

**Table S5:****The list of genera that are different in the bacterial network from downer and normal cattle.**

Type	Genus	Degree	Average of $\rho$ value	Average of $p$ -value	Average of $q$ -value
Downer cattle	UCG-009	7	0.72	6.8E-12	1.5E-11
	JG30-KF-CM45	7	0.55	4.1E-09	5.7E-09
	<i>Altererythrobacter</i>	6	0.56	4.6E-09	6.3E-09
	<i>Moryella</i>	6	0.54	2.5E-08	2.8E-08
	<i>Glutamicibacter</i>	6	0.51	8.0E-08	8.5E-08
	<i>Paraprevotella</i>	5	0.65	1.1E-10	2.1E-10
	<i>Williamsia</i>	5	0.61	3.3E-08	3.4E-08
	<i>Paeniglutamicibacter</i>	5	0.60	6.9E-09	8.2E-09
	[Eubacterium]_coprostanoligenes_group	5	0.59	5.0E-08	5.1E-08
	<i>Shuttleworthia</i>	5	0.53	7.2E-08	7.4E-08
Normal cattle	<i>Pusillimonas</i>	21	0.52	5.0E-08	5.5E-08
	<i>Sphingopyxis</i>	19	0.60	1.3E-09	1.7E-09
	<i>Iamia</i>	16	0.57	1.3E-08	1.7E-08
	<i>Candidatus_Obscuribacter</i>	6	0.63	1.3E-08	1.5E-08
	U29-B03	6	0.53	2.6E-08	3.1E-08
	<i>Allorhizobium-Neorhizobium-Pararhizobium-Rhizobium</i>	5	0.80	1.4E-08	1.5E-08
	Christensenellaceae_R-7_group	5	0.55	2.0E-08	2.4E-08
	[Eubacterium]_hallii_group	5	0.51	8.0E-08	8.4E-08