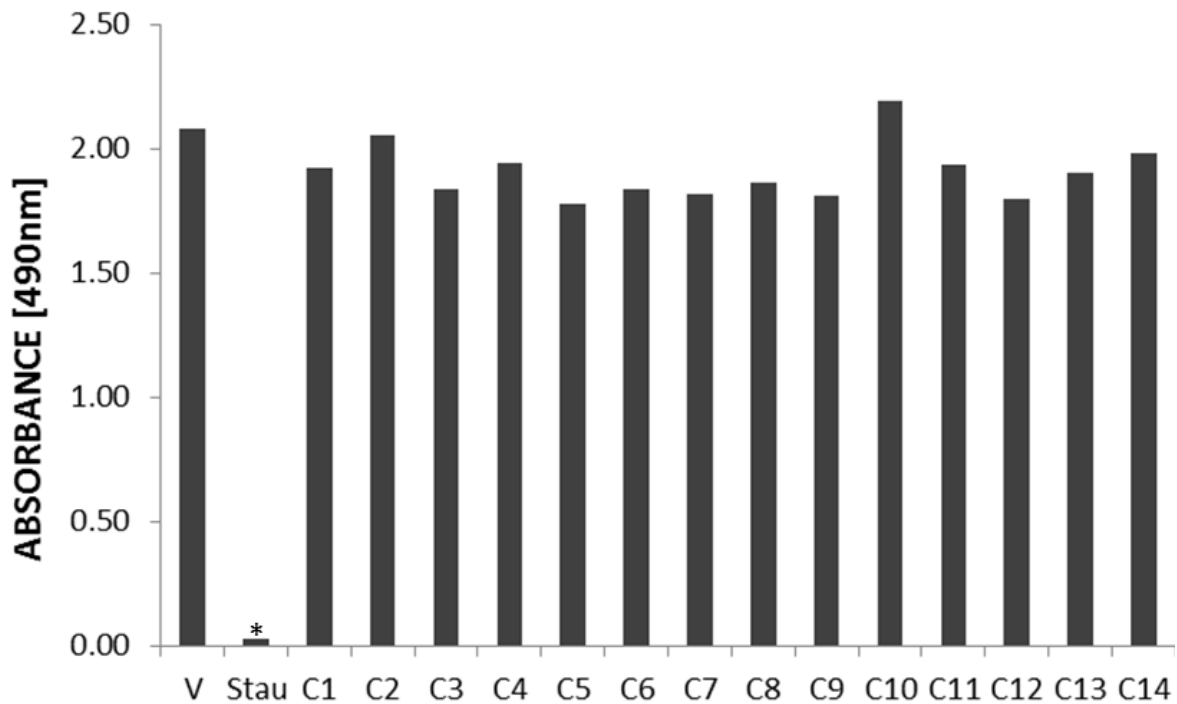


1 **SUPPLEMENTARY TABLE:**

2 Supplementary Table 1: Summary of effects of 14 validated compounds identified in this study

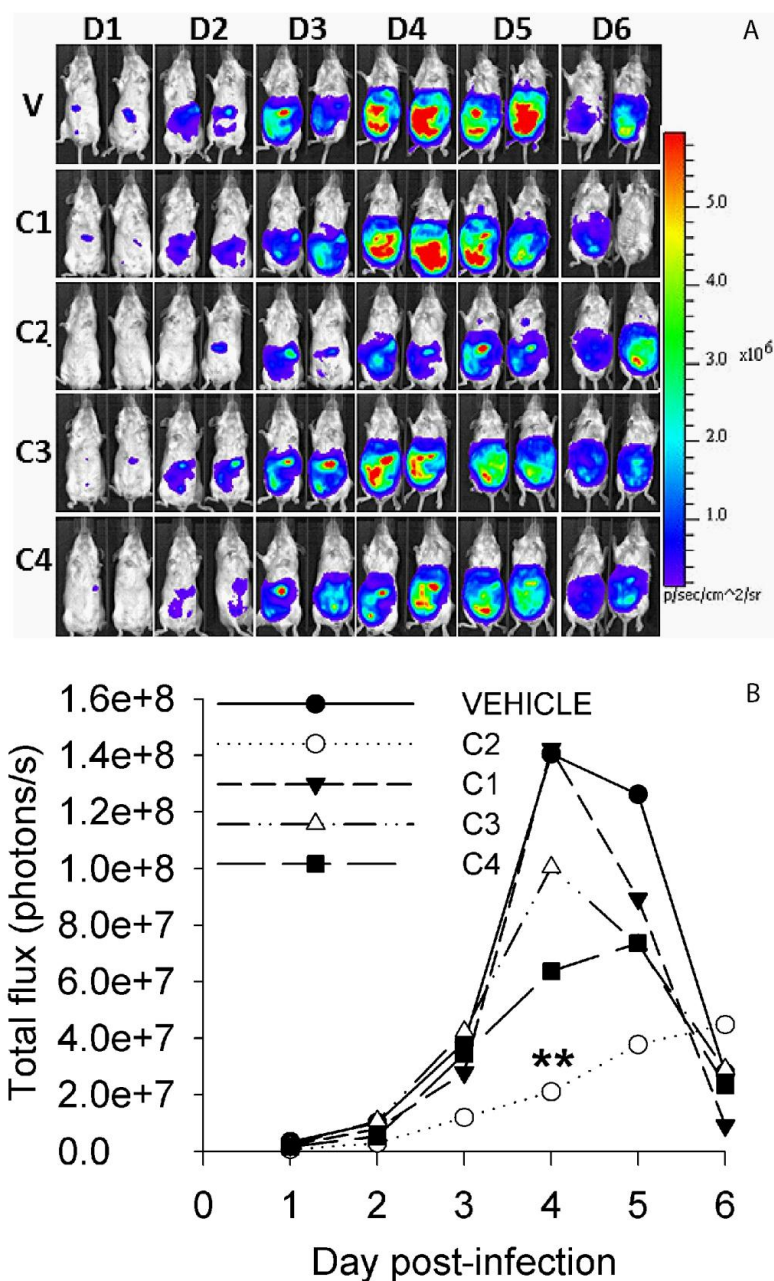
<b>NAME</b>	<b>ID*</b>	<b>Effect</b>	<b>% INH/ENH</b>	<b>IC<sub>50</sub> (<math>\mu</math>M)</b>
C1	<b>F1115-0016</b>	INH	0.17 $\pm$ 0.1	1.36 $\pm$ 3.54
C2	<b>F1041-0001</b>	INH	0.19 $\pm$ 0.1	1.34 $\pm$ 0.27
C3	<b>F3215-0002</b>	INH	0.65 $\pm$ 0.1	0.57 $\pm$ 0.06
C4	<b>F1744-0034</b>	INH	1.57 $\pm$ 0.5	3.46 $\pm$ 0.08
C5	<b>F0909-0123</b>	INH	1.82 $\pm$ 2.2	1.12 $\pm$ 0.18
C6	<b>F1092-0914</b>	INH	10.9 $\pm$ 15.0	6.48 $\pm$ 0.83
C7	<b>F5040-0271</b>	INH	11.7 $\pm$ 4.4	8.70 $\pm$ 1.03
C8	<b>F0406-1005</b>	ENH	205.3 $\pm$ 7.6	0.14 $\pm$ 0.02
C9	<b>F1874-0558</b>	ENH	207.4 $\pm$ 7.6	1.35 $\pm$ 0.41
C10	<b>F0779-0483</b>	ENH	210.2 $\pm$ 4.1	1.24 $\pm$ 0.68
C11	<b>F0745-0014</b>	ENH	213.8 $\pm$ 18.8	0.21 $\pm$ 0.05
C12	<b>F0862-0340</b>	ENH	214.1 $\pm$ 31.0	1.19 $\pm$ 0.22
C13	<b>F3220-0514</b>	ENH	220.3 $\pm$ 1.3	0.38 $\pm$ 0.26
C14	<b>F5570-0789</b>	ENH	269.5 $\pm$ 10.0	5.54 $\pm$ 4.28

