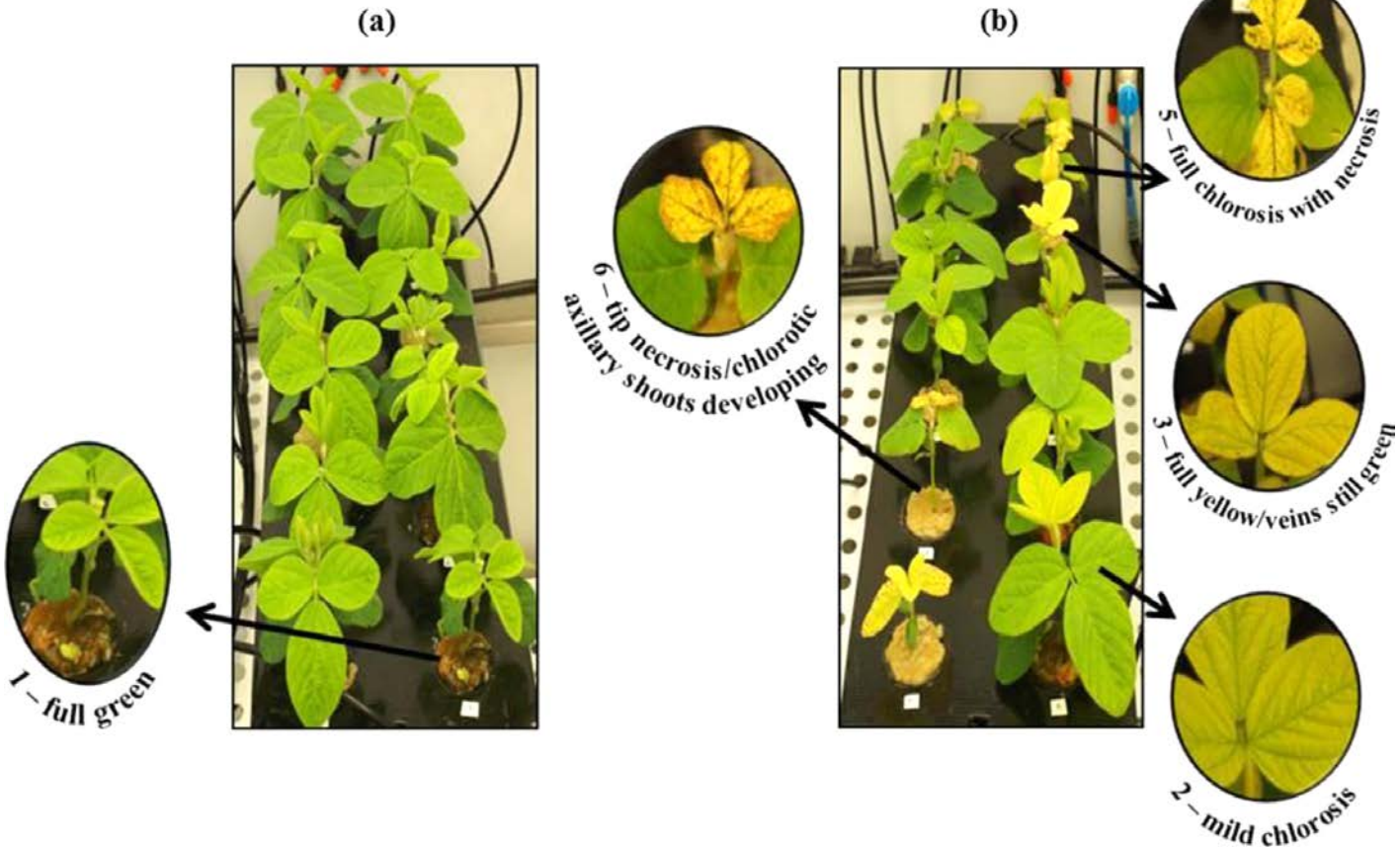

STRESS


(a)
(b)
1 – full green
6 – tip necrosis/chlorotic axillary shoots developing
5 – full chlorosis with necrosis
3 – full yellow/veins still green
2 – mild chlorosis

