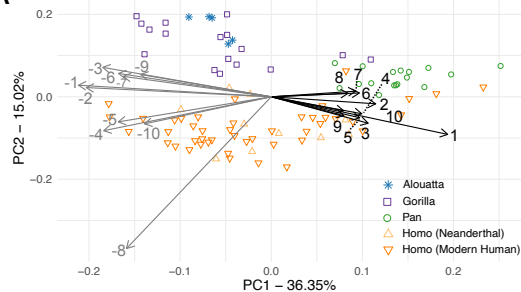
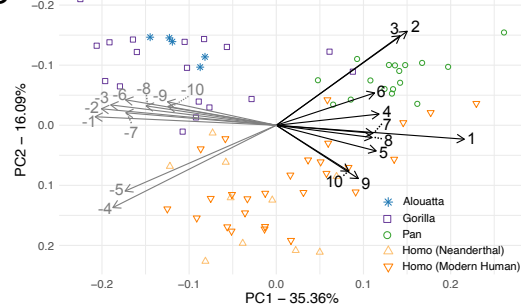


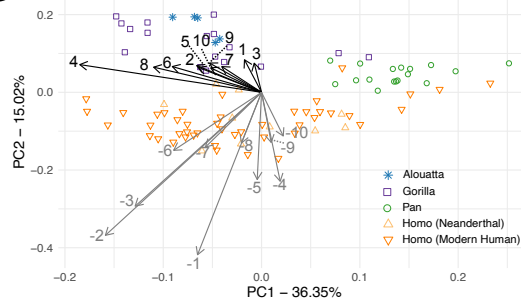
A



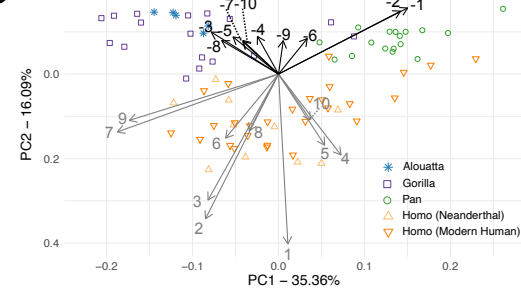
B



C



D



PC1 negative loadings

-1	Sulfite reductase [NADPH] flavoprotein alpha-component (EC 1.8.1.2)
-2	Outer membrane receptor for ferric coprogen and ferric-rhodotorulic acid
-3	Exodeoxyribonuclease V gamma chain (EC 3.1.11.5)
-4	Glutathione biosynthesis bifunctional protein gshF (EC 6.3.2.2)(EC 6.3.2.3)
-5	Maltodextrin phosphorylase (EC 2.4.1.1)
-6	Sulfite reductase [NADPH] hemoprotein beta-component (EC 1.8.1.2)
-7	Oligopeptidase A (EC 3.4.24.70)
-8	Serine endopeptidase ScpC (EC 3.4.21.-)
-9	Chaperone protein HscA
-10	Beta-lactamase (EC 3.5.2.6)

PC1 positive loadings

1	Duplicated ATPase component BL0693 of energizing module of predicted ECF transporter
2	Pyruvate-flavodoxin oxidoreductase (EC 1.2.7.-)
3	Pyrophosphate-energized proton pump (EC 3.6.1.1)
4	Transport ATP-binding protein CydC
5	Multi antimicrobial extrusion protein (Na ⁺ /drug antiporter), MATE family of MDR efflux pumps
6	DNA topoisomerase III (EC 5.99.1.2)
7	Putative mobilization protein BF0133
8	Conjugative transposon protein TraG
9	Pyrophosphate-dependent fructose 6-phosphate-1-kinase (EC 2.7.1.90)
10	Pyruvate,phosphate dikinase (EC 2.7.9.1)

PC1 negative loadings – no modern humans

-1	Sulfite reductase [NADPH] flavoprotein alpha-component (EC 1.8.1.2)
-2	Exodeoxyribonuclease V gamma chain (EC 3.1.11.5)
-3	Outer membrane receptor for ferric coprogen and ferric-rhodotorulic acid
-4	Glutathione biosynthesis bifunctional protein gshF (EC 6.3.2.2)(EC 6.3.2.3)
-5	Maltodextrin phosphorylase (EC 2.4.1.1)
-6	Sulfite reductase [NADPH] hemoprotein beta-component (EC 1.8.1.2)
-7	Oligopeptidase A (EC 3.4.24.70)
-8	Chaperone protein HscA
-9	Dihydropyrimidine dehydrogenase of pyruvate dehydrogenase complex (EC 1.8.1.4)
-10	Exodeoxyribonuclease V beta chain (EC 3.1.11.5)

