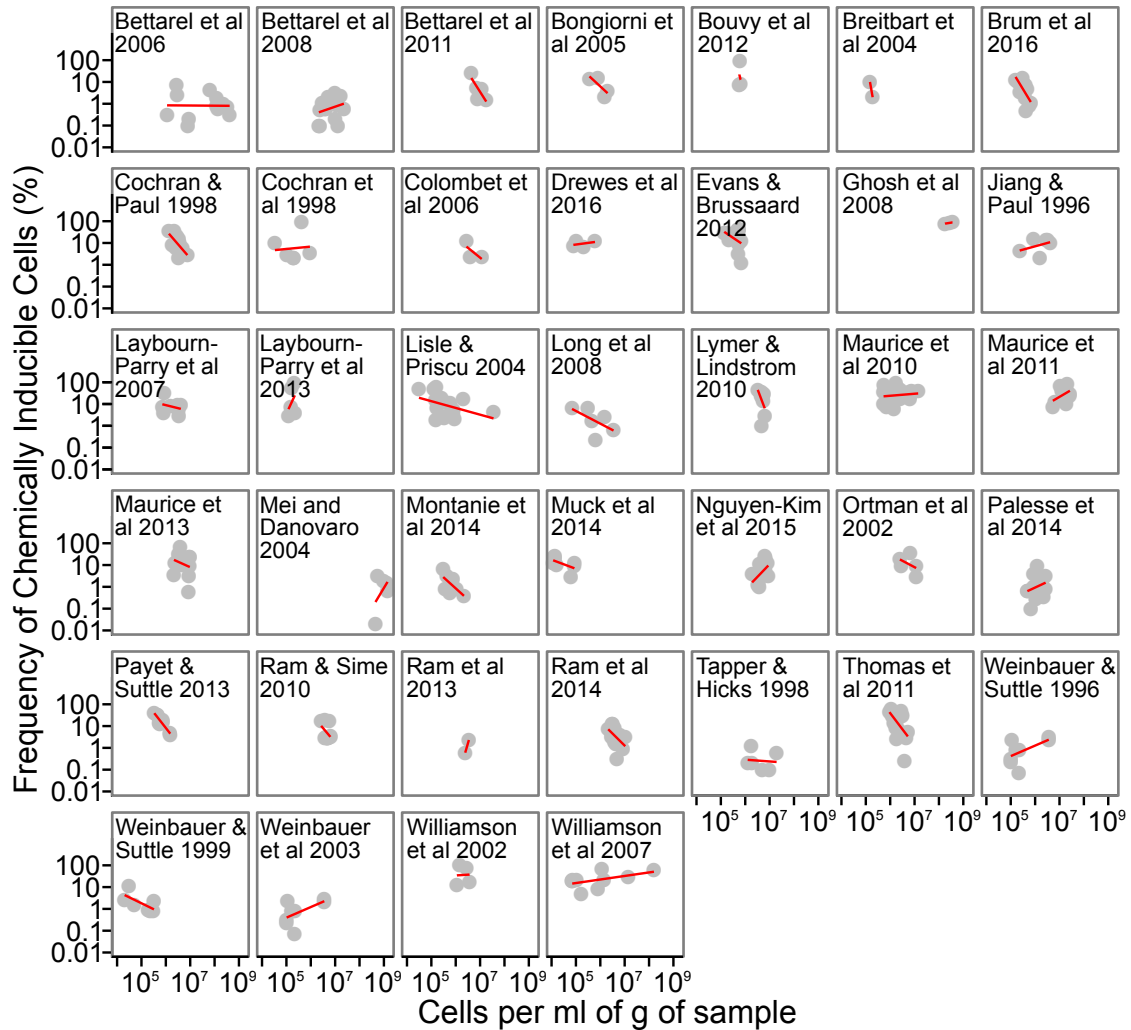


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Variability and host density independence in inductions-based estimates of environmental lysogeny

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Supplementary Figure 1: Fraction of chemically inducible cells across host densities paneled by study. Lines of best fit for each study are shown (red; FCIC and host density log-transformed after Figures 1 and 2). The number of samples (n) for each study are shown in Supplementary Table 1.

Supplementary Table 1: Summary statistics of published studies showing number of measures (*n*), type of measure retrieved from publications (mean or individual values), goodness of fit (R^2), slope (*m*) and significance (*p*; bold indicates values < 0.05 where slopes are significantly different to zero at the 95% confidence level) for regressions between FCIC and host densities (both log-transformed). R^2 and *p*-value statistics were not computed for studies with *n* < 3. Superscripts indicate the study number used in Figure 1. Asterisks mark studies conducted in more than one environment with FCIC values split for analysis.