3 \*Life Chemicals ID. Can be searched at <http://www.emolecules.com>

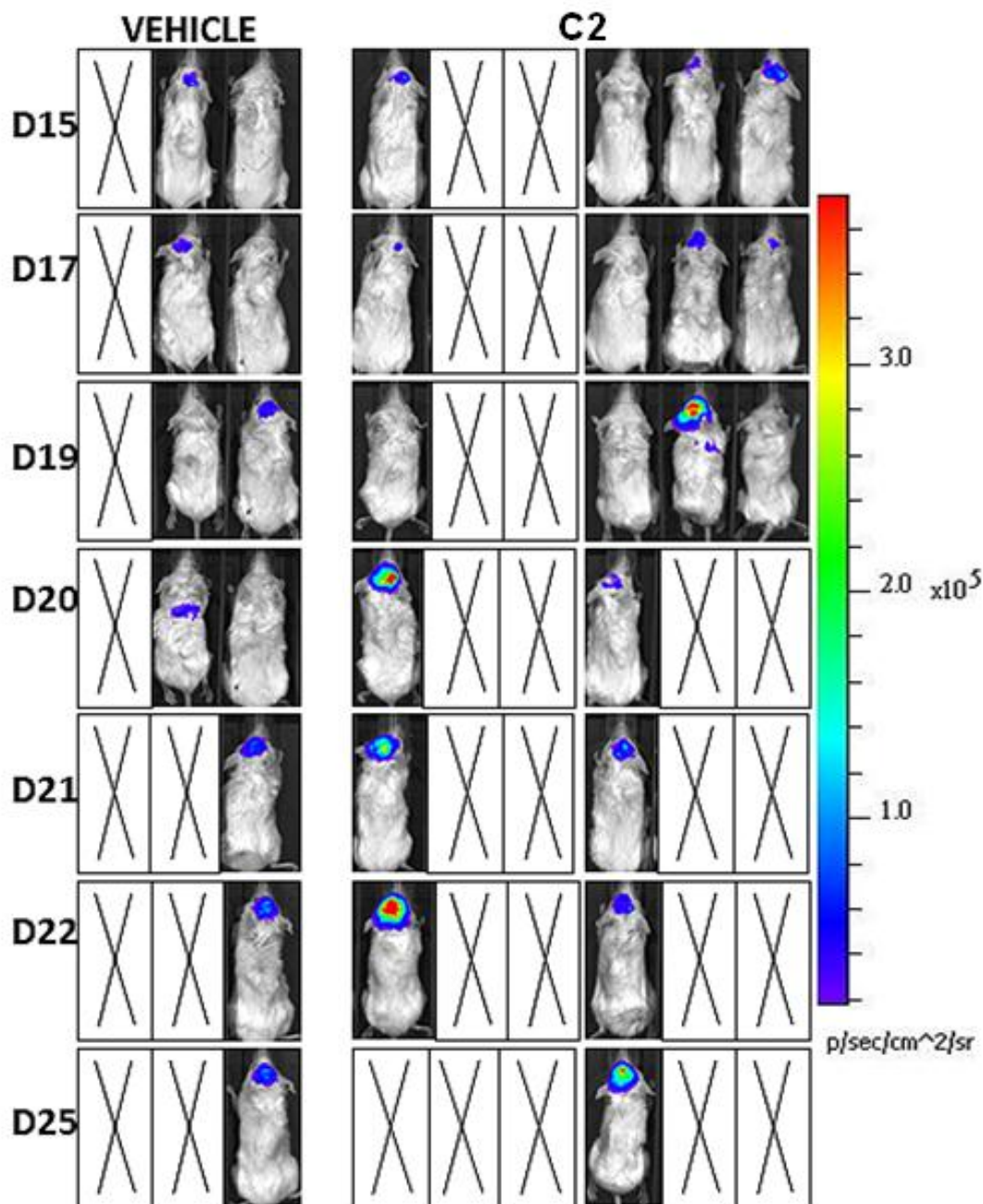
4 **SUPPLEMENTARY FIGURES AND LEGENDS:**

5  
6 **Figure S1.** Absorbance data showing the effects of the 14 validated compound on host cell  
7 viability. All validated compounds recorded absorbance levels similar to vehicle while  
8 staurosporine (Stau\*) recorded low absorbance signal, an indication of toxic effects on the host  
9 cells.