REPORT

Bacterial Community Variation in Human Body Habitats Across Space and Time

Elizabeth K. Costello[1], Christian L. Lauber[2], Micah Hamady[3], Noah Fierer[2,4], Jeffrey I. Gordon[5], Rob Knight[1,6,*]

+ Author Affiliations

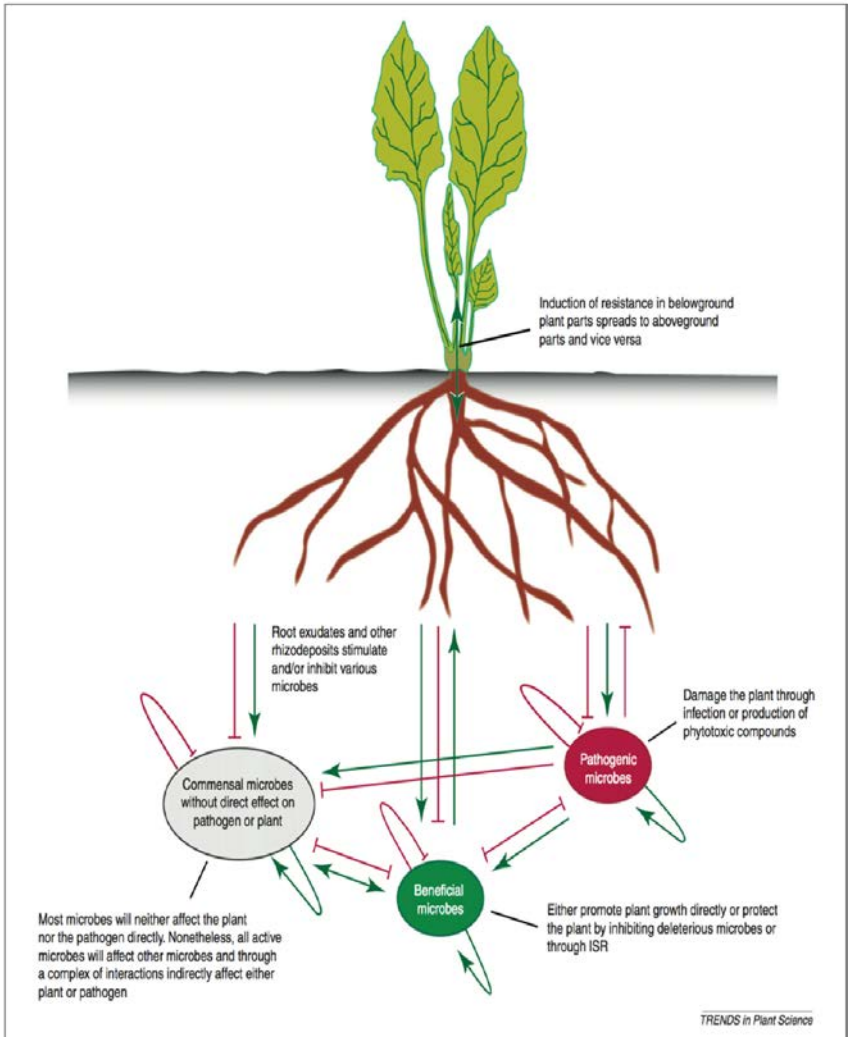
↵*To whom correspondence should be addressed. E-mail: rob.knight@colorado.edu

