

Supplementary Table 1 Changes in the dominant gut microbiota in the small intestine and large intestine of mice in the N, Met250, MP400, and MP900 groups compared to the C group

Groups	Microbiota findings			
	No significant change	Increase	Decrease	
Small intestine		↑ <i>Bacteroidetes</i> , ↑ <i>Bacteroidales_S24-7</i> , ↑ <i>Bacteroidales</i> , ↓ <i>Bacteroidetes</i> , ↑ <i>Bacilli</i> , ↓ <i>Bacteroidales_S24-7</i> , ↓ <i>Bacteroidales</i>	↓ <i>Actinobacteria</i> , ↓ <i>Firmicutes</i> , ↓ <i>Bacilli</i> , ↓ <i>Nocardiaceae</i> , ↓ <i>Corynebacteriales</i> , ↓ <i>Lactobacillales</i> , ↓ <i>Rhodococcus</i> ↓ <i>Actinobacteria</i> , ↓ <i>Nocardiaceae</i> , ↓ <i>Corynebacteriales</i> , ↓ <i>Lactobacillales</i> , ↓ <i>Rhodococcus</i>	
		MP400		
		MP900	~ <i>Firmicutes</i>	
		Met250		
Large intestine		↑ <i>Bacteroidetes</i> , ↑ <i>Bacteroidales_S24-7</i> , ↑ <i>Bacteroidales</i> , ↑ <i>Bacteroidetes</i> , ↑ <i>Bacteroidales_S24-7</i> , ↑ <i>Bacteroidales</i>	↓ <i>Actinobacteria</i> , ↓ <i>Firmicutes</i> , ↓ <i>Bacilli</i> , ↓ <i>Nocardiaceae</i> , ↓ <i>Corynebacteriales</i> , ↓ <i>Lactobacillales</i> , ↓ <i>Rhodococcus</i> ↓ <i>Actinobacteria</i> , ↓ <i>Firmicutes</i> , ↓ <i>Bacilli</i> , ↓ <i>Nocardiaceae</i> , ↓ <i>Corynebacteriales</i> , ↓ <i>Lactobacillales</i> , ↓ <i>Rhodococcus</i>	
		MP400	~ <i>Clostridia</i> , ~ <i>Bacteroidales_S24-7</i>	↓ <i>Firmicutes</i> , ↓ <i>Bacilli</i> , ↓ <i>Lactobacillaceae</i> , ↓ <i>Lactobacillales</i> , ↓ <i>Lactobacillus</i> , ↓ <i>Ruminiclostridium_5</i>
	MP900		↓ <i>Bacteroidetes</i> , ↑ <i>Bacteroidia</i> , ↓ <i>Bacteroidales_S24-7</i> , ↓ <i>Bacteroidales</i> , ↑ <i>Alloprevotella</i> ↓ <i>Firmicutes</i> , ↓ <i>Bacilli</i> , ↓ <i>Clostridia</i> , ↓ <i>Lactobacillaceae</i> , ↓ <i>Lactobacillales</i> , ↓ <i>Lactobacillus</i> , ↓ <i>Ruminiclostridium_5</i>	
	Met250	~ <i>Bacteroidales_S24-7</i>	↑ <i>Bacteroidetes</i> , ↑ <i>Bacteroidia</i> , ↑ <i>Bacteroidales</i> , ↑ <i>Alloprevotella</i> ↓ <i>Firmicutes</i> , ↓ <i>Bacilli</i> , ↓ <i>Clostridia</i> , ↓ <i>Lactobacillaceae</i> , <i>Lactobacillales</i> , ↓ <i>Lactobacillus</i> , ↓ <i>Ruminiclostridium_5</i>	
	N		↑ <i>Bacteroidetes</i> , ↑ <i>Bacteroidia</i> , ↑ <i>Bacteroidales_S24-7</i> , ↑ <i>Bacteroidales</i> , ↑ <i>Alloprevotella</i> ↓ <i>Firmicutes</i> , ↓ <i>Bacilli</i> , ↓ <i>Clostridia</i> , ↓ <i>Lactobacillaceae</i> , <i>Lactobacillales</i> , ↓ <i>Lactobacillus</i> , ↓ <i>Ruminiclostridium_5</i>	

