Supplementary Table S5. Genes with differential expression ($P < 1 \times 10^{-7}$) in at least one of the six conditions described in Fig. 6A – Node 2B. Depicted is a rank of genes by major biological function followed by each individual gene grouped by function. In general, these genes were uniquely induced by *in vitro* derived *V. cholerae* in the aquatic environment. Table S10 provides gene specific fold-changes.

Biological function	Number of genes	Percent of genes with annotation	Genes of interest
Cellular processes	14	29	phage shock proteins, *cheY-4*, *cheR*, carbon starvation proteins
Energy Metabolism	5	10	
Transport and binding proteins	5	10	
Regulation	5	10	
Amino Acid Biosynthesis	3	6	
Mobile and extrachromosomal role	2	4	VCA0391 killer protein
Central metabolism	1	2	
Fatty acid metabolism	1	2	
Protein fate	1	2	
Biosynthesis of cofactors	0	0	
Cell Envelope	0	0	
DNA metabolism	0	0	
Protein synthesis	0	0	
Nucleic acid synthesis	0	0	
Transcription	0	0	
Hypothetical (annotated)	12	24	
Total annotated genes	49	100	
Hypotheticals (no annotation)	17		

Cellular processes			
Locus	Function	Gene	*P* Value
VC0139	DPS family protein		3.0E-11
VC0687	carbon starvation protein A, putative		2.2E-08
VC1117	heat shock protein HtpX	*htpX*	3.2E-09
VC1313	methyl-accepting chemotaxis protein		5.9E-11
VC1399	chemotaxis protein methyltransferase CheR	*cheR-1*	6.7E-08
VC1405	methyl-accepting chemotaxis protein		4.7E-14
VC1677	phage shock protein B	*pspB*	2.2E-18
VC1678	phage shock protein A	*pspA*	1.7E-23
VCA0268	methyl-accepting chemotaxis protein		1.7E-10
VCA0906	methyl-accepting chemotaxis protein		2.2E-08
VCA0923	methyl-accepting chemotaxis protein		5.4E-11
VCA1006	organic hydroperoxide resistance protein, putative		1.6E-10
VCA1096	chemotaxis protein CheY	*cheY-4*	1.7E-15
VCA1111	thermostable hemolysin		2.7E-08
Energy Metabolism			
Locus	Function	Gene	*P* Value

VC1336	carboxyphosphonoenolpyruvate phosphonomutase	*prpB*	5.0E-08
VC1819	aldehyde dehydrogenase	*aldA-2*	6.7E-12
VCA0644	NADH oxidase, putative		6.0E-13
VCA0828	phenylalanine-4-hydroxylase	*phhA*	1.5E-13
VCA1029	glycogen operon protein GlgX	*glgX*	3.4E-09
Transport and binding proteins			
Locus	Function	Gene	*P* Value
VC1549	glycerol-3-phosphate ABC transporter, periplasmic glycerol-3-phosphate-binding protein	*ugpB*	1.8E-09
VC2215	cation transport ATPase, E1-E2 family		1.2E-08
VC2705	sodium-solute symporter, putative		1.9E-09
VCA0070	phosphate ABC transporter, periplasmic phosphate-binding protein	*pstS*	1.1E-18
VCA0071	phosphate ABC transporter, permease protein	*pstC-2*	2.9E-10
Regulation			
Locus	Function	Gene	*P* Value
VC0719	DNA-binding response regulator PhoB	*phoB*	2.2E-14
VC1335	transcriptional regulator, GntR family		4.8E-09
VC1653	sensory box sensor histidine kinase-response regulator VieS	*vieS*	4.4E-08
VC1741	transcriptional regulator, TetR family		1.7E-12
VCA0642	transcriptional regulator, ArsR family		1.2E-14
Amino Acid Biosynthesis			
Locus	Function	Gene	*P* Value
VC1173	anthranilate synthase component II	*trpG*	3.6E-10
VC2618	acetylornithine aminotransferase	*argD*	7.8E-09
VC2642	argininosuccinate synthase	*argG*	9.7E-08
Mobile and extrachrom. Element fns			
Locus	Function	Gene	*P* Value
VCA0359	plasmid stabilization element ParE, putative		8.3E-10
VCA0391	killer protein, putative		2.5E-10
Central metabolism			
Locus	Function	Gene	*P* Value
VC0748	aminotransferase NifS, class V		5.2E-08
Fatty acid metabolism			
Locus	Function	Gene	*P* Value
VC2758	fatty oxidation complex, alpha subunit	*fadB*	1.2E-08
Protein fate			
Locus	Function	Gene	*P* Value
VCA0639	AcrA-AcrE family protein		5.4E-08
Hypothetical (annotated)			
Locus	Function	Gene	*P* Value
VC0749	NifU-related protein		5.3E-12

VC0750	hesB family protein		4.1E-10
VC0747	conserved hypothetical protein		1.2E-13
VC1099	conserved hypothetical protein		1.8E-10
VC1872	conserved hypothetical protein		5.5E-11
VC2340	conserved hypothetical protein		2.0E-09
VC2473	conserved hypothetical protein		6.4E-15
VC2488	conserved hypothetical protein		3.4E-17
VC2507	conserved hypothetical protein		7.2E-12
VCA0641	conserved hypothetical protein		1.5E-14
VCA0716	conserved hypothetical protein		1.1E-10
VCA0948	conserved hypothetical protein		2.7E-14
Hypothetical (no annotation)			
Locus	Function	Gene	*P* Value
VC0025	hypothetical protein		8.6E-18
VC0978	hypothetical protein		1.8E-12
VC1116	hypothetical protein		9.1E-18
VC1323	hypothetical protein		1.7E-11
VC1368	hypothetical protein		1.1E-22
VC1661	hypothetical protein		7.5E-12
VC1932	hypothetical protein		3.8E-12
VC1933	hypothetical protein		1.4E-09
VC2667	hypothetical protein		4.7E-09
VC2704	hypothetical protein		7.5E-09
VCA0004	hypothetical protein		3.3E-10
VCA0087	hypothetical protein		1.1E-12
VCA0333	hypothetical protein		1.3E-08
VCA0360	hypothetical protein		6.4E-10
VCA0551	hypothetical protein		2.5E-16
VCA0715	hypothetical protein		8.4E-13
VCA0994	hypothetical protein		1.5E-17