5/8/18

Abnormal legs
Normal eye phenotype - inconclusive for now
Missing segmentation between the distal femur and proximal tibia
Pre tarsus is one instead of two
Basal insects (primative) if they dont have wings they usually have only one claw
Phenotype goes back to the ancestral state
Study more the role of lim1 in leg developmetn, how does it effect the pre tarsal
Most distal of antennae is fused

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 4/26/18
Week#:

Objective:
Observe injected beetles

Procedures:

Note:
Pupae- one eclosed (come out of shell)
Legs are weird - 11
One antennae is shorter and compact
RNAi is working because we can confirm because the antenna segments are fused similar to what we

Conclusion:

Next step:

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 4/24/18
Week#:

Objective:
Observe injected beetles

Procedures:

Note:
Larva - 15 -cant tell how many are dead but there is alot of movement in the flour
Pupae- 15 injected- 11 alive
Legs longer than normal - 4

Conclusion:

Next step:

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 4/12
Week#:

Objective:
Invitro transcription
DNase treatment
To prepare double-stranded RNA, free pf protein and other contaminating molecules

Procedures:

D. Nuclease Digestion to Remove DNA and ssRNA

This DNase/RNase treatment digests template DNA and any ssRNA that did not anneal. RNase will not degrade dsRNA when using the reaction conditions specified below.

1. Assemble RNase digestion reaction on ice

The amounts shown are for a 20 µL transcription reaction; scale up if your transcription reaction was larger.

Amount	Component
20 µL	dsRNA (from step B.4 or step C.2)
21 µL	Nuclease-free Water
5 µL	10X Digestion Buffer
2 µL	DNase I
2 µL	RNase

2. Incubate at 37°C for 1 hr

The ssRNA will be digested after 15 min but allow the incubation to proceed for 1 hr to completely digest the DNA template.

Do ***not*** continue this incubation longer than 2 hr.

E. Purification of dsRNA

This purification removes proteins, free nucleotides, and nucleic acid degradation products from the dsRNA.


NOTE

For the quickest dsRNA purification, preheat the Elution Solution to ~95°C before starting the purification procedure.

1. Assemble the dsRNA binding mix

Assemble the dsRNA binding mix by adding 10X Binding Buffer, water, and 100% ethanol to the dsRNA according to the table below.

Amount	Component
50 µL	dsRNA (from step D.2 above)
50 µL	10X Binding Buffer
150 µL	Nuclease-free Water
250 µL	100% Ethanol

Gently mix the reaction by pipetting up and down.

2. Apply binding mix to the Filter Cartridge, and draw it through

Pipet the entire 500 µL dsRNA binding mix onto the filter in the Filter Cartridge, and draw it through by centrifugation or with a vacuum manifold.

Centrifuge users:

a. For each dsRNA sample, place a Filter Cartridge in a Collection Tube. Use the Collection Tubes supplied with the kit.

b. Pipet the entire 500 µL dsRNA mixture onto the filter in the Filter Cartridge. Centrifuge at maximum speed for 2 min.

c. Discard the flow-through and replace the Filter Cartridge in the Collection Tube.

Vacuum manifold users:

a. For each dsRNA sample, place a 5 mL syringe barrel on the vacuum manifold, load it with a Filter Cartridge, and turn on the vacuum.

b. Pipet the entire 500 µL dsRNA mixture onto the filter in the Filter Cartridge. The vacuum will draw the lysate through the filter.

3. Wash the Filter Cartridge with 2 X 500 µL Wash Solution

IMPORTANT

Verify that 12 mL of 100% ethanol was added to the 2X Wash Solution.

a. Pipet 500 µL of Wash Solution onto the filter in the Filter Cartridge. Draw the wash solution through the filter as in the previous step.

b. Repeat with a second 500 µL of Wash Solution.

c. After discarding the Wash Solution, continue centrifugation, or leave on the vacuum manifold for ~10–30 sec to remove the last traces of liquid.