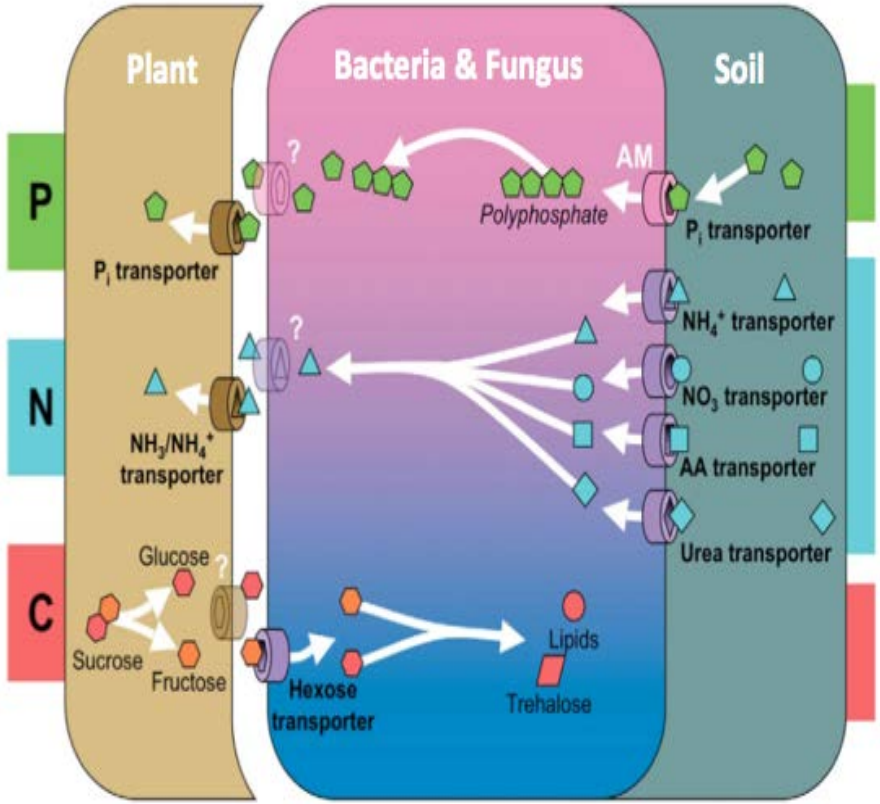
Science 18 Dec 2009:
Vol. 326, Issue 5960, pp. 1694-1697
DOI: 10.1126/science.1177486

