

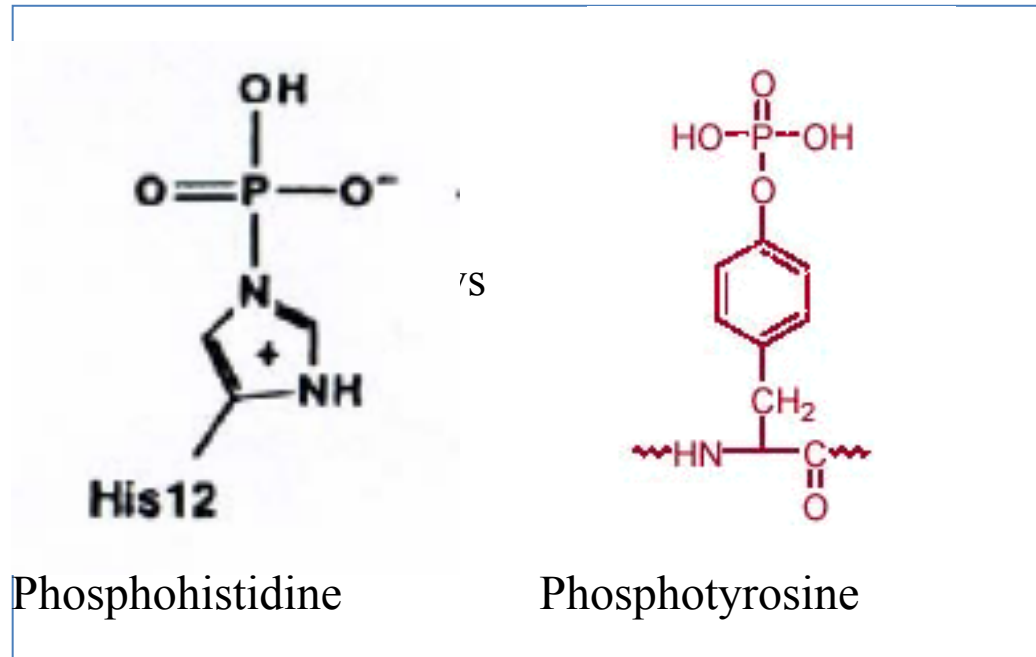
# System Engineering

## M2D2

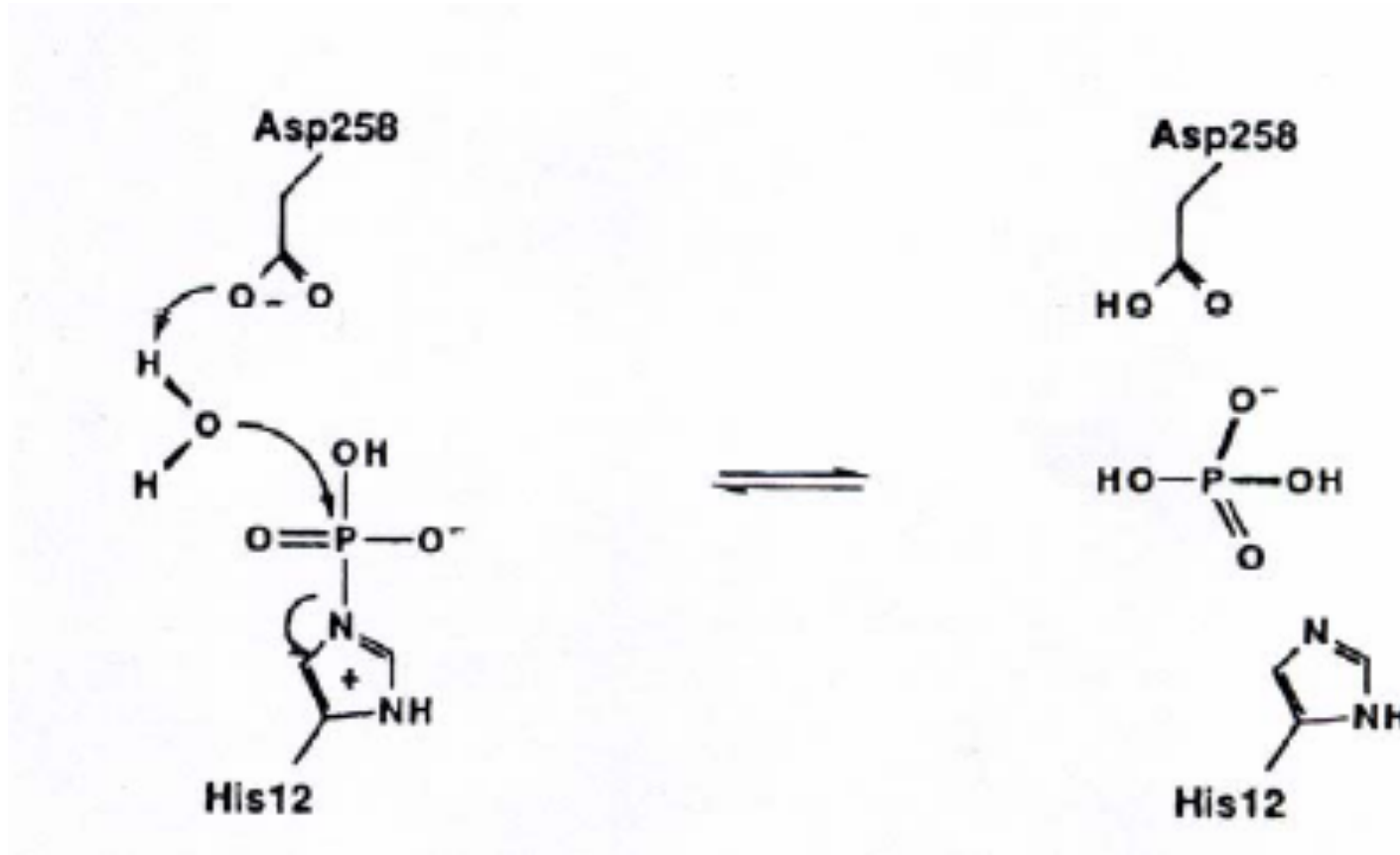
10.18.11