4. Recover the dsRNA 2 X 50–100 µL Elution Solution

a. *The Elution Solution provided with the kit is 10 mM Tris-HCl pH 7, 1 mM EDTA. It is compatible with dsRNA injection, or 2X Injection Buffer can be added to the purified dsRNA for a final concentration of 1X Injection Buffer. Alternatively, the dsRNA can be eluted into any sterile low salt solution (≤30 mM), e.g. 5 mM KCl, 0.1 mM sodium phosphate buffer as used by Rubin and Spradling (1982).*Transfer the Filter Cartridge to a fresh Collection Tube.

b. Apply 50–100 µL (hot) Elution Solution to the filter in the Filter Cartridge.
   - Apply preheated (≥95°C) Elution Solution to the filter, ***or***
   - Apply room temperature Elution Solution, close the tube lid over the Filter Cartridge, and incubate in a heat block set to 65°C or warmer for 2 min.

c. Centrifuge for 2 min at maximum speed.

d. Repeat steps b–c with a second 50–100 µL aliquot of Elution Solution collecting the RNA into the same Collection Tube.
Most of the RNA will be eluted in the first elution. The second elution is included to recover any remaining RNA.

5. Quantitate and store the dsRNA

Quantitate the reaction product by measuring its absorbance at 260 nm and calculating the concentration (see section *V.A. Quantitation of RNA by Spectrophotometry* on page 19).

The dsRNA is stable when stored at –20°C in Elution Solution.

6. Check 1/400th of the purified dsRNA on an agarose gel

Run 1/400th of the dsRNA on a 1% agarose gel (nondenaturing) to examine the integrity and efficiency of duplex formation.

- 1/400th of 100 µL elution volume is 2.5 µL of a 1:10 dilution
- 1/400th of 200 µL elution volume is 5 µL of a 1:10 dilution
- Dilute the gel samples in TE (10 mM Tris, 1 mM EDTA) or in gel loading buffer

(Instructions for running the gel are in section V.B on page 19). The dsRNA will migrate slightly slower than DNA markers of the same length. See Figure 4 on page 15 for an example of how the dsRNA reaction products will look on a gel.

Note:

Primer with T7 promoter on the 5' side
RNA polymerase binds to the promoter
After transcribed they will hybridize automatically
This will cause a dsRNA
The direction of RNA polymerase synthesizes 3→ 5 of the antisense strand
RNA polymerase will use the template and make complementary RNA
Want to remove salts, NTP, DNa and protein (polymerase) and single stranded RNA

- We can use column to remove salts, NTP and protein
- We can use DNase to remove DNA
- We can use RNase to remove ssRNA

Some stay single stranded and we want double stranded
Need a column to remove everything except nucleotides
To remove only single stranded RNA= use RNAase

Conclusion:

Next step:

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 4/10/2018
Week#: 9

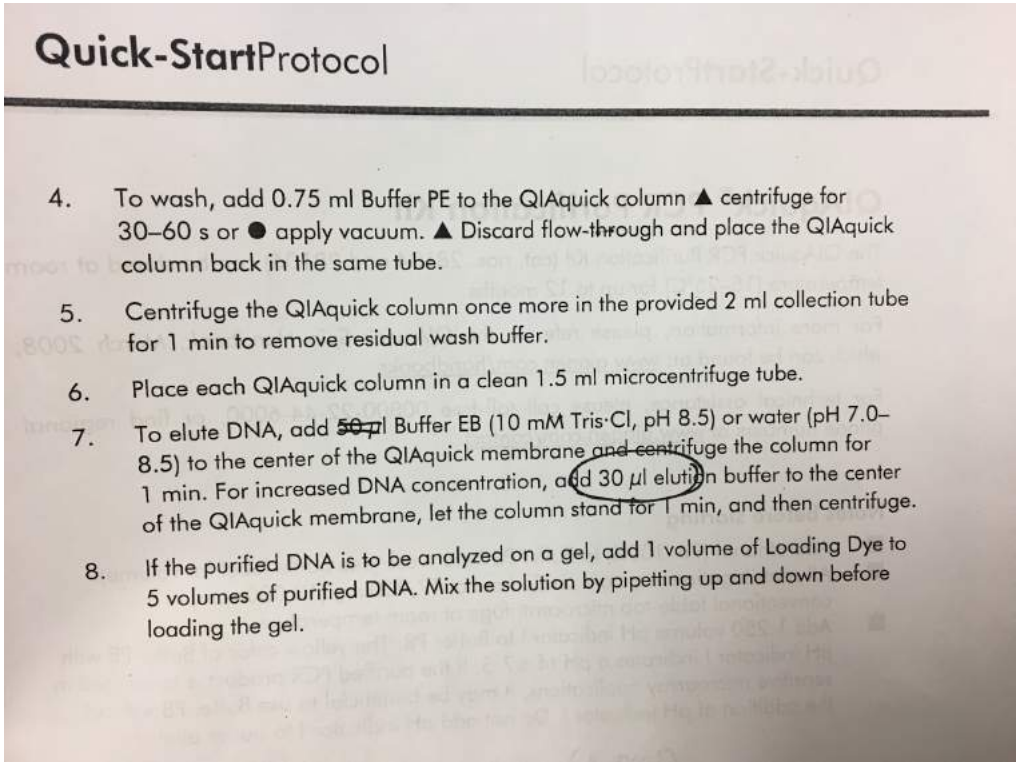
Objective:

