

## Supplementary data for

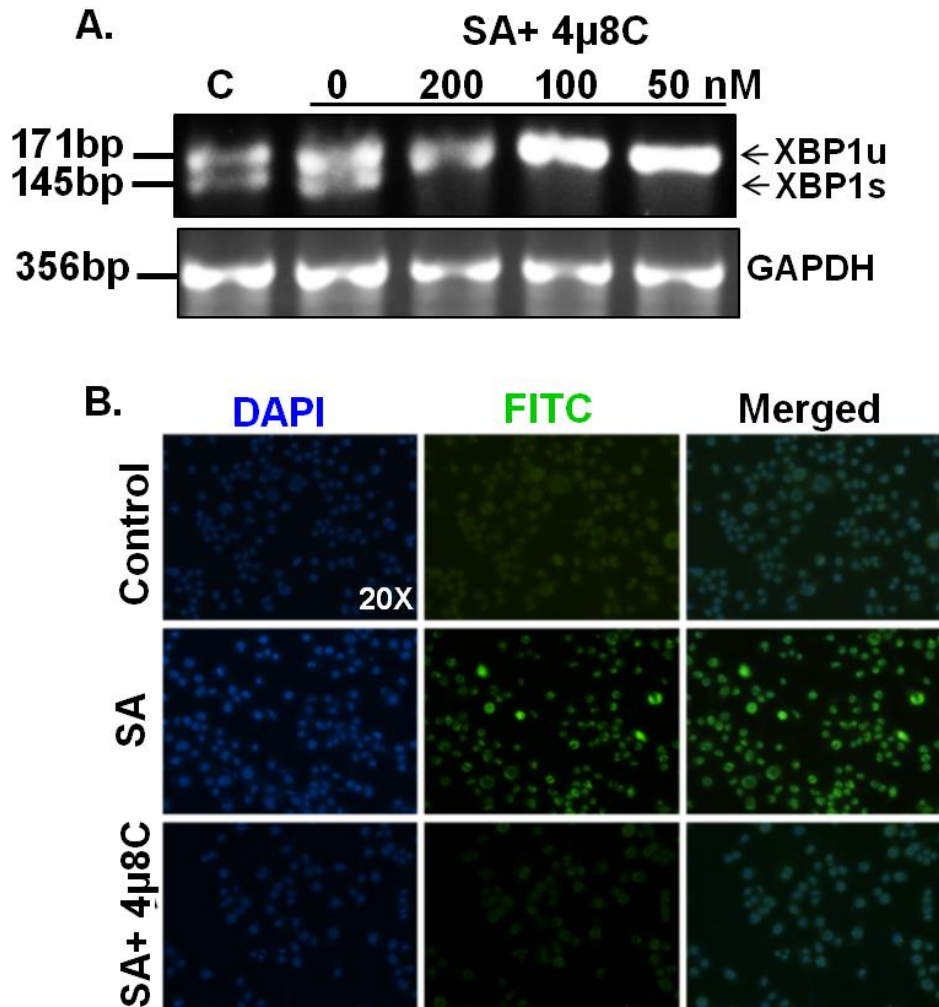
### **Toll-like receptor 2 (TLR2) engages endoplasmic reticulum stress sensor IRE1 $\alpha$ to regulate retinal innate responses in *S. aureus* endophthalmitis**

**Authors:** Ajay Kumar<sup>1,4</sup>, Pawan Kumar Singh<sup>1</sup>, Kezhong Zhang<sup>2, 3</sup>, and Ashok Kumar<sup>1,3, #</sup>

Corresponding Author: Ashok Kumar  
Department of Ophthalmology, Visual and Anatomical Sciences  
Wayne State University School of Medicine  
4717 St. Antoine, Detroit, MI 48201  
Tel: (313) 577-6213  
E-mail: [akuma@med.wayne.edu](mailto:akuma@med.wayne.edu)

