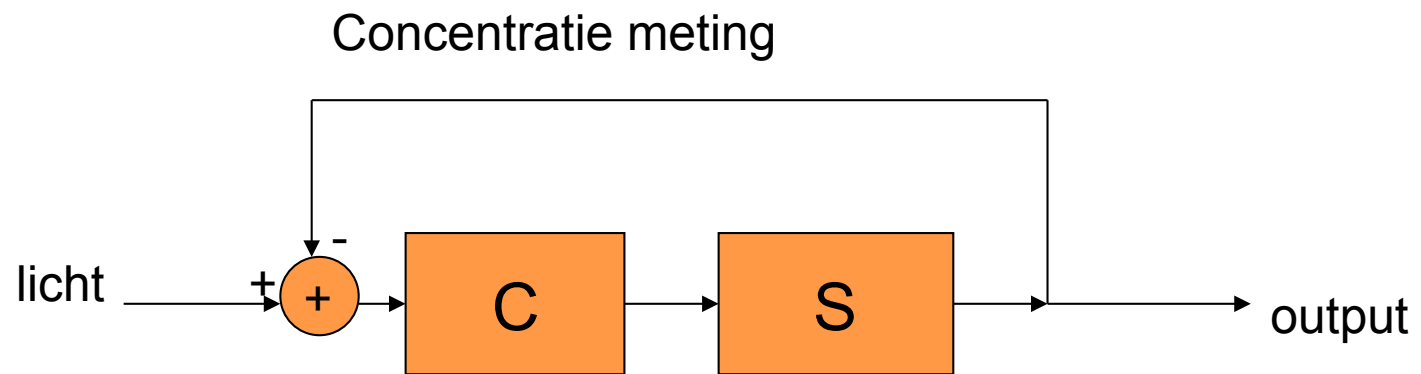
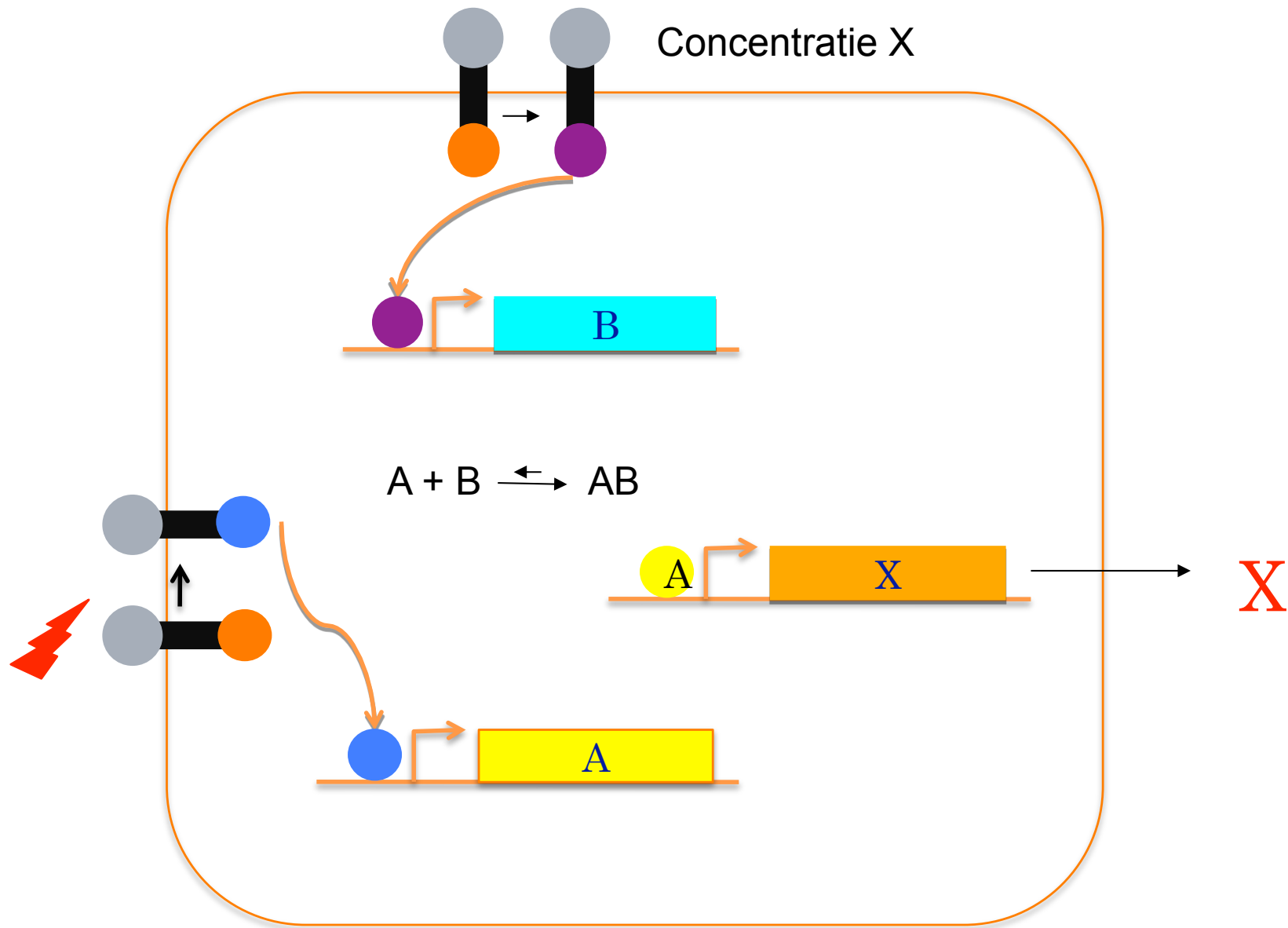




