



1

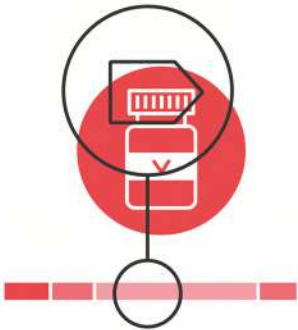
2

3

4



## CODING SEQUENCE



B12 vitamin synthesis



1

2

3

4



## CODING SEQUENCE



Antibiotic production



1

2

3

4



## CODING SEQUENCE



Antibiotic production



1

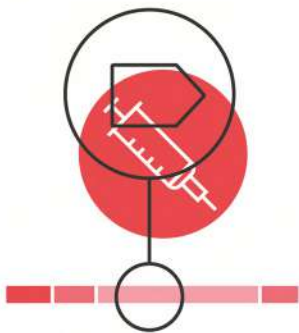
2

3

4



## CODING SEQUENCE



Insulin production



1

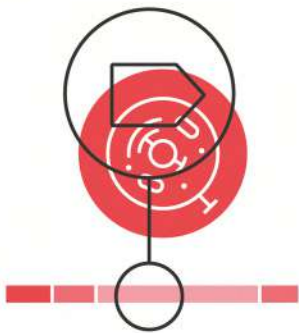
2

3

4



## CODING SEQUENCE



Antitumoral synthesis



1

2

3

4

## STANDARD TERMINATOR



A well-balanced sequence to give  
a finishing touch to your gene!



1

2

3

4

## STANDARD TERMINATOR



A well-balanced sequence to give  
a finishing touch to your gene!



1

2

3

4

## STANDARD TERMINATOR



A well-balanced sequence to give  
a finishing touch to your gene!





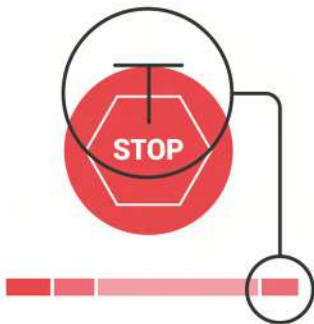
1

2

3

4

## TERMINATOR



UGA is one of the possible sequences to finish up a gene. Be careful, for some bacteria it's not an actual terminator!



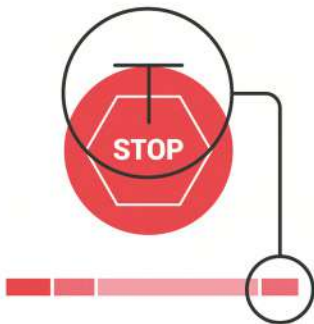
1

2

3

4

## TERMINATOR



UGA is one of the possible sequences to finish up a gene. Be careful, for some bacteria it's not an actual terminator!



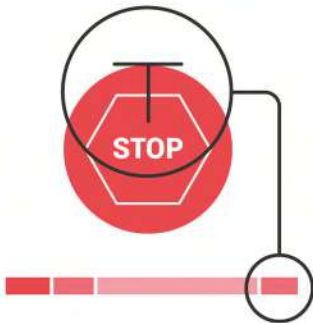
1

2

3

4

## TERMINATOR



UAG is one of the possible sequences to finish up a gene. Better than nothing, but a standard would be better.



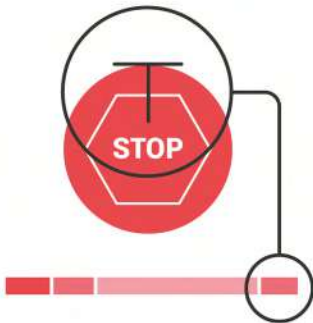
1

2

3

4

## TERMINATOR



UAG is one of the possible sequences to finish up a gene. Better than nothing, but a standard would be better.



