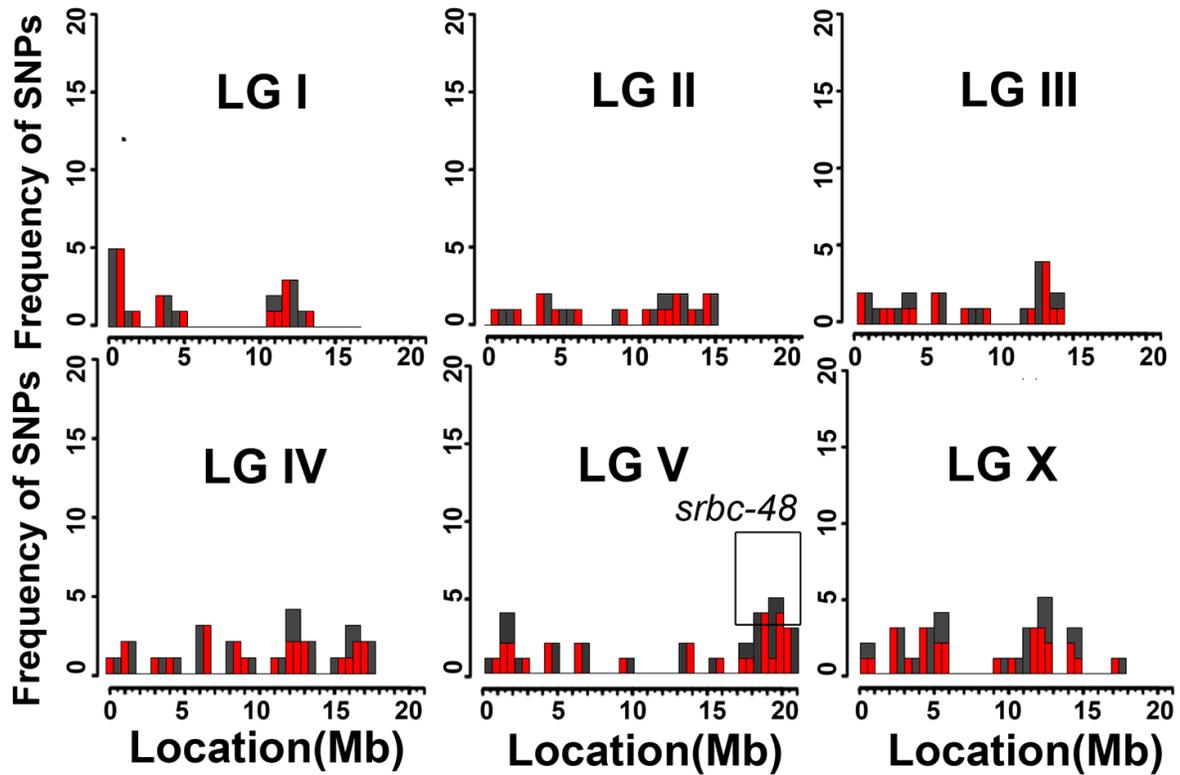


**Cell Reports, Volume 31**

**Supplemental Information**

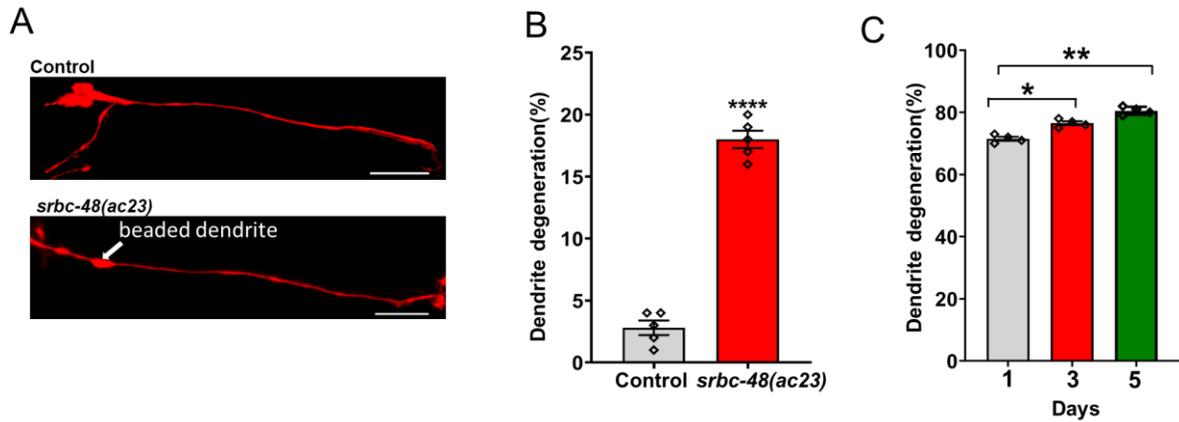
**G-Protein-Coupled Receptor SRBC-48  
Protects against Dendrite Degeneration  
and Reduced Longevity Due to Infection**

