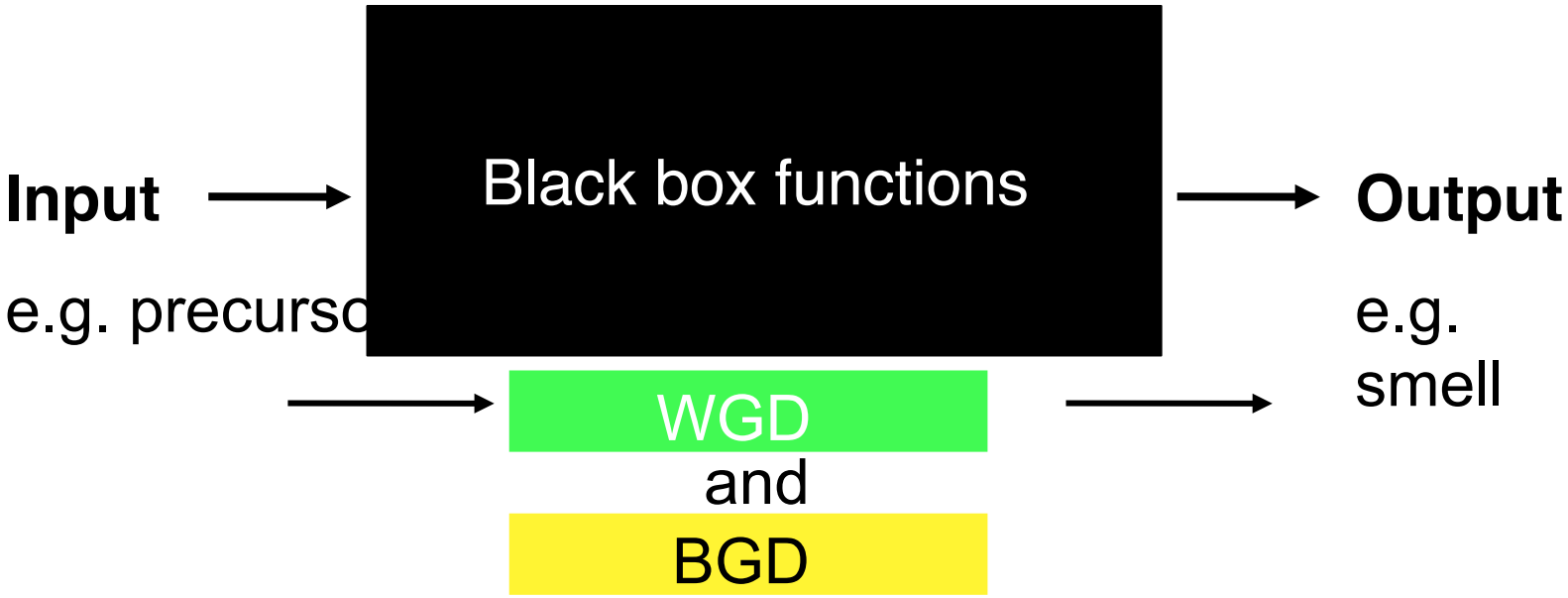
Eau d'coli

N Kuldell for 20.020

Spring 2009

System level description: initial planning

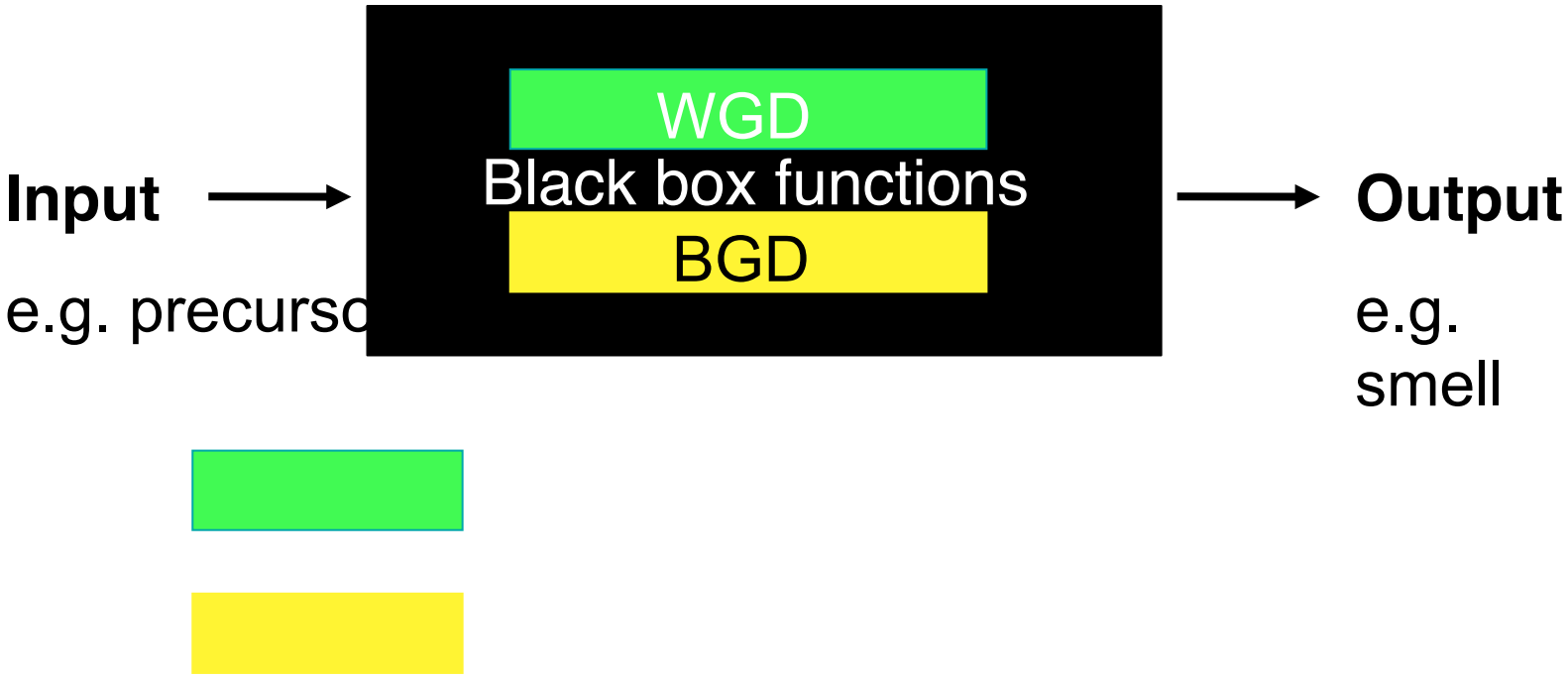


WGD: Wintergreen Generating Device
