Electronic Supplementary Material (ESI) for Environmental Science: Nano.

Using nanoselenium to combat Minamata Disease in rats: The regulation of gut microbes

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Supplemental File

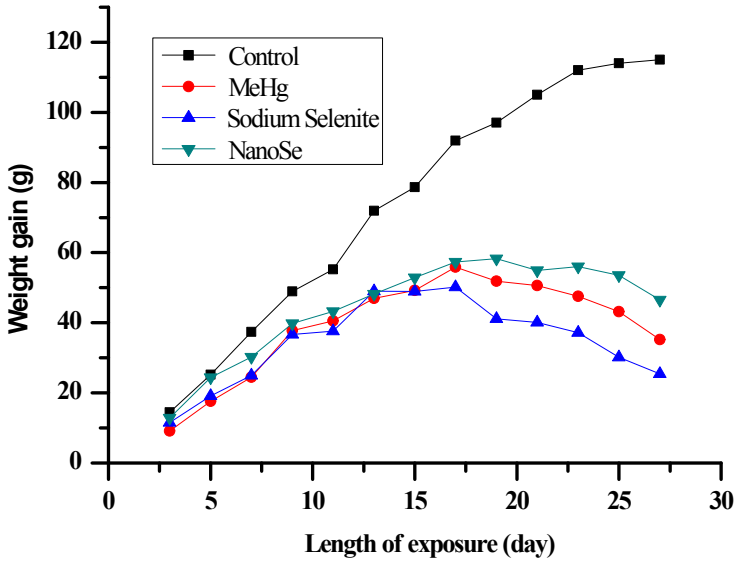

Figure. S1 Changes in body weight of rats during exposure

Control: the control group, MeHg: the MeHg-poisoned group, Sodium Selenite: the MeHg-poisoned+sodium selenite group and NanoSe: the MeHg-poisoned+nanoSe group

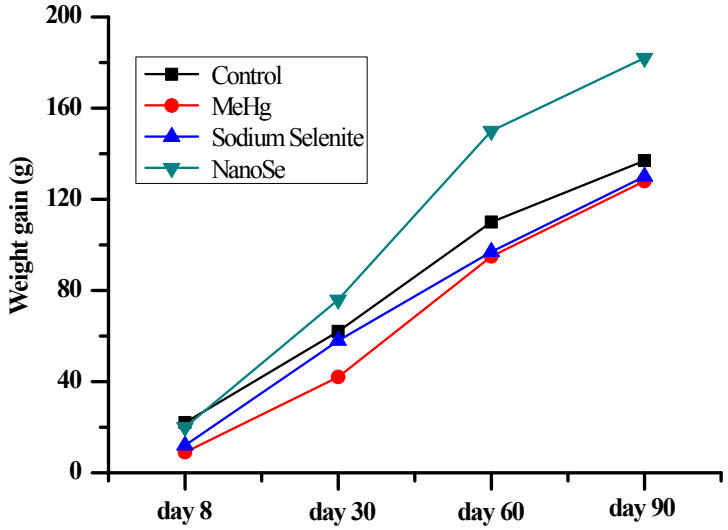

Figure. S2 Weight change after Se treatment

Control: the control group, MeHg: the MeHg-poisoned group, Sodium Selenite: the MeHg-poisoned+sodium selenite group and NanoSe: the MeHg-poisoned+nanoSe group

