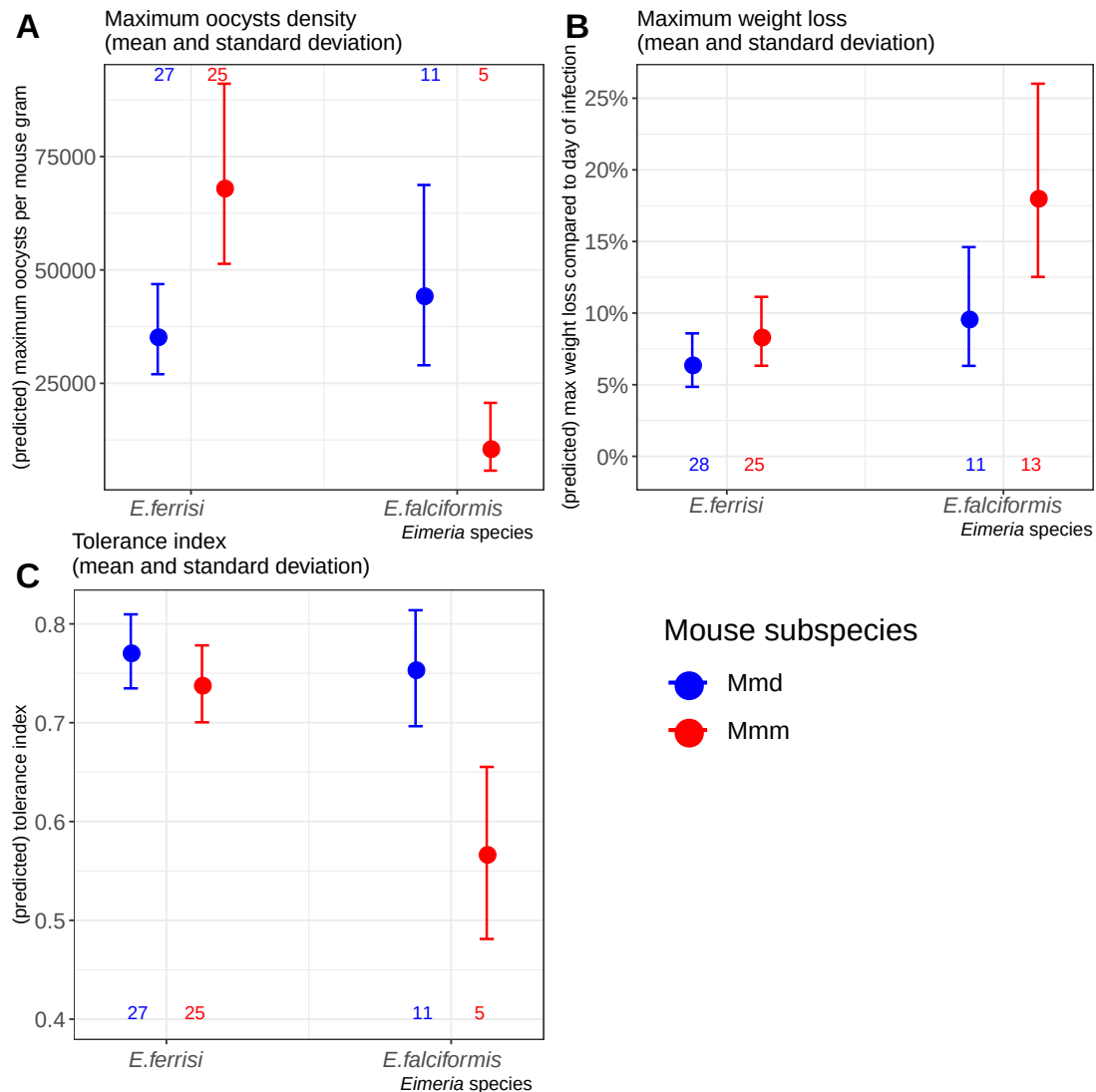


### Supplementary Material S3. Main analyses on conservative dataset (N = 77)



**Resistance, impact on host health and tolerance marginal effects for the two mice subspecies and two *Eimeria* species.** Values under bars represent the number of animals for each group. See Table 2 for summary statistics. (A) Resistance index measured as  $(-\text{maximum number of oocysts per mouse gram} + 300000) / 300000$ ; (B) Impact on host health measured as the maximum weight loss during patent period relative to starting weight (%); (C) Tolerance Index measured as  $(\log_{10}(\text{maximum relative weight loss} / \text{maximum number of oocysts per mouse gram} + 1e-8) / -8$

