

1 **Supplements**

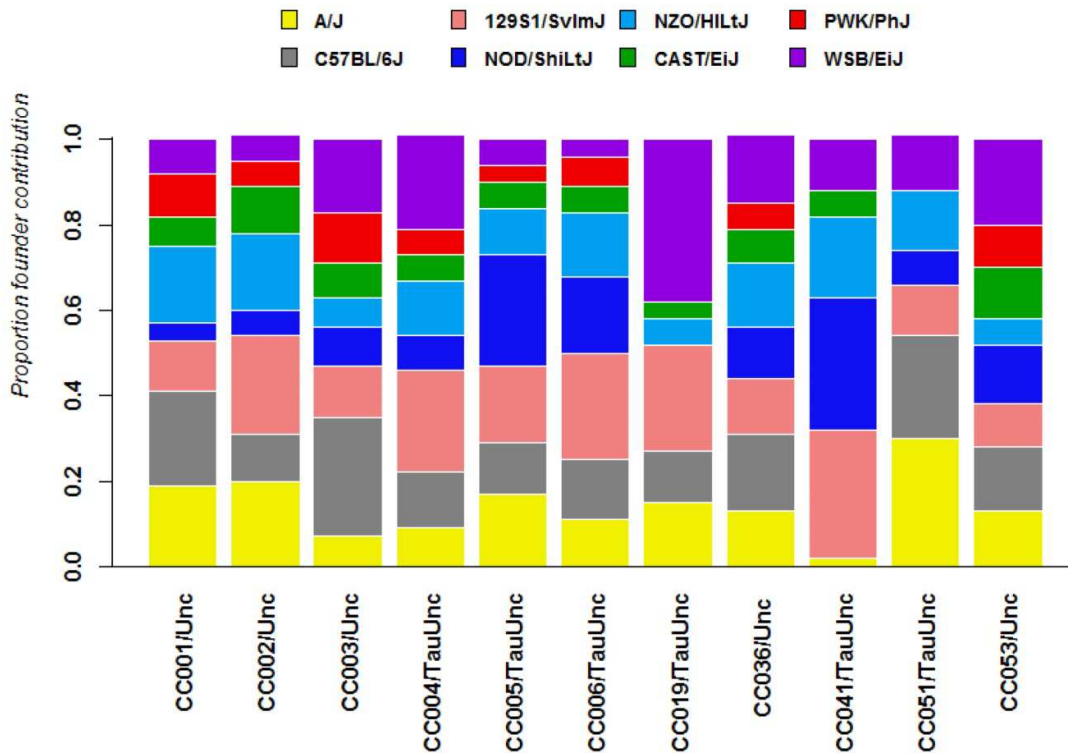
2 **Of mice and men – the host response to influenza virus infection**

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4 Schughart<sup>1,4,#</sup>

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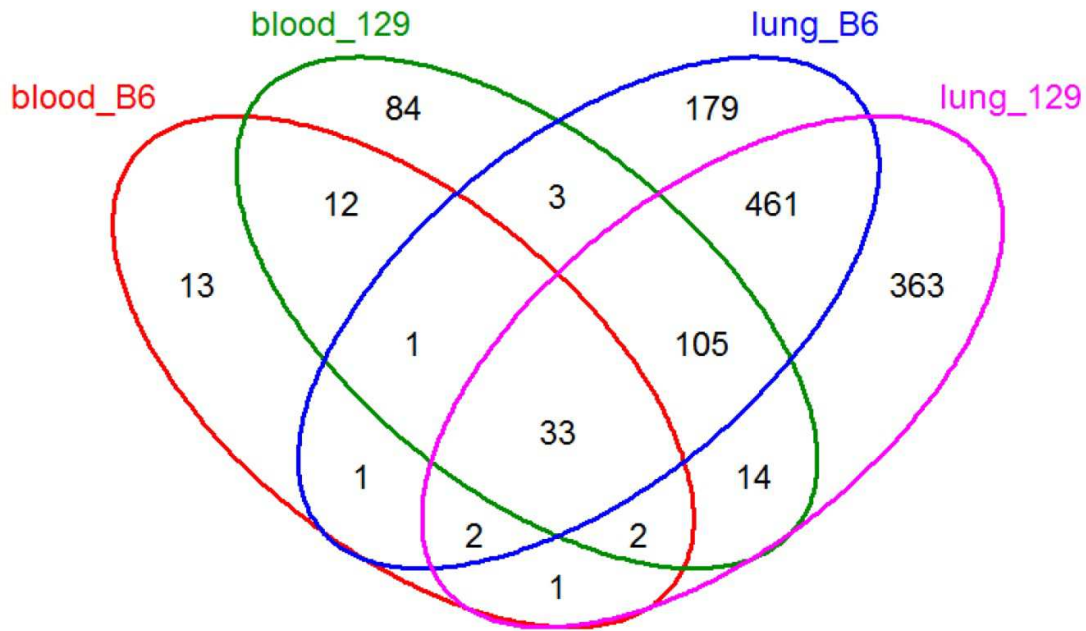
8

9 **Fig. S1. Founder contributions in eleven CC strains from this study**

10 Founder contributions for each CC strain as provided by the System Genetics Core facility at  
11 the University of North Carolina (<http://csbio.unc.edu/CCstatus/index.py?run=availableLines>);  
12 status January 2018.