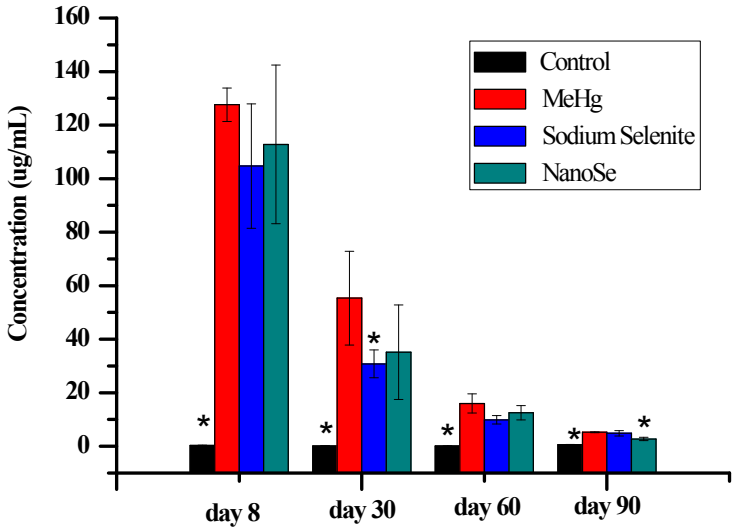

Figure. S3 Total mercury content in red blood cells

Control: the control group, MeHg: the MeHg-poisoned group, Sodium Selenite: the MeHg-poisoned+sodium selenite group and NanoSe: the MeHg-poisoned+nanoSe group

* Indicates that compared with the MeHg-poisoned group, P＜0.05

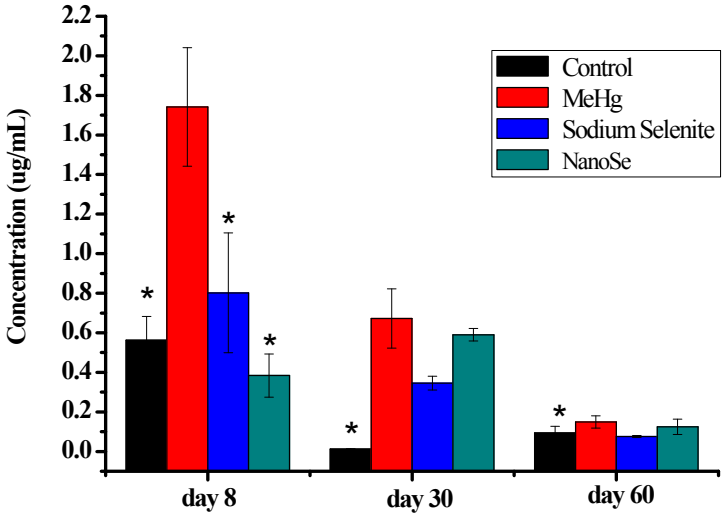

Figure. S4 Total mercury content in serum

Control: the control group, MeHg: the MeHg-poisoned group, Sodium Selenite: the MeHg-poisoned+sodium selenite group and NanoSe: the MeHg-poisoned+nanoSe group

* Indicates that compared with the MeHg-poisoned group, P＜0.05

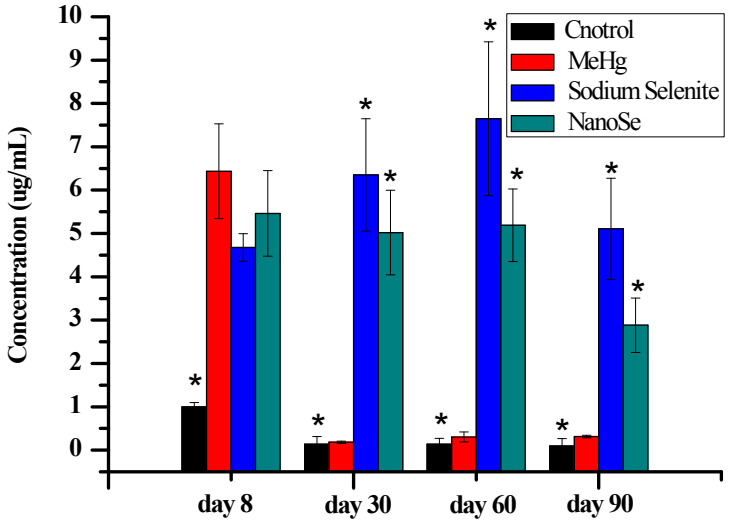

Figure. S5 Selenium content in red blood cells

Control: the control group, MeHg: the MeHg-poisoned group, Sodium Selenite: the MeHg-poisoned+sodium selenite group and NanoSe: the MeHg-poisoned+nanoSe group

