



GBM #2

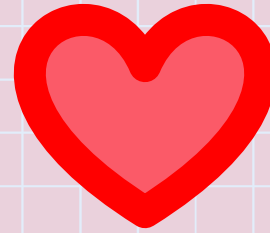
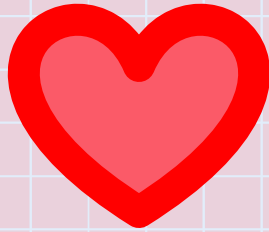
Welcome to Society for Viral Studies



2/13/2023



Journal Club today!



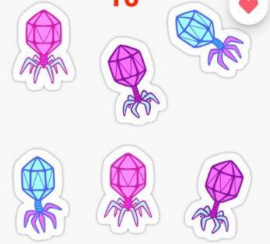
Please sign in using the QR Code for attendance!

Sticker Sale!

9



10



11

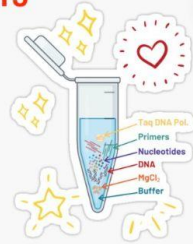


I've got a lot on my plate
right now

12



13



1



2



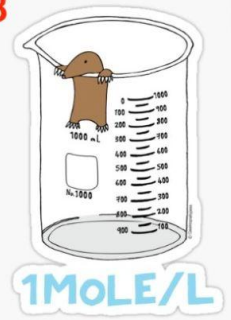
3



7



8



Active Member Requirements

01

Be a UF Student

02

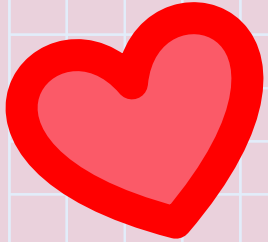
Attend ~ $\frac{2}{3}$ of meetings

03

Attend ~ $\frac{1}{3}$ of events

Benefits

- Priority for trip sign-ups
- Priority for committee positions



Meet the Officers!



Brianna Garcia
President



Antonia LoFranco
Vice President



Erica Roberts
Treasurer



Akash Shah
Journal Club Director



Michele Himadi
Secretary



Kira Kazi
Event Director



Sophie Penafiel
Public Relations Director



Urvi Patel
Trip Director

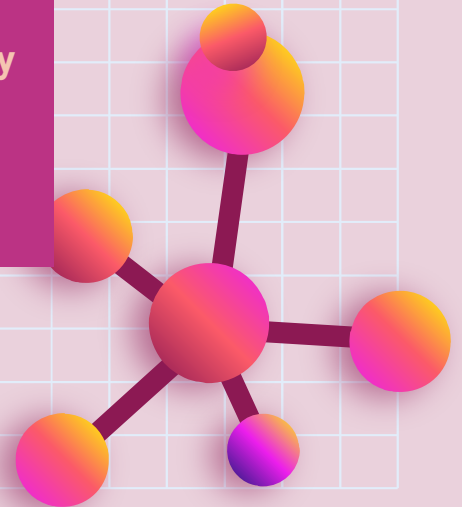
Meet Our Faculty Advisor

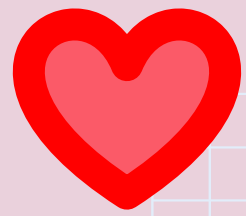


Dr. Niam Montazeri

Assistant Professor of Food Virology

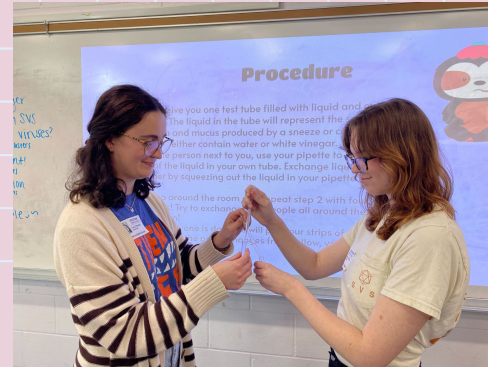
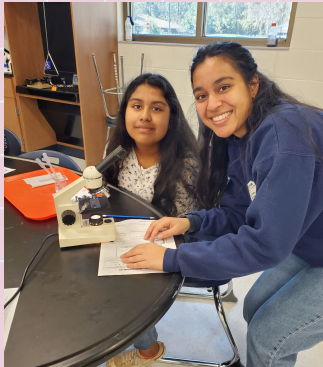
**Department of Food Science and
Human Nutrition**





Upcoming Middle School Outreach Volunteering

- Thank you Urvi for helping out in Dr. Winant's classroom for the Micro Pond Life activity!
- There is an availability survey in the #volunteering channel. Responses used when scheduling upcoming outreach events.
- **Friday February 17th:** Methods of Viral Infection Case Studies
- **Monday February 20th:** Viral Infection lesson with Dr. Jones
- Class times are: 10:25, 11:59, 12:53, and 2:41
- Speak with me after the meeting or message me on slack if you would like to attend!



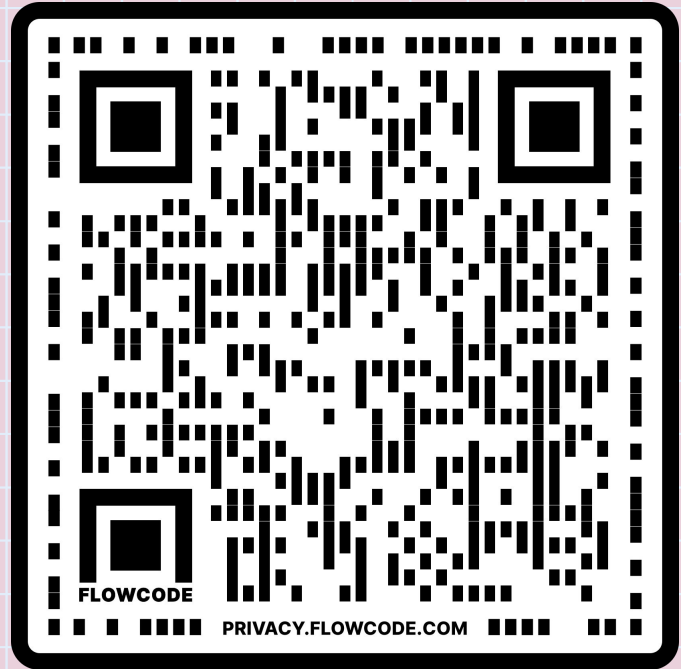
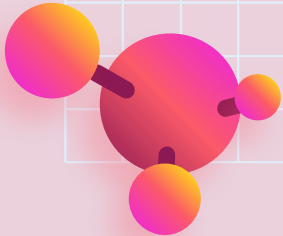


