

Prevalence and pathogen load estimates for the fungus *Batrachochytrium dendrobatidis* are impacted by ITS DNA copy number variation

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Table S1. Estimated ITS copy number of 14 *Bd* strains including isolates from 4 lineages: the global panzootic lineage (GPL), Brazil, Korea, and Swiss lineages. The values for qPCR with gBlocks® standards ranged from 12.7 to 237.2 copies zoospore⁻¹. Most of the isolates belong to the GPL, which are associated with mass amphibian mortality around the world. Isolates from endemic lineages are not thought to cause mass mortality (Rosenblum et al. 2013, Ruggeri et al. 2015, Schloegel et al. 2012). There was not a distinct difference in ITS copy number between endemic isolates and the global panzootic lineage. Isolates from the same region also show a range in copy number, for example 3 isolates from Panama ranged from 72.6 to 237.2. It is unknown whether these differences reflect history of passage through culture or biological differences from pathogen history in the field. Two isolates collected in 2004 (JEL 404 and JEL 423) had similar ITS copy numbers (116.8 and 98.2, respectively) and demonstrated differences in pathogenicity on some species, likely due to novelty of the Panamanian isolate to North American amphibians (Gahl et al. 2012). Thus, zoospore ITS copy number may not be related to pathogen virulence.

Isolate	Lineage	Host species and locality	gBlocks® qPCR mean (SD) ITS1–5.8S copies zsp. ⁻¹
Melbourne-L.lesueuri-00-LB1	GPL	<i>Litoria lesueuri</i> , Gibbo River, Victoria, Australia	12.7 (2.3)
Campana_H.vireovittatum_13_JLV	GPL	<i>Hyalinobatrachium vireovittatum</i> , Campana, Panama	237.2 (94.6)
JEL 310	GPL	<i>Smilisca phaeota</i> , Fortuna, Panama	72.6 (38.7)
JEL 423	GPL	GenBank accession: AATT00000000 <i>Phyllomedusa lemur</i> , Guabal stream, Panama	98.2 (76.6)
VMV 808	GPL	<i>Lithobates catesbeianus</i> tadpole, Georgia, USA	223.3 (63.9)
VMV 813	GPL	<i>Lithobates catesbeianus</i> tadpole, Georgia, USA	199.7 (94.8)
JEL 197	GPL	Type isolate, <i>Dendrobates azureus</i> , National Zoological Park, Washington DC, USA	169.1 (62.3)
JEL 242	GPL	Africa (<i>Xenopus laevis</i> imported to USA)	35.8 (20.5)
UKTvB	GPL	<i>Bufo bufo</i> , Kent, UK	41.1 (33.0)
JEL 404	GPL	<i>Lithobates catesbeianus</i> tadpole, Crocker Pond, Maine, USA	116.8 (61.9)
LFT 001	Brazil	São Paulo, Brazil	125.8 (38.0)
KR 323	Korea	Korea	99.6 (51.2)
Bo 331	Korea	Korea	117.4 (31.4)
TG 739	Swiss	<i>Alytes obstetricans</i> , Gamlikon, Switzerland	96.2 (69.6)

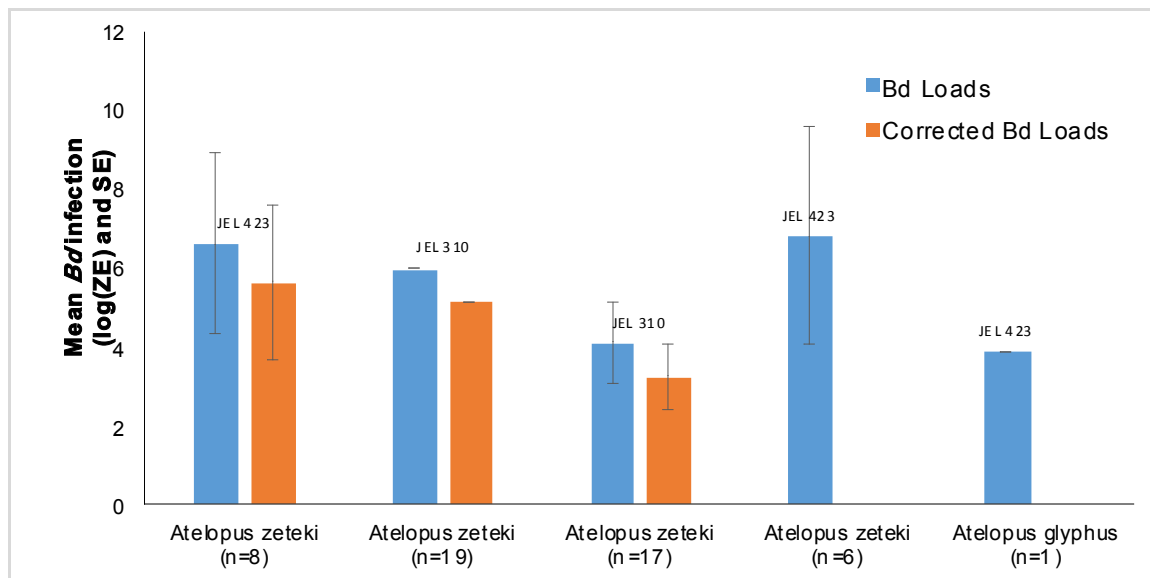


Fig. S1. *Bd* loads (zoospore equivalents [ZE] per swab) at the infection threshold before death for golden frogs, *Atelopus spp.* Data were obtained from 3 studies (Becker et al. 2011, DiRenzo et al. 2014, Ellison et al. 2014). Corrected *Bd* loads recalculated based on ITS copy number of the *Bd* isolate (Table S1). The original ZE value was multiplied by 10 for the ITS copies predicted by Boyle et al. (2004) and then divided by our calculated ITS copy number to get a corrected ZE value. Note that Ellison et al. (2014) used the JEL 423 isolate both for experimental exposure and to make zoospore standards for use in qPCR; thus, no correction was required.

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