

Untitled

JJ

2021 3 18

iGEM

주소 : iGEM site

List

- Team name
- Organization
- Title
- Track
- Wiki page
- Problem
- Strategy
- Used bioparts
- Vector map

```
No <- c(1,2,3,4,5,6)
Team <- c("TU Kaiserlautern", "Leiden", "AFCM-Egypt", "EPFL", "Munich", "TU_Eindhoven")
Subject <- c("Environment", "Diagnosis", "Therapeutics", "Diagnosis", "Biology", "Therapeutics")
Strategy <- c("Enzymatic reaction", "Pathogenic gene detection", "Circuit for vaccine production", "Diagnosis kit for field usage", "Analysis of transcripts via vesicular export", "precise diagnosis for needs for antibiotics")
iGEM_df <- data.frame(No,Team,Subject,Strategy)
iGEM_df
```

##	No	Team	Subject	Strategy
## 1	1	TU Kaiserlautern	Environment	Enzymatic reaction
## 2	2	Leiden	Diagnosis	Pathogenic gene detection
## 3	3	AFCM-Egypt	Therapeutics	Circuit for vaccine production
## 4	4	EPFL	Diagnosis	Diagnosis kit for field usage
## 5	5	Munich	Biology	Analysis of transcripts via vesicular export
## 6	6	TU_Eindhoven	Therapeutics	precise diagnosis for needs for antibiotics

```
knitr::kable(iGEM_df, format="markdown")
```

No	Team	Subject	Strategy
1	TU Kaiserlautern	Environment	Enzymatic reaction
2	Leiden	Diagnosis	Pathogenic gene detection
3	AFCM-Egypt	Therapeutics	Circuit for vaccine production
4	EPFL	Diagnosis	Diagnosis kit for field usage
5	Munich	Biology	Analysis of transcripts via vesicular export
6	TU_Eindhoven	Therapeutics	precise diagnosis for needs for antibiotics

TU Kaiserslautern

- Organization : Technical University of Kaiserslautern / Germany
- Title : Chlamy Yummy - Revolutionizing plastic degradation by introducing Chlamydomonas reinhardtii as a eukaryotic secretion platform
- Track : Environment
- wiki
- Subject : IPBES에 의한 동식물 멸종 / microtoxic pollutants에 의한 수질 오염
- Strategy : Green algae Chlamydomonas reinhardtii를 이용한 micropollutants 분해 효소 발현
- Used bioparts : MoClo system

```
Name <- c("BBa_K3589107", "BBa_K3589108", "BBa_K3589109", "BBa_K3589110", "BBa_K3589150", "BBa_K3589151")
Type <- c("Coding", "Intermediate/Coding", "Coding", "Coding", "Tag", "Tag", "Composite", "Composite", "Composite")
Table1 <- data.frame(Name, Type)
knitr::kable(Table1, format="markdown")
```

Name	Type
BBa_K3589107	Coding
BBa_K3589108	Intermediate/Coding
BBa_K3589109	Coding
BBa_K3589110	Coding
BBa_K3589150	Tag
BBa_K3589151	Tag
BBa_K3589201	Composite
BBa_K3589202	Composite
BBa_K3589203	Composite
BBa_K3589204	Composite
BBa_K3589205	Composite
BBa_K3589206	Composite
BBa_K3589207	Composite
BBa_K3589208	Composite
BBa_K3589209	Composite
BBa_K3589210	Composite
BBa_K3589211	Composite
BBa_K3589212	Composite

- Vector map : pGEX-6P-1 expression vector

Leiden

- Organization :
- Title :
- wiki
- Subject : Pandemic 상황을 빠르게 해결하기 위해 global한 질병 진단 방법 필요
- Strategy : Pathogenic species의 핵산을 빠르게 감지하기 위한 방법 개발 isothermal DNA amplification method에 colorimetric readout을 병행함
- Method : Pathogen의 genome에 맞는 여러 세트의 프라이머를 사용, 다양한 pathogen에 적용될 수 있도록 함. (specificity 문제 고려 필요)
- Used bioparts :
- Vector map :