BGD: Banana Generating Device

System level description: scent production

WGD: Wintergreen Generating Device
BGD: Banana Generating Device

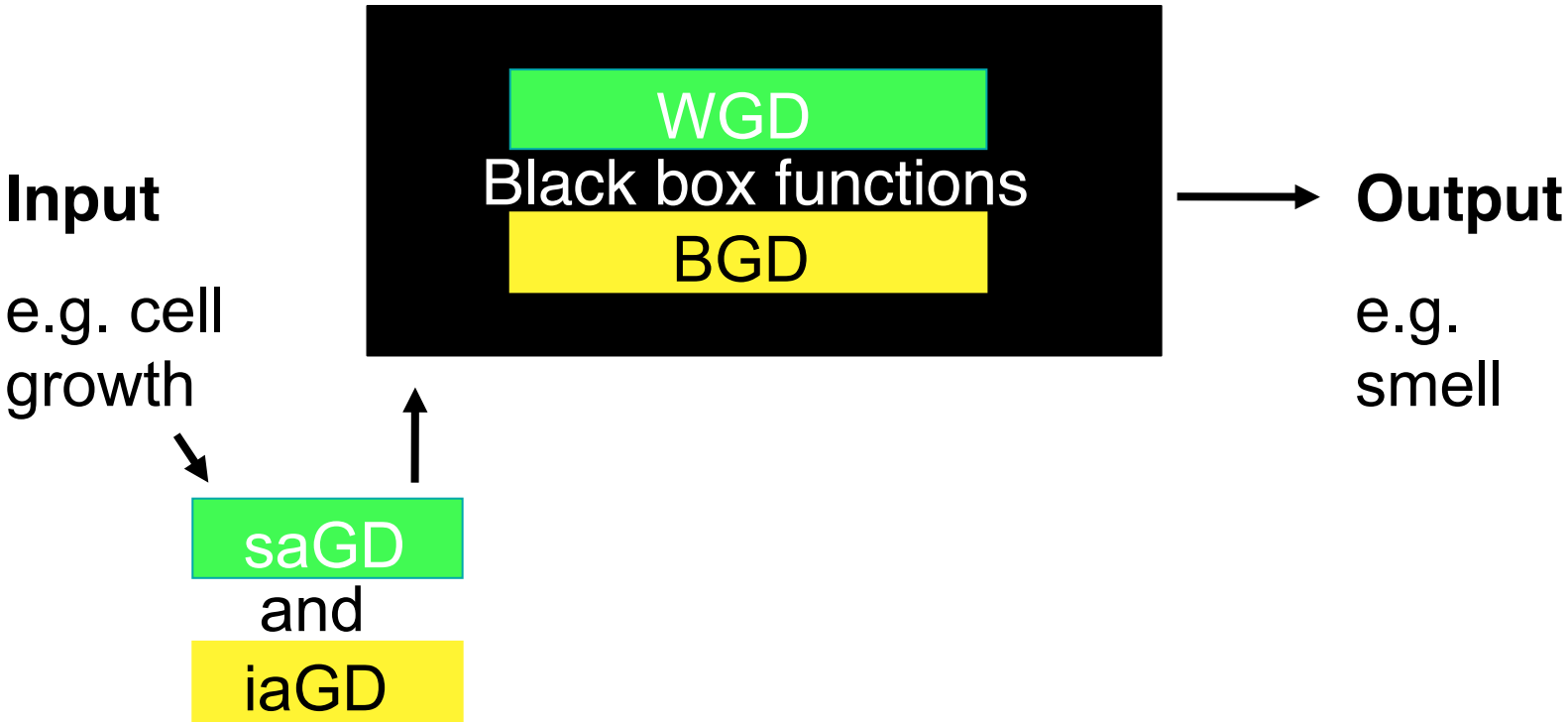
System level description: scent production