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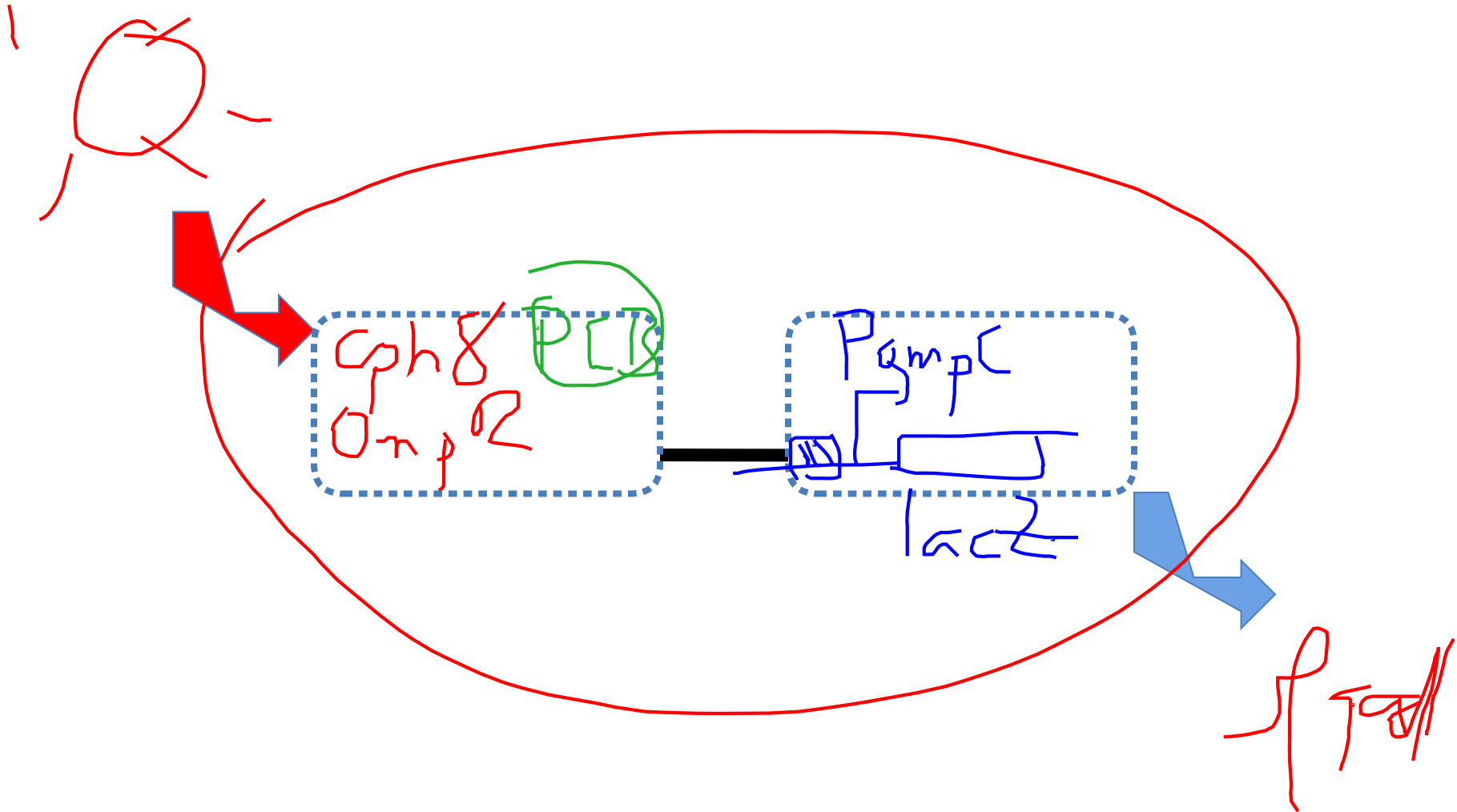
# Phosphorelay System



# Phosphorelay System



# Overview of bacterial photography system



# Measuring LacZ

$$1 \text{ Miller Unit} = 1000 * \frac{(Abs_{420} - (1.75 * Abs_{550}))}{(t * v * Abs_{600})}$$

