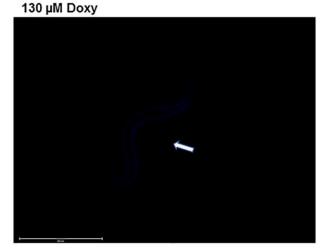
### **SUPPLEMENTARY FIGURES**

### **Doxycycline decreases Lipofuscin content**







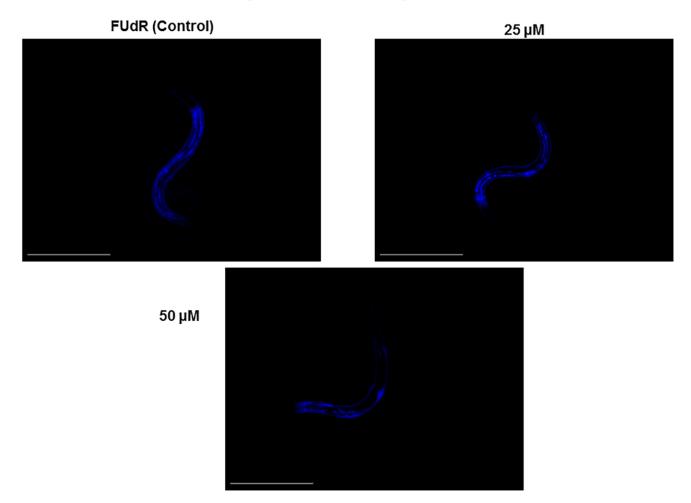






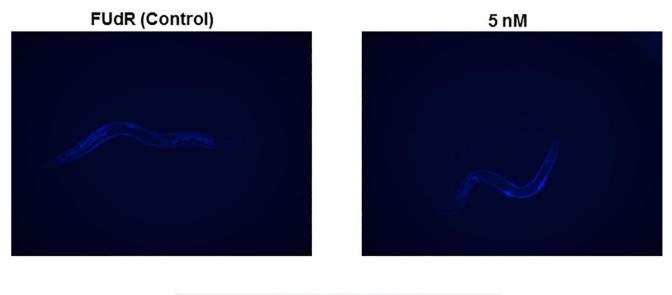
Supplementary Figure 1. Doxycycline decreases lipofuscin content in adults (13 days from young adult stage). A representative image of lipofuscin content evaluated by autofluorescence. DAPI filter set was used. Left half of the figure: top panel, FUdR control; lower panel, treatment with doxycycline at the concentration of 13  $\mu$ M. Right half of the figure: top panel, treatment with doxycycline at the concentration of 13  $\mu$ M. Right half of the figure: top panel, treatment with doxycycline at the concentration of 13  $\mu$ M. Right half of the figure: top panel, treatment with doxycycline at the concentration of 130  $\mu$ M; lower photograph as the one above but in brightfield. The arrow indicates the worm. Magnification 10X. Scale bar: 500  $\mu$ m.

## Azithromycin decreases Lipofuscin content



Supplementary Figure 2. Azithromycin decreases lipofuscin content in adults (13 days from young adult stage). Representative image of lipofuscin content evaluated by autofluorescence of the above pigment. DAPI filter set was used. Clockwise: FUdR control; *C. elegans* treated with azithromycin at the concentration of 25  $\mu$ M; *C. elegans* treated with azithromycin at the concentration of 50  $\mu$ M. Magnification 10X. Scale bar: 500  $\mu$ m.

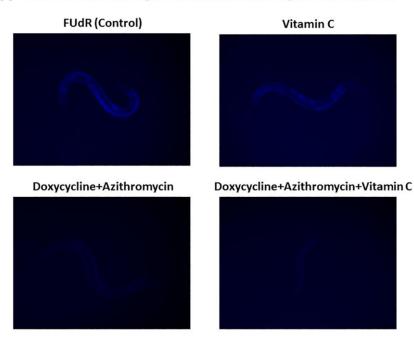
# **DPI Decreases Lipofuscin content**



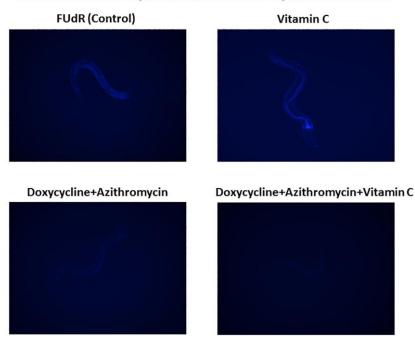


Supplementary Figure 3. DPI decreases lipofuscin content in adults (13 days from young adult stage). Representative image of lipofuscin content evaluated by autofluorescence of the above pigment. DAPI filter set was used. Clockwise: FUdR control; C. elegans treated with DPI at the concentration of 5 nM; C. elegans treated with DPI at the concentration 10X. Scale bar: 500  $\mu$ m.

#### A Dual Combo and Triple Combo Decrease Lipofuscin Content



**B** Dual Combo and Triple Combo Decrease Lipofuscin Content



**Supplementary Figure 4. Doxycycline/Azithromycin combination decreases lipofuscin content in adults.** Representative images of lipofuscin content evaluated by autofluorescence of the above pigment. DAPI filter was used. (A) Evaluation at 8 days from young adult stage. (B) evaluation at 13 days from young adult stage. Clockwise: untreated control; *C. elegans* treated with vitamin C alone; *C. elegans* treated with doxycycline plus azithromycin plus vitamin C; *C. elegans* treated with doxycycline plus azithromycin. Magnification 10X. Scale bar: 500 µm.