Environment	Reference	Type	<i>n</i>	R^2	<i>m</i>	<i>p</i>
Freshwater	Bettarel et al. (2006) ^{1,*}	mean	6	0.04	-0.19	0.70
Freshwater	Breitbart et al. (2004) ⁶	individual	2	-	-6.40	-
Freshwater	Colombet et al. (2006) ¹⁰	mean	3	0.51	-0.91	0.49
Freshwater	Drewes et al. (2016) ¹¹	mean	4	0.15	0.15	0.62
Freshwater	Laybourn-Parry et al. (2013) ¹⁶	mean	5	0.14	2.43	0.54
Freshwater	Lisle and Priscu (2004) ^{17,*}	mean	4	0.42	-0.72	0.35
Freshwater	Lymer and Lindstrom (2010) ¹⁹	mean	9	0.20	-2.97	0.23
Freshwater	Maurice et al. (2010) ²⁰	mean	26	0.02	0.09	0.52
Freshwater	Maurice et al. (2011) ^{21,*}	mean	8	0.28	0.76	0.17
Freshwater	Palesse et al. (2014) ²⁸	mean	14	0.07	0.52	0.37
Freshwater	Ram and Sime-Ngando (2010) ³⁰	mean	11	0.17	-1.33	0.22
Freshwater	Ram et al. (2013) ³¹	mean	2	-	3.86	-
Freshwater	Ram et al. (2014) ³²	mean	15	0.21	-1.11	0.09
Freshwater	Tapper and Hicks (1998) ³³	mean	6	0.01	-0.08	0.87
Freshwater	Thomas et al. (2011) ³⁴	mean	16	0.27	-1.48	0.04
Saltwater	Bettarel et al. (2008) ²	mean	15	0.07	0.39	0.35
Saltwater	Bettarel et al. (2011) ³	mean	5	0.64	-1.77	0.10
Saltwater	Bongiorni et al. (2005) ⁴	mean	4	0.61	-1.04	0.22
Saltwater	Bouvy et al. (2012) ⁵	mean	3	0.04	-4.62	0.87
Saltwater	Brum et al. (2016) ⁷	mean	17	0.45	-1.84	0.00
Saltwater	Cochran and Paul (1998) ⁸	mean	12	0.42	-1.30	0.02
Saltwater	Cochran et al. (1998) ⁹	mean	6	0.01	0.11	0.88
Saltwater	Evans and Brussaard (2012) ¹²	mean	12	0.13	-0.75	0.24
Saltwater	Jiang and Paul (1996) ¹⁴	mean	6	0.16	0.31	0.44
Saltwater	Laybourn-Parry et al. (2007) ¹⁵	mean	8	0.08	-0.28	0.49
Saltwater	Lisle and Priscu (2004) ^{17,*}	mean	12	0.16	-0.29	0.20
Saltwater	Long et al. (2008) ¹⁸	mean	6	0.35	-0.58	0.22
Saltwater	Maurice et al. (2011) ^{21,*}	mean	4	0.19	-0.58	0.56
Saltwater	Maurice et al. (2013) ²²	mean	13	0.05	-0.50	0.45
Saltwater	Muck et al. (2014) ²⁵	mean	9	0.32	-0.42	0.11
Saltwater	Nguyen-Kim et al. (2015) ²⁶	mean	14	0.24	1.17	0.08
Saltwater	Ortmann et al. (2002) ²⁷	mean	5	0.22	-0.59	0.43
Saltwater	Payet and Suttle (2013) ²⁹	individual	9	0.88	-1.43	0.00
Saltwater	Weinbauer and Suttle (1996) ³⁵	mean	9	0.32	0.49	0.11
Saltwater	Weinbauer and Suttle (1999) ³⁶	mean	7	0.44	-0.54	0.10
Saltwater	Weinbauer et al. (2003) ³⁷	mean	9	0.32	0.49	0.11
Saltwater	Williamson et al. (2002) ³⁸	mean	4	0.00	0.07	0.96
Sediment	Bettarel et al. (2006) ^{1,*}	mean	7	0.80	-1.13	0.01
Sediment	Mei and Danovaro (2004) ²³	mean	5	0.22	1.87	0.42
Sediment	Montanie et al. (2014) ²⁴	mean	7	0.43	-1.01	0.11
Soil	Ghosh et al. (2008) ¹³	mean	3	0.92	0.18	0.18
Soil	Williamson et al. (2007) ³⁹	mean	10	0.28	0.16	0.12

Supplementary Table 2: Sites sampled in the current study, from both saltwater (Famosa Slough, Spanish Landing, and Vacation Road) and freshwater (Chollas Reservoir, Old Mission Dam, and Lake Murray) sites. In addition to site coordinates, FCIC mean values and 95 % bootstrapped confidence intervals (CIs) values within each site are shown estimated when all values were considered (all) or where only values < 0 were included (> 0). Range values for FCIC within each site are shown for when all values were included.

Site	Latitude (°N)	Longitude (°W)	Mean (all)	95 % CI (all)	Range (all)	Mean (< 0)	95 % CI (< 0)
Famosa Slough	32.751	117.229	4.62	-1.52, 8.26	13.31	7.67	6.72, 8.77
Spanish Landing	32.728	117.209	4.38	-1.23, 8.98	14.51	7.22	3.71, 10.34
Vacation Road	32.773	117.232	3.34	1.96, 5.00	4.35	3.34	1.96, 5.00
Chollas Reservoir	32.737	117.062	1.34	0.02, 2.67	3.54	1.79	0.04, 3.54
Old Mission Dam	32.839	117.043	9.61	5.13, 13.50	11.59	9.60	5.13, 13.50
Lake Murray	32.784	117.042	-2.17	-6.97, 1.29	11.14	1.29	1.11, 1.47
All Sites			3.52	1.31, 5.68		5.49	3.76, 7.37