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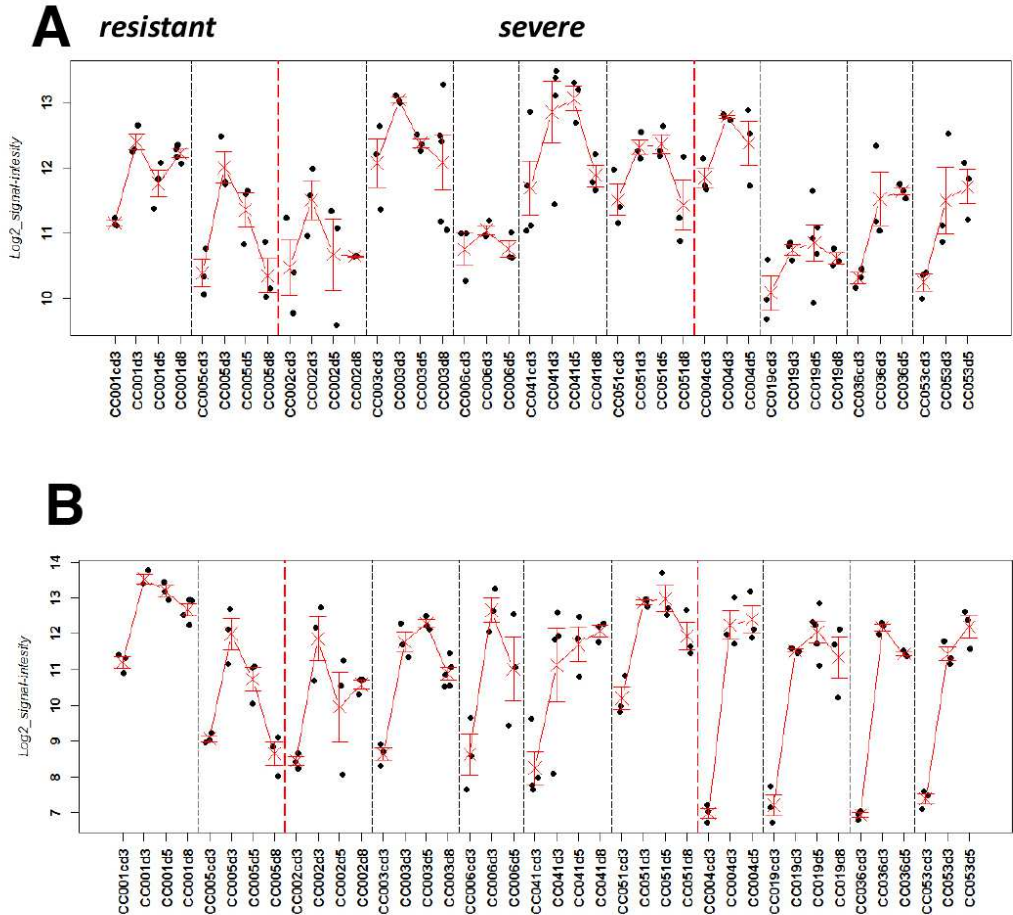
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16 **Fig. S2. VENN diagram comparing DEGs in mouse founder strains in blood and lungs**

17 DEGs in lungs and blood were determined between infected and control mouse of C57BL/6J  
18 (B6) and 129S1/SvImJ (129) CC founder strains using the data set described by (Leist et al.  
19 2016) (GSE74077). 26% of DEGs were shared in the lungs of B6 and 129 strains and 3.8 %  
20 in the blood between B6 and 129 strains. However, only 0.1 % were shared when blood of  
21 B6 was compared to lung of 129 and 0.3 % when lung of B6 was compared to blood of 129.  
22 Thus, lung and blood DEG do not show a strong overlap and, therefore, lung DEGs of mice  
23 should not be compared with blood DEGs in humans to evaluate validity of the mouse model.

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27 **Fig. S3. Expression levels of genes in CC strains over time**

28 Normalized log<sub>2</sub>-transformed relative gene expression values of (A) *Ifi27* and (B) *Irf7* in CC  
 29 mice. Dots represent values from individual mice. Crosses represent mean expression  
 30 values per group, bars represent +/- 1 SEM (standard error of mean). Mock-infected control  
 31 mice are designated 'cd3', infected mouse groups are labelled 'd3', 'd5', and 'd8'  
 32 representing the time points p.i.

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35 **Supplementary Tables**

36 **Table S1: Sample list with annotations for CC strains**

37 **Table S2: Sample list with annotations for Woods\_13**

38 **Table S3: Sample list with annotations for Zhai\_15**

39 **Table S4: Sample list with annotations for Tang\_17**

40 **Table S5: Differentially expressed probesets for comparison of CC infected resistant**  
41 **strains to mock controls**

42 **Table S6: Differentially expressed probesets for comparison of CC infected severe**  
43 **strains to mock controls**

44 **Table S7: Differentially expressed probesets for comparison of Woods\_13 infected**  
45 **versus controls**

46 **Table S8: Differentially expressed probesets for comparison of Zhai\_15 infected**  
47 **versus controls**

48 **Table S9: Differentially expressed probesets for comparison of Tang\_17 infected**  
49 **versus controls**

50 **Table S10: Differentially expressed probesets for comparison of CC infected severe**  
51 **strains to resistant strains**

52 **Table S11: Genes in different groups from VENN diagram in Figure 4A.**

53 **Table S12: Genes in different groups from VENN diagram in Figure 4B.**

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55 **References**

56 Leist SR, Pilzner C, van den Brand JM, Dengler L, Geffers R, Kuiken T, Balling R, Kollmus  
57 H, Schughart K (2016) Influenza H3N2 infection of the collaborative cross founder strains  
58 reveals highly divergent host responses and identifies a unique phenotype in CAST/EiJ mice.  
59 BMC Genomics 17, 143

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