WGD: Wintergreen Generating Device

BGD: Banana Generating Device

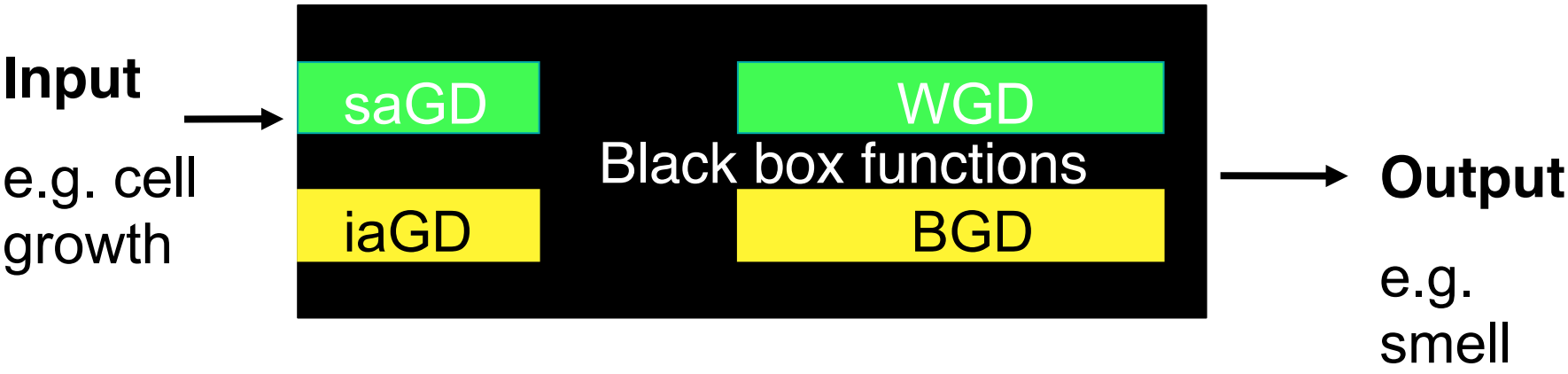
System level description: precursor production



WGD: Wintergreen Generating Device
BGD: Banana Generating Device

saGD: salicylic acid Gen Dev
iaGD: isoamyl alcohol Gen Dev

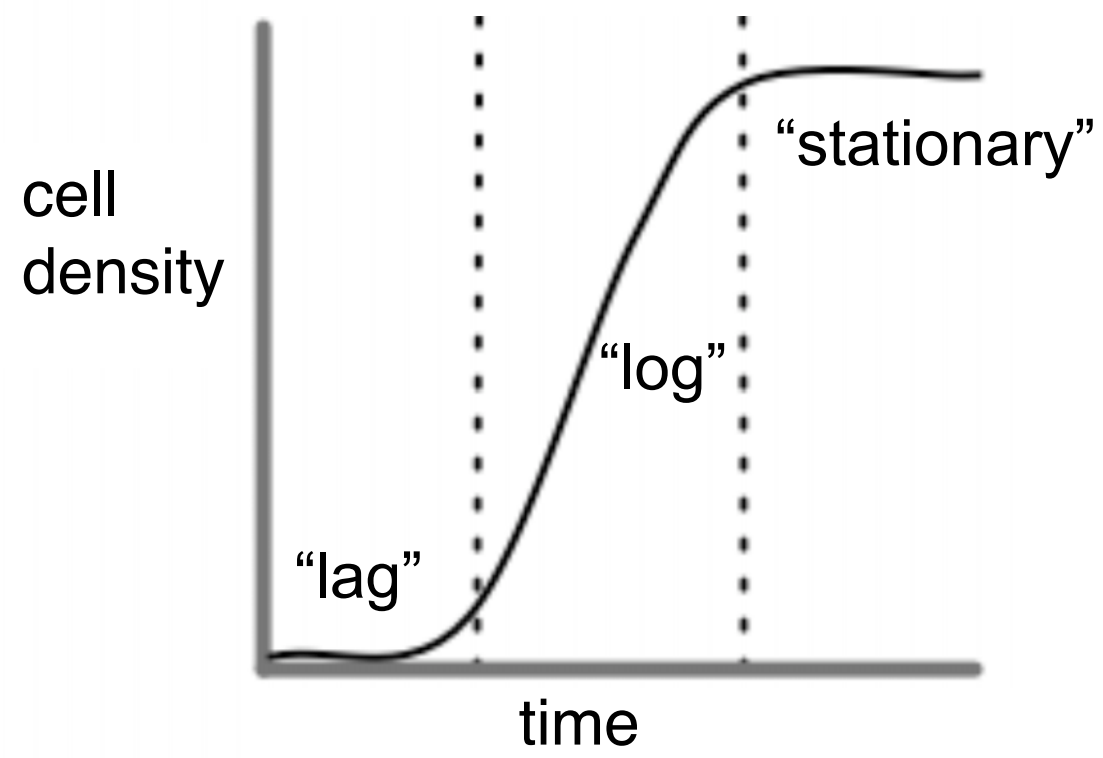
System level description: precursor production



