CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY

Name(s)

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Project Number

33605

Project Title

Engineering Pink Salt

Abstract

Objectives/Goals

Create an open Halobacteria plasmid with do-it-yourself (DIY) methods

Methods/Materials

Materials---
Strains-
E. coli K12 ER2267, Halobacteria NRC-1

Plasmids-
pGreen, pBeloBac11, pUC19, pUC57 + insert,

Chemicals / media
DMSO, LB agar, Agarose, ethidium bromide, Bromophenol Blue/Xylene Cyanol Gel Loading Buffer, Distilled water, Epsom Salt, PEG 3350 (miralax), LB broth, Halobacteria broth, Halobacteria agar, Ampicillin, chloramphenicol, CaCl,
Gycerol,

Tools
Electrophoresis box, Transilluminator, Power supply, loops, Bunsen burner, pipettes, water bath, centrifuge, PCR machine, Vortex, refrigerator, freezer,
glasses,

Expendables
Inoculating loops (plastic), petri dishes, PCR tubes, Centrifuge tubes, Culture tubes, gloves, masks,

Results

All polymerase reactions were verified by electrophoresis. The projects DNA could not be because of minimal amounts (gibson assembly). No E coli colonies observed. Halobacteria colonies were observed.

Conclusions/Discussion

All of the Polymerase chain reactions worked. The actual DNA could not be verified because of minimal amount of it.

However, a streak colony was observed on one of the transformed plates. Since it was small, and salt

Summary Statement

Creating a shuttle vector for genetically modifying the thrid domain of life, Archaea.

Help Received

Went to LA biohackers for help with ethidium bromide, verification of PCR. Used my own electrophoresis equipment, used their transilluminator. Needed to go there for my fair's regulations. Everything else I did

Preliminary