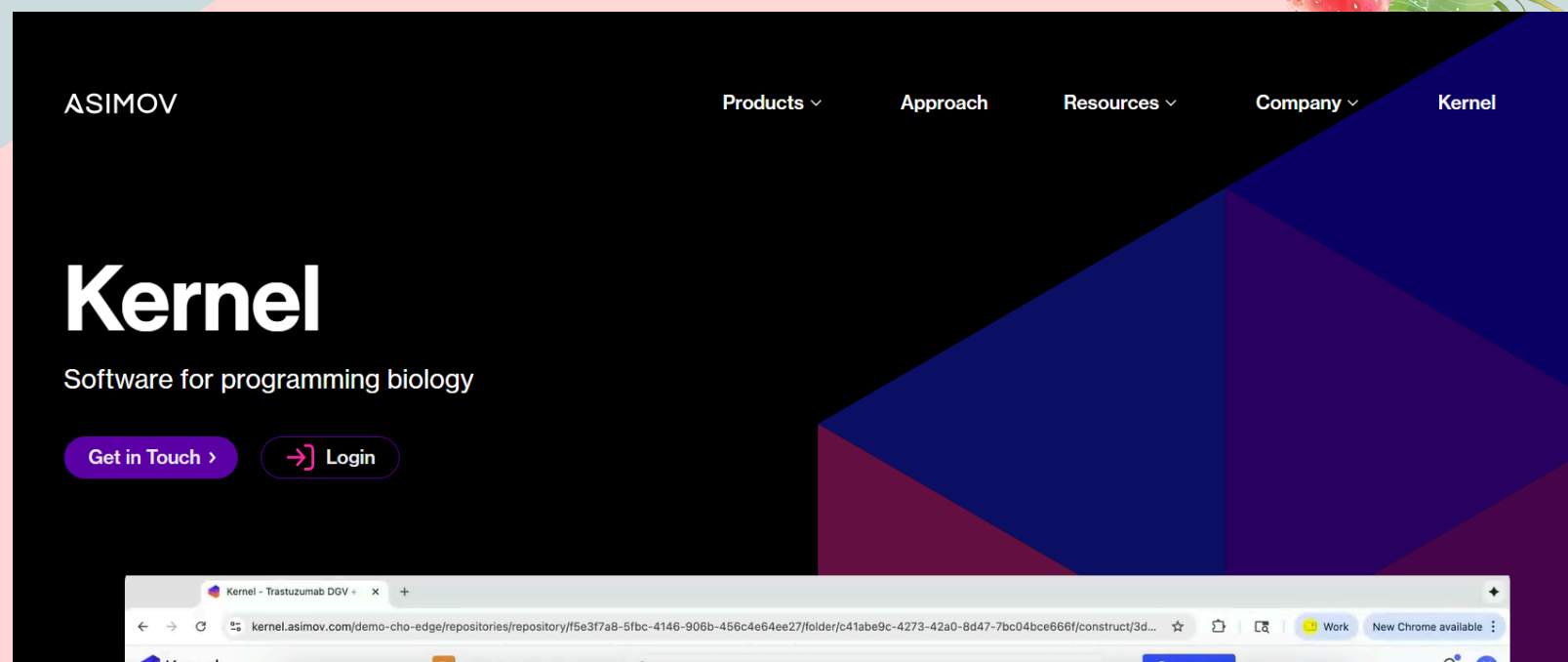


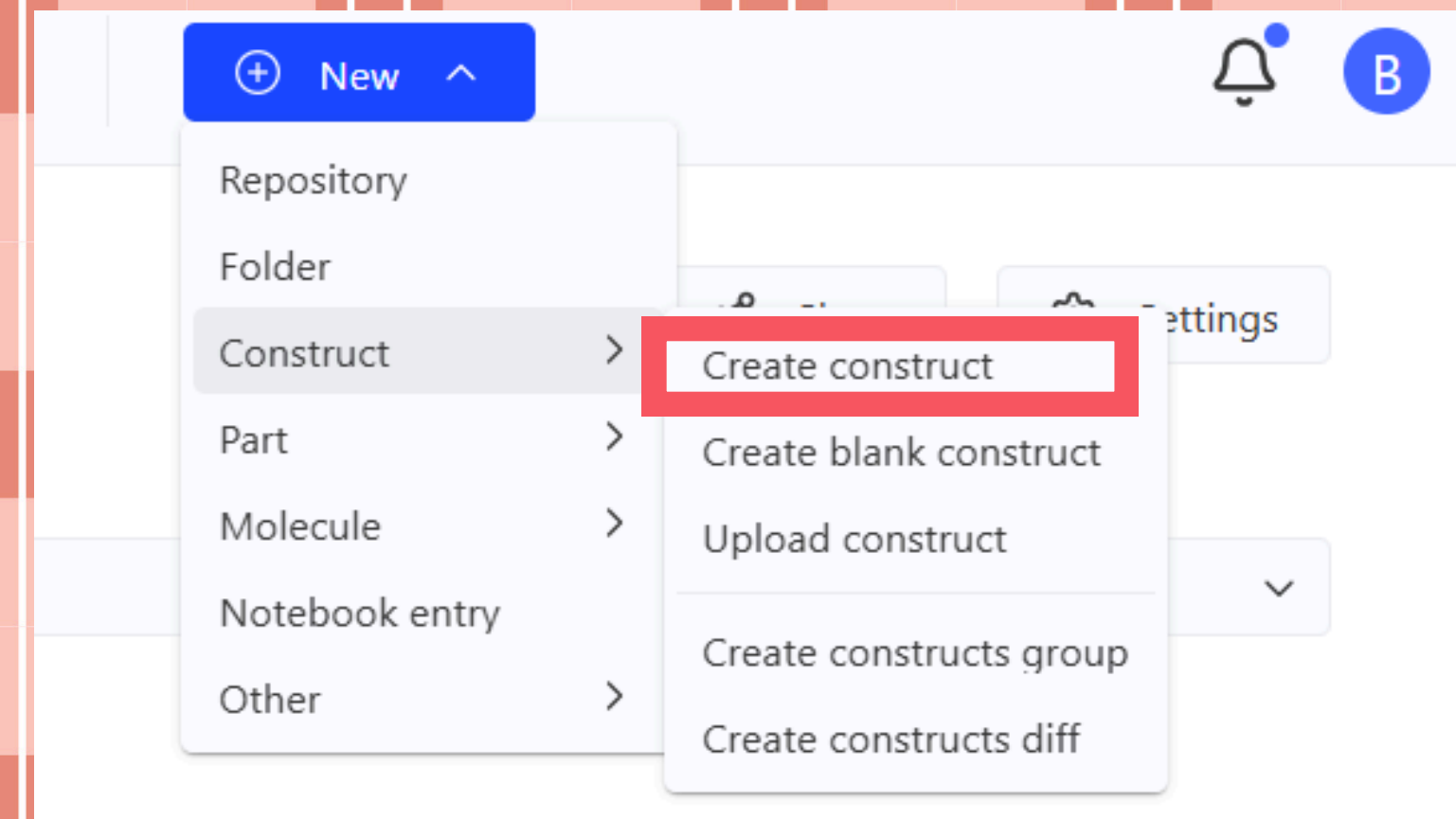
Kernel Software tutorial: Constructs

1

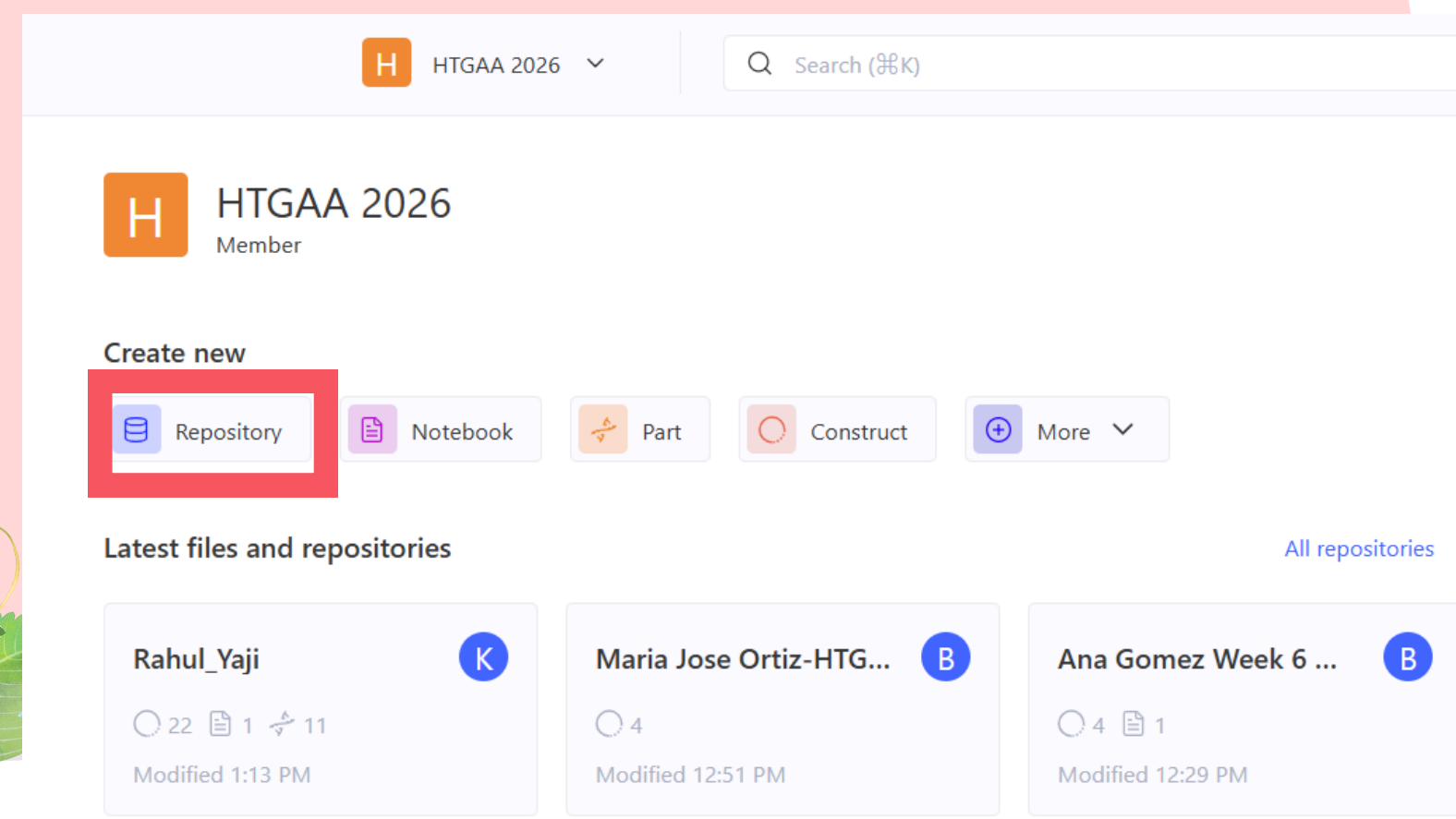
1. First, log in with your credentials



3. Inside the repository, select New, and pick the construct option



2. In the dashboard, create a Repository



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4. Name the file and submit it (you can add a sequence too)



5. In the view, you can create your construct in the search option and drag it to the construct space

Create construct

Creation tools

Manual entry

Construct name*

Folder*

Ana Gomez Week 6 Homework [Update folder](#)

Sequence ⓘ

example Last edited: 1:22 PM File Edit View

Drag and drop parts here

Parts search

Find...

Biomolecule class

Select classes

Part type

Select types

Repositories

Select repositories

Reset Filters

Ldh	1370bp
T7 Terminator	47bp
T7 Promoter	20bp
Ldh	1364bp
L3S2P24 Bacterial Terminator	55bp
A1 RBS	34bp
pLacI	82bp
TetR	624bp

Search

Part match

AI

Sim.

CO

Cut sites

History



