

Figure S1. Role of S100A8/A9 in a murine model of *A. fumigatus* keratitis. C57BL/6, CD18^{-/-} or S100A9^{-/-} mice were infected with 50,000 *A. fumigatus* conidia **A**. Brightfield images of infected corneas; **B**. Opacity of infected corneas measured as integrated pixel intensity (original magnification is x 20). **C**-**D**. Neutrophil infiltration in infected corneas of C57BL/6 or S100A9^{-/-} mice by IHC for NIMP-R14 (percent positive area) (**C**) or total myeloperoxidase (MPO) by ELISA (**D**) at 24h pi. **E**-**F**. Neutrophil chemokines CXCL1 and CXCL2 measured by ELISA in corneal lysates from infected C57BL/6 or S100A9^{-/-} mice 6h pi. **G**. Corneal sections from infected S100A9^{-/-} and CD18^{-/-} mice stained with H&E or for neutrophils (NIMP-R14), S100A8 and S100A9 at 24 and 48h pi (original magnification is x400). **H**. flow cytometry of total corneal cells from 24h infected C57BL/6 or S100A9^{-/-} mice showing NIMP-R14⁺ neutrophils and S100A8 or S100A9 double staining. **I**. Total *A. fumigatus* hyphal (fungal) mass measured by Calcofluor chitin binding and fluorimetry following 18h incubation with 0.5, 1.0 or 2.0 x 10⁵ live neutrophils from C57BL/6 mice (Data presented as % of unrestricted growth in RPMI). **J**. *A. fumigatus* hyphal mass following incubation with soluble lysates of 1.0 x 10⁵ C57BL/6 neutrophils. **K**. S100A8 and S100A9 content of C57BL/6 neutrophil lysates measured by ELISA.

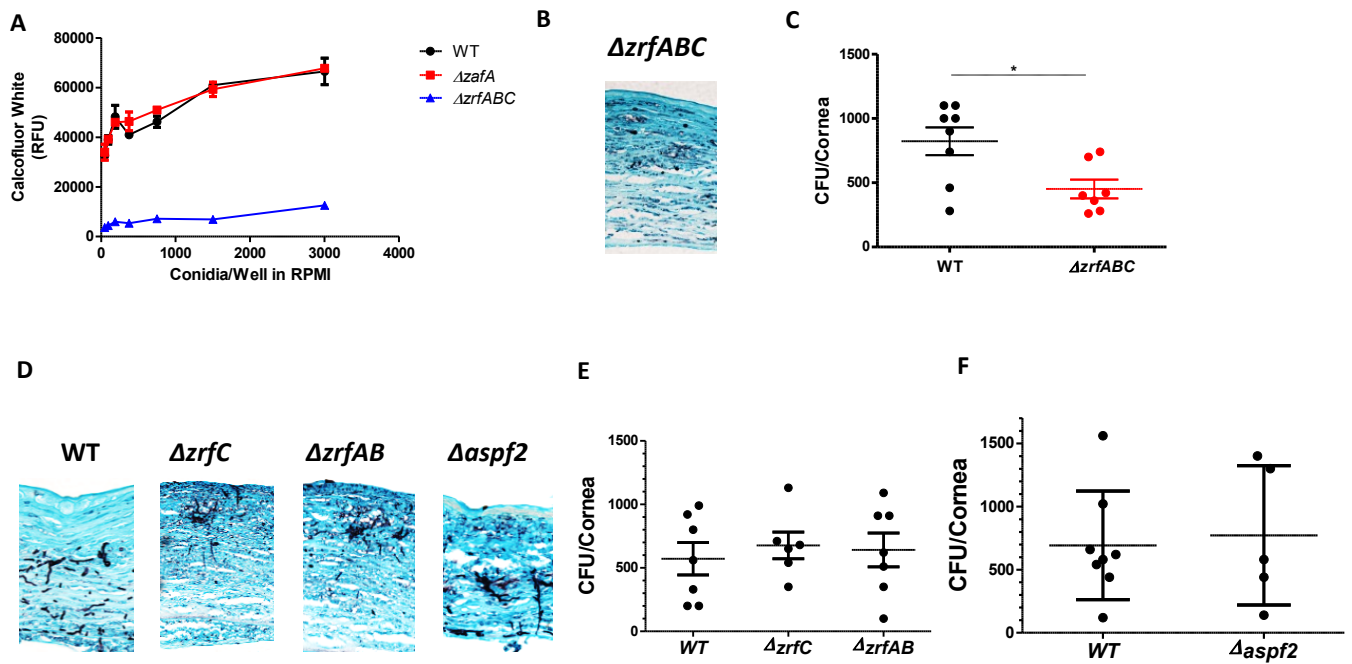
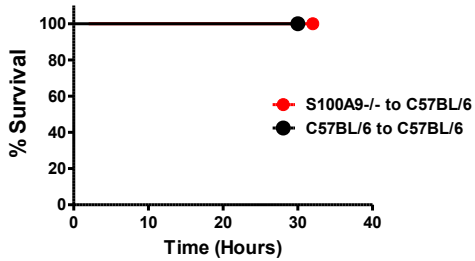


Figure S2. Growth of *A. fumigatus* zinc transporter mutants in the cornea. **A.** Growth of WT, $\Delta zafA$ and $\Delta zrfABC$ *A. fumigatus* hyphae in RPMI media. After 16h, hyphal mass was assessed by calcofluor white staining and fluorimetry. **B-C.** C57BL/6 mice were infected with WT or $\Delta zrfABC$ *A. fumigatus*, and after 48h, corneal sections were stained with GMS for fungal mass (black) (**B**) and CFU was measured in whole eye homogenates (**C**). **D-F.** Corneas of C57BL/6 mice were infected with WT, $\Delta zrfC$, $\Delta zrfAB$ or $\Delta asp2$ *A. fumigatus*, and after 48h, fungal mass was assessed by GMS (**D**), or CFU in whole eye homogenates (**E-F**). **B** and **D** original magnification is x 400.

A



B

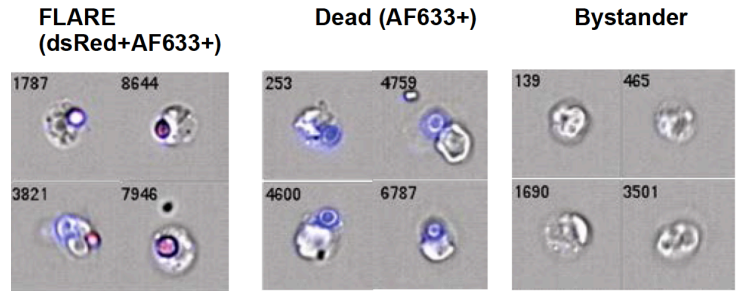


Figure S3: Role of S100A8/A9 in a lung model of *A fumigatus*. C57BL/6 or S100A9^{-/-} bone marrow chimeras (in C57BL/6) were challenged intratracheally with FLARE conidia (**A-B**). **A.** Kaplan-Meier survival plot of mice challenged with 7×10^7 FLARE conidia. Data are from a single experiment with 8 mice per group. **B.** Representative images of FLARE conidia in neutrophils from lungs of infected mice analyzed by Imagestream. Neutrophils containing live FLARE conidia, dead FLARE conidia or no conidia (bystander) are shown. Original magnification is x600.