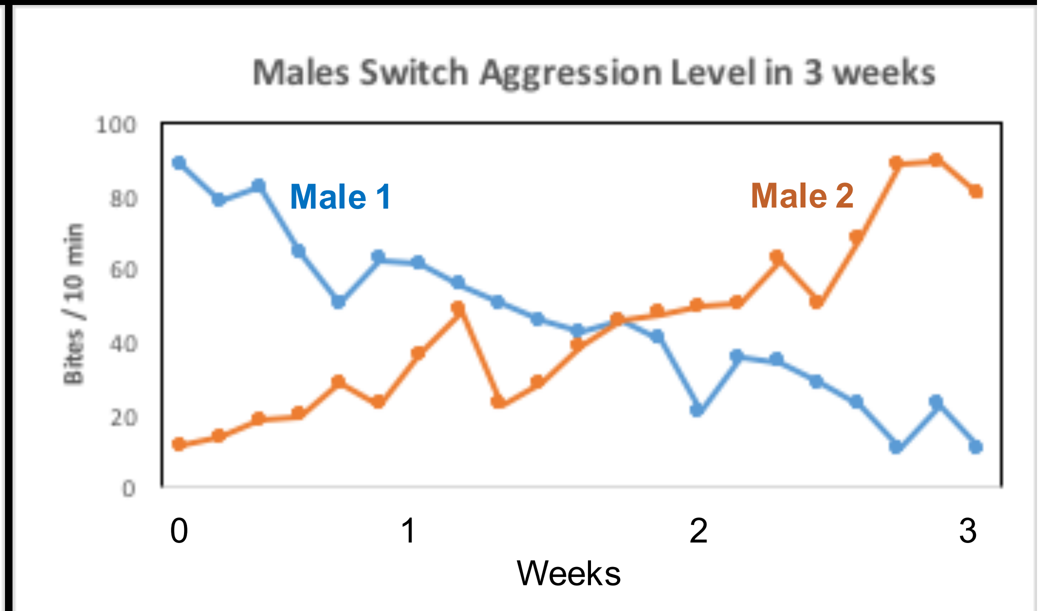
Use spaces not tabs to



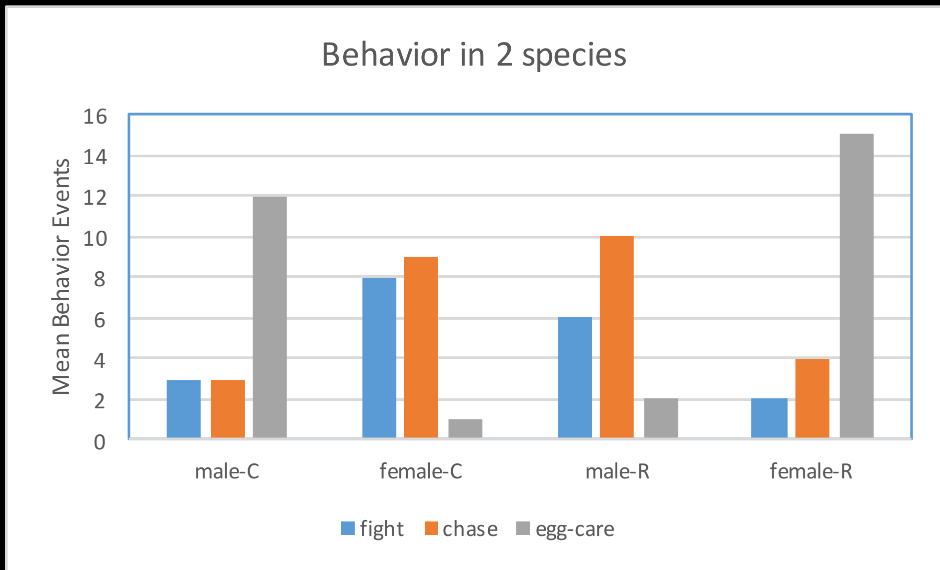
Choose Fonts and sizes appropriately

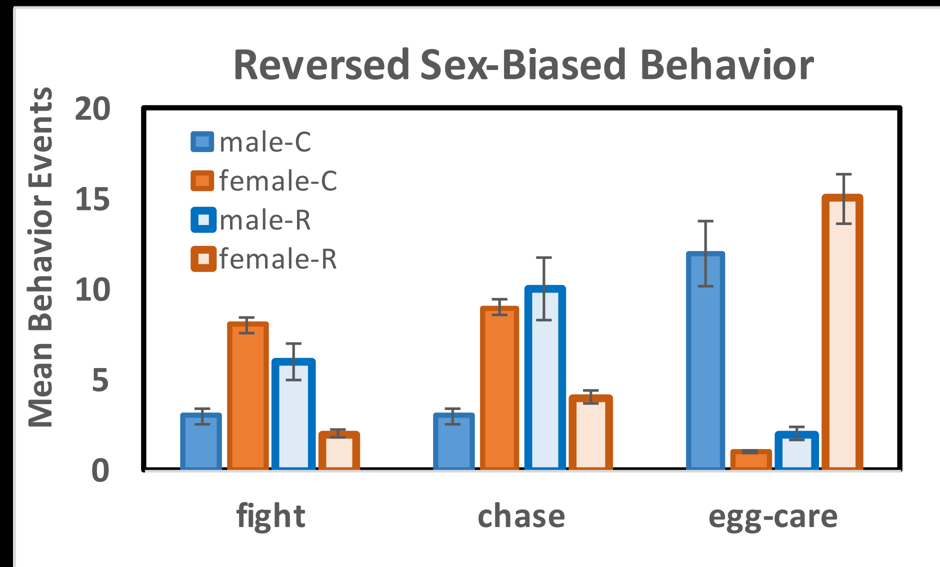
[redacted]





[redacted]


Behavior in 2 species
Mean Behavior Events
16
14
12
10
8
6
4
2
0
male-C
female-C
male-R
female-R
fight
chase
egg-care


Reversed Sex-Biased Behavior
Mean Behavior Events
20
15
10
5
0
male-C
female-C
male-R
female-R
fight
chase
egg-care

http://www.reed.edu/biology/professors/srenn/pages/teaching/posters_2010/amms.pdf
http://www.reed.edu/biology/professors/srenn/pages/teaching/posters_2010/qaic_poster.pdf
http://www.reed.edu/biology/professors/srenn/pages/teaching/posters_2010/ab_poster_MES_final.pdf

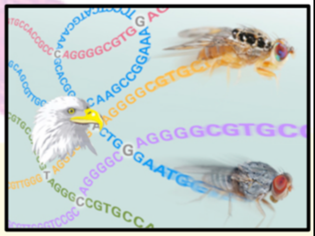
Do Eagles Make Flies Ready for Love?

Quinn Langdon: langdonq@reed.edu
Katherine Thomas: thomaska@reed.edu
Reed College Bio342