**REGEL-BACTERIE**  
**CONTROLLING THE UNKNOWN**  
iGEM 2009

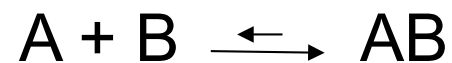
# REGELSYSTEEM





## A & B

- A (transcriptie factor)
  - Vanille synthese: promoter aanpassen. (zie volgende slide)
- B (repressie van de transcriptie factor)



$$[A^*] = [A] + [AB]$$

$$[B^*] = [B] + [AB]$$

$$[AB] = K[A][B]$$

$$[A] = [A^*] - [AB]$$

$$[A] = [A^*] - [B^*] + [B]$$

$$[A] = [A^*] - [B^*] + \underbrace{[AB]/K[A]}_{\rightarrow 0}$$

$\rightarrow 0$



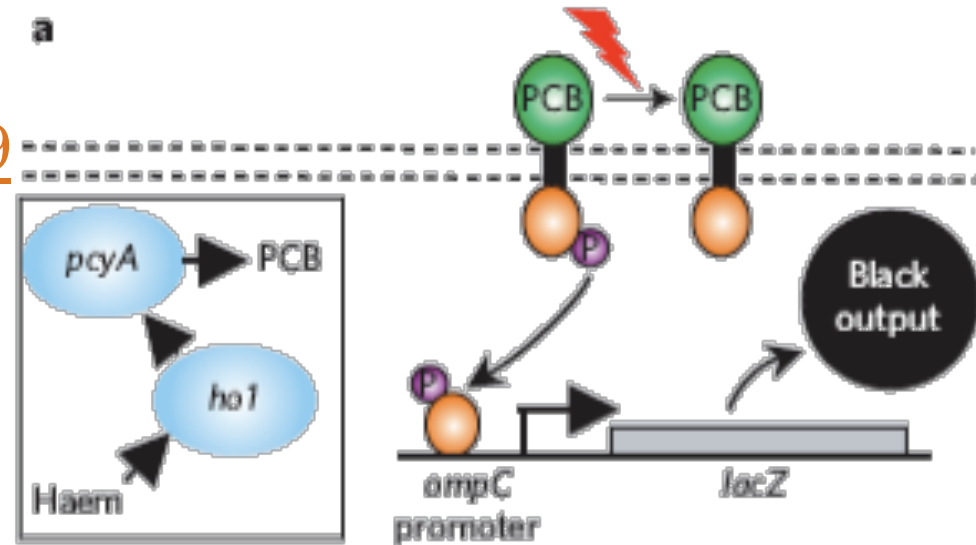
## IDEËËN VOOR 'X'

- Essentiele Amino-zuren/vitaminen voor vissen in aquarium
- Geurstoffen:
  - Vanillin: iGEM 2006 Valencia
    - Synthese: BBa\_I769103
    - Detector: BBa\_J58105
      - Probleem: zelfde intracellulair systeem als lichtsensoren
  - Wintergreen: BBa\_J45120 (iGEM 2006 MIT)
  - Banaan: BBa\_J45200 (iGEM 2006 MIT)



# LICHTSENSOREN

- Origineel DNA in huis <sup>a</sup>
- Biobrick: [BBa\\_M30109](#)



- YCGF: experimenteel

