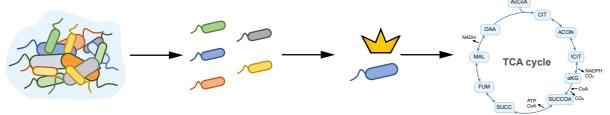
Acquisition of strains — GEMs application



Microbial community Core functional strains Oceanimonas sp. GK1 Metabolic prediction

GEMs Construction of *i***ZJ929**

Automatic tools



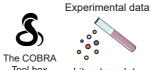
Databases



BiGG Models



Manual curation



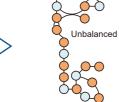
Tool box





Genomic sequence

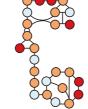




Dead end metabolities



Draft model



High-quality model

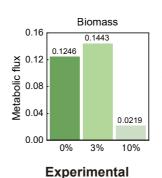
Salinity Driven Osmoregulatory Reprogramming

G3F

TCA cycle

NADPH αKG CO₂

NADH 🗲 1,3BPG



constraint simulation

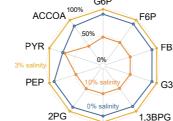
FBP

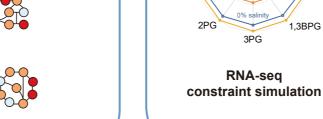
4PAPS

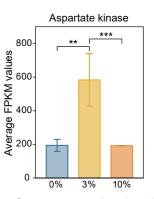
ASPSA

EĊT

pathway







Gene expression levels

Biomass

0% salinity: 0.1246 3% salinity: 0.1443 ★ 10% salinity: 0.0219

Ectoine

salinity: 0.57 3% salinity: 0.66 ★ 10% salinity: 0.10