

Table S2: Conservation of known and putative virulence factors.

Gene	Function	No. Genomes
Antibiotic, Metal and Reactive Oxygen Species Resistance:		
MCR_1299	M35-like porin protein	12
MCR_1247	outer membrane porin M35	12
<i>acrA</i>	RND system membrane fusion protein AcrA	12
<i>acrB</i>	RND system efflux pump AcrB	12
<i>ahpC</i>	alkyl hydroperoxide reductase subunit C	12
MCR_0043	AhpD-like alkylhydroperoxidase	12
MCR_0110	Bcr/CflA subfamily drug resistance transporter	12
<i>corC</i>	magnesium and cobalt efflux protein CorC	12
MCR_0808	glyoxalase/bleomycin resistance protein/dioxygenase	12
MCR_1465	putative efflux pump component MtrF	12
MCR_0016	multidrug efflux pump ABC transporter ATPase subunit	12
<i>katA</i>	catalase	12
<i>oprM</i>	RND system membrane channel OprM	12

MCR_0120	putative iron-dependent peroxidase	12
<i>sodA</i>	superoxide dismutase A	12
MCR_1539	transmembrane efflux protein	12
Iron Acquisition:		
MCR_0645	NRAMP family Mn ²⁺ and Fe ²⁺ transporter	12
	chelated iron ABC transporter substrate binding	
<i>afeA</i>	protein AfeA	12
<i>afeB</i>	chelated iron ABC transporter ATPase subunit AfeB	12
	chelated iron ABC transporter permease protein	
<i>afeC</i>	AfeC	12
	chelated iron ABC transporter permease protein	
<i>afeD</i>	AfeD	12
<i>fbpA</i>	Iron (III) ABC transporter iron binding protein FbpA	12
	Iron (III) ABC transporter membrane permease	
<i>fbpB</i>	FbpB	12
<i>fbpC</i>	Iron (III) ABC transporter ATPase subunit FbpC	12
MCR_0372	Fur family transcriptional regulator	12
<i>fur</i>	ferric uptake regulation protein Fur	12

<i>copB</i>	outer membrane protein CopB	12
<i>tbpA</i>	transferrin binding protein A TbpA	12
<i>tbpB</i>	transferrin binding protein B TbpB	12
LOS biosynthesis:		
<i>kdsA</i>	3-deoxy-8-phosphooctulonate synthase KdsA	12
<i>lgt1</i>	glucosyltransferase Lgt1	12
<i>lgt2A</i>	galactosyltransferase Lgt2A	5
<i>lgt2B/C</i>	galactosyltransferase Lgt2B/C	7
<i>lgt3</i>	glucosyltransferase Lgt3	12
<i>lgt4</i>	acetylglucosaminyltransferase Lgt4	7
<i>lgt5</i>	galactosyltransferase Lgt5	12
<i>lgt6</i>	glucosyltransferase Lgt6	12
DNA Uptake:		
<i>comEA</i>	competence protein ComEA	12
<i>comEC</i>	competence protein ComEC	12
<i>comF</i>	competence protein ComF	12
<i>comM</i>	competence protein ComM	12

Adhesins and Outer Membrane Surface Structures:		
<i>hag</i>	<i>Moraxella</i> IgD binding protein/hemagglutinin MID/Hag	12
<i>mcaP</i>	<i>Moraxella catarrhalis</i> adherence protein McaP	12
<i>mchA1/A2*</i>	<i>Moraxella</i> HMW protein MchA1/A2	8
<i>mchB</i>	<i>Moraxella</i> HMW protein tps partner mchB	9
<i>ompCD</i>	outer membrane protein CD	12
<i>ompG1a</i>	outer membrane protein G1a OmpG1a	12
<i>pilA</i>	type IV pilin PilA	12
<i>pilB</i>	type IV pilus assembly ATPase PilB	12
<i>pilC</i>	type IV pilus assembly protein PilC	12
<i>pilD</i>	type IV prepilin peptidase PilD	12
<i>pilMN</i>	type IV pilus biogenesis protein PilMN	12
<i>pilO</i>	type IV pilus biogenesis protein PilO	12
<i>pilP</i>	type IV pilus biogenesis protein PilP	12
<i>pilQ</i>	type IV pilus secretin PilQ	12
<i>pilT</i>	type IV pilus retraction ATPase PilT	12

<i>pilV</i>	type IV pilus biogenesis protein PilV	12
<i>pilW</i>	type IV pilus assembly protein PilW	12
MCR_1173	putative type IV pilus biogenesis protein	12
<i>uspA1</i>	ubiquitous surface protein A1 UspA1	12
<i>uspA2/A2H</i>	ubiquitous surface protein A2/A2H (UspA2/A2H UspA2H)	12
Environment Sensing:		
MCR_0179	two component system sensor histidine kinase	12
MCR_0386	two-component system sensor histidine kinase	12
MCR_0387	two-component system sensor histidine kinase	12
MCR_0180	two-component system response regulator	12
MCR_0385	two-component system response regulator	12

* Denotes presence of ORF(s) homologous to *mchA1/2* over 1 Kb or greater of the total length of the ORF.