

**Table S4 Moderating effect of water intake on the relationship between *Ruminococcus* and IL-8 level**

Variables	Controlling effect					Main effect		Interaction effect	
	Age	BMI	FBG	MS	UGLU	<i>Ruminococcus</i>	Water	<i>Ruminococcus</i> × Water	
Step 1	β	0.28	0.05	-0.17	-0.09	0.09			
	t	2.18	0.43	-1.28	-0.69	0.70			
	p	0.03	0.67	0.21	0.49	0.49			
	ΔF			1.94					
	ΔR <sup>2</sup>			0.13					
	p			0.10					
Step 2	β	0.26	-0.01	-0.26	-0.05	0.10	0.20	-0.28	
	t	2.19	-0.07	-1.99	-0.42	0.77	1.78	-2.37	
	p	0.03	0.95	0.05	0.68	0.45	0.08	0.02	
	ΔF						5.70		
	ΔR <sup>2</sup>						0.14		
	p						0.01		
Step 3	β	0.29	0.02	-0.26	-0.05	0.09	-0.07	-0.30	-0.39
	t	2.52	0.18	-2.13	-0.42	0.72	0.47	-2.67	-2.74
	p	0.01	0.86	0.04	0.68	0.48	0.64	0.01	0.01
	ΔF								7.51
	ΔR <sup>2</sup>								0.08
	p						0.01		

Abbreviations: FBG: fasting blood glucose; UGLU: urine glucose level; MS: menstrual status; BMI: body mass index