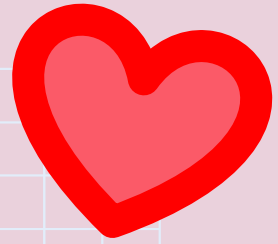
Healthcare and Virology Panel Committees

- This Spring we will be putting on our annual Healthcare and Virology career panels!
- We will be bringing in professionals from a variety of fields to speak with us about their research and occupations (a GREAT opportunity to network and ask questions!)
- We will be recruiting members to help us put these events on! Panel Committee members will help with:
 - Contacting professionals in a business professional manner
 - Helping organize event specifics
 - Coming up with questions for the panel
 - Organizing food and refreshments for the events
 - Creating social media posts for the event
- Being on the Panel Committee is also a good opportunity for those wanting to run for an executive position in SVS at the end of the semester

Panel Committee Application

- Please fill out this form accordingly to apply for the Panel Committee!
- Applications are due February 20th (one week before GBM 3)
- If you are selected, you will be added to a private slack channel to organize event specifics
- https://docs.google.com/forms/d/e/1FAIpQLScG4GrjO_nvRBMzuVBgFAj_PGtop-qYVC7U7A1j9dzCjuITXdA/view_form?usp=sf_link





Events

Some highlights so far :)



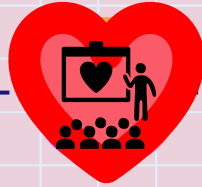
Upcoming Events!

Krishna Lunch



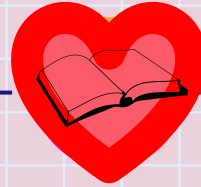
Friday,
February 24th
at 11am

GBM #3



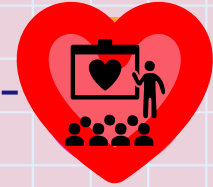
Monday,
February 27th
at 7:30pm
Reitz Union
Room 3305

Study Social



Monday,
March 6th at
7pm
Marston
Science
Library

GBM #4



Monday,
March 20th at
7:30pm
Reitz Union
Room 3305



Jeremiah's Italian Ice FUNDRAISER will be
Thursday, March 23rd from 6-10pm!

Journal Presentation & Special Guest Speaker

- Next journal breakdown presentation will be at the next GBM! Topic will regarding CRISPR/Cas9 genome editing. More details to follow on our instagram.
- Special guest speaker to present her research focusing on dementia and parkinson's work
 - Will be sending out a breakdown of their work the week prior, be sure to get your questions in!
 - Date: TBA

CRISPR/CAS9



What is CRISPR?

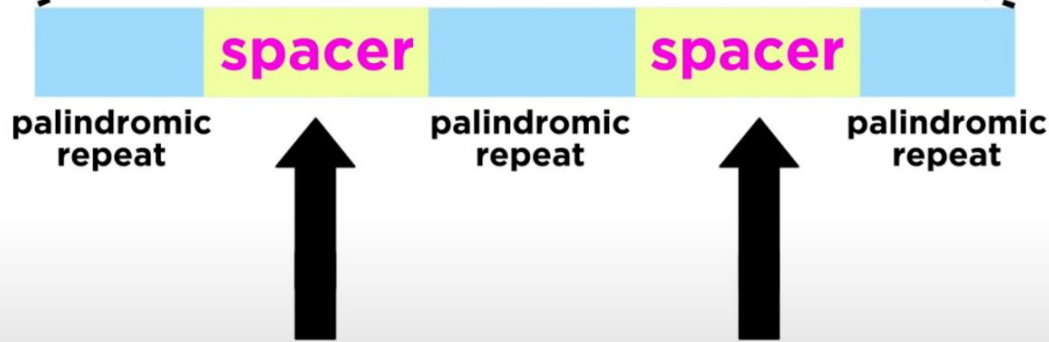
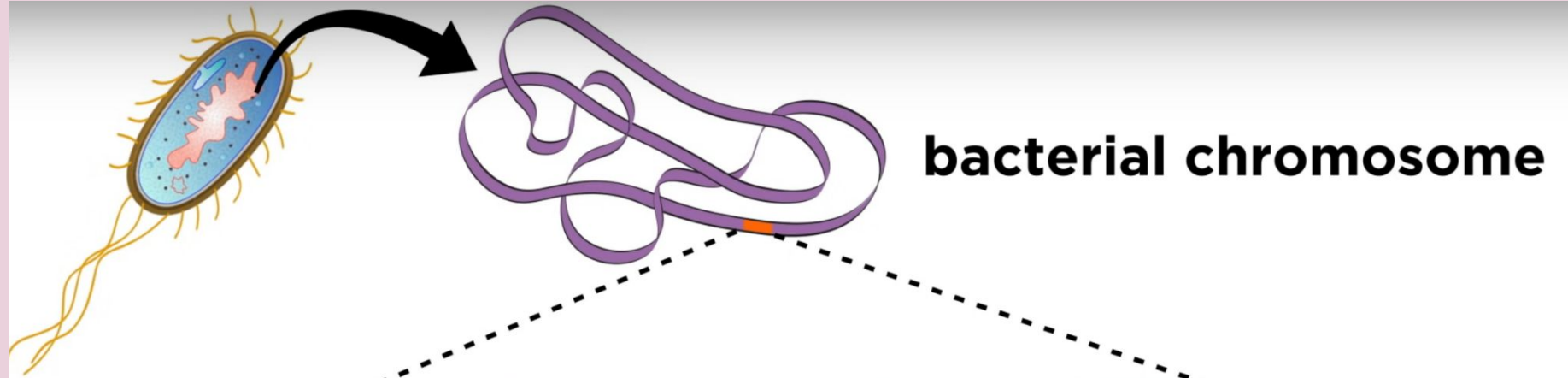
Clustered Regularly Interspaced Palindromic Repeats