Purify DNA from PCR to use as template to make dsRNA

Invitro transcription

Procedures:

1. Add 5 volumes Buffer PB to 1 volume of the PCR reaction and mix. If the color of the mixture is orange or violet, add 10 µl 3 M sodium acetate, pH 5.0, and mix. The color of the mixture will turn yellow.
2. Place a QIAquick column in ▲ a provided 2 ml collection tube or into ● a vacuum manifold. For details on how to set up a vacuum manifold, refer to the *QIAquick Spin Handbook*.
3. To bind DNA, apply the sample to the QIAquick column and ▲ centrifuge for 30–60 s or ● apply vacuum to the manifold until all the samples have passed through the column. ▲ Discard flow-through and place the QIAquick column back in the same tube.



Quick-Start Protocol

4. To wash, add 0.75 ml Buffer PE to the QIAquick column ▲ centrifuge for 30–60 s or ● apply vacuum. ▲ Discard flow-through and place the QIAquick column back in the same tube.
5. Centrifuge the QIAquick column once more in the provided 2 ml collection tube for 1 min to remove residual wash buffer.
6. Place each QIAquick column in a clean 1.5 ml microcentrifuge tube.
7. To elute DNA, add ~~50 µ~~l Buffer EB (10 mM Tris·Cl, pH 8.5) or water (pH 7.0–8.5) to the center of the QIAquick membrane and centrifuge the column for 1 min. For increased DNA concentration, add 30 µl elution buffer to the center of the QIAquick membrane, let the column stand for 1 min, and then centrifuge.
8. If the purified DNA is to be analyzed on a gel, add 1 volume of Loading Dye to 5 volumes of purified DNA. Mix the solution by pipetting up and down before loading the gel.

After purification → nanodrop to see if we eluted at least 189.5 ng/microliter of DNA

Note:

T7 RNA polymerase to bind to the T7 promoter

10x buffer 2 microliters

Water to adjust entire volume

1.5 microgram of our template the minimum concentration we need is 187.5 ng/microliter

Found this by converting 1.5 micrograms to nanograms and divide by 8 microliters
8 microliters is the max volume that we can add for total to be 20

(314.8 ng/microliter)(V1) = (187.5ng/microliter) (8microliters)
V1=4.76 microliters

8 microliter dNTP
2 microliter enzyme

Total has to be 20 microliters

Conclusion:

Next step:
Injection

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 4/5/2018
Week#: 9

Objective:
Template synthesis via PCR
DNA fragment purification

Procedures:

Reaction

H_20	___µl	_102_ µl
5 X PCR buffer	20µl	_40_ µl
*$MgCl_2$ (25mM stock)	6µl (1.5µM)	___µl (__µM)
dNTP mix (2.5mM stock)	8µl (0.2µM)	_16_ µl
Primer1 (10µM stock)	___µl (__µM)	_30_ µl (_10_ µM)
Plasmid DNA (_____)	___µl	_10_ µl
Taq polymerase (5U/ µl)	0.5µl (2.5U /100µl)	_2_ µl
Total	100µl	_200_ µl 8x 25microliters tubes

46 /2 = 23 + 1 microliter F1 + 1 R1= 25

*No $MgCl_2$ if using TAKARA Ex Taq or Promega GoTaq

40 microliter of 10 ng/microliter

Reaction Cycle

Program name: _____
Denaturation: 95 □ X 5 min
↓
Denaturation: 95 □ X 30 sec
Annealing: _61-62_ □ X 30 sec _35_ cycles
Extension: 72 □ X _30_ sec