* Indicates that compared with the MeHg-poisoned group, P＜0.05

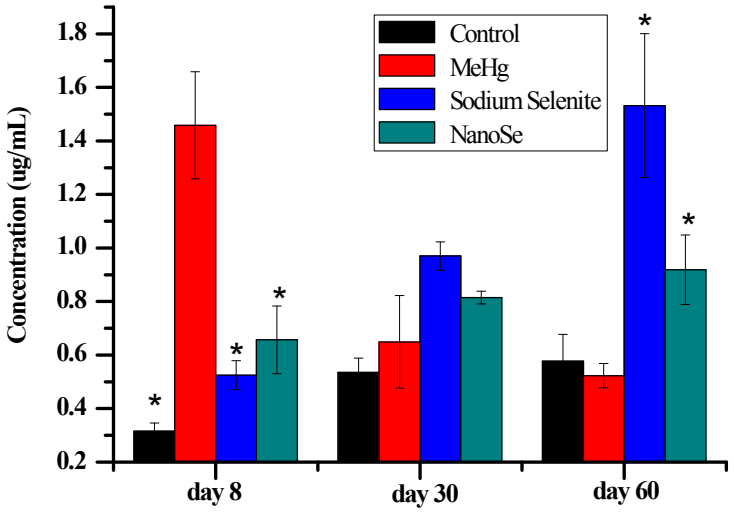

Figure. S6 Serum selenium content

Control: the control group, MeHg: the MeHg-poisoned group, Sodium Selenite: the MeHg-poisoned+sodium selenite group and NanoSe: the MeHg-poisoned+nanoSe group

* Indicates that compared with the MeHg-poisoned group, P＜0.05

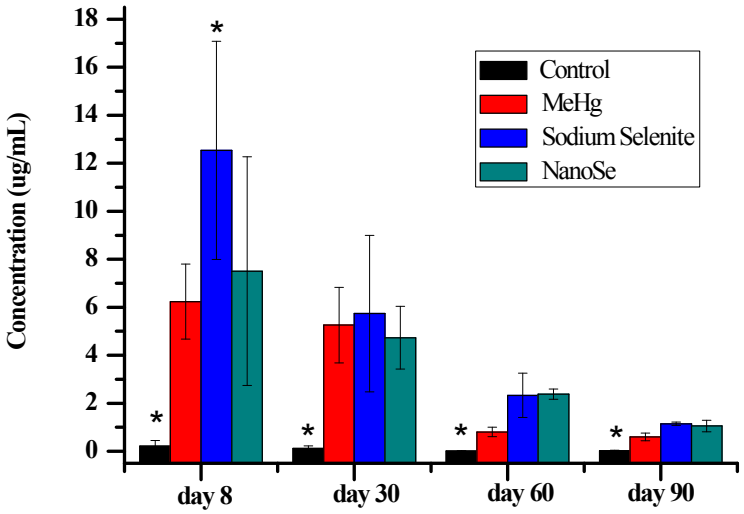

Figure. S7 Total mercury content in the brain

Control: the control group, MeHg: the MeHg-poisoned group, Sodium Selenite: the MeHg-poisoned+sodium selenite group and NanoSe: the MeHg-poisoned+nanoSe group

* Indicates that compared with the MeHg-poisoned group, P＜0.05

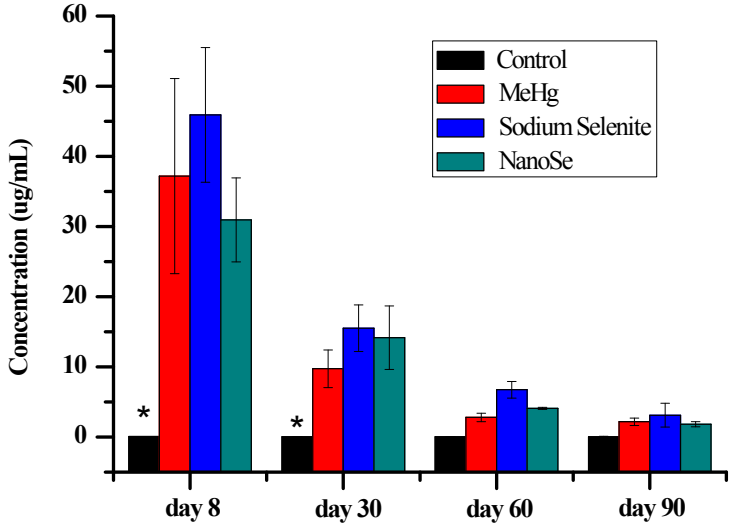

Figure. S8 Total mercury content in liver

Control: the control group, MeHg: the MeHg-poisoned group, Sodium Selenite: the MeHg-poisoned+sodium selenite group and NanoSe: the MeHg-poisoned+nanoSe group