A genetic database that is present within many bacterial species.
Comprised of **spacers** and **palindromes**.

- Functions as an adaptive immunity arm of bacteria
- Spacers are the “samples” of the bacteriophage DNA
- Crucial for defense against reinfection
- Made possible by Cas1/Cas2 endonucleases and PAMs

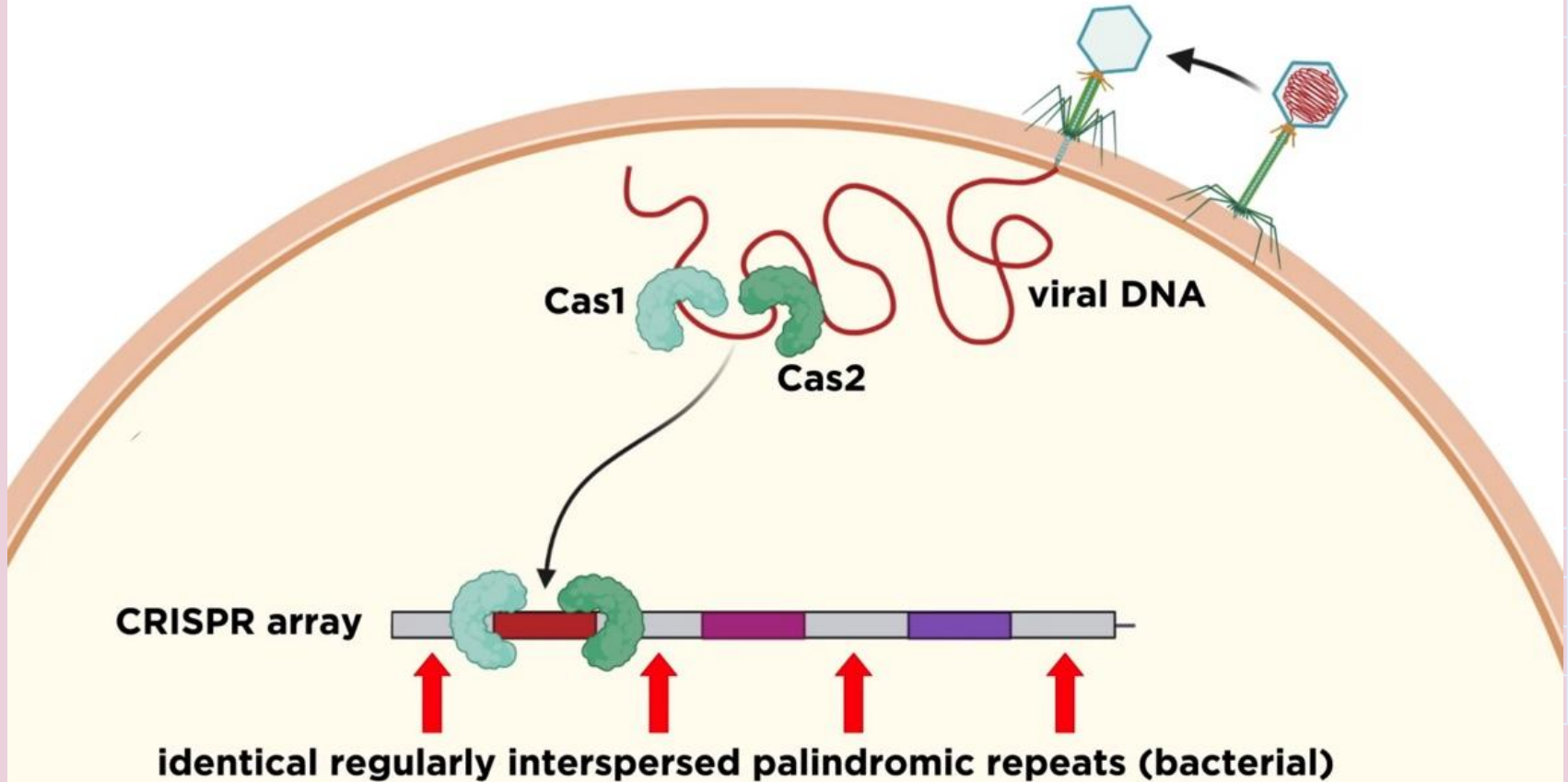
tacocat
racecar

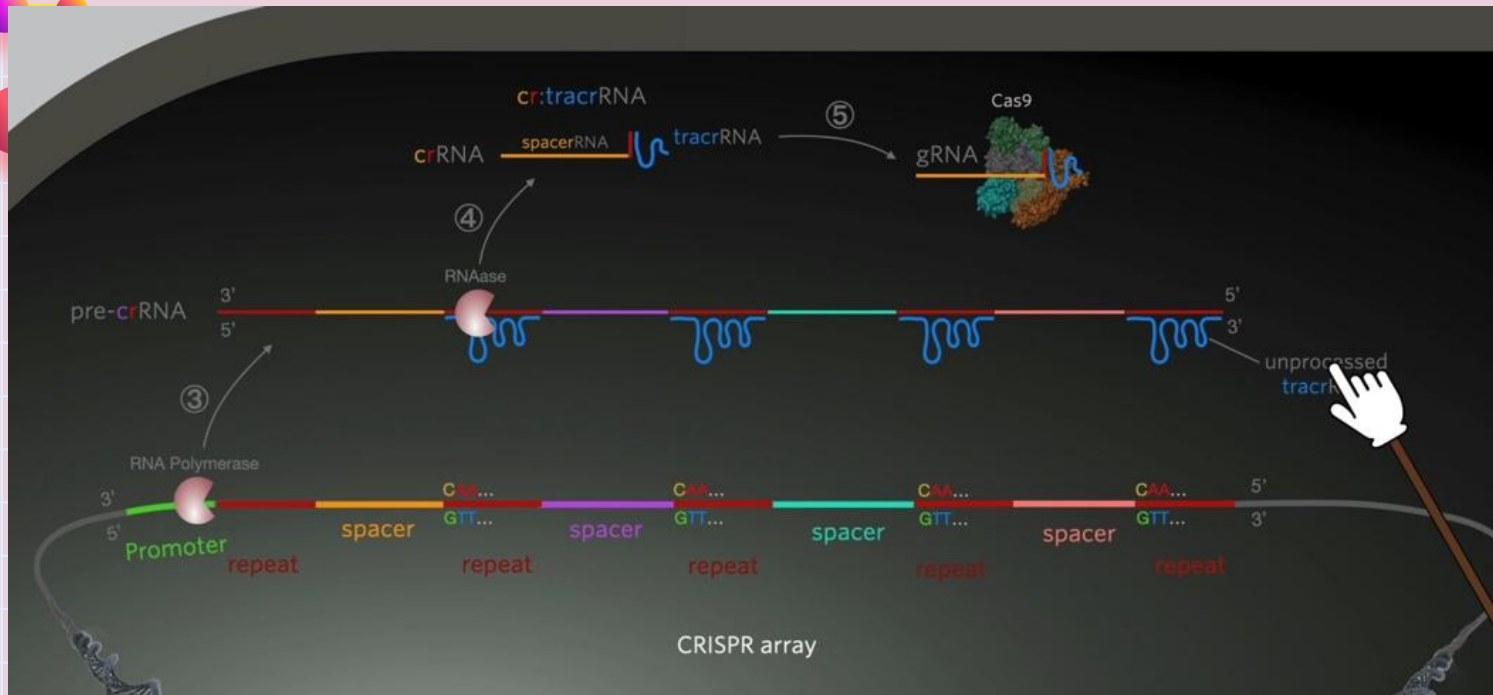




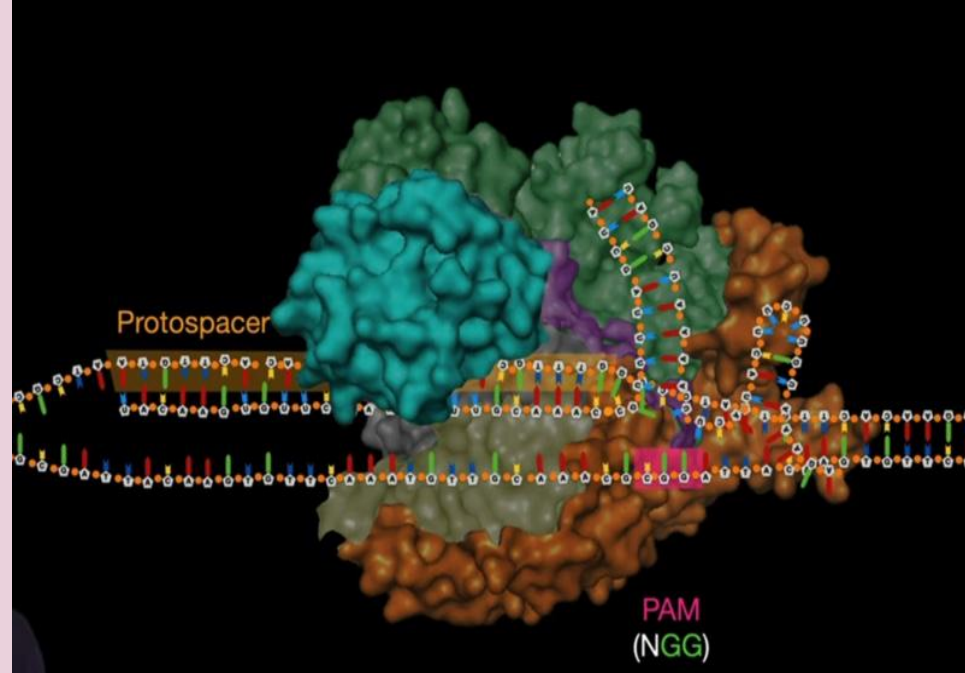
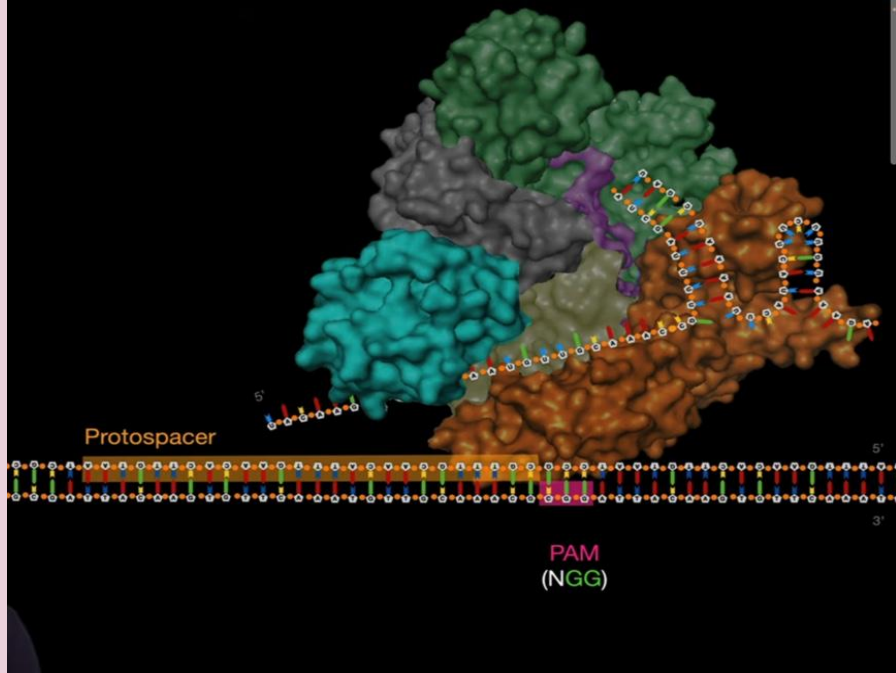
originate from **mobile genetic elements (MGEs)**
- bacteriophages