Result

Electrophoresis:__%agarose,__X TAE/ TBE
Loaded sample ___µl / lean

↓
Extension: 72 □ X 5 min
↓
Hold: 4 □

*2: Primer Tm + 1-2□
*3: 500bp/30sec, 1,000bp/1min

Note:
Make DNA with T7
We want to add promoter sequence on both ends of out DNA
Make DNA from Plasmid DNA, use DNA polymerase = replication
-for this we need primer, dntp etc.
-this reaction is called PCR to make copies of this DNA
We have T7 on one side of our DNA, but we do have T3 on the other side
We need to use the primer and when we design primer we can add T7 promoter sequence to our primer, if we do this, then every single amplicon with our primer will have T7 promoter sequence
If we target plasmid with the t7 sequence = TOPO RNAi primer

Conclusion:

Next step:

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 4/3/18
Week#: 9

Objective: dry lab
How DNA sequences work
Sequence analysis

Procedures:

Note:
dNTP vs. ddNTP

-ddNTP lacs the oxygen so it leads to termination of synthesis because you cannot add a nucleotide onto the end of the ddNTP

Conclusion:

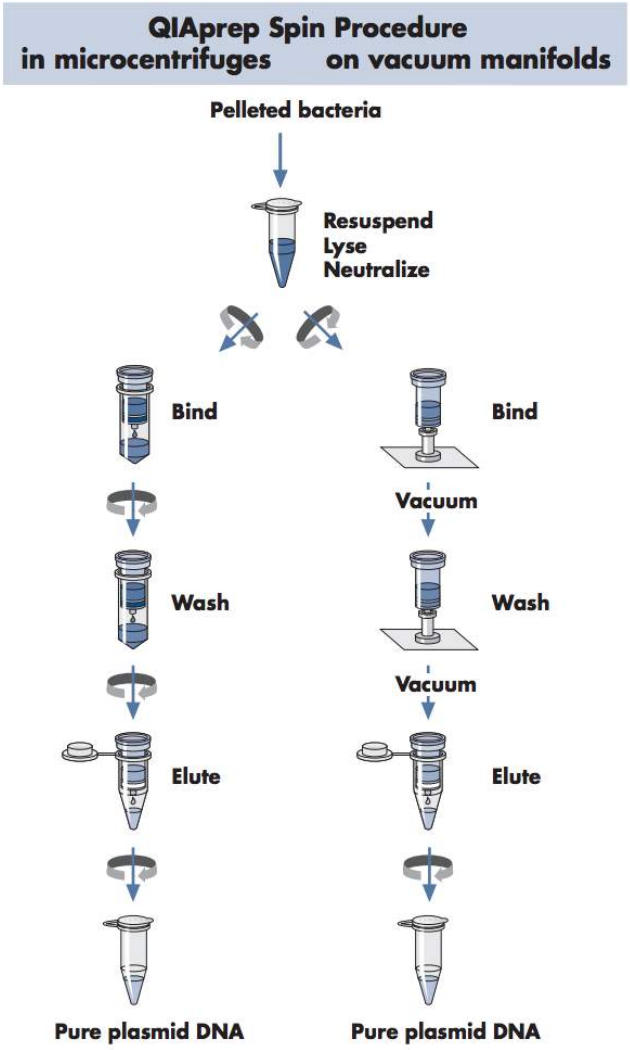
Next step:

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 3/29
Week#: 8

Objective: purify DNA to get rid of macromolecules

Procedures:
Add 2 ml and centrifuge
Remove liquid
Repeat
Increase pH to kill cell by adding P2
1 min
Neutralize with N3


QIAprep Spin Procedure
in microcentrifuges
on vacuum manifolds
Pelleted bacteria
Resuspend
Lyse
Neutralize
Bind
Wash
Elute
Pure plasmid DNA
Bind
Vacuum
Wash
Vacuum
Elute
Pure plasmid DNA

Protocol: Plasmid DNA Purification using the QIAprep Spin Miniprep Kit and a Microcentrifuge

This protocol is designed for purification of up to 20 µg of high-copy plasmid DNA from 1–5 ml overnight cultures of *E. coli* in LB medium. For purification of low-copy plasmids and cosmids, large plasmids (>10 kb), and DNA prepared using other methods, refer to the recommendations on pages 35–36.

Please read "Important Notes" on pages 13–18 before starting.