**Supender Kaur and Alejandro Aballay**



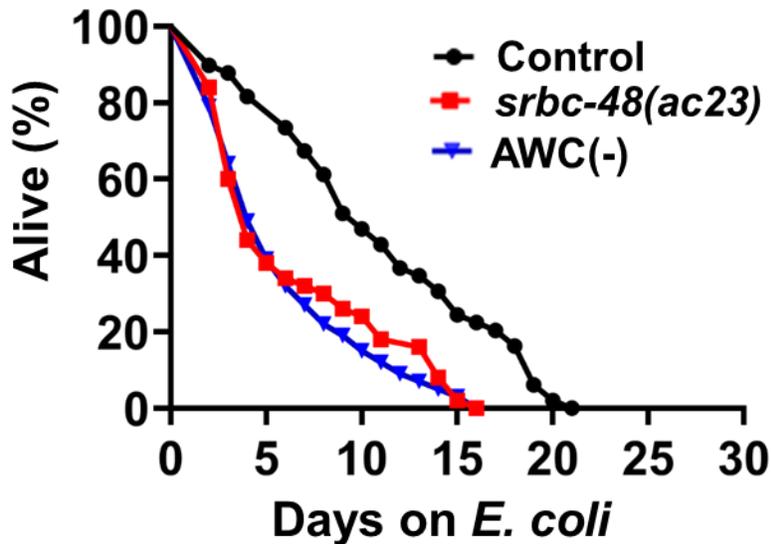
**Figure S1. Linkage maps of single nucleotide polymorphisms (SNPs) for the mutant AY-23 showed the linkage in the V chromosome.**

Related to Figures 2A and 2B.



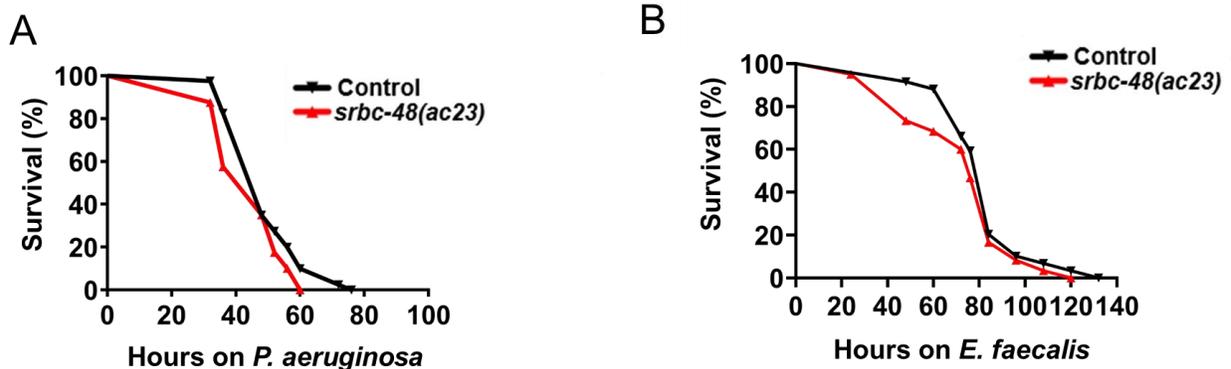
**Figure S2. Early infection can lead to dendrite degeneration later in life in *srbc-48(ac23)* animals.**

(A) Representative photomicrographs of control and *srbc-48(ac23)* animals exposed to *P. aeruginosa* for 12 hours. The scale bars represent 20  $\mu\text{m}$ . (B) Quantification of dendrite degeneration in control and *srbc-48(ac23)* animals (N=5, animals per condition=20). The black symbols represent individual experiments. Control vs. *srbc-48(ac23)* ( $p < 0.0001$ ) via t-test. (C) Quantification of dendrite degeneration at 1, 3 and 5 days in *srbc-48(ac23)* animals post-infection with *P. aeruginosa* for 24 hours (independent replicates N=4, animals per condition=20). The black symbols represent individual data points. 1 day vs. 3 day ( $p < 0.05$ ), 1 day vs 5 day ( $p < 0.01$ ). Related to Figures 2A, 2B, 5C, and 5D.