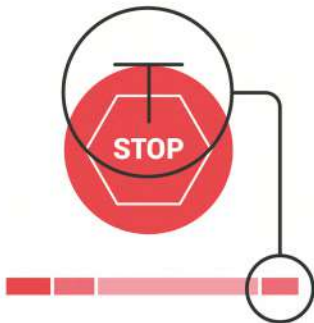
1

2

3

4

## TERMINATOR



UAA is one of the possible sequences to finish up a gene. Be careful, for some bacteria it's not an actual terminator!



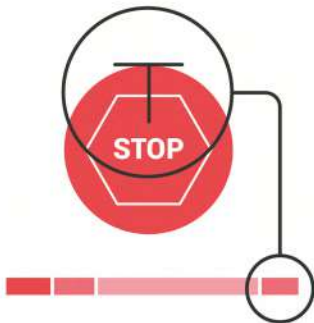
1

2

3

4

## TERMINATOR



UAA is one of the possible sequences to finish up a gene. Be careful, for some bacteria it's not an actual terminator!



## STANDARD PLASMID



The SEVA plasmid has been standardised to be efficient in different synbio projects. A winner bet to place your genetic circuit!



## STANDARD PLASMID



The SEVA plasmid has been standardised to be efficient in different synbio projects. A winner bet to place your genetic circuit!





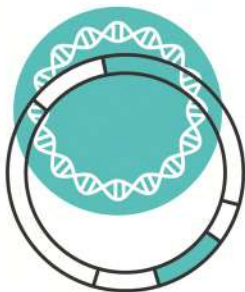
## STANDARD PLASMID



The SEVA plasmid has been standardised to be efficient in different synbio projects. A winner bet to place your genetic circuit!



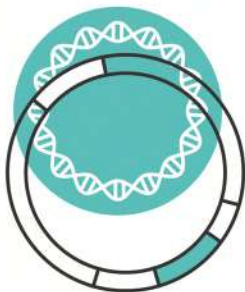
## PLASMID



This non-standard pCMV plasmid helps to produce a high number of gene copies.



## PLASMID



This non-standard pCMV plasmid helps to produce a high number of gene copies.



## PLASMID



The lentiCRISPR plasmid designed to be used for gene editing experiments but not to be a standard.



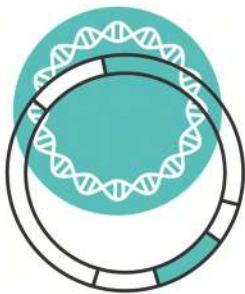
## PLASMID



The lentiCRISPR plasmid designed to be used for gene editing experiments but not to be a standard.



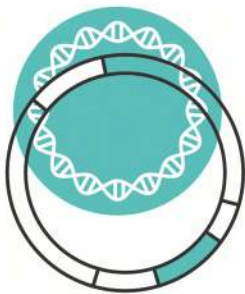
## PLASMID



The psPAX2 is a special plasmid that carries genetic information from the HIV.



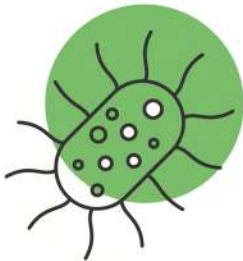
## PLASMID



The psPAX2 is a special plasmid that carries genetic information from the HIV.



## ESCHERICHIA COLI

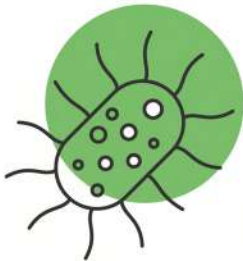


The apple of many scientists' eyes.  
These bacteria live within our gut  
and their genetics is well-known, so  
they are very useful for applications  
related to medicine and health.





## ESCHERICHIA COLI



The apple of many scientists' eyes.  
These bacteria live within our gut  
and their genetics is well-known, so  
they are very useful for applications  
related to medicine and health.



1

2

3

4

## STANDARD PROMOTER



A standardised version of a promoter. The safest bet to control the number of gene copies produced by your bacteria!



1

2

3

4

## STANDARD PROMOTER



A standardised version of a promoter. The safest bet to control the number of gene copies produced by your bacteria!



1

2

3

4

## STANDARD PROMOTER



A standardised version of a promoter. The safest bet to control the number of gene copies produced by your bacteria!