## Post-hoc tests:

Maximum oocysts density:		Mouse subspecies			
		<i>Mus musculus domesticus</i> (Mmd)		<i>Mus musculus musculus</i> (Mmm)	
Mouse subspecies	<i>Eimeria</i> species	<i>Eimeria ferrisi</i>	<i>Eimeria falciformis</i>	<i>Eimeria ferrisi</i>	<i>Eimeria falciformis</i>
<i>Mus musculus domesticus</i> (Mmd)	<i>Eimeria ferrisi</i>		Est:0.23 Std.Error:0.26	Est:0.65 Std.Error:0.2	Est:-1.18 Std.Error:0.36
	<i>Eimeria falciformis</i>	z value:0.87 Pr(> z ):0.82		Est:0.43 Std.Error:0.26	Est:-1.41 Std.Error:0.39
<i>Mus musculus musculus</i> (Mmm)	<i>Eimeria ferrisi</i>	z value:3.22 Pr(> z ):< 0.01	z value:1.61 Pr(> z ):0.36		Est:-1.84 Std.Error:0.36
	<i>Eimeria falciformis</i>	z value:-3.32 Pr(> z ):< 0.01	z value:-3.57 Pr(> z ):< 0.01	z value:-5.13 Pr(> z ):< 0.001	

Maximum weight loss:		Mouse subspecies			
		<i>Mus musculus domesticus</i> (Mmd)		<i>Mus musculus musculus</i> (Mmm)	
Mouse subspecies	<i>Eimeria</i> species	<i>Eimeria ferrisi</i>	<i>Eimeria falciformis</i>	<i>Eimeria ferrisi</i>	<i>Eimeria falciformis</i>
<i>Mus musculus domesticus</i> (Mmd)	<i>Eimeria ferrisi</i>		Est:0.36 Std.Error:0.23	Est:0.23 Std.Error:0.18	Est:0.94 Std.Error:0.22
	<i>Eimeria falciformis</i>	z value:1.57 Pr(> z ):0.39		Est:-0.13 Std.Error:0.23	Est:0.58 Std.Error:0.26
<i>Mus musculus musculus</i> (Mmm)	<i>Eimeria ferrisi</i>	z value:1.31 Pr(> z ):0.55	z value:-0.54 Pr(> z ):0.95		Est:0.71 Std.Error:0.22
	<i>Eimeria falciformis</i>	z value:4.34 Pr(> z ):< 0.001	z value:2.23 Pr(> z ):0.11	z value:3.24 Pr(> z ):< 0.01	

Tolerance index:		Mouse subspecies			
		<i>Mus musculus domesticus</i> (Mmd)		<i>Mus musculus musculus</i> (Mmm)	
Mouse subspecies	<i>Eimeria</i> species	<i>Eimeria ferrisi</i>	<i>Eimeria falciformis</i>	<i>Eimeria ferrisi</i>	<i>Eimeria falciformis</i>
<i>Mus musculus domesticus</i> (Mmd)	<i>Eimeria ferrisi</i>		Est:-0.02 Std.Error:0.04	Est:-0.03 Std.Error:0.03	Est:-0.2 Std.Error:0.05
	<i>Eimeria falciformis</i>	z value:-0.48 Pr(> z ):0.96		Est:-0.02 Std.Error:0.04	Est:-0.19 Std.Error:0.05
<i>Mus musculus musculus</i> (Mmm)	<i>Eimeria ferrisi</i>	z value:-1.19 Pr(> z ):0.62	z value:-0.44 Pr(> z ):0.97		Est:-0.17 Std.Error:0.05
	<i>Eimeria falciformis</i>	z value:-4.22 Pr(> z ):< 0.001	z value:-3.49 Pr(> z ):< 0.01	z value:-3.52 Pr(> z ):< 0.01	

## Linear regression of the tolerance index with the resistance index:

We found that tolerance index was negatively correlated with resistance index (LRT:  $G = 16.6$ ,  $df = 2$ ,  $p < 0.001$ ), was different for both *Eimeria* species (LRT:  $G = 15.3$ ,  $df = 2$ ,  $p < 0.001$ ), and that interaction between these two factors were significant (LRT:  $G = 12.5$ ,  $df = 1$ ,  $p < 0.001$ ). Every increase of 1 unit of resistance index corresponds to a decrease of 0.08 unit of tolerance index for *E. ferrisi* (95%CI: [-0.25 , 0.09]) and to a decrease of 1 unit of tolerance index for *E. falciformis* (95%CI: [-1.58 , -0.54]).