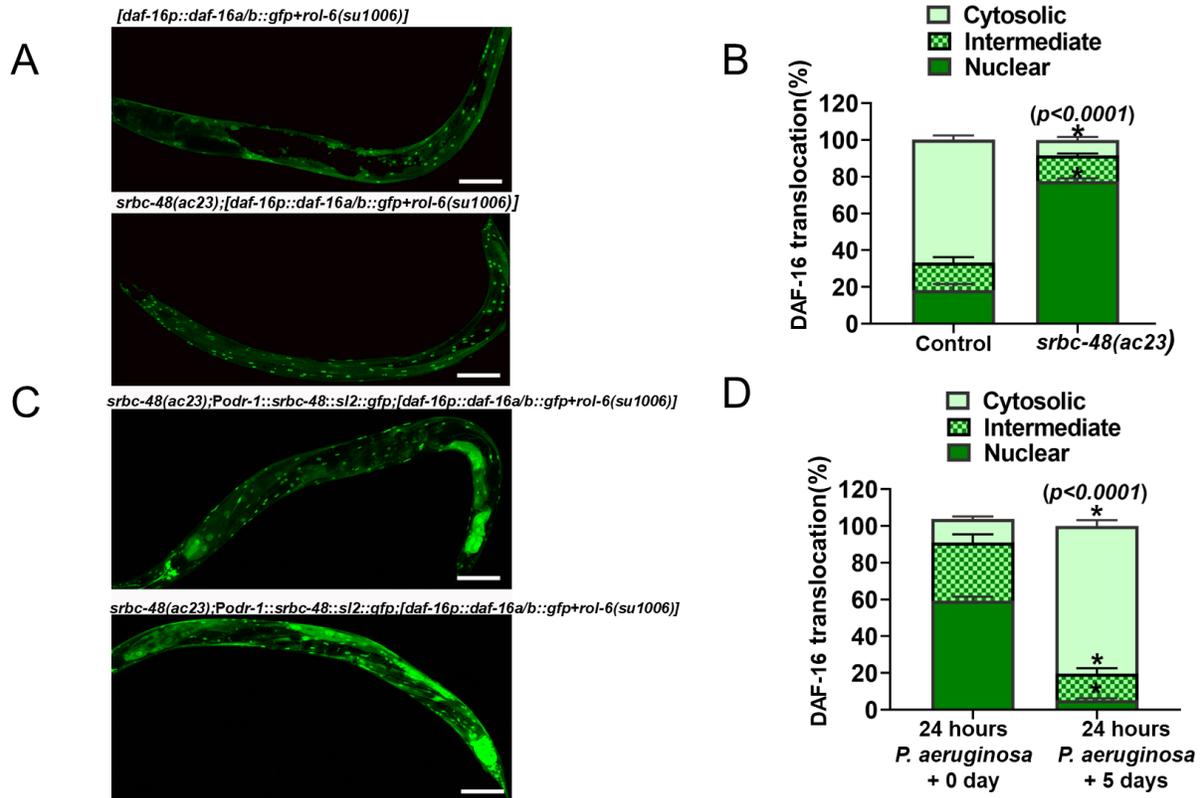
**Figure S3. AWC neurons control the lifespan of the animals.**

Representative lifespan plots after 24 hours of *P. aeruginosa* exposure in control, *srbc-48(ac23)*, and AWC ablated animals (N=3, animals per condition=100). Control vs. *srbc-48(ac23)* ( $p < 0.0001$ ), Control vs. AWC(-) ( $p < 0.0001$ ), *srbc-48(ac23)* vs. AWC(-) (n.s.). Related to Figure 5D.



**Figure S4. *srbc-48(ac23)* animals are not susceptible to pathogen-mediated killing**

(A) Representative survival plot of control and *srbc-48(ac23)* animals on full lawns of *P. aeruginosa* (N=3, animals per condition=20), Control vs. *srbc-48(ac23)* (n.s.). (B) Representative survival plot of control and *srbc-48(ac23)* animals on full lawns of *Enterococcus faecalis* (N=3, animals per condition=20) Control vs. *srbc-48(ac23)* (n.s.). Related to Figures 2A, 2B, 2D, and 5C.



**Figure S5. DAF-16 nuclear localization exhibited by *srbc-48(ac23)* animals is irreversible.**

(A) Representative photomicrographs of DAF-16::GFP nuclear localization in control [*daf-16p::daf-16a/b::gfp+rol-6(su1006)*] and *srbc-48(ac23);[daf-16p::daf-16a/b::gfp+rol-6(su1006)]* animals 10 days after 24 hour exposure to *P. aeruginosa*. The scale bars represent 100  $\mu$ m. (B) Quantification of DAF-16 nuclear localization in control [*daf-16p::daf-16a/b::gfp+rol-6(su1006)*] and *srbc-48(ac23);[daf-16p::daf-16a/b::gfp+rol-6(su1006)]* animals 10 days after 24 hour exposure to *P. aeruginosa*. Nuclear translocation of control vs. *srbc-48(ac23)* ( $p < 0.0001$ ). (C) Representative photomicrographs of DAF-16::GFP nuclear localization in *srbc-48(ac23);Podr-1::srbc-48::sl2::gfp*; [*daf-16p::daf-16a/b::gfp+rol-6(su1006)*] after 24 hour exposure to *P. aeruginosa* (upper panel) and 5 days after 24 hour exposure to *P. aeruginosa* (bottom panel). The scale bars represent 100  $\mu$ m. (D) Quantification of DAF-16 nuclear localization in *srbc-48(ac23);Podr-1::srbc-48::sl2::gfp*; [*daf-16p::daf-16a/b::gfp+rol-6(su1006)*] after 24 hour exposure to *P. aeruginosa* and 5 days after 24 hour exposure to *P. aeruginosa*. Nuclear translocation immediately after 24-hour exposure to *P. aeruginosa* vs. 5 days after 24-hour exposure to *P. aeruginosa* ( $p < 0.0001$ ). All the experiments were repeated 3 times and 20 animals were used for each condition, and one-way ANOVA was used. Related to Figures 7A, 7B, and 5D.