How does the expression of *eagle (eg)* change with *Drosophila* mating status?

What are the cellular functions of the *eagle* gene product?

- Nuclear hormone receptor
- Transcription factor
- Zinc finger protein
- Serotonin neuroblast fate determining factor



What is known about *eg*'s effect on mating behavior?

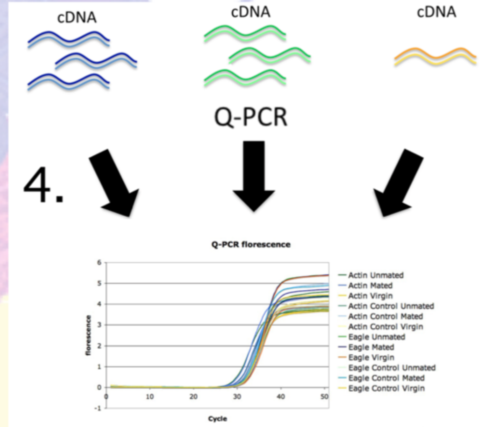
QTL analysis identified *eg* as being associated with variations in mating behavior.[1] Mating behaviors could include:

- Courtship occurrence
- Courtship latency
- Copulation occurrence
- Copulation latency

Hypothesis: *eg* is upregulated in mated male flies compared to courting and virgin males

Quantitative PCR

4. cDNA transcripts from 3. were used to perform Q-PCR to determine *eg* expression. Actin isoform B was used to normalize the samples. C_t values were determined from the raw Q-PCR data graph (bottom right) and averaged in each of the 3 different conditions to determine *eg* expression.