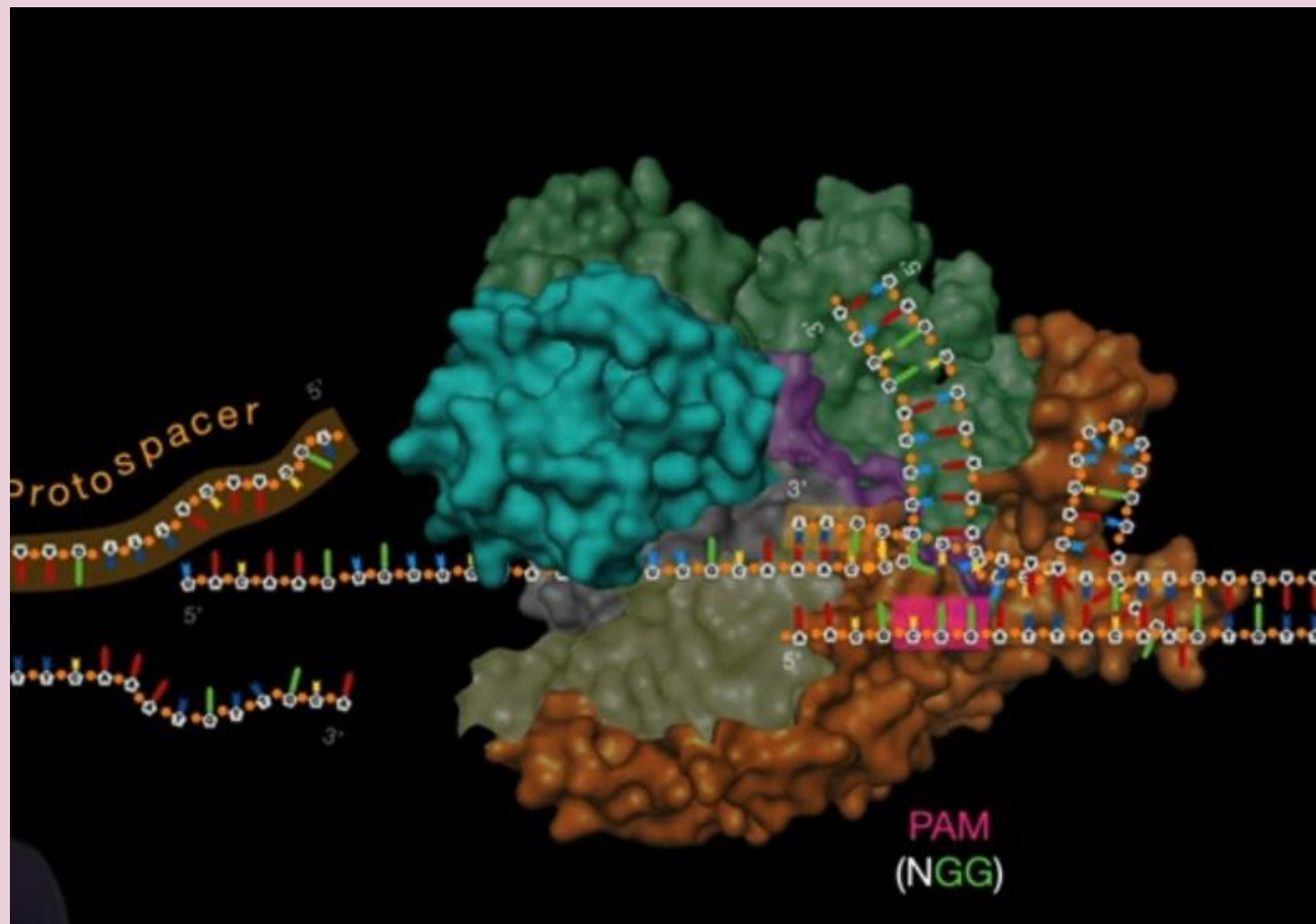
viral infection

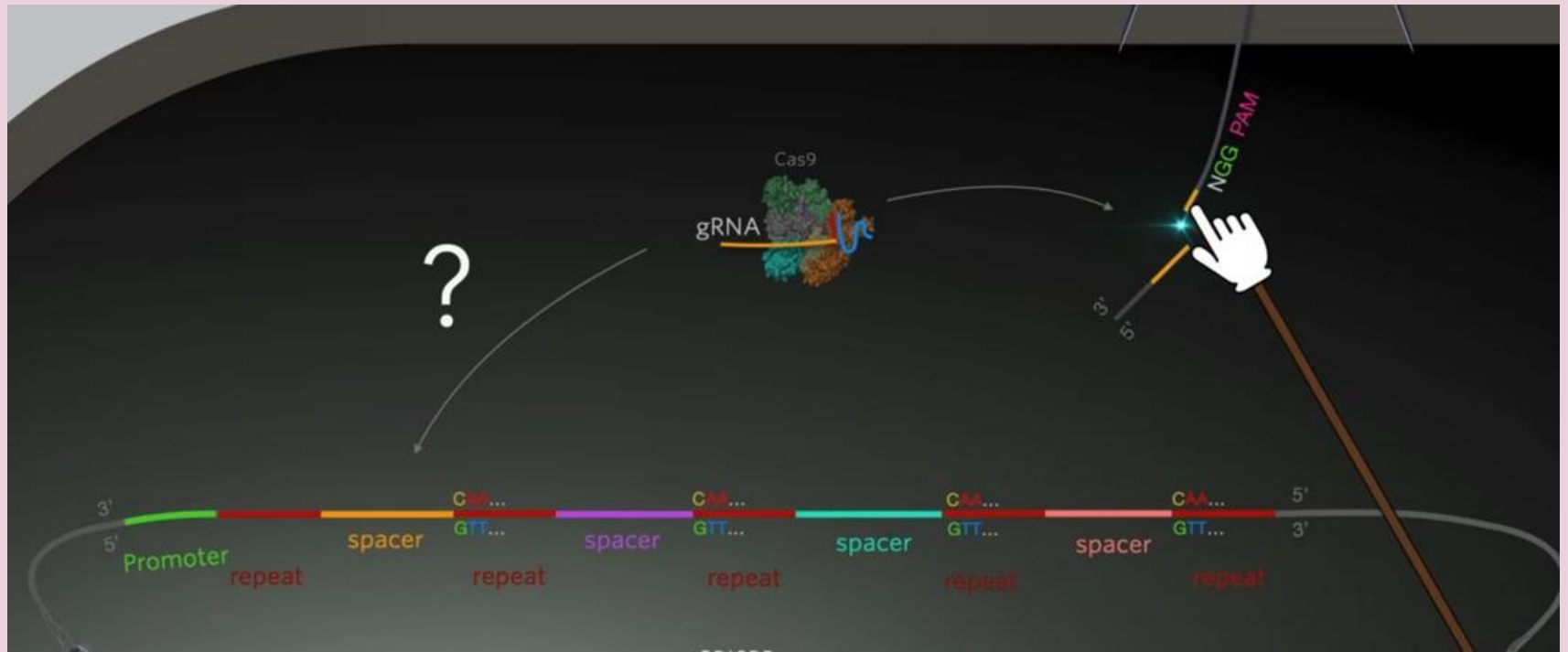




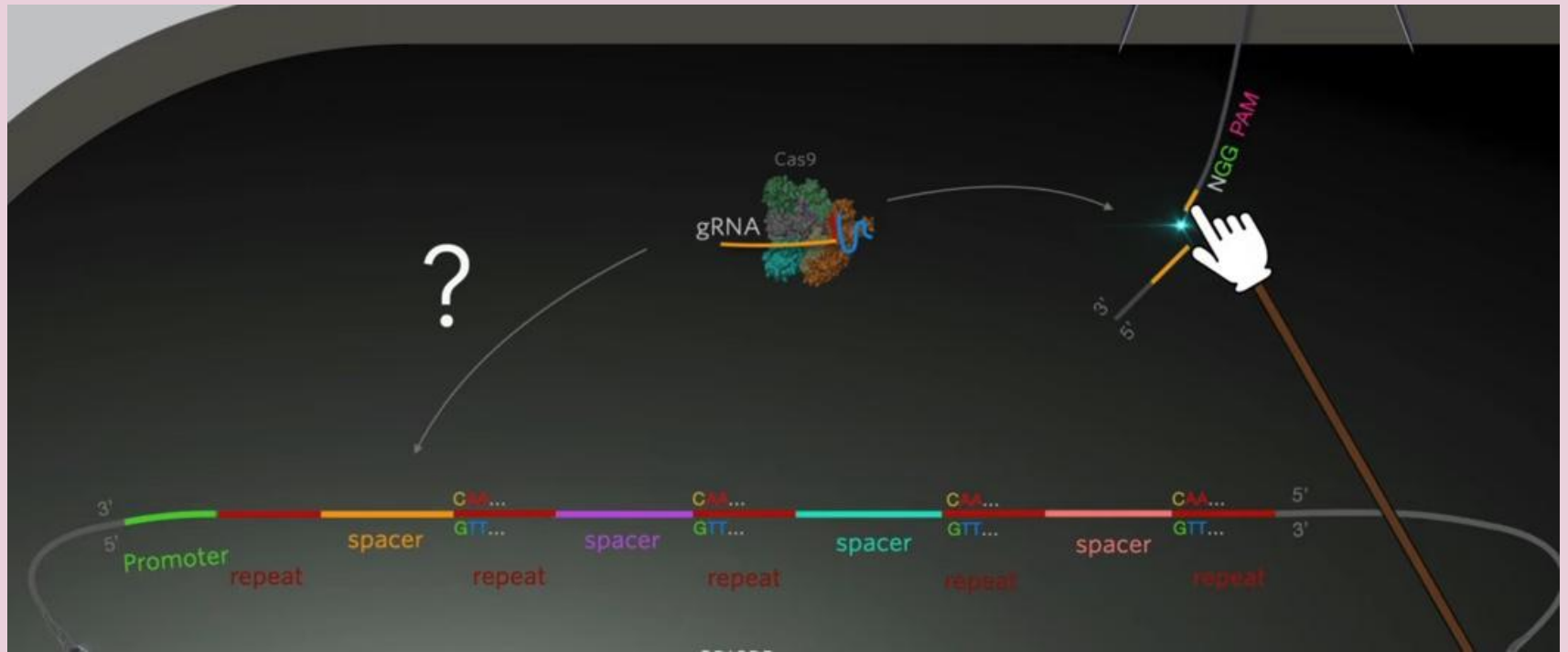
- CRISPR → crRNA → cr:tracrRNA → gRNA + Cas9
- Cas9 endonuclease has specific domain to recognize PAMs







But why doesn't it attack itself?