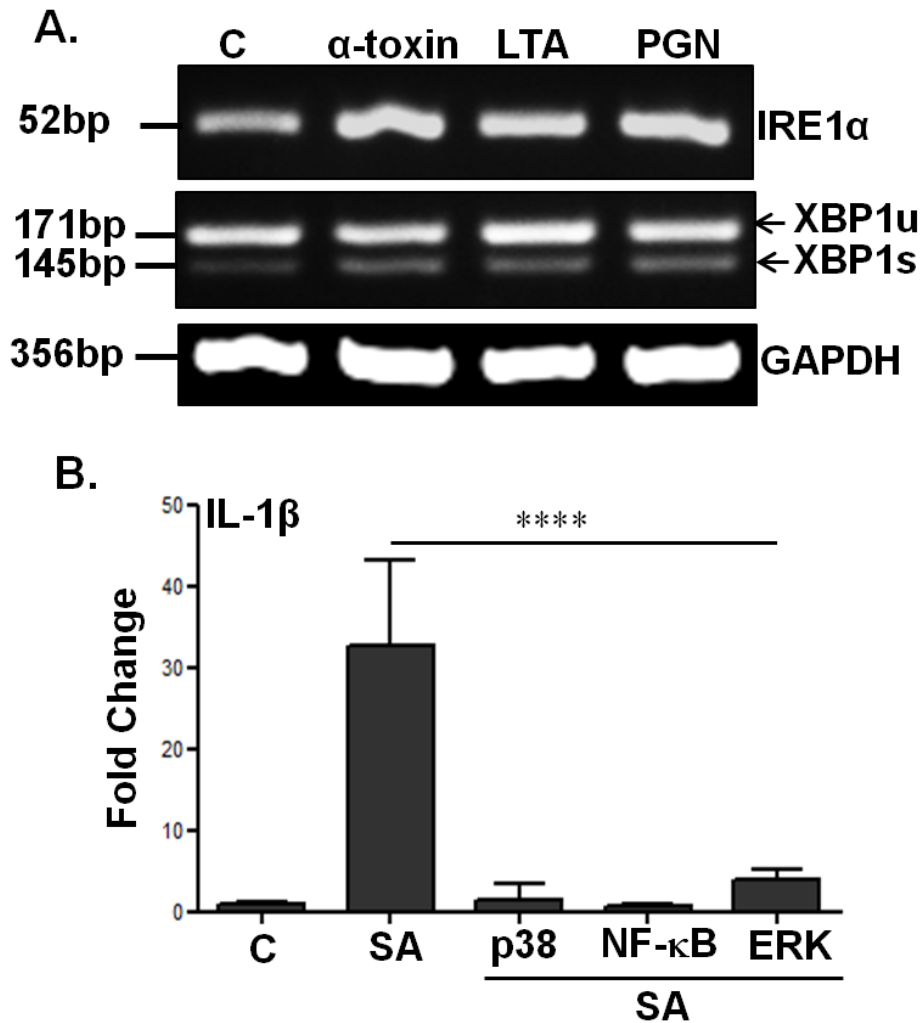
This pdf file includes supplementary figures.

## Supplementary Fig. 1



**Fig. S1. (A)** BV2 microglia cells ( $1 \times 10^6$  cells/well) were treated with different dosages of IRE1 inhibitor 4 $\mu$ 8C (0, 50, 100, 200 nM) 1h before *S. aureus* challenge. Eight hour following infection cells were harvested for RNA isolation and subjected to PCR for XBP1 (XBP1u: Unspliced XBP1; XBP1s: spliced XBP1) and GAPDH genes. **(B)** BV2 cells were challenged with 4 $\mu$ 8C (100nM) 1h before *S. aureus* challenge for 8h. Following incubation, cells were fixed and immunostained for pIRE1 $\alpha$ .

## Supplementary Fig. 2



**Fig. S2. (A)** BV2 microglia cells ( $1 \times 10^6$  cells/well) were challenged with different *Staphylococcal* toxins/ cell wall components [ $\alpha$ -toxin, Lipoteichoic acid (LTA), and peptidoglycan (PGN)] ( $10 \mu\text{g/ml}$ ) for 8h. Control and treated cells were harvested for RNA isolation and subjected to PCR for IRE1 $\alpha$ , XBP1 (XBP1u: Unspliced XBP1; XBP1s: spliced XBP1) and GAPDH genes. **(B)** BV2 cells were pretreated with p38, NF- $\kappa$ B and ERK inhibitors followed by infection with *S. aureus*. Eight hours following infection cells were harvested for RNA isolation and subjected to qPCR for IL-1 $\beta$  mRNA expression. ANOVA; \*\*\*\*,  $P < 0.0001$