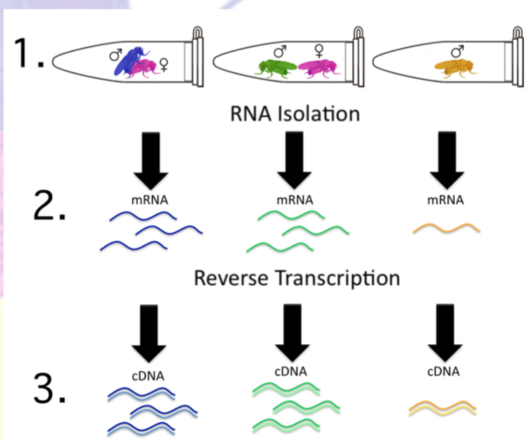
Hypothesis: *eg* is upregulated in mated male flies compared to courting and virgin males

Behavioral Assay, RNA Isolation, and Reverse Transcription

1. 3-day-old virgin male *Drosophila* were put in eppendorf tubes with 3-day old virgin females and either **mated** (left), remained **unmated** (center), or remained **virgins** (right).

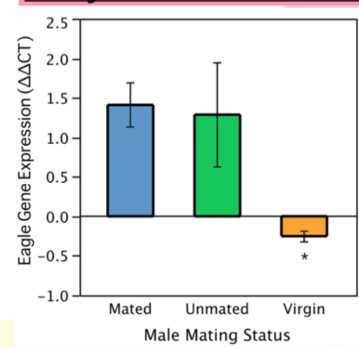
2. RNA was isolated from 3 flies in each condition (**mated**, **unmated** and **virgin**). The isolated RNA was then treated with DNase I to eliminate contaminant DNA from the samples.

3. RNA isolated in 2. was then reversed transcribed into cDNA.



Conclusion: *eg* is upregulated in male flies who court or mate with females as compared to isolated virgin males

Analysis of Q-PCR Results



ΔΔCt values for 3 **mated**, 3 **unmated**, and 3 **virgin** male flies indicated that *eg* is expressed significantly more in males exposed to females as compared to isolated virgin males (ANOVA, $F=11.4$, $df = 1,7$, $P= 0.0118$). Note: * indicates significant difference from other conditions.

Future Directions

- We achieved amplification in Q-PCR with DNase I treated RNA samples, which indicates DNA contamination. Would these same results be observed if our samples hadn't been contaminated?
- We only tested 3-day-old males. Would expression be different in males of different ages or in females?
- Very few of our male flies mated. What conditions could be established to optimize mating?

Acknowledgements & References

We would like to thank Suzy Renn, Kelsey Wood, Maryanne McClellan & the Biology Stockroom Staff for helping us with this project.

1. Moehring, A.J., Mackay, T. F.C. "The Quantitative Genetic Basis of Male Mating Behavior in Drosophila Melanogaster." *Genetics*. 2004; 167 (3): 1249-1263.

2. Benson, D.A., Karsch-Mizrachi I, Lipman DJ, Ostell J, Wheeler DL. "GenBank." *Nul Acids Res*. 2005; 1 (33): D34-D38.

Abstracts :: due date Dec 8th.

An abstract (~7 sentences) with a descriptive (fun) title and the authors names.

This should describe:

- the "Big Question"
- the specific area of research
- the general technique or approach applied,
- the major results found and conclusion that can be drawn.

Please post to Moodle by 5:00

Poster Presentation :: Dec 11th 9:00 AM

Tips for making and Presenting a Poster template1, template2, on website.

During the poster session, students will be required to visit several posters and to formally evaluate at least two posters using the standard evaluation forms that will be provided in class and handed in at the end of class.

Please post a .pdf copy to Moodle

Turn in Lab Notebooks at Poster Session

Self Assessment :: Dec 12th

Each student will **individually** assess his/her own effort & success.

See Moodle for worksheet. **Please post to Moodle by 5:00**