BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance placed on this supplemental material which has been supplied by the author(s)

(a) phosphoenolpyruvate (PEP) → D-erythrose 4-phosphate
   → 3-deoxy-7-phosphoheptulonate synthase
   → 3-deoxy-D-arbinohexitol 7-phosphate
   → 3-dehydroshikimate
   → shikimate 5-dehydrogenase
   → Shikimate
   → Tryptophan

(b) phosphoenolpyruvate (PEP) → oxaloacetate
   → L-aspartate
   → homoserine kinase
   → Homoserine
   → O-phospho-L-homoserine
   → L-threonine

(c) 5-phospho-D-ribose 1-diphosphate → 1-(5-phospho-D-ribosyl)-ATP
   → phosphoribosyl-ATP phosphoribosyltransferase
   → 1-(5-phospho-D-ribosyl)-AMP
   → Imidazole glycerol-3P
   → L-histidinol phosphate
   → Histidine

Tryptophan Species
- Anaerostipes cacaee
- Fusicatenibacter saccharivorans
- Blautia_A_sp900066165
- Coprococcus_B_comos
- Faecalibacterium prausnitzii
- Blautia_A_massiliensis
- Dorea_formicigena
- Blautia_hansenii

Threonine Species
- Agathobaculum butyriciproducem
- Clostridoides difficile
- Veillonella_parvula_A
- Streptococcus_parasanguinis_B
- Enterococcus_faecalis
- Streptococcus_anginosus

Histidine Species
- Agathobaculum butyriciproducem
- Faecalibacterium faecis
- Dorea_longicatena
- Faecalibacterium prausnitzii
- Faecalibacterium sp900065845
- Dorea_longicatena_B
- Sellimonas_intestinalis
- Tyzzerella_sp900411335