10



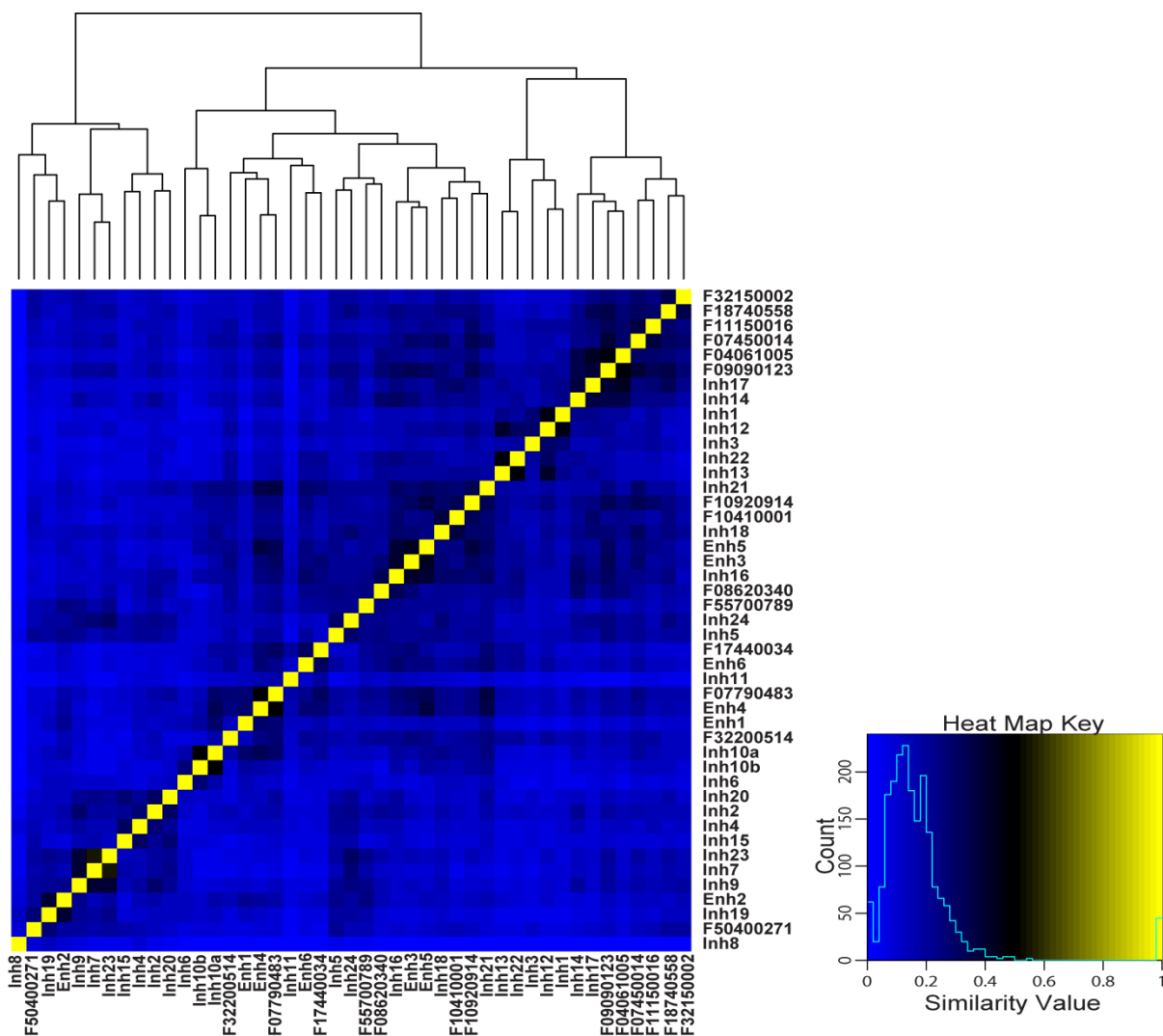
11  
 12 **Figure S2.** Bioluminescence signal data showing the effects of C1,C2, C3 and C5 on parasite  
 13 growth in mice. C2-treated mice recorded low signal during days 1-6 compared to controls,  
 14 which was significantly different on D4. B) Total flux (photons/s) data showing how each  
 15 compound affected parasite growth in mice. C2 was effective in reducing parasite growth during  
 16 days 1-6.



17

18 **Figure S3.** Dorsal signal during days 15-25 after infection with strain 5A10 and treatment with  
 19 either vehicle or C2. Despite the dramatically reduced parasite burden in C2-treated mice during  
 20 the acute phase of infection (Fig. 9A-B), all mice eventually exhibited significant signal in the  
 21 brain that was similar between vehicle and C2-treated mice.

22



**Figure S4.** Tanimoto based hierarchical clustering and heat map of the 14 identified compounds in our study and the 31 parasite invasion modulators identified in Carey et al (7). The compound dataset was clustered using the R package ChemmineR (1) using atom pair fingerprints and hclust (ward method). The cluster plot, heatmap, and heat map key were generated using the R package gplots (2). As shown in the heat map key histogram, the highest similarity value was 0.55 and 95% of the compounds had similarities less than 0.3.

## 32 Supplementary References cited:

- 33 1. **Cao, Y., A. Charisi, L. C. Cheng, T. Jiang, and T. Girke.** 2008. ChemmineR: a compound mining  
34 framework for R. *Bioinformatics* **24**:1733-1734.
- 35 2. **Gregory R. Warnes et al.** 2012. gplots: Various R programming tools for plotting data. R package  
36 2.11.0. <http://CRAN.R-project.org/package=gplots>  
37