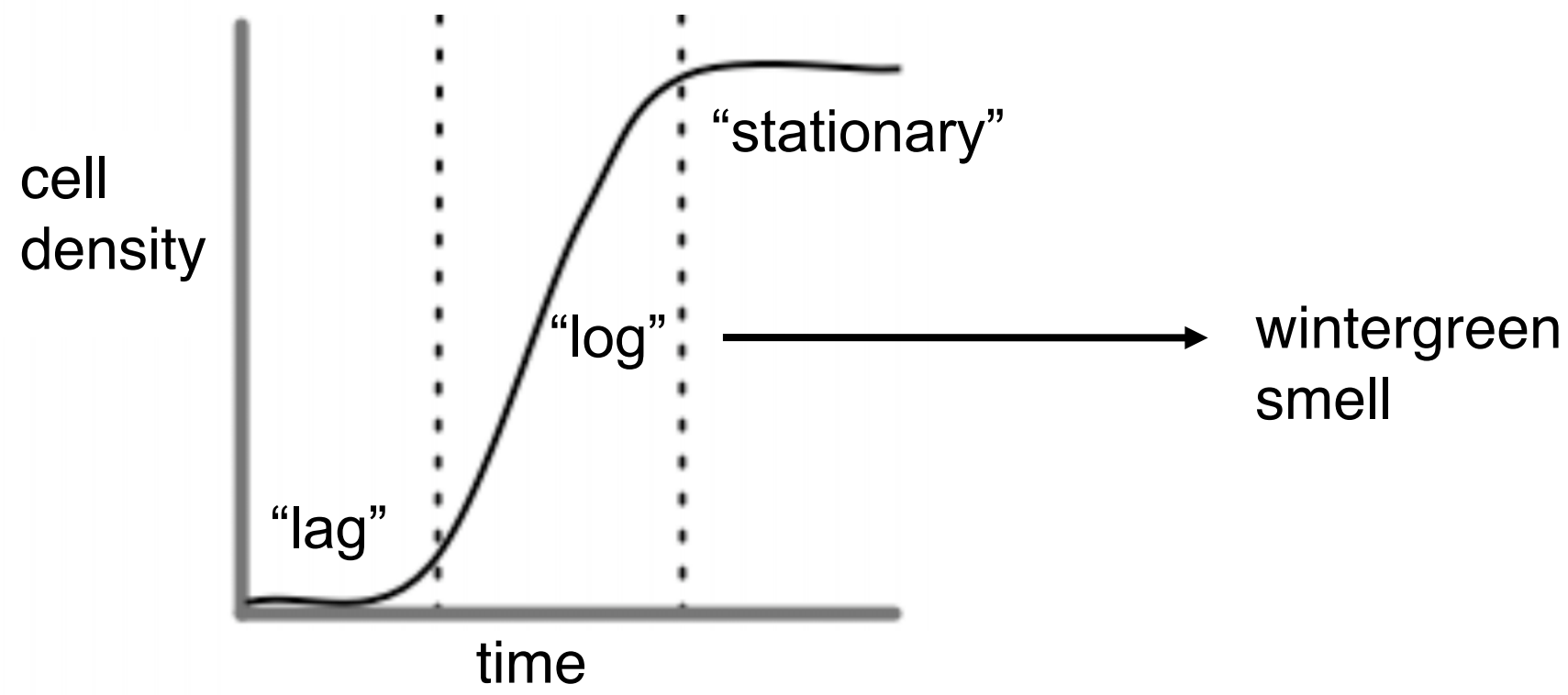
WGD: Wintergreen Generating Device
BGD: Banana Generating Device

