Supplemental materials

Oral Administration of Rutile and Anatase TiO2 Nanoparticles Shifts Mouse Gut Microbiota Structure

Juan Li¹, Shengmei Yang¹, Runhong Lei¹, Weihong Gu¹, Yanxia Qin¹, Sihan Ma¹,

Kui Chen¹, Yanan Chang¹, Xue Bai¹, Shibo Xia¹, Chongming Wu^{*,2}, Gengmei Xing^{*,1}

- CAS Key Laboratory for Biomedical Effects of Nanomaterial & Nanosafety, Institute of High Energy Physics, Chinese Academy of Science (CAS), Beijing 100049, China
- Pharmacology and Toxicology Research Center, Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences & Peking Union Medical College, Beijing 100193, China

^{*} Corresponding authors: Corresponding authors: E-mails: cmwu@implad.ac.cn (W.C.) and xinggm@ihep.ac.cn (X.G.); Tel/Fax: +86 10 88236456.



Figure S1. The changes of mice weight in the experiments.



Figure S2. H&E staining of liver slices of mice in anatase and rutile exposed groups and the control group. The slides were 4, 10, 20 and 40 times magnified to observe by the microscopy, respectively.



Figure S3. H&E staining of spleen slices of mice in anatase and rutile exposed groups and the control group. The slides were 4, 10, 20 and 40 times magnified to observe by the microscopy, respectively.



Figure S4. H&E staining of kidney slices of mice in anatase and rutile exposed groups and the control group. The slides were 4, 10, 20 and 40 times magnified to observe by the microscopy, respectively.



Figure S5. H&E staining of brain slices of mice in anatase and rutile exposed groups and the control group. The slides were 4, 10, 20 and 40 times magnified to observe by the microscopy, respectively.



Figure S6. H&E staining of lung slices of mice in anatase and rutile exposed groups and the control group. The slides were 4, 10, 20 and 40 times magnified to observe by the microscopy, respectively.



Figure S7. H&E staining of small intestine slices of mice in anatase and rutile exposed groups and the control group. The slides were 4, 10, 20 and 40 times magnified to observe by the microscopy, respectively.



Figure S8. Diversity analysis by Chao1, Shannon and Simpson diversity indexes of the gut microbiota of mice in anatase and rutile exposed groups and the control group during the 28-day treatment period. (a) Chao1; (b) Shannon index; (c) Simpson index.