Supplemental Table S1 for Shen et al. 2024, Gulf and Caribbean Research volume 35, Antibiotic Resistance in a Coastal River in Mississippi, USA – Potential Drivers

SUPPLEMENTAL TABLE S1. Mixed-effects all-season models explored to predict the relative concentrations of antibiotic genes from water samples in the Pascagoula River, MS. C−relative concentration of antibiotic resistant genes (ARG, logit transformed); G−type of ARG (*sul1*, *sul2*, or *intI1*); D−distance from the water treatment plant; L−indicator of upstream (0) or downstream (1) of the waste water treatment plant; T−temperature; S−salinity; M−month; B−site. Bolded numbers indicate the lowest AICc and those within 2 of the lowest number, with which the models are considered as best model candidates. Highlighted model is the final model selected and generally is the most parsimonious among the best model candidates.

Number	Model	Fixed	Estimate	p-Value	AICc
1	C~G+D+D^2+L+T+T^2+S	D	-0.1209	0.9319	291.2615
		D2	-0.2041	0.8566	
		L	-0.5007	0.1537	
		T	0.3559	0.0603	
		T2	-0.0124	0.0087	
		S	-0.0382	0.0402	
2	C~G+D+D^2+L+T+T^2+S+(1|M)	D	-0.0991	0.9427	292.1425
		D2	-0.2410	0.8275	
		L	-0.5176	0.1401	
		T	0.4585	0.3519	
		T2	-0.0148	0.2617	
		S	-0.0348	0.4134	
3	C~G+D+D^2+L+T+T^2+S+(1|B)	D	-0.1114	0.9850	285.4887
		D2	-0.2392	0.9597	
		L	-0.5242	0.7285	
		T	0.3647	0.0370	
		T2	-0.0127	0.0037	
		S	-0.0301	0.0811	
4	C~G+D+D^2+L+T+T^2+S+(1|M)+(1|B)	D	-0.1075	0.9622	281.0480
		D2	-0.2466	0.8915	
		L	-0.5280	0.3632	
		T	0.3808	0.1215	
		T2	-0.0131	0.0516	
		S	-0.0291	0.2008	
5	C~G+D+D^2+(1|M)+(1|B)	D	0.9357	0.7308	270.8629
		D2	-1.2208	0.5739	
6	C~G+D+(1|M)+(1|B)	D	-0.5618	0.4480	270.2065
7	C~G+D^2+(1|M)+(1|B)	D2	-0.5073	0.3790	268.0496
8	C~G+L+(1|M)+(1|B)	L	-0.7000	0.3038	267.8286

9	$C \sim G+T+T^2+(1\|M)+(1\|B)$	T	0.3895	0.1920	**263.2639**
		T2	-0.0137	0.0857	
10	$C \sim G+T+(1\|M)+(1\|B)$	T	-0.1512	0.0263	**264.6862**
11	$C \sim G+T^2+(1\|M)+(1\|B)$	T2	-0.0041	0.0118	**262.8984**
12	$C \sim G+S+(1\|M)+(1\|B)$	S	0.0516	0.3131	268.4275
13	$C \sim G+S+T+T^2+(1\|M)+(1\|B)$	S	-0.0319	0.1563	**264.3599**
		T	0.3771	0.1191	
		T2	-0.0130	0.0494	
14	$C \sim G+S+T^2+(1\|M)+(1\|B)$	S	-0.0205	0.4197	264.9923
		T2	-0.0038	0.0173	
15	$C \sim G+S+T+(1\|M)+(1\|B)$	S	-0.0135	0.6530	267.0789
		T	-0.1450	0.0485	
16	$C \sim G+S+D+D^2+T+T^2+(1\|M)+(1\|B)$	S	-0.0300	0.1874	268.9439
		D	0.7377	0.7483	
		D2	-0.9526	0.6034	
		T	0.3804	0.1212	
		T2	-0.0131	0.0513	