Note: All protocol steps should be carried out at room temperature (15–25°C).

Procedure

1. **Resuspend pelleted bacterial cells in 250 µl Buffer P1 and transfer to a microcentrifuge tube.**

   Ensure that RNase A has been added to Buffer P1. No cell clumps should be visible after resuspension of the pellet.

   If LyseBlue reagent has been added to Buffer P1, vigorously shake the buffer bottle to ensure LyseBlue particles are completely dissolved. The bacteria should be resuspended completely by vortexing or pipetting up and down until no cell clumps remain.

2. **Add 250 µl Buffer P2 and mix thoroughly by inverting the tube 4–6 times.**

   Mix gently by inverting the tube. Do not vortex, as this will result in shearing of genomic DNA. If necessary, continue inverting the tube until the solution becomes viscous and slightly clear. Do not allow the lysis reaction to proceed for more than 5 min.

   If LyseBlue has been added to Buffer P1 the cell suspension will turn blue after addition of Buffer P2. Mixing should result in a homogeneously colored suspension. If the suspension contains localized colorless regions or if brownish cell clumps are still visible, continue mixing the solution until a homogeneously colored suspension is achieved.

3. **Add 350 µl Buffer N3 and mix immediately and thoroughly by inverting the tube 4–6 times.**

   To avoid localized precipitation, mix the solution thoroughly, immediately after addition of Buffer N3. Large culture volumes (e.g. ≥ 5 ml) may require inverting up to 10 times. The solution should become cloudy.

   If LyseBlue reagent has been used, the suspension should be mixed until all trace of blue has gone and the suspension is colorless. A homogeneous colorless suspension indicates that the SDS has been effectively precipitated.

4. **Centrifuge for 10 min at 13,000 rpm (~17,900 x *g*) in a table-top microcentrifuge.**

   A compact white pellet will form.

5. **Apply 800 µl of the supernatant from step 4 to the QIAprep 2.0 spin column by pipetting.**
6. **Centrifuge for 30–60 s. Discard the flow-through.**
7. **Recommended: Wash the QIAprep 2.0 spin column by adding 0.5 ml Buffer PB and centrifuging for 30–60 s. Discard the flow-through.**

   This step is necessary to remove trace nuclease activity when using *endA*+ strains such as the JM series, HB101 and its derivatives, or any wild-type strain, which have high levels of nuclease activity or high carbohydrate content. Host strains such as XL-1 Blue and DH5®α do not require this additional wash step.
8. **Wash QIAprep 2.0 spin column by adding 0.75 ml Buffer PE and centrifuging for 30–60 s.**
9. **Discard the flow-through, and centrifuge at full speed for an additional 1 min to remove residual wash buffer.**

   Important: Residual wash buffer will not be completely removed unless the flow-through is discarded before this additional centrifugation. Residual ethanol from Buffer PE may inhibit subsequent enzymatic reactions.
10. **Place the QIAprep 2.0 column in a clean 1.5 ml microcentrifuge tube. To elute DNA, add 50 µl Buffer EB (10 mM Tris·Cl, pH 8.5) or water to the center of each QIAprep 2.0 spin column, let stand for 1 min, and centrifuge for 1 min.**

Note:
Mix gently after adding P2 and Pipette gently

Conclusion:

