Beta diversity analyses of the two publically available datasets were performed using PCA on ILR-transformed relative abundance data at the species level. (A) Exposure to high-LET radiation (600 MeV/n $^{16}$O) at various doses altered the community structure of the gut microbiome in mice 10 or 30 days after the exposure (n = 10 in each group) [7]. Significant effects of time (P = 0.018, PERMANOVA) and dose (P < 0.0001, PERMANOVA) were observed. (B) Exposing rats to low-LET radiation ($^{137}$Cs fractionated radiation at 0.375 Gy every other day, totaling at 3 Gy) induced a shift in the gut microbiome community structure (P = 0.0029, PERMANOVA) [5]. A diet-by-radiation interaction effect was also observed (P = 0.033, PERMANOVA). Sample sizes: sham/Normal-Fe, n = 9; irradiated/Normal-Fe, n = 8; sham/High-Fe, n = 7; irradiated/High-Fe, n = 8.