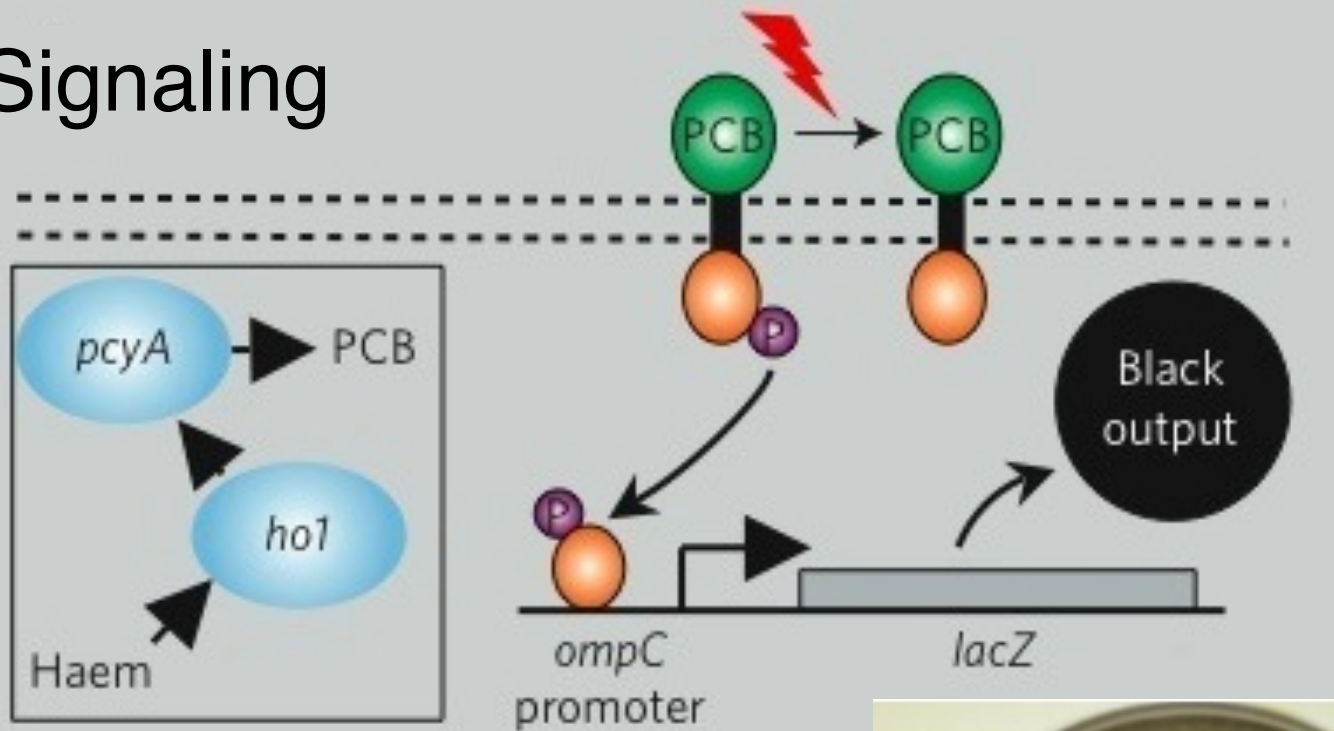
## Protocol

1. Measure concentration of cells  $OD_{600}$
2. Lyse cells  $SDS, CHCl_3$  : Vortex
3. Start Reactions  $ONPG$
4. Stop Reactions  $NaCO_3$
5. Spin
6. Measure yellow color and debris

$420$        $550$

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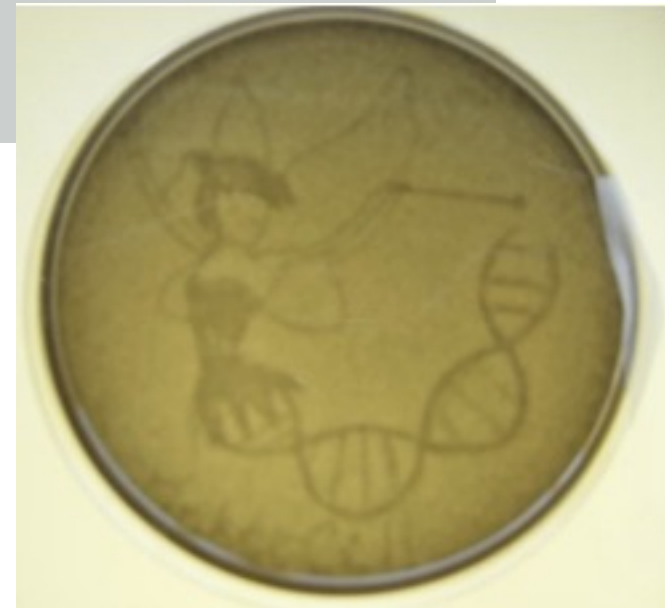
# Signaling