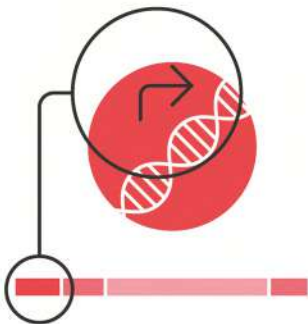
1

2

3

4

## PROMOTER



**The galactose promoter isn't standard, this is probably the sweetest promoter you will ever find!**



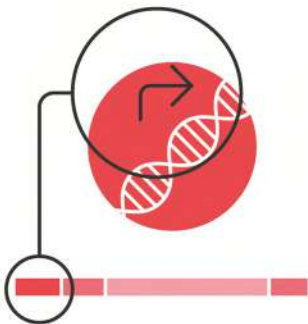
1

2

3

4

## PROMOTER



**The galactose promoter isn't standard, this is probably the sweetest promoter you will ever find!**



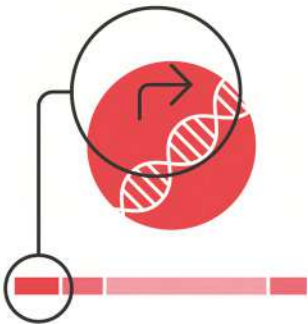
1

2

3

4

## PROMOTER



**The lactose promoter: a classic and classy way to start your genetic circuit. It can be induced by lactose, be careful if you are allergic!**



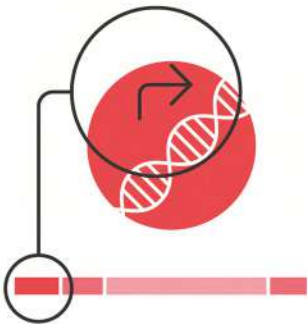
1

2

3

4

## PROMOTER



**The lactose promoter: a classic and classy way to start your genetic circuit. It can be induced by lactose, be careful if you are allergic!**





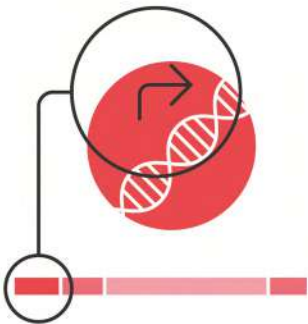
1

2

3

4

## PROMOTER



The tryptophan promoter is a non-standard promoter that was discovered in *E. coli* and can be disabled using this amino acid.



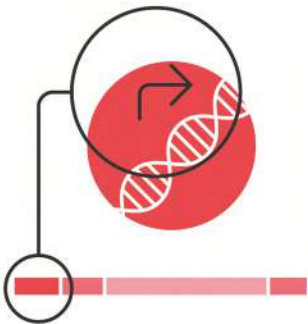
1

2

3

4

## PROMOTER



The tryptophan promoter is a non-standard promoter that was discovered in *E. coli* and can be disabled using this amino acid.



1

2

3

4

## STANDARD RIBOSOME BINDING SITE



The B0030 is a wonderful  
Biobrick standard RBS. No  
ribosome will resist translating  
your gene!



1

2

3

4

## STANDARD RIBOSOME BINDING SITE



The B0030 is a wonderful  
Biobrick standard RBS. No  
ribosome will resist translating  
your gene!



1

2

3

4

## STANDARD RIBOSOME BINDING SITE



The B0030 is a wonderful  
Biobrick standard RBS. No  
ribosome will resist translating  
your gene!



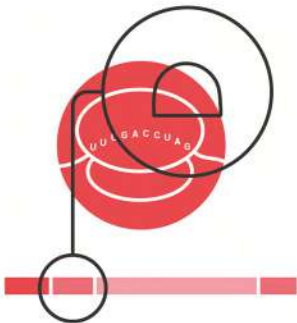
1

2

3

4

## RIBOSOME BINDING SITE



This Shine-Dalgarno sequence is a cytosine-rich synthetic RBS created using a computer. It will work, but it's not optimised for all genes.



