A Better Observation And Tracking

Fluorescent Protein Marker

H4Z-HANGZHOU 2015
01 WHAT IS AUTOPHAGY?
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- A biological phenomenon

1. A biological process
   - catches denaturing organelles
   - fusing with lysosome

- Work like a waste treatment plant
• WHAT IS AUTOPHAGY?

- A biological phenomenon

- Work like a waste treatment plant
02 HOW IT BENEFITS OUR BODY?
• HOW IT BENEFITS OUR BODY?

- Defend our bodies from disease
- Keeping cell steady
- Anti-aging
- Cleaning out aging cell
- Rebuilding the cytoplasm
- The potential impact to treat cancer
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• Autophagosomes (AVs)
• pIREs2-GFP-LC3
• pSB1C3
DYED AVs

• Our expectation
• Cell RPE1

From Sun, Yi’s Lab
• **HOW WE DID IT?**

  - **Plasmid Preparation**
  - **Restriction Enzyme Digestion**
  - **Ligation**
  - **Electrophoresis and Sequencing**

  - **Problems with shipped plasmid**
  - **pIREs2-GFP-LC3 provided by ZJU**
  - **Transformation into competent E.coli**
    - A. Transform pIREs2-GFP-LC3 into competent E.coli cell
    - B. Plasmid prep of pIREs2-GFP-LC3 (401.1 ng/ul)

  - From Sun, Yi’s Lab

  - **Competent/E. coli cell**
    - (401.1 ng/ul)

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HUMAN PRACTICE

1. Environment impact
2. Safety
3. Public education
The students accept GM food in a much larger extent than that in general public.
• SOURCES

<table>
<thead>
<tr>
<th>Media</th>
<th>Rumors</th>
<th>School Education</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>General public</td>
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</tbody>
</table>

Students - School
General Public - Rumors
The lack of excellent education → Rumors → Misunderstanding
Ancient Sense → Do not accept new things
Our team was composed of 15 high school students and two instructors, who were active and creative. Everything is brand new for us and full of challenge.
• GROUPS

EXPERIMENT

HUMAN PRACTICE

ART
23th DEC.  27th JAN.  5th MAY.  13th APR.  17th MAY.  12th JUN.

PCR Operation Skills Training and Preparation for Experiment
FROM JUNE. 24th AUG.

Training Every Single Two weeks and Lab Work

Final Stage of Our Experiment
4. **Experiment**
Helped us do the difficult cell experiment

3. **Observation**
Helped us to observe the fluorescent protein.

2. **Knowledge**
Frequent academic communication and experimental guidance.

1. **Website**
Guided us how to create a web page.
• **COLLABORATION**

- Zhejiang University
- Tianjin University
- NEFU_China
- Korea_U_Seoul
- The Paris Bettencourt Team
- The IGEM team Nankai
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- Sun Yi Lab
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- Zhejiang University
- Tianjin University
- The Paris Bettencourt Team
- YAKANGBO company
- NEFU_China
- Korea_U_Seoul
- The IGEM team Nankai
THANKS FOR WATCHING