* Indicates that compared with the MeHg-poisoned group, P＜0.05

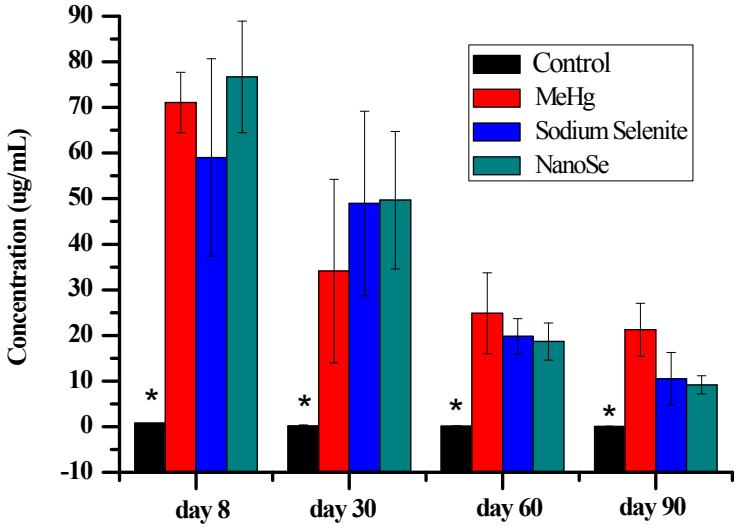

Figure. S9 Total mercury content in the kidney

Control: the control group, MeHg: the MeHg-poisoned group, Sodium Selenite: the MeHg-poisoned+sodium selenite group and NanoSe: the MeHg-poisoned+nanoSe group

* Indicates that compared with the MeHg-poisoned group, P＜0.05

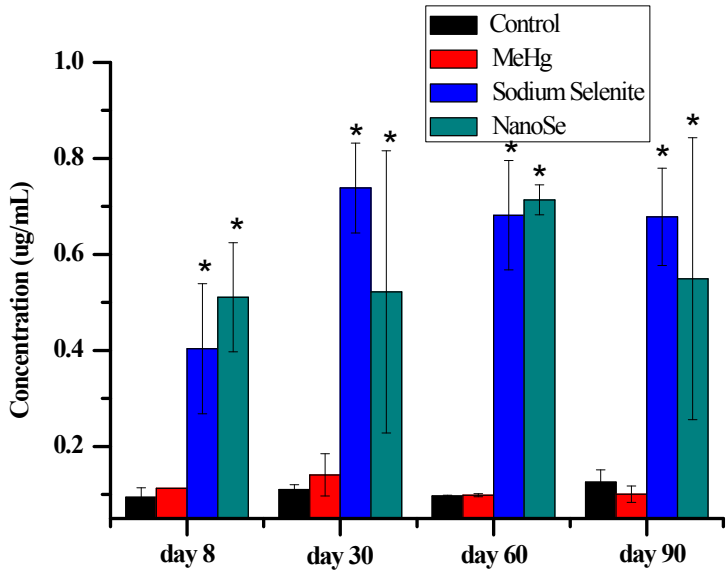

Figure. S10 Total selenium content in the brain

Control: the control group, MeHg: the MeHg-poisoned group, Sodium Selenite: the MeHg-poisoned+sodium selenite group and NanoSe: the MeHg-poisoned+nanoSe group

