

HZAU IGEM Meeting Record No.1

5/18

Attendants: Le Xiong, Jian Wan, Wei Wu, Yunchuan Li, Shaowei Zhang, Ping Hong, Jing Chen, Liu Tian, Linfeng Ding, Xianlin Zhou, Tao Bai, Mian Yang, Zhiwei Zhou, Bing Chen, Xudong Luo, Xin Tan, Li Zhang, Jing Zhou, Chang Liu, Pei Jing Zhang, Mengya Zhao, Leitong Nie, Jian Yi, Yun Gao, Luchang Ming, Peng Yang

1. Teamers' summary

(1).Jing Chen

① The team of Fudan University made a Christmas tree by used Fluorescent protein gene;

② Whether or not there is nitrate → → different promoter → → different transcription process → → show different colors;

Idea: We can use one kind of bacteria to detect kinds of substances in soil.

(2).Wei Wu

① Golden brick extension ~ ~ ~ ~ golden gate cloning

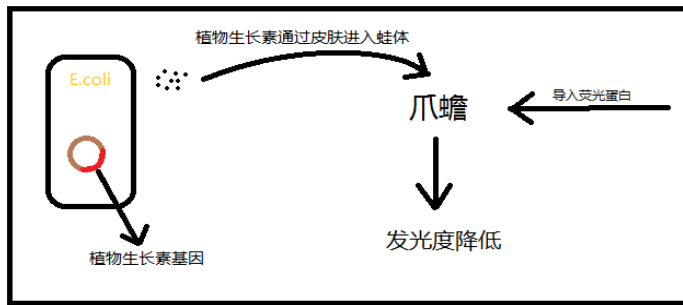
Idea: Logic gate, logic biology module

② Xenopus:

Eukaryotic → → Plasmids can not replicate

→ → Construct plasmids

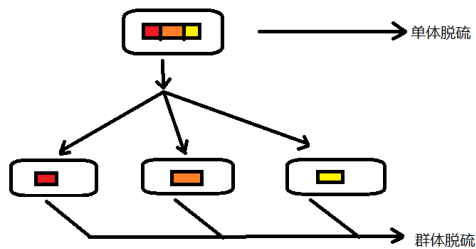
→ → put plasmids into Xenopus cells



(3).Le Xiong

- ①Solve maths problems by using bio-computer
- ②Detect the heavy metal pollution
- ③the effect of group——basal innovation

Complex metabolic pathways can be divided into group work.



The mutualistic symbiosis of auxotrophic bacteria is an example

(4).Liu Tian

DNA→→linearity→→clothes

Idea:we can use optical properties of DNA to make Invisibility cloak

(5).Yunchuan Li

① Bacteria attach to the roots of plants and help plant absorb inorganic matter.

Idea: Suicide System — — — — holin — — — — znti-holin — — — —

Use the low probability of gene parallel transfer

② Detect BPA in feeder

③ Gram-negative bacteria

... HALF ... glycoprotein ... cleavage ... membrane gets thinner ...

moderate wavelength ... color change

Idea: make membranes to test Gram-negative bacteria

④ Detection of mercury ion concentration

..... Biological Switches

..... Design concentration gradient

(6). Shaowei Zhang

① Logic gate

Accumulation of problems → → To a concentration in a certain time can be expressed

② E. coli ... Nitrate ... GFP → → detect soil fertility

③ deal with the oil pollution problem.

④ Bio wall → → to improve the reaction rate

(7). Jian Wan

① Use bacteria to solidify the weathered bed in Martian

② Biofactory

③Biological Zener diode

(8).Ping Hong

①The terminator in colon cancer→→find the position of cancer and then
kill it

②Microbial fuel cell

③Allow drosophilas to express the relevant gene to cure MACT
lymphoma or leukemia

④to rebuild probiotics to fight against obesity

⑤Korea-U-seoul - Rice Keeper