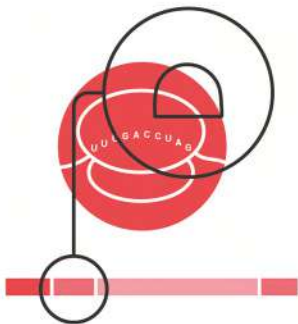
1

2

3

4

## RIBOSOME BINDING SITE



This Shine-Dalgarno sequence is a cytosine-rich synthetic RBS created using a computer. It will work, but it's not optimised for all genes.



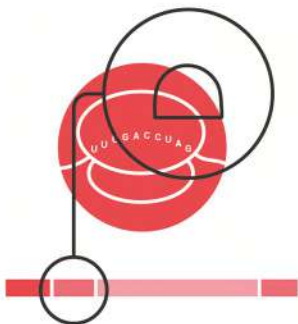
1

2

3

4

## RIBOSOME BINDING SITE



This Shine-Dalgarno sequence is a cytosine-rich synthetic RBS created using a computer. It will work, but it's not optimised for all genes.





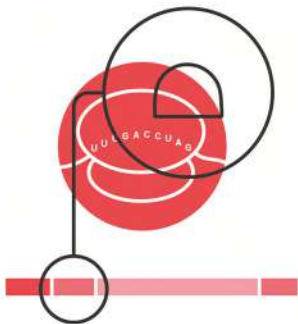
1

2

3

4

## RIBOSOME BINDING SITE



This Shine-Dalgarno sequence is a cytosine-rich synthetic RBS created using a computer. It will work, but it's not optimised for all genes.



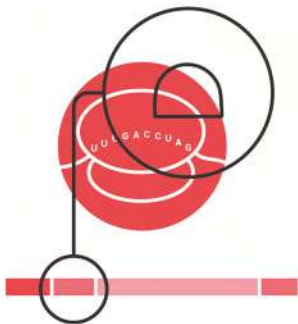
1

2

3

4

## RIBOSOME BINDING SITE



This Shine-Dalgarno sequence is a cytosine-rich synthetic RBS created using a computer. It will work, but it's not optimised for all genes.



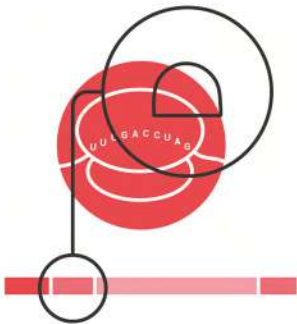
1

2

3

4

## RIBOSOME BINDING SITE



This Shine-Dalgarno sequence is a cytosine-rich synthetic RBS created using a computer. It will work, but it's not optimised for all genes.