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Kernel Software tutorial: Constructs

6. Once created the construct, you can choose the view output

7. After creating the construct, use the Sim option and select New simulation

tactccaccgttggctttttccctatcagtgatagagattgacatccctatcag
atgaggtggcaaccgaaaaaagggatagtcactatctctaactgtagggatagtc

1 10 20 30 40 50

tgatagagataatgagcacAATGTTCCCTAATAATCAGCAAAGAGGTTACTAGat
actatcttattactcgtgTTACAAGGGATTATTAGTCGTTTCTCCAATGATCTa

60 70 80 90 100

gtccagattagataaaagtaaagtgattaacagcgcattagagctgcttaatgag
caggtctaattttcatttcactaattgtcgcgtaattctcgacgaattactc

S R L D K S K V I N S A L E L L E

Sequence viewer Circular map Linear map Sequence Stats

+ New simulation

3/28/2026, 10:20:33 AM
Chassis: E. coli
Duration: 72 hours
Timestep: 10 minutes
Transfection: Transient transfection

Wait for the results and then click on the last run generated

Kernel Software tutorial: Constructs

8. Once the results are done, you can select the expand view to visualize all graphs

Expanded view!!

Simulation

Processed at: 10:20 AM
Chassis: E. coli
Simulation duration: 72 hours
Simulation time step: 10 minutes
Transfection type: Transient transfection

Graphs: All Plots

RNAP flux at last time point

Construct	Flux (relative units)
pTet	0.07
A1 RBS	0.07
TetR	0.07
L352124 Bacterial Terminator	0.00

Part match, AI, Sim., CO, Cut sites, History

Graphs: All Plots

RNAP flux at last time point

Construct	Flux (relative units)
pTet	0.07
A1 RBS	0.07
TetR	0.07
L352124 Bacterial Terminator	0.00

RNA concentrations over time

Time (hours)	Concentration (relative units)
0	0.055
70	0.055

RNAs: Transcript for TetR

Ribosome flux at last time point

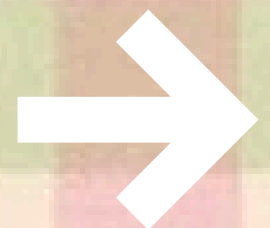
Construct	Flux (relative units)
pTet	0.00
A1 RBS	0.04
TetR	0.04
L352124 Bacterial Terminator	0.00

Protein concentrations over time

Time (hours)	Concentration (relative units)
0	0.000
10	0.032
70	0.032

Work Done!

Then analyse your constructs (also, you can add a Notebook entry in the New button)



New

- Repository
- Folder
- Construct >
- Part >
- Molecule >
- Notebook entry**
- Other >