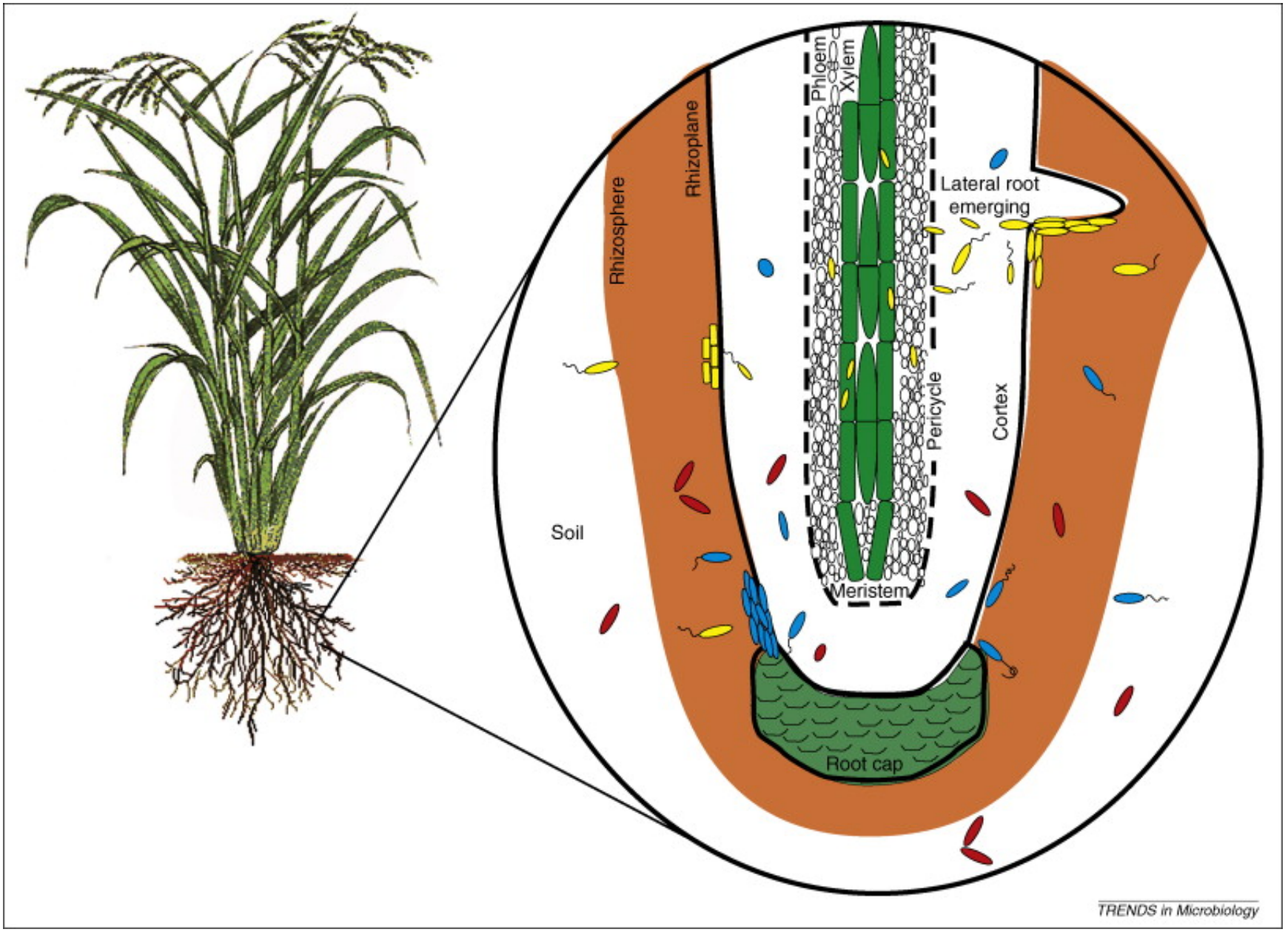

welcome to
GUT
POP: 100 TRILLION


Welcome to the Rhizosphere

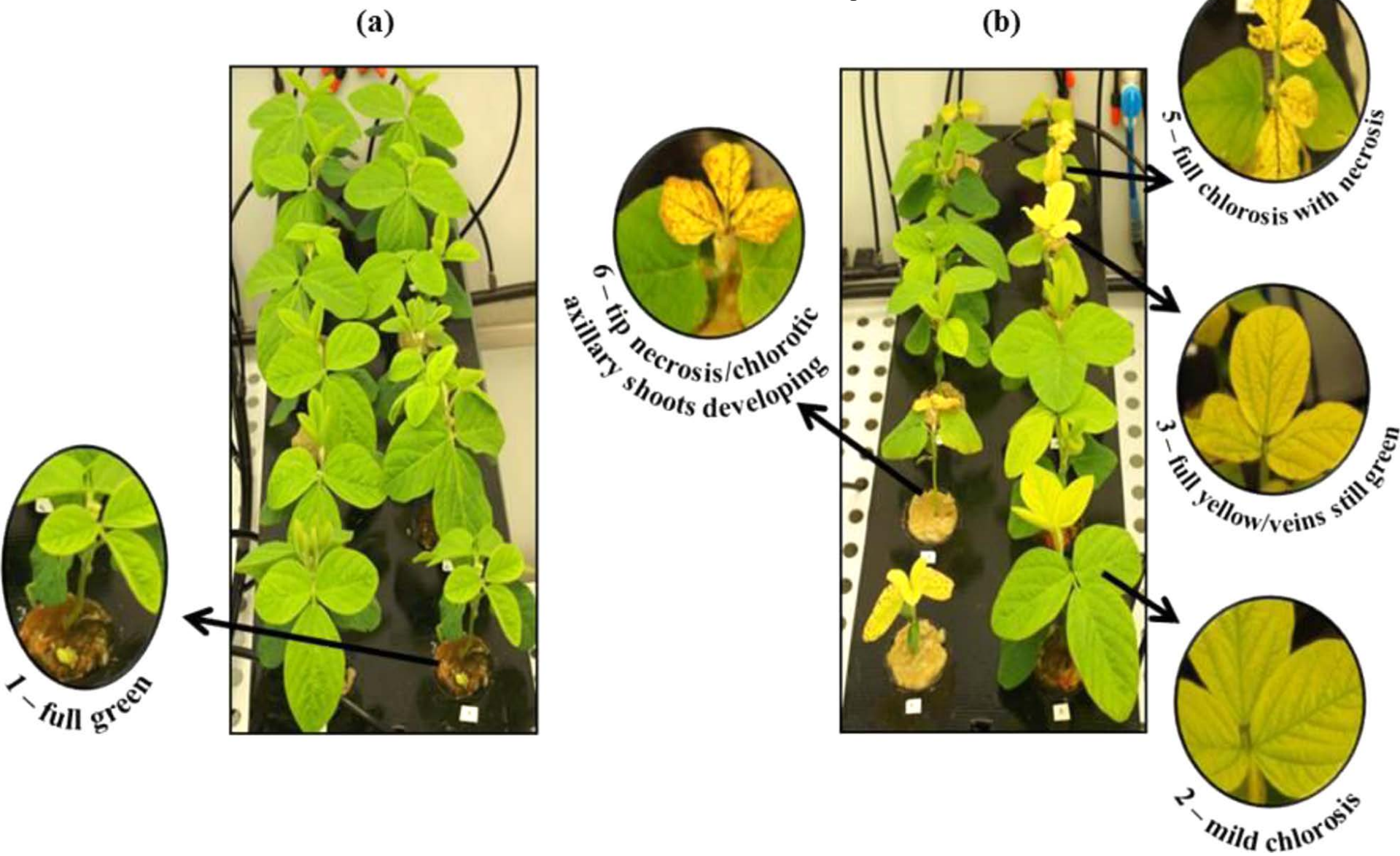
Plant Root Microbiome






Phloem
Xylem
Rhizoplane
Rhizosphere
Lateral root
