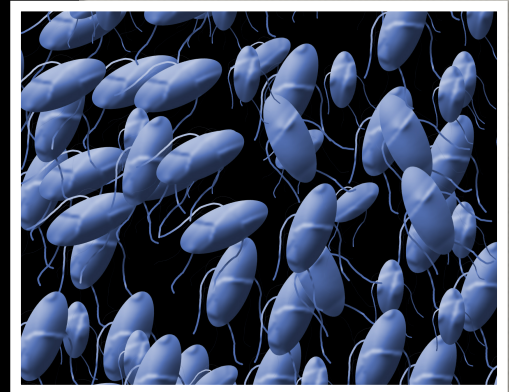
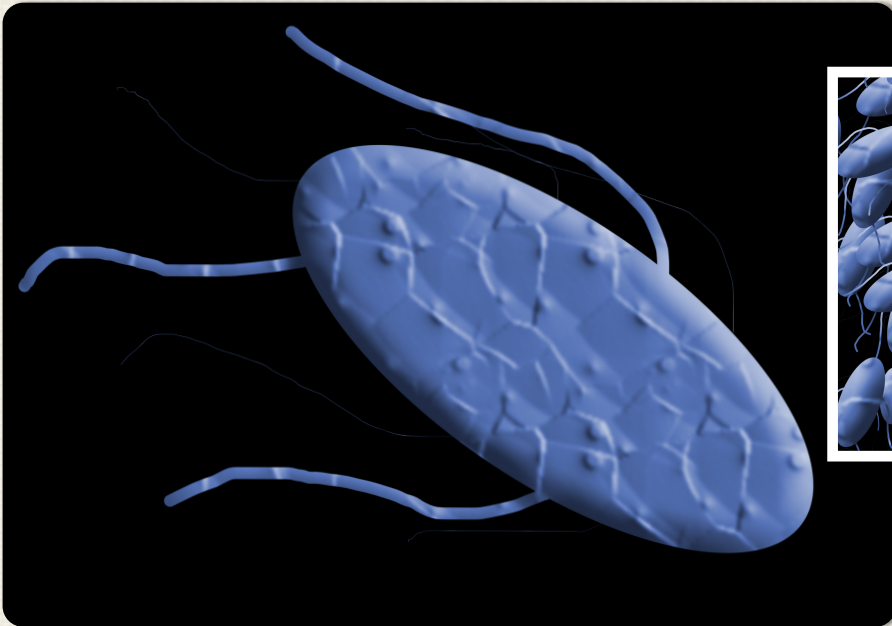


# IDEAS



## Hair growth bacteria.

### The essential vitamins

Vitamin A is vital because it prevents the drying and clogging of sebaceous glands, which produces sebum. Sebum is important in lubricating the hair follicles. A deficiency in vitamin A makes your scalp become dry and thick causing dandruff that could eventually lead to hair loss. Vitamins B6, B12 and folic acid are important in keeping the normal levels of hemoglobin in the blood. Hemoglobin is important because it supplies oxygen from the lungs to the different parts of the body. A

deficiency in these vitamins can lead to a decrease in repairing cells of the body. Vitamin C is important in maintaining collagen in the body. Collagen is essential in keeping your body tissues connected and tightly packed. A deficiency in vitamin C results to hair breakages and split ends. Biotin, another key ingredient, promotes cell growth, the production of fatty acids, metabolism of fats, and amino acids. MSM stands for [Methylsulfonylmethane](#). MSM is a naturally occurring sulfur found in many foods.

It naturally increases your hair growth phase. This allows your hair to reach grow longer than it otherwise would.

### Next

The next step would be to make a biobrick that would make it possible for a bacteria to secrete these imp vitamins.

And then this bacteria could be applied on the hair like oil and wait for the bacteria to start its action.

# Time & Weather

## ILLUSTRATION



### Time

#### Cromatophores:

Xanthophores

Erythrophores &

Melanophores

**Biobrick:** We will have to create a biobrick that is a receptor of time and will trigger of the above proteins to secrete and change color accordingly.

### Weather:

1. [BBa\\_K098998](#) clts coding region with rbs D: This is the temperature sensitive cl coding region from the PGW7 plasmid. It was taken from the plasmid via PCR, and a RBS was also added (BBa\_B0034).

2. [BBa\\_K259006](#) It responds to certain wavelengths of light to give out fluorescent light. This can be modified to increase or decrease the amount of light emitted with an increase in temperature which in turn would convey the temperature through the brightness of light.

**So imagine a watch that uses no battery as it is the bacteria that tells the time and temperature by emitting a range of colors.**

**This will be the future Biowatch that uses the non-convencional source of energy to run.**