1

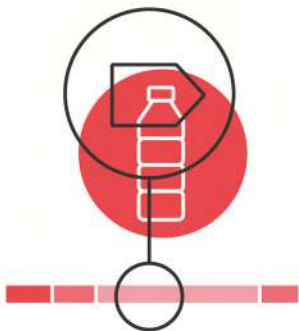
2

3

4



## CODING SEQUENCE



Plastic degradation



1

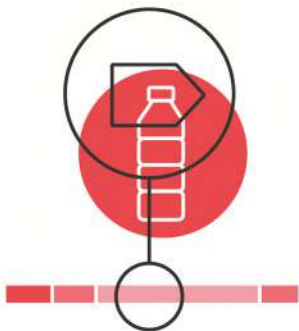
2

3

4



## CODING SEQUENCE



Plastic degradation



1

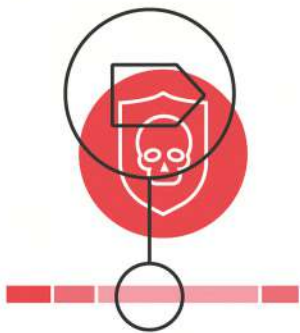
2

3

4



## CODING SEQUENCE



Toxicity resistance



1

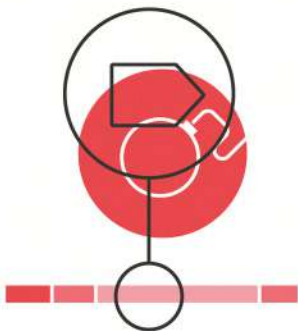
2

3

4



## CODING SEQUENCE



Detection of explosives



1

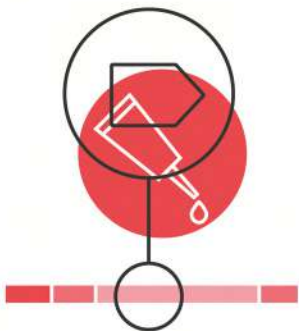
2

3

4



## CODING SEQUENCE



Dye production





1

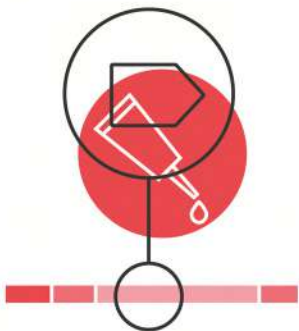
2

3

4



## CODING SEQUENCE



Dye production



1

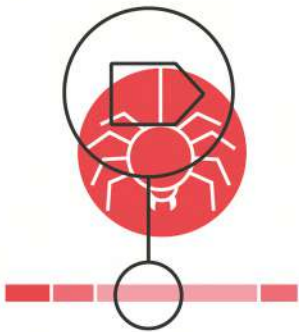
2

3

4



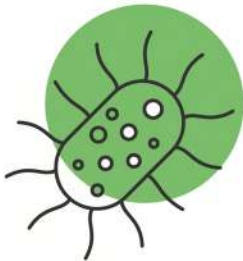
## CODING SEQUENCE



Spider silk synthesis



## ESCHERICHIA COLI



The apple of many scientists' eyes.  
These bacteria live within our gut  
and their genetics is well-known, so  
they are very useful for applications  
related to medicine and health.



## *PSEUDOMONAS PUTIDA*



These microbes have learnt how to degrade many different pollutants! Researchers' top choice for synbio projects related to environmental applications!



## *PSEUDOMONAS PUTIDA*



These microbes have learnt how to degrade many different pollutants! Researchers' top choice for synbio projects related to environmental applications!



## *PSEUDOMONAS PUTIDA*



These microbes have learnt how to degrade many different pollutants! Researchers' top choice for synbio projects related to environmental applications!



## BACILLUS SUBTILIS



These bacteria are "living factories". They are very easy to manipulate and can be engineered to produce many different molecules. That's why they are the best option for industrial applications.



## BACILLUS SUBTILIS



These bacteria are "living factories". They are very easy to manipulate and can be engineered to produce many different molecules. That's why they are the best option for industrial applications.





## BACILLUS SUBTILIS



These bacteria are "living factories". They are very easy to manipulate and can be engineered to produce many different molecules. That's why they are the best option for industrial applications.



## CHITCHAT



Place this card in front of the rival that will play after you . They will lose turn. "Have I ever told you the story about the mysterious bacterial gene? Everything started when..."



## CHITCHAT



Place this card in front of the rival that will play after you . They will lose turn. "Have I ever told you the story about the mysterious bacterial gene? Everything started when..."



## BIOHACKING



**Action card!** Take a card at random from the hand of any rival. They say everything is fair in synbio and war...



## BIOHACKING



**Action card!** Take a card at random from the hand of any rival. They say everything is fair in synbio and war...



## TURBO PIPETTE



**Action card!** Draw three cards from the deck and choose one to keep. Then, discard the other two.



## TURBO PIPETTE



**Action card!** Draw three cards from the deck and choose one to keep. Then, discard the other two.



## TOOLBOX ASSAULT



**Action card! Go through the discard pile and choose any resource card. In synbio contests we waste nothing!**





## TOOLBOX ASSAULT



**Action card! Go through the discard pile and choose any resource card. In synbio contests we waste nothing!**