Next step:
Analyze sequences

Lab notebook template

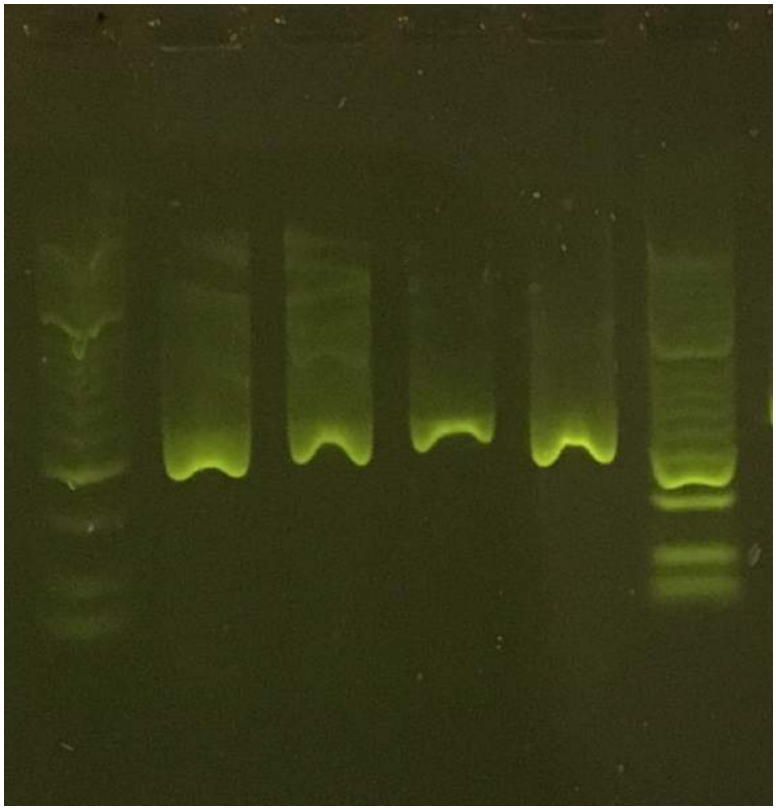
Name: Sarah Kosse and Bridget Dames
Date: 3/27/18
Week#: 8

Objective: Confirm size of gene by running gel
Chose 2 bands to culture

Procedures:
Make 1.5 % gel
Place 2 microliters of each PCR soln into 4 different wells
Run gel for 30 minutes
Choose 2 bands to culture

Note:
Try to culture two
Use 50bp ladder
1.5% because the sequences are longer
Primer 1 amplicon length should be around 401 bp
2 microliters in each well

Conclusion:
Chose bands 1 and 2



Next step:
Purify the plasmid

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 3/15/18 (Extra Credit word--- Pacific Rim 2)
Week#: 7

Objective:
To test if the kill gene system really works - take advantage of PCR to do so
To pick up colonies and perform colony PCR

Procedures:
Pick colony from plate
Put into 15 microliter LB + amp
Culture 37 degree for 1 hour
Mixing every 15 minutes
Use for PCR
pCR 4-TOPO
Do the PCR then determine if the amplified product matches with our predicted length of our gene

--Water 8.15
--Green Buffer 4
-dNTP mix 1.6
-Primer1 2
-Primer2 2
Taq 0.25
Colony 2
Total 20
X4

PCR
95- 5 min
94- 30 sec
55- 30 sec
72- 30 sec
72- 2 min
4 C

Note:
Use kill gene to identify colony (ccdb)
All the ecoli that survive should have plasmid that survive
Using blue gene is usually pretty vague
Primer side on the plasmid, not your gene, so if we do PCR you will have the size of your gene
Easiest way is to use your pipette tip
Pick the colony that looks big
One tip gets MILLIONS of colonies

Conclusion:
Always have plan B
Microbiology is not always exact
Exact same PCR can sometimes work and sometimes not

Next step:
Run gel for colony PCR
Start E.coli culture

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 3/13
Week#: 7

Objective: Cloning: put DNA fragment into plasmid

Procedures:
4 microliters purified DNA
1 microliter salt solution
1 microliter TOPO vector
In 1.5 microliter tube
Rt for 30 min

TOPO TA cloning short:

https://drive.google.com/drive/u/0/search?q=lab%20tomoyasu%20topoisomerase

Ecoli on ice
3 microliter of our topo reaction mixture into cell
5 min on ice
30 sec in 42 degrees
5 min on ice
250 microliters of SOC into cell
Wait 37 degrees in incubator for 50min-1 hr
Then plate 120 microliter of bacteria
Use “hockey stick” to spread the bacteria on the plate then close
Leave 30 degree overnight

Note:
Do not vortex - it will denature the enzyme
Can spin down

Put your DNA fragment into plasmid, then put your plasmid into E. coli
Restriction Enzymes to produce sticky ends, then use ligase to attach
Topoisomerase used to release tension
Use antibiotics to choose if e coli has plasmid or not
Use ccdB to see if the e coli has the kill gene

Keep the petri dish upside down

Conclusion:
Cloning a bacteria is very sensitive and can be contaminated very easily.