saGD: salicylic acid Gen Dev
iaGD: isoamyl alcohol Gen Dev

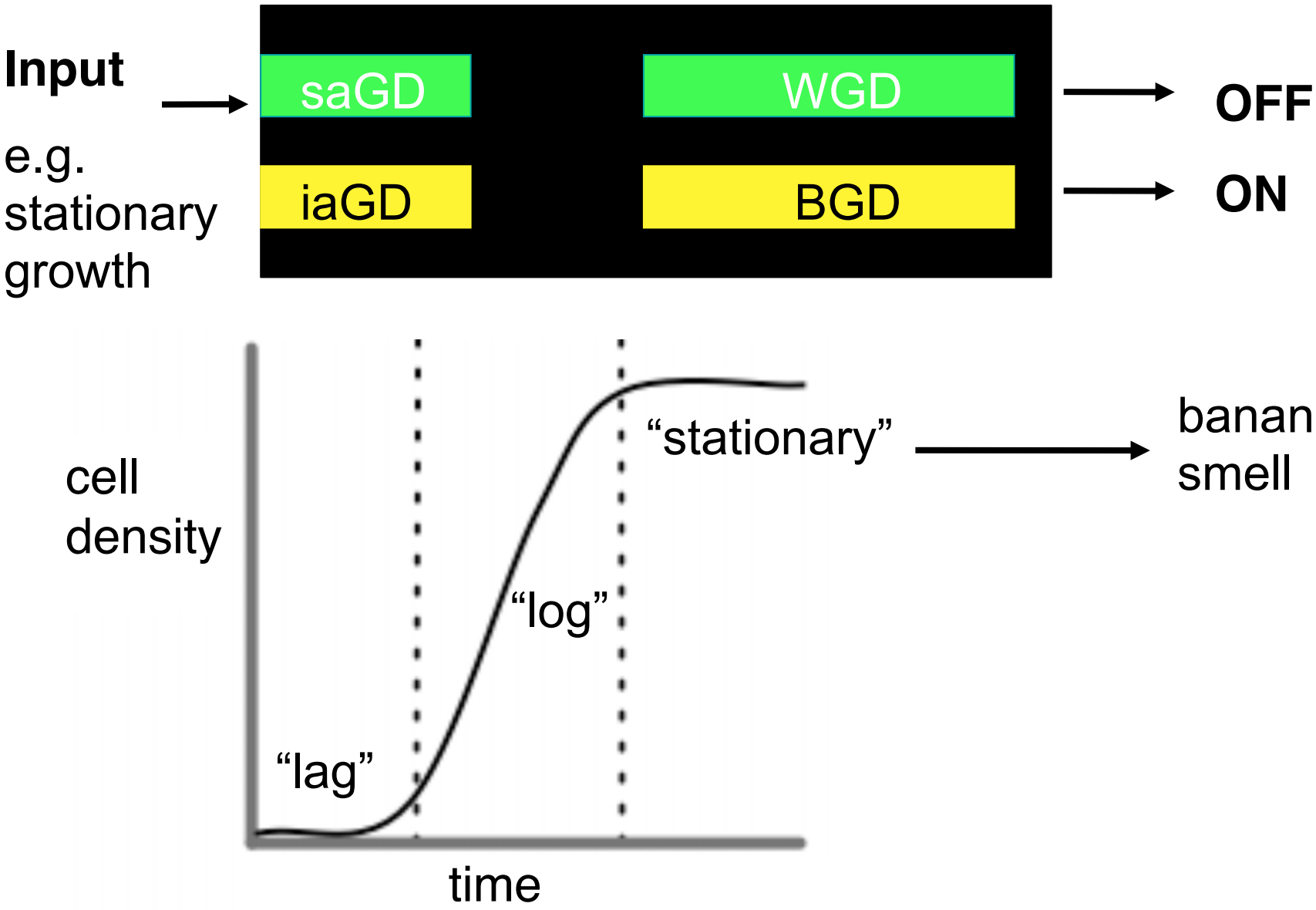
System level description: growth regulation



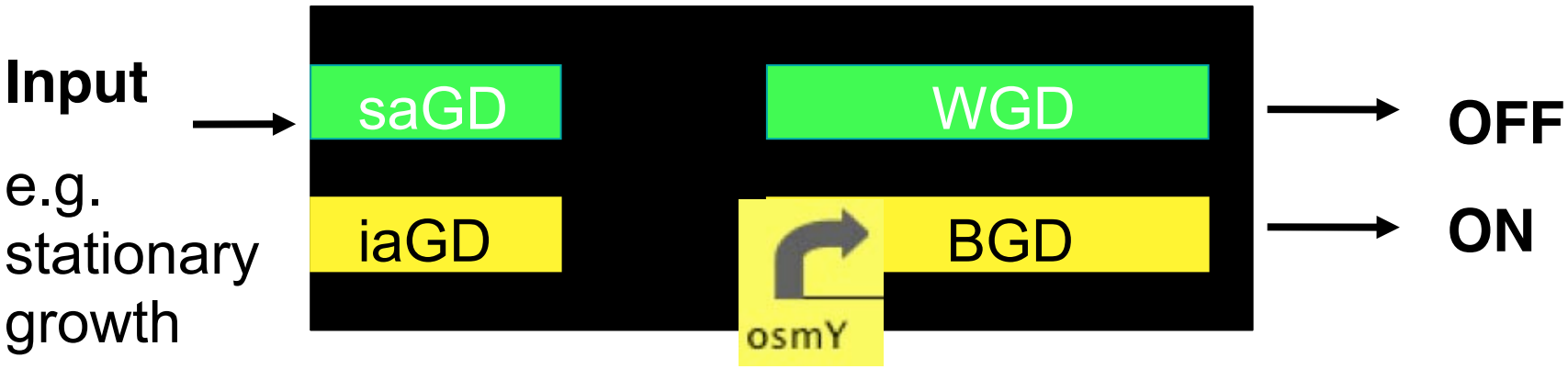
System level description: growth regulation