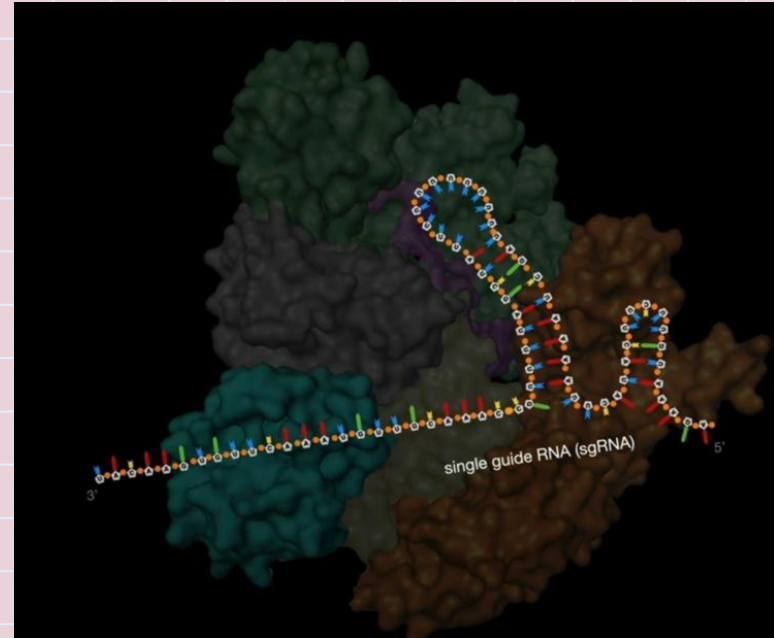
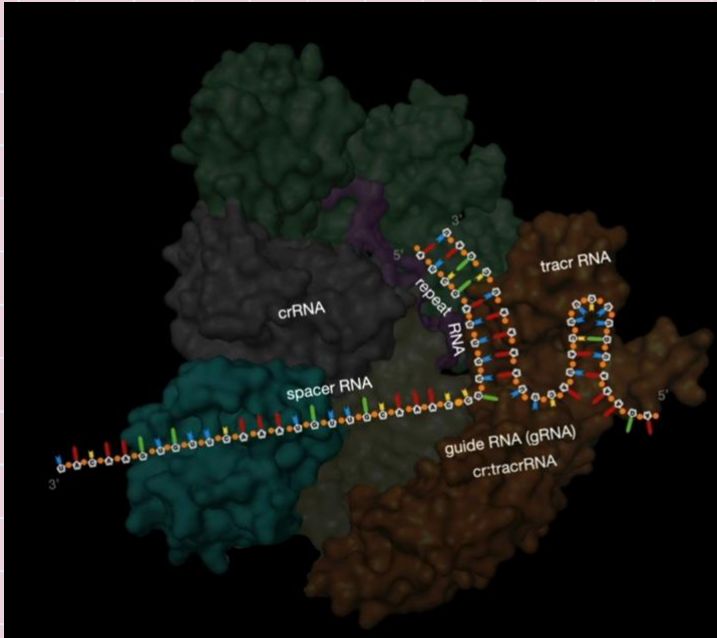
But why doesn't it attack itself?

Because PAM!

(a highly specific 3 nucleotide sequence upstream of spacer)

Clinical Applications

- By synthetically creating a gRNA, the Cas9 complex will become a homing missile that seeks out deleterious genes of interest to excise



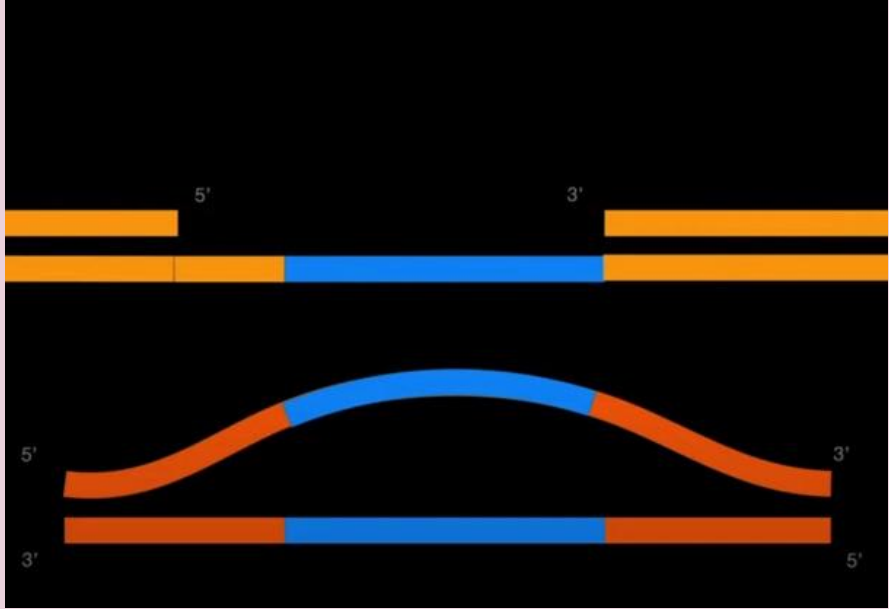
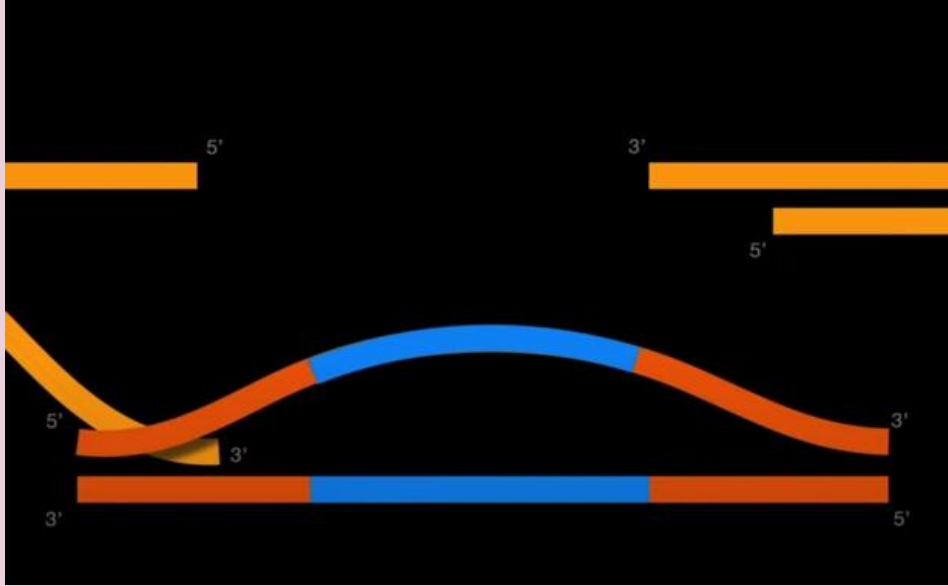
Clinical Applications