Next step:
Collect Bacteria cultures

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 03/08/18
Week#: 6

Objective:
Run the gel electrophoresis to purify the gene
How to use a centrifuge

Procedures:
Make the gel (1.2%)
- -0.6g agar
- -50 mL gel green TBE (make 100 total)
- - 3 min in microwave take out and stir 1 more minute in microwave on 3 power

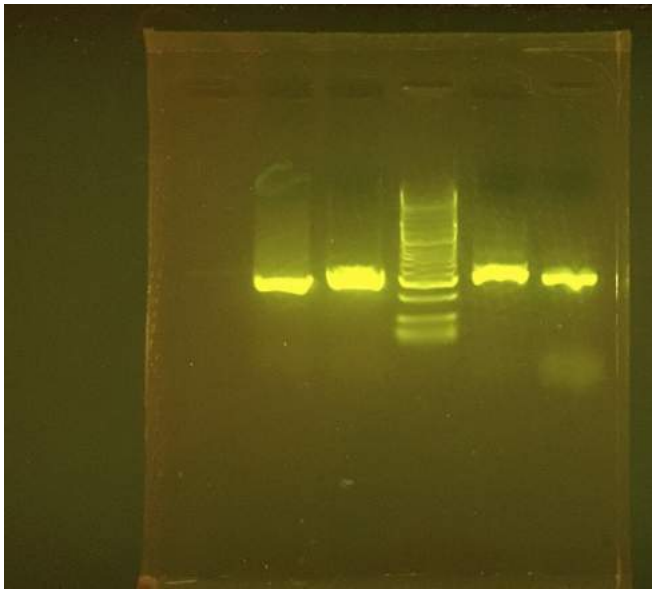
Pour gel into cassette and let sit until hard with plastic grooved piece (6 wells) so that wells are created in the gel

TBE without green in big box - fill until covers the gel
100V for 25 min - stop running when the color of the loading dye reaches ⅔ of the gel
Wipe off gel
Load 10 microliters of the DNA + loading dye into the wells of the gel and run the gel
After you run the gel use blue light to see the size of our DNA fragments

Use Extractor and push down on the desired band to take out gel band.
put in the basket
Freeze for 5 minutes
Centrifuge for 1300 for 3 minutes

Note:
Extracted the larger band, the one that did not move as far through the gel
Extracted DNA with F_1 and R_1 primers
When the rotor is not balanced it can fly your sample out!

Conclusion:
Gel electrophoresis is used to purify the gene of interest. Used the fourth band from the left.
Primer set 1



Next step:
Put the DNA into a plasmid - DNA extraction

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 03/06/18
Week#: 6

Objective:
Learn how to dilute primers and prepare for a PCR

Procedures:
Dilute Primer- 50 microliter of 10 micromolar from 100 micromolar stock

TC014939_F1 - 19.7 nmol; 0.12mg =197 microliters
TC014939_R1 - 28.6nmol; 0.17 mg = 286 microliter
TC014939_F2 - 26.1 nmol; 0.16mg = 261 microliters
TC014939_R2- 34.1 n mol; 0.21mg = 341 microliters

(28.6 nmol X 10^-9)/ X L= 100 microM x 10^-6

Dilute the stock:
(100 micromolars) (x) = (50 microliters) (10 micromolar)

Program to run the PCR:
Note:
Everything we get from the freezer, vortex and spin down except for the enzyme
Make the 46 microliter master solution in one tube then split in half before you add the forward and reverse primers

Date._____
Aim:_____

Gene name: Lim1

Forward Primer: Tm=59.97 □: sequence 5'--AGGCGGTACGGTACAAAGTG
Reverse Primer: Tm=60.03□: sequence 5'-- CCGTGCAACGTGTGATGTTT

Reaction

H_20	___µl	__30.5_µl
5 X PCR buffer	20µl	__10_µl
*$MgCl_2$ (25mM stock)	6µl (1.5µM)	__0_µl (__µM)
dNTP mix (2.5mM stock)	8µl (0.2µM)	__4_µl
Primer1 (10µM stock)	___µl (__µM)	__2_µl (_10_µM)
Primer2 (10µM stock)	___µl (__µM)	__2__µl (_10_µM)
Sample DNA (_____)	___µl	__1__µl
Taq polymerase (5U/ µl)	0.5µl (2.5U /100µl)	__0.5__µl
Total	100µl	__50__µl