System level description: growth regulation

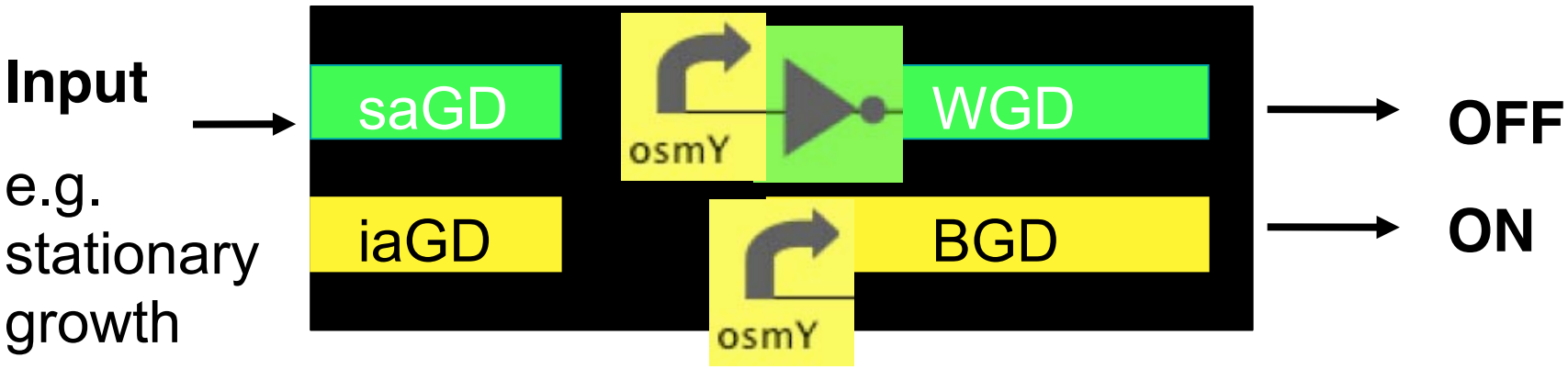


System level description: growth regulation



OsmY is a promoter that is only active during stationary phase

System level description: growth regulation

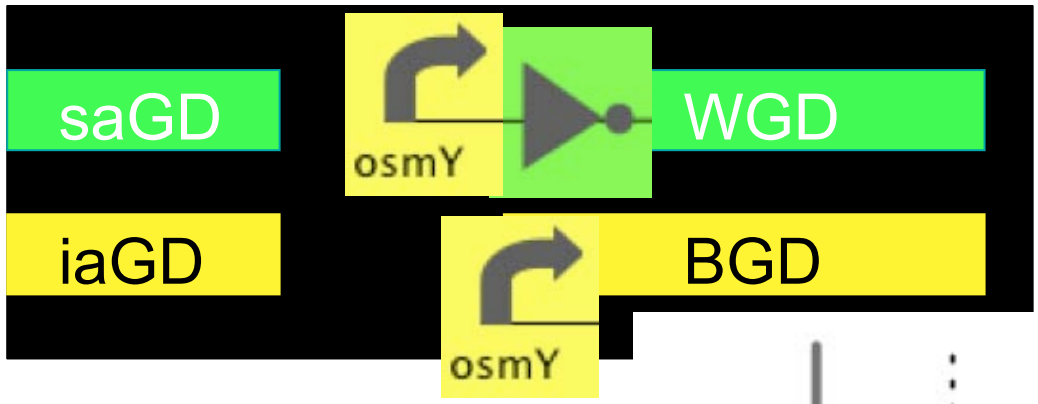