- Segment of donor DNA inserted alongside Cas9
- DNA will form “holiday junction” and now have a beneficial gene
- Template is necessary, as nucleotides cannot be join otherwise

Homology Directed Repair (HDR) (in gene editing)

PROCESS 1: Synthesis Dependent Strand Annealing (SDSA)





Cost Vs. Benefit

Remarkably accurate

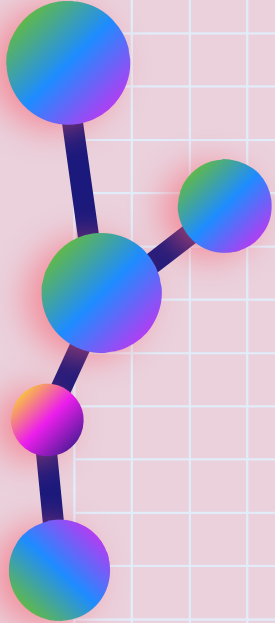
Many patients haven't reported any mutations or gene translocations

Untested waters

FDA has upped regulation, delaying the pipeline from laboratory to clinical use

Wide applications

With genes being the blueprint to life, CRISPR is theoretically able to solve "any" problem



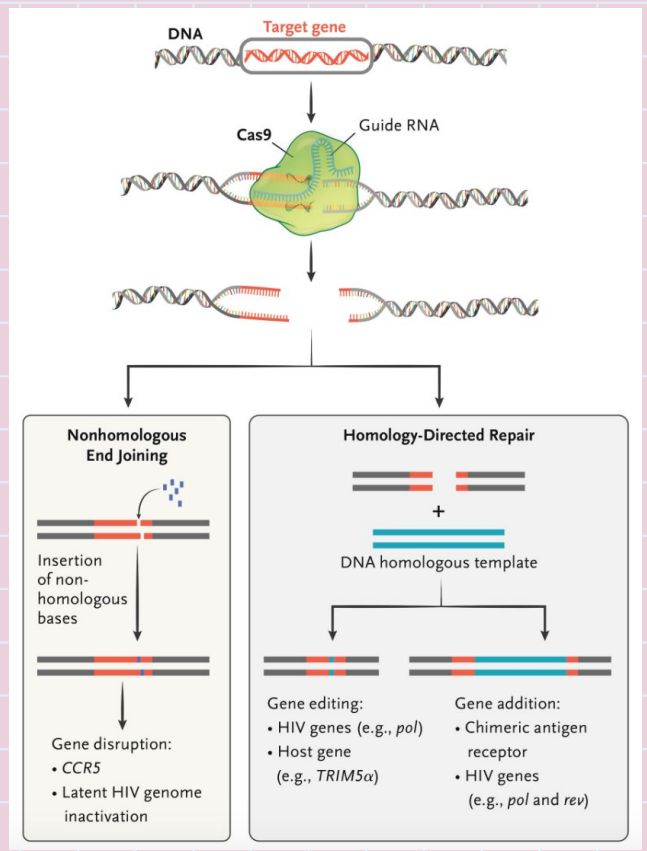
Ongoing Trials

HIV/AIDS & Leukemia

$\frac{3}{4}$ patients demonstrated HIV resistance after CRISPR

One 13-year-old girl in remission after CRISPR CAR-T therapy

Data is very limited as regulations are extremely tight in America



Merch and Other Cool Stuff



- NEW special stickers are here!!! Come see Erica after the meeting to check out all the cool designs!
 - \$3 each
- Our NEW T-shirts are for sale!
 - \$20 each
- Rep SVS with logo stickers and viral outreach buttons!
 - \$1 each
- Grad cords will be available for active members who are graduating.
 - \$10 each
- For all purchases you can Venmo @ericaroberts or pay in cash :)



Upcoming Outings!



Strawberry Picking

Roger's Farm
Gainesville, FL

CRITTER CREEK FARM SANCTUARY
PRESENTS

← ♥ →

**FARMERS
MOO-KET**

Sunday,
February 5th
12:00-4:00pm
12626 NW CR 231
Gainesville, FL 32609

A cute, pink cartoon pig standing and smiling, surrounded by several red hearts of various sizes. The pig has a small red heart on its forehead and a red heart on its tail.

Enjoy food vendors, artists, craftspeople, and more!
All products sold are vegan
Meet the critters of Critter Creek and give them treats!



Farmers Market

Heartwood/Haile
Gainesville, FL

Game time!

Let's break up into groups!





Minute-To-Win-it Games

Game 1

Cookie Face

Game 2

Mummy Wrap

Game 3

Candy Stack

Game 4

Back Scribble