emerging
Pericycle
Cortex
Soil
Meristem
Root cap
TRENDS in Microbiology

(Fe) Stress Response



Stress Response

Replete Conditions

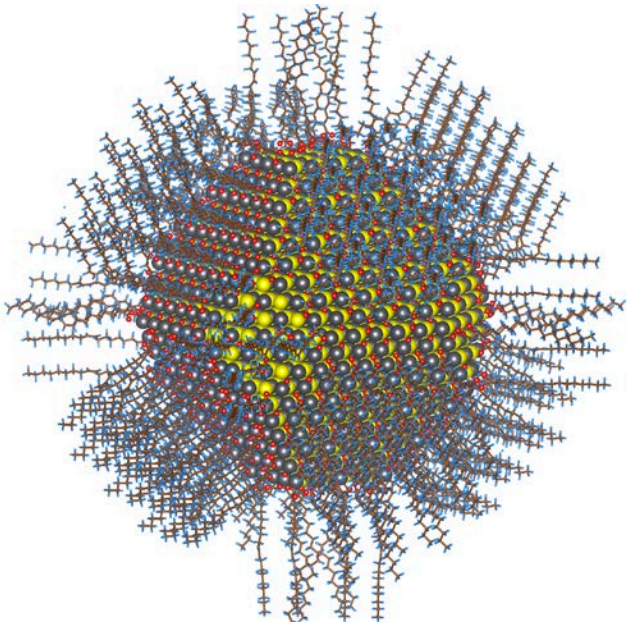
Deplete Conditions

How do cells respond?