	Stationary phase	Log phase
OsmY	1	0
OsmY+ inverter	0	1

System level description: growth regulation

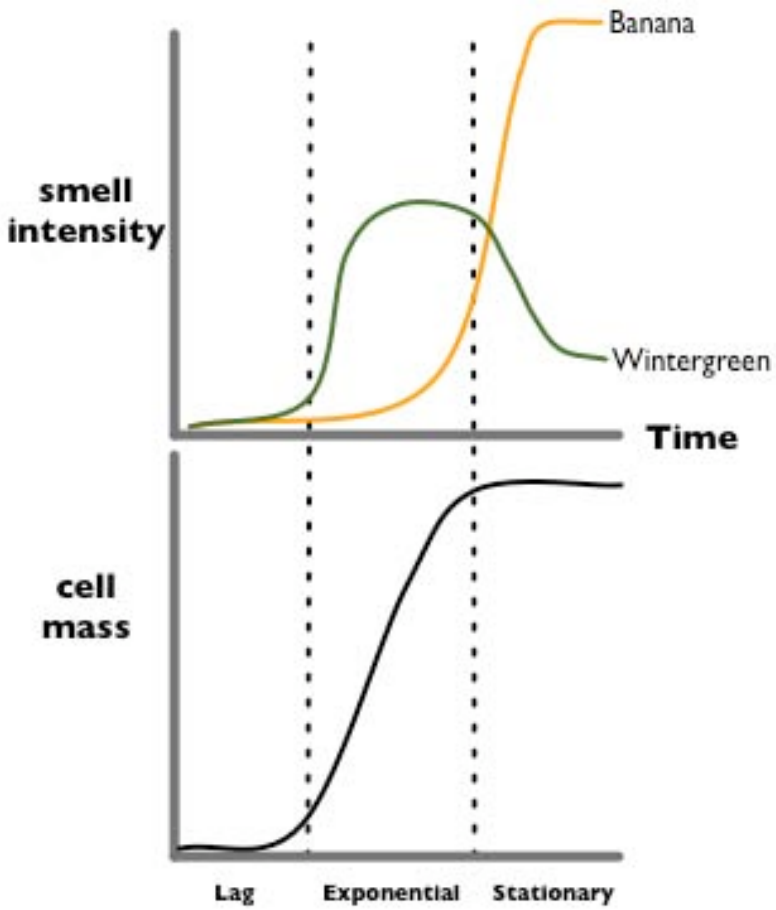
Input

e.g.
stationary
growth

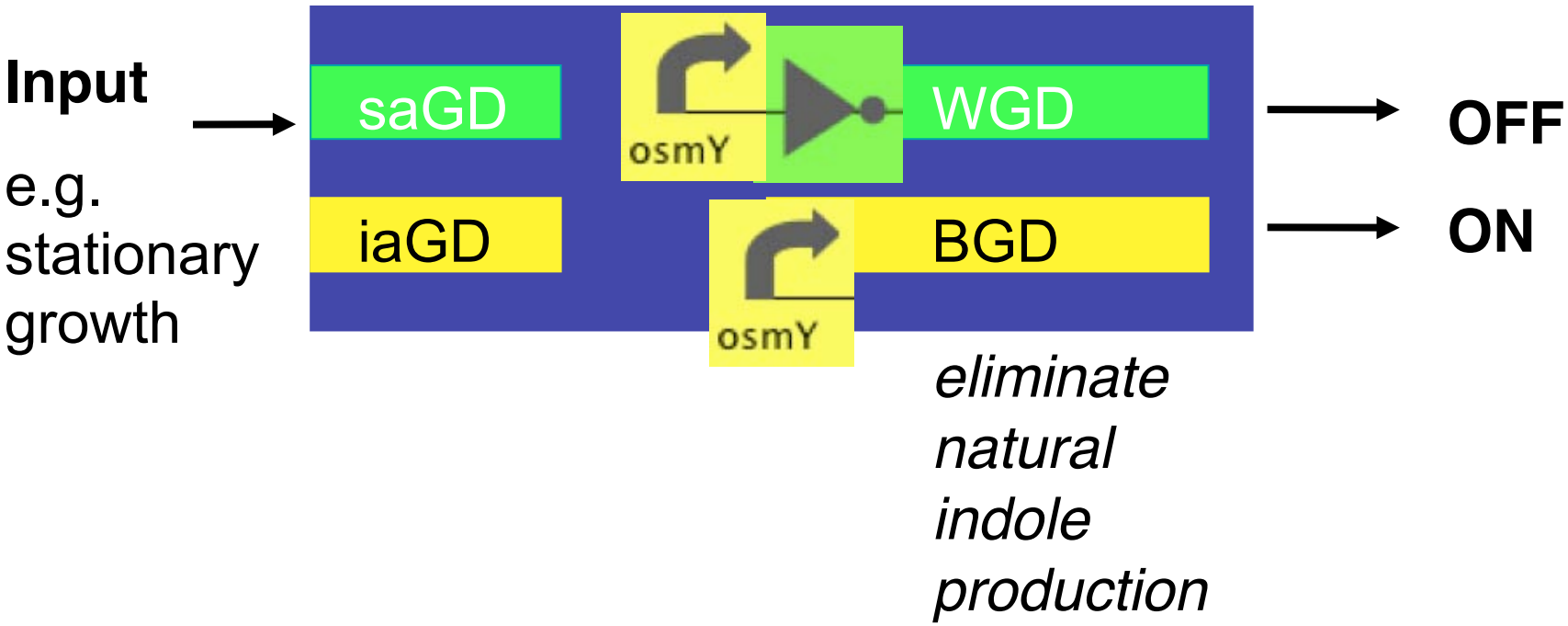


OFF

ON

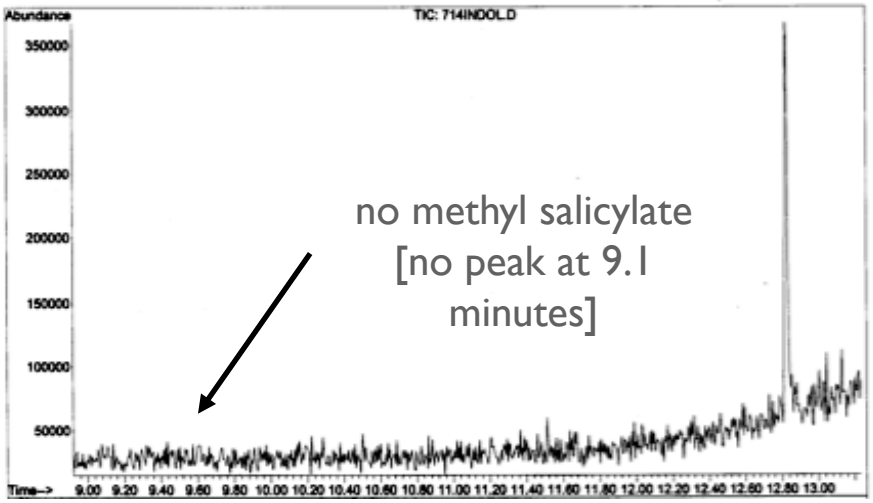


System level description: Chassis modification