PC1 positive loadings – no modern humans

1	Duplicated ATPase component BL0693 of energizing module of predicted ECF transporter
2	Putative mobilization protein BF0133
3	Conjugative transposon protein TraG
4	Pyruvate-flavodoxin oxidoreductase (EC 1.2.7.-)
5	Pyrophosphate-energized proton pump (EC 3.6.1.1)
6	DNA topoisomerase III (EC 5.99.1.2)
7	Transport ATP-binding protein CydC
8	Multi antimicrobial extrusion protein (Na ⁺ /drug antiporter), MATE family of MDR efflux pumps
9	V-type ATP synthase subunit A (EC 3.6.3.14)
10	V-type ATP synthase subunit B (EC 3.6.3.14)

PC2 negative loadings

-1	Pyruvate-utilizing enzyme, similar to phosphoenolpyruvate synthase
-2	Serine endopeptidase ScpC (EC 3.4.21.-)
-3	Pullulanase (EC 3.2.1.41)
-4	Choline binding protein A
-5	Sialidase (EC 3.2.1.18)
-6	FtsK/SpolIIE family protein, putative EssC component of Type VII secretion system
-7	ATP-dependent nuclease, subunit B
-8	Beta-hexosaminidase (EC 3.2.1.52)
-9	Alpha-galactosidase (EC 3.2.1.22)
-10	Alpha-1,2-mannosidase

PC2 positive loadings

1	Acriflavin resistance protein
2	Ribonucleotide reductase of class Ia (aerobic), alpha subunit (EC 1.17.4.1)
3	Glutathione-regulated potassium-efflux system ATP-binding protein
4	Exodeoxyribonuclease V gamma chain (EC 3.1.11.5)
5	3-oxoacyl-[acyl-carrier-protein] synthase, KASI (EC 2.3.1.41)
6	Na ⁺ -translocating NADH-quinone reductase subunit F (EC 1.6.5.-)
7	GTP pyrophosphokinase (EC 2.7.6.5), (p)ppGpp synthetase II
8	ATP-dependent DNA helicase Rep
9	Ribonucleotide reductase of class Ia (aerobic), beta subunit (EC 1.17.4.1)
10	Catalase (EC 1.11.1.6)

PC2 negative loadings – no modern humans

-1	Putative mobilization protein BF0133
-2	Conjugative transposon protein TraG
-3	Na ⁺ -translocating NADH-quinone reductase subunit F (EC 1.6.5.-)
-4	Acriflavin resistance protein
-5	Ribonucleotide reductase of class Ia (aerobic), alpha subunit (EC 1.17.4.1)
-6	Ferric iron ABC transporter, permease protein
-7	GTP pyrophosphokinase (EC 2.7.6.5), (p)ppGpp synthetase II
-8	3-oxoacyl-[acyl-carrier-protein] synthase, KASI (EC 2.3.1.41)
-9	Phosphoenolpyruvate carboxykinase [ATP] (EC 4.1.1.49)
-10	Lipid-A-disaccharide synthase (EC 2.4.1.182)

PC2 positive loadings – no modern humans

1	Pyruvate-utilizing enzyme, similar to phosphoenolpyruvate synthase
2	Serine endopeptidase ScpC (EC 3.4.21.-)
3	Pullulanase (EC 3.2.1.41)
4	Choline binding protein A
5	Sialidase (EC 3.2.1.18)
6	FtsK/SpolIIE family protein, putative EssC component of Type VII secretion system
7	Glutathione biosynthesis bifunctional protein gshF (EC 6.3.2.2)(EC 6.3.2.3)
8	ATP-dependent nuclease, subunit B
9	Maltodextrin phosphorylase (EC 2.4.1.1)
10	Alpha-galactosidase (EC 3.2.1.22)