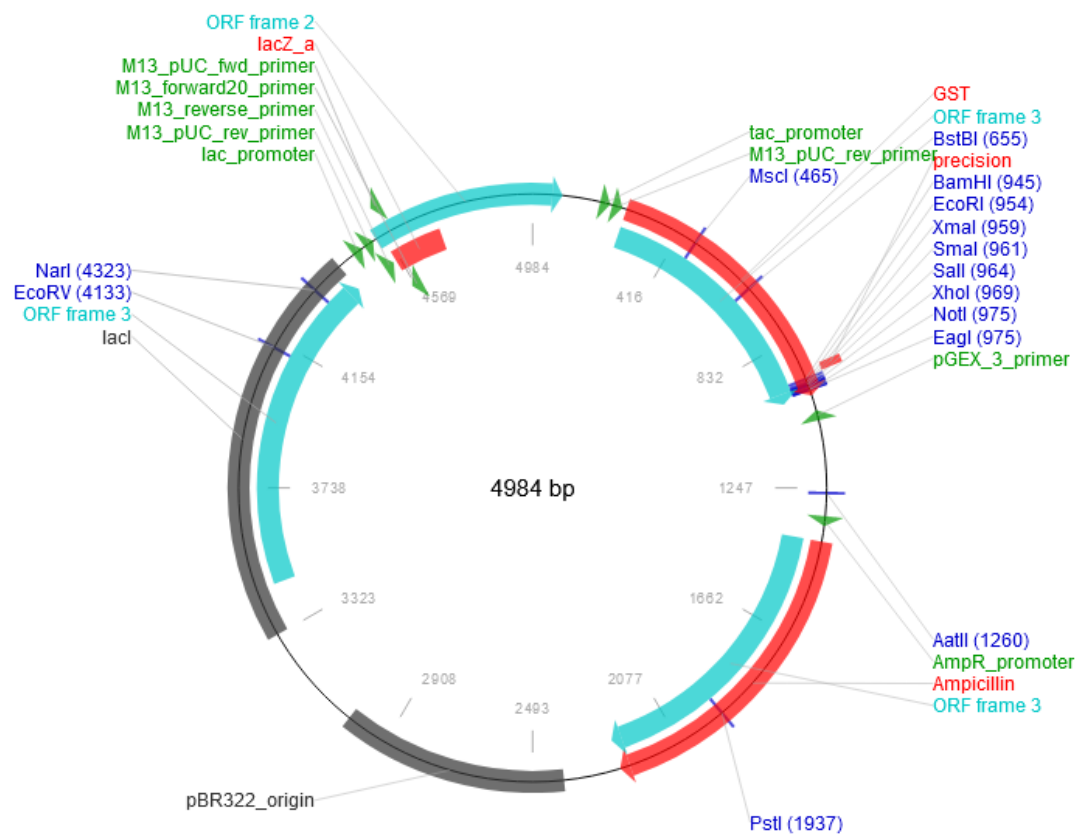


Figure 1: TU Kaiserslautern

AFCM-Egypt

- Organization :
- Title :
- wiki
- Subject : DNA-launched RNA replicons를 이용한 Breast cancer 백신 개발 연구
- Strategy : multi-epitope DNA vaccine 생산을 위한 DNA vaccine circuit 제작
- Used bioparts :
- Vector map :

EPFL

- Organization :
- Title :
- wiki
- Subject : 전염성이 강한 식물 관련 질병을 빠르게, 현장에서 분석할 수 있는 진단 키트 개발
- Strategy : 수 주에서 수 시간으로 진단 시간 축소, 현장에서 진단 가능
- Method : 마이크로니들을 이용한 DNA 추출, RPA reaction 후 paper disc에 반응시키면 확인 가능
- Used bioparts :
- Vector map :

Munich

- Organization :
- Title :
- wiki
- Subject : 유전자 발현의 dynamics를 시간에 따라 모니터링하기 위한 기술 개발
- Strategy : ALiVE (Analysis of Living cells via Vesicular Export)
- Method : BioBrick에 기반하여 exosome 분비와 viral budding 과정을 조절해 특정 transcripts를 living cell에서 배출되도록 함.
- Used bioparts :
- Vector map :

TU_Eindhoven

- Organization :
- Title :
- wiki
- Subject : AMR (항생제 저항성)을 감소시키고 항생제의 대체재를 찾고자 함
- Strategy : 필요한 항생제를 정확히 진단함으로써 항생제의 남용과 broad-spectrum 항생제의 사용을 방지함.
- Method : Bacterial infection을 치료하기 위해 박테리오파지와 dCas9 protein을 이용함.
- Used bioparts :
- Vector map :