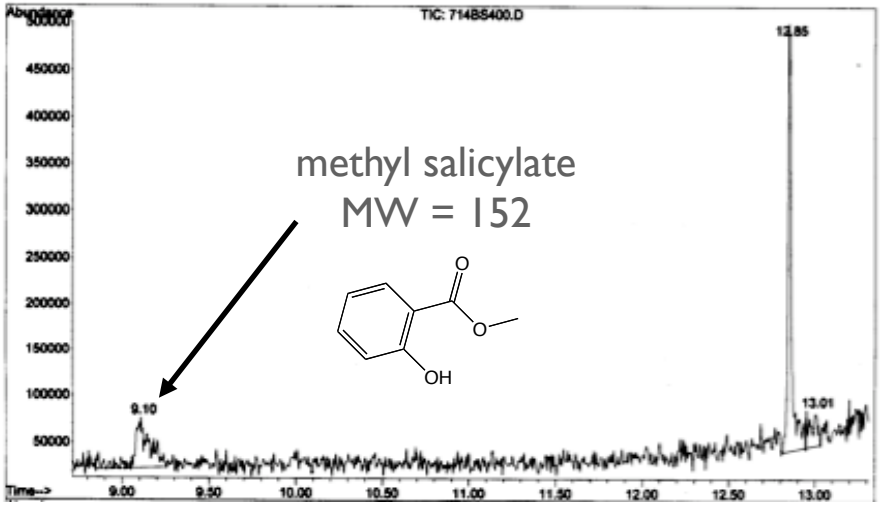


System level test: gas chromatographs

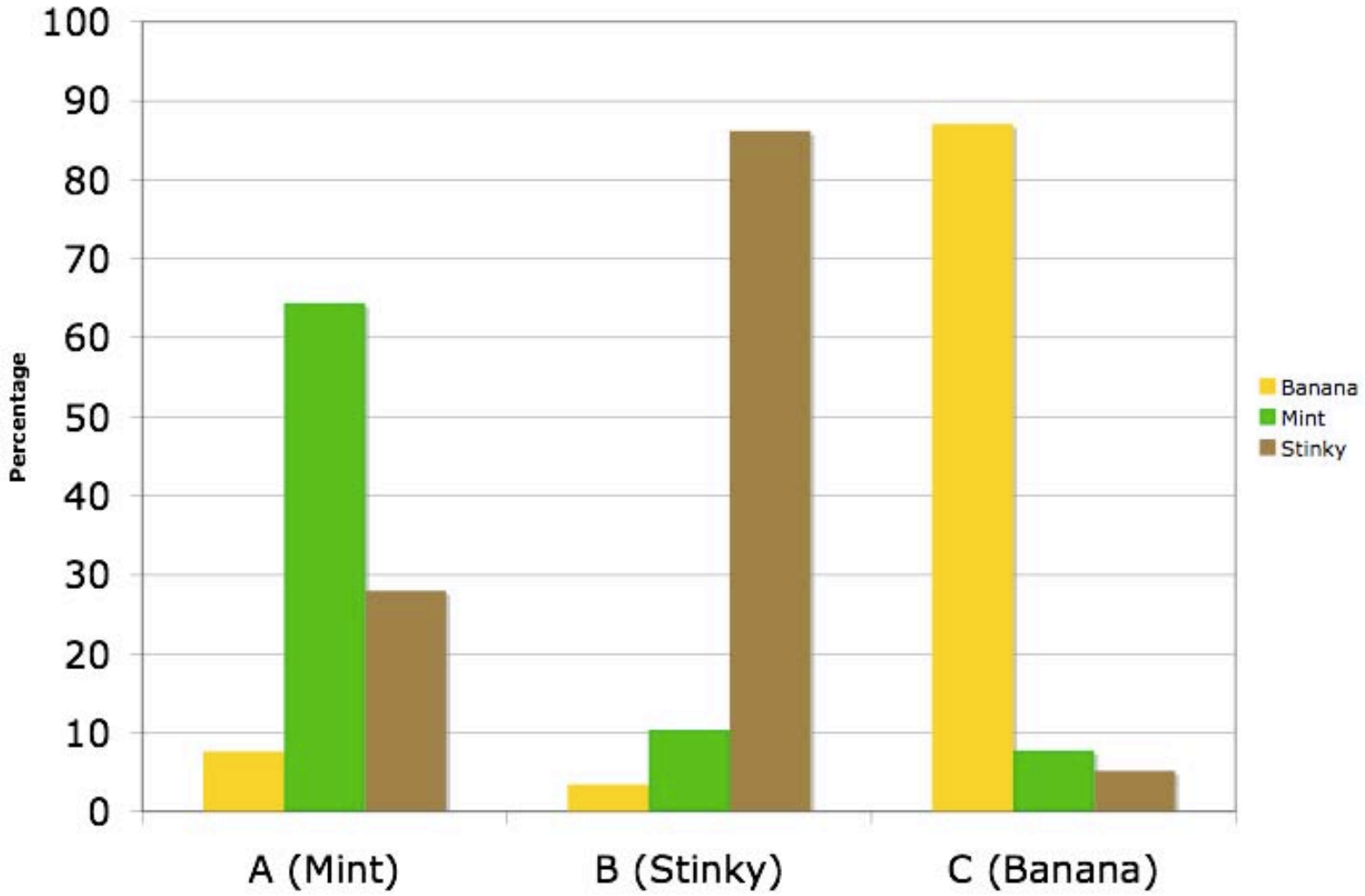
E. coli



E. coli + precursor (SA) + WGD



System level test: uninformed experimental subjects??



20.020 Introduction to Biological Engineering Design

Spring 2009