* Indicates that compared with the MeHg-poisoned group, P＜0.05

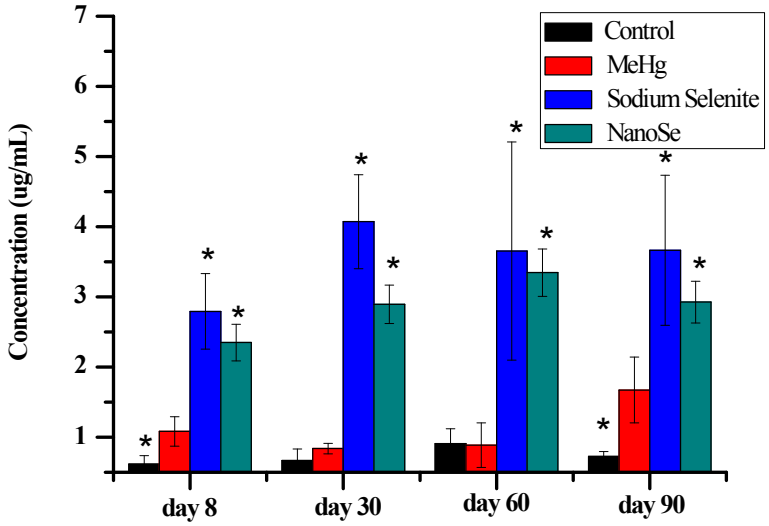

Figure. S11 Total selenium content in liver

Control: the control group, MeHg: the MeHg-poisoned group, Sodium Selenite: the MeHg-poisoned+sodium selenite group and NanoSe: the MeHg-poisoned+nanoSe group

* Indicates that compared with the MeHg-poisoned group, P＜0.05

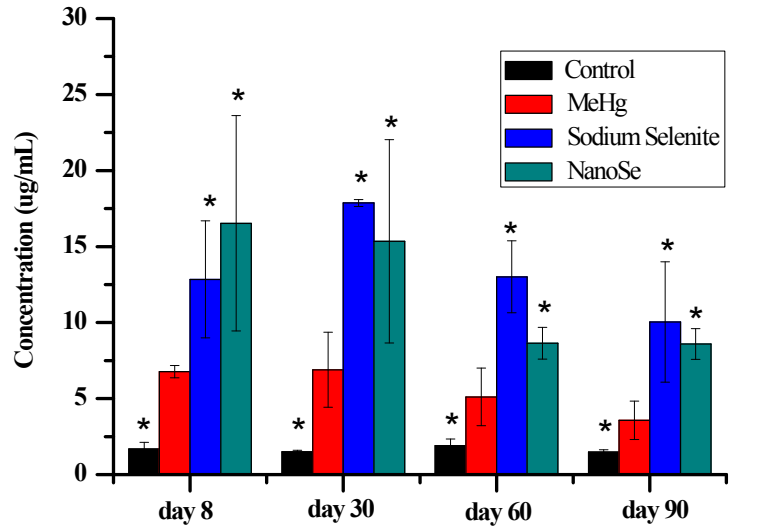

Figure. S12 Total selenium content in kidney

Control: the control group, MeHg: the MeHg-poisoned group, Sodium Selenite: the MeHg-poisoned+sodium selenite group and NanoSe: the MeHg-poisoned+nanoSe group

* Indicates that compared with the MeHg-poisoned group, P＜0.05

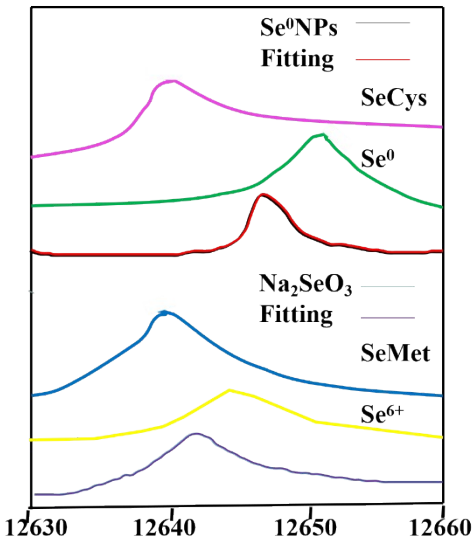

Figure. S13 The chemical forms of Se in the small intestine walls studied by XANES. Se was mainly in the form of SeCys and Se^0 in the Se^0NPs group while it was SeMet and Se^{6+} in the Na_2SeO_3 group.