Table S3. Distribution of genes required *in vivo* organized by functional categories

	Genes required *in vivo*		Total *H. influenzae* genes	
Category[a]	No. of genes	Percent in category	No.of genes[c]	Percent in category
Amino acid transport and metabolism (E)	23[b]	16.9%	148	8.9%
Cell wall/membrane/envelope biogenesis (M)	18[b]	13.2%	118	7.1%
Nucleotide transport and metabolism (F)	13[b]	9.6%	56	3.4%
DNA Replication, recombination and repair (L)	10	7.4%	108	6.5%
Inorganic ion transport and metabolism (P)	10	7.4%	85	5.1%
Posttranslational modification, chaperones (O)	8	5.9%	85	5.1%
Carbohydrate transport and metabolism (G)	7	5.1%	104	6.3%
Cell division and chromosome partitioning (D)	6[b]	4.4%	23	1.4%
Signal transduction mechanisms (T)	5	3.7%	31	1.9%
Coenzyme transport and metabolism (H)	4	2.9%	72	4.3%
2° metabolites biosynthesis and transport (Q)	4[b]	2.9%	14	0.8%
Intracellular trafficking and secretion (U)	3	2.2%	26	1.6%
Translation, ribosomal structure (J)	3	2.2%	148	8.9%
Energy production and conversion (C)	3	2.2%	94	5.7%
Transcription (K)	2	1.5%	73	4.4%
Defense mechanisms (V)	2	1.5%	17	1.0%
Unknown[c]	14	10.3%	404	24.4%
Total	135		1657	

"Percentage in category" refers to the fraction of genes within an individual functional class relative to the total. Letters in parenthesis denote the COG classification identifiers.

[a] Categories in which no genes were identified for growth or survival *in vivo* are not shown

[b] Increases in the number of genes in category identified by HITS relative to the entire genome are significant ($p < 0.05$) by chi squared analysis.

[c] Genes with COG designations of Function Unknown (S), General Function Prediction Only (R) and those without an assigned designation.