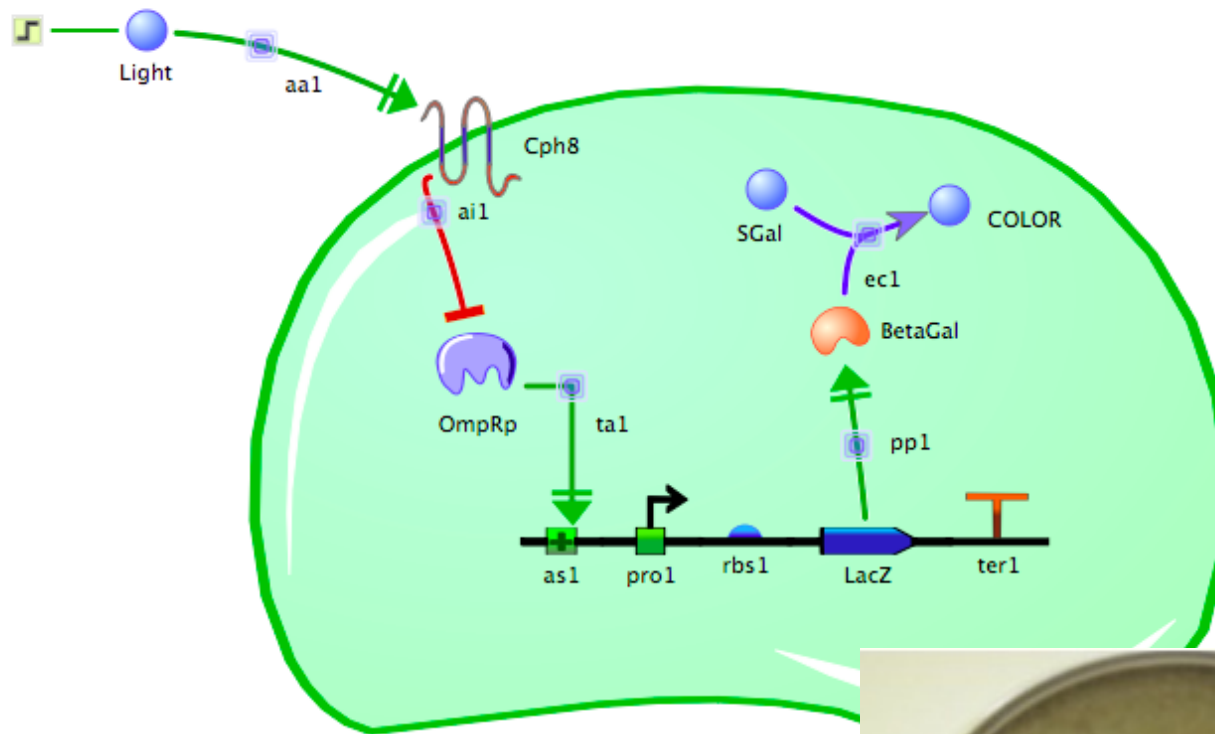


RXN 1: Autophosphorylation

RXN 2: Phosphotransferase

RXN 3: Phosphatase

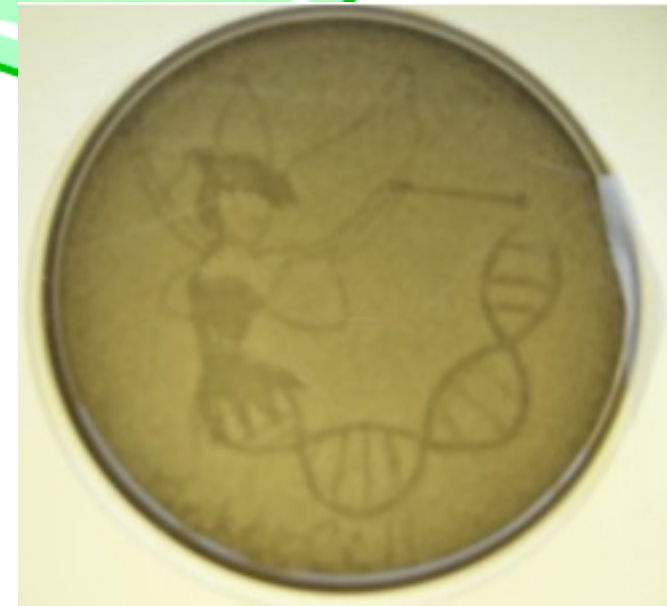




RXN 1: Autophosphorylation

RXN 2: Phosphotransferase

RXN 3: Phosphatase



This week in lab