46 /2 = 23 + 1 microliter F1 + 1 R1= 25

*No $MgCl_2$ if using TAKARA Ex Taq or Promega GoTaq

Reaction Cycle
Program name: _____
Denaturation: 95 □ X 5 min

Result
Electrophoresis:__%agarose,__X TAE/ TBE
Loaded sample ___µl / lean

↓
Denaturation: 95 □ X 30 sec
Annealing: 61-62 □ X 30 sec] 35 cycles
Extension: 72 □ X 30 sec
↓
Extension: 72 □ X 5 min
↓
Hold: 4 □

*2: Primer Tm + 1-2□
*3: 500bp/30sec, 1,000bp/1min

Conclusion:
Listen better :)
PCR amplifies our gene of interest

Next step:
Run PCR then run the gel electrophoresis

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 03/01/18
Week#: 5

Objective: To learn how to run gel electrophoresis
To figure out the size of the DNA unknown fragment (Size A, B, C)

Procedures:
Make the gel (1.2%)
-0.6g agar
-50 mL gel green TBE
- 3 min in microwave take out and stir 1 more minute in microwave on 3 power
Pour gel into cassette and let sit until hard with plastic grooved piece so that wells are created in the gel
A- 82 ng/microliter
B- 118 ng/microliter
C- 115 ng/microliter
Diluter all 10 microliter of 10 ng/microliter
M1V1=M2V2
A- 1.22 microliter of DNA and 8.78 microliter of water

B- 0.85 microliter of DNA and 9.15 microliter of water
C- 0.87 microliter of DNA and 9.13 microliter of water

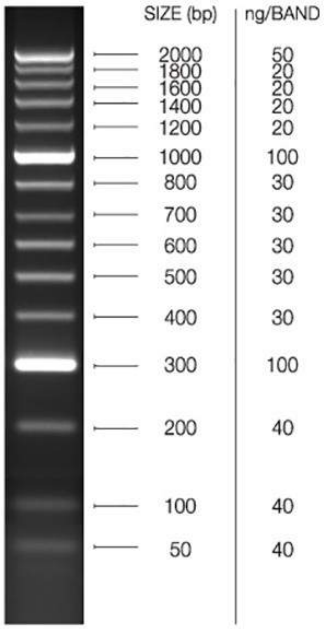
Mix DNA with 5x loading dye, then put the DNA into the gel

$\frac{1}{5} = x/(10 + x)$ → 2.5 microliters loading dye

TBE without green in big box - fill until covers the gel
100V for 25 min - stop running when the color of the loading dye reaches ⅔ of the gel
Wipe off gel
Load 10 microliters of the DNA + loading dye into the wells of the gel and run the gel
After you run the gel use blue light to see the size of our DNA fragments

Note:
Gel- agar - make the gel with the TBE with gel green (aluminum around it)
Gel electrophoresis: separates DNA based on size
DNA is negatively charged so it will flow toward the positive probe; smaller the DNA fragment, the farther is moves through the gel
Ladder (usually 1kb)- mixture of DNA molecules that contains many different sized fragments of DNA to act as a control. Ladder tells you the size of your DNA fragment
Buffer- TAE and TBE (0.5x TBE)
Ethidium bromide goes into the DNA so that you can see the DNA with UV light
Gel green - use blue light to excite the dye
1% gel separates 1 kb - 5 kb (1g in 100mL buffer)
1.2-1.5% 100 kb - 1000 kb
5x loading dye
Red is plus
10 microliter of ladder

Conclusion:
The size of A, B, and C fragment



Next step:
Dilute the primers for our gene.
Use the knowledge learned in this class to run a gel electrophoresis with our own gene.

Lab notebook template

Name: Sarah Kosse and Bridget Dames
Date: 02/27/18
Week#: 5

Objective: To learn basic lab techniques: how to pipette,

Procedures:

-use the pipette to transfer liquid from one tube to another

-set amount on pipet, push down until first stop, place the pipet into the liquid, suck op the liquid

-to push liquid out, push all the way down

Note:

P1000 (200-1000 microliters)

P200 (20-200 microliters)

P20 (2-20 microliters)

P10 (0.5-2microliters)

-do not use p10 for 2-10 microliters (use p20)

-always keep pipet vertical

-keep tip box closed when not in use

-

Conclusion:

Pipettes are fun!!!

Next step:

Pipette some real stuff

Lab notebook template

Name: Sarah Kosse and Bridget Dames

Date:

Week#:

Objective:

Procedures:

Note:

Conclusion:

Next step: