a

Genes

	a	b	c	d	e
S1					
S2					
S3					
S4					
S5					

Samples

Metagenomes

Relative abundance

b

Bimodal distribution:

$$\frac{y1}{y2} \geq 0.3$$

$$\frac{\Delta y}{y1} \geq 0.2$$

Higher peak

Lower peak

Number of samples

y2

Δy

y1

Abundance (log$_{10}$)

c Danish gut microbiome
Bimodal distributions

K00314 | K02663 | K02664 | K04110
K06893 | K07022 | K07389 | K07671
K09490 | K10562 | K11707 | K11708
K11709 | K11710 | K12856 | K13931

Number of samples

Abundance (log$_{10}$)

d Danish gut microbiome
Examples of unimodal distributions

K11753 | K13038 | K00851 | K00030
K05777 | K00796 | K05343 | K00984
K01002 | K01840 | K12687 | K06283
K05337 | K01937 | K01281 | K02809

Number of samples

Abundance (log$_{10}$)