Which pathways are involved in stress response?

Role for the root microbiome in stress response?


STRESS



DNA → Genome

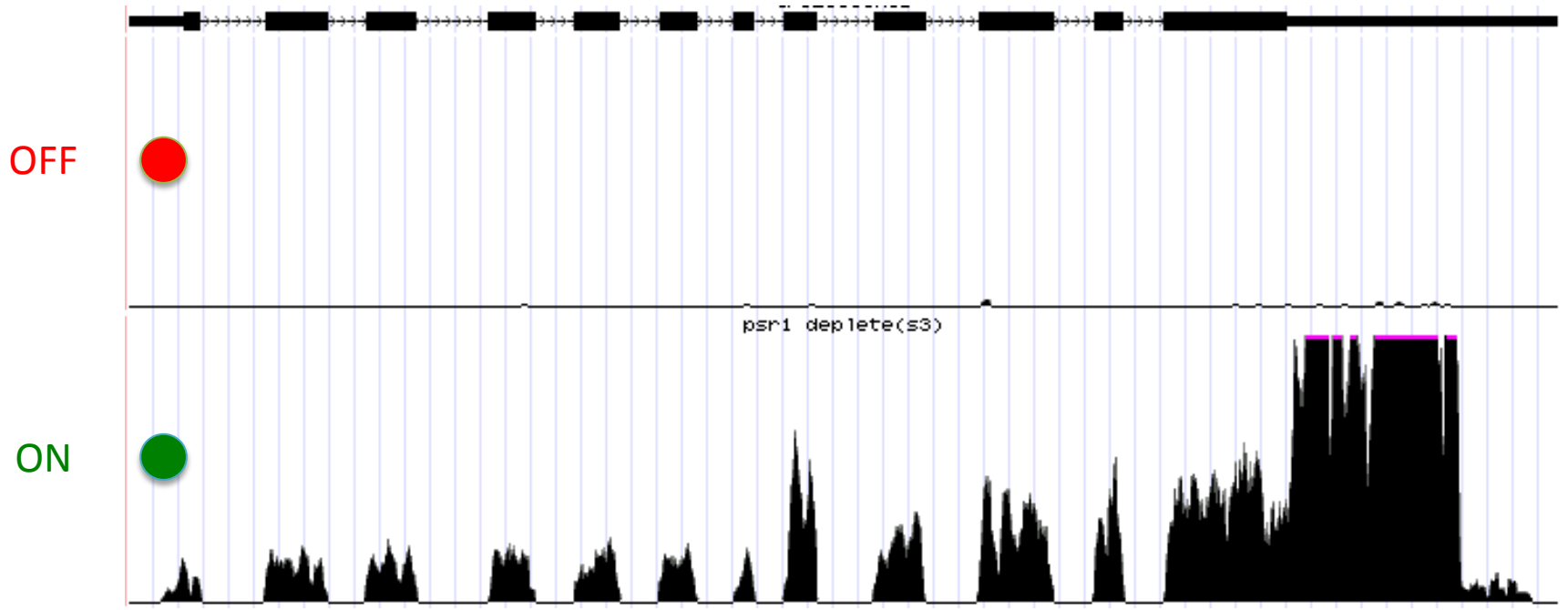
Transcription

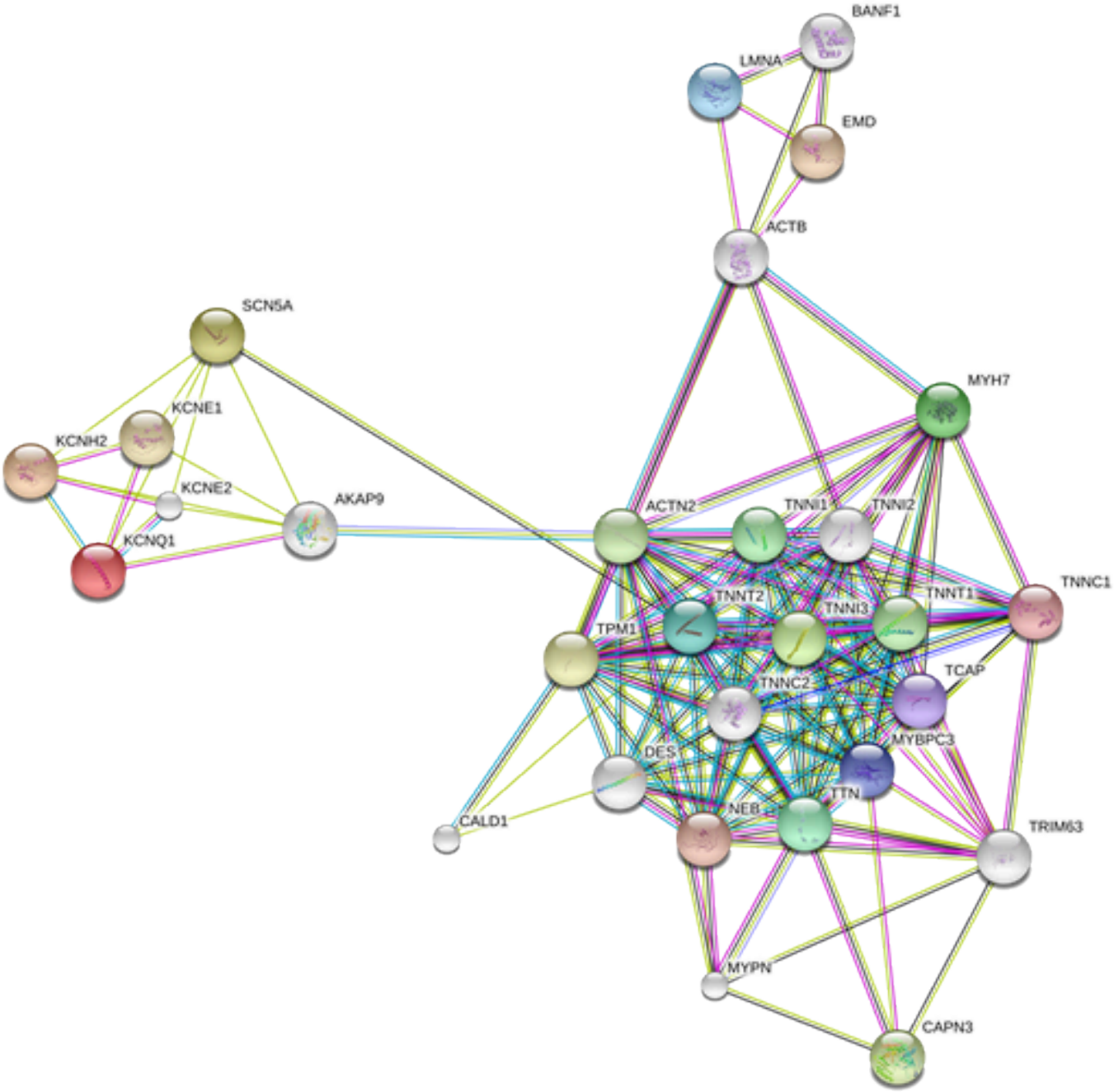
mRNA → Transcriptome

Translation

Protein → Proteome

Differential Expression




BANF1
LMNA
EMD
ACTB
SCN5A
MYH7
KCNE1
KCNH2
KCNE2
AKAP9
KCNQ1
ACTN2
TNNI1
TNNI2
TNNC1
TNNT2
TNNT1
TNNI3
TPM1
TCAP
TNNC2
MYBPC3
DES
TTN
NEB
CALD1
TRIM63
MYPN
CAPN3