## **Supplemental Material**

	RWGP	Oat Fiber 780
	(g/100g)	(g/100g)
Proximate analysis and fiber		
content		
Fat	7.8	0.04
Protein	11.7	0.0
Carbohydrates <sup>a</sup>	17.0	92.8
Dietary fiber	47.7	92.8 <sup>b</sup>
Soluble	3.5	0.4
Insoluble	44.2	92.4
Ash	8.4	2.6
Moisture	7.5	7.0

## TABLE S1: Nutritional composition of RWGP flour and isolated Oat Fiber 780.

Values are mean ± SD

<sup>a</sup> Nitrogen-free extract minus dietary fiber

<sup>b</sup> AOAC 991.43

\* The values represent averages of two to three independent measurements.



FIGURE S1: Effect of RWGP supplementation on total body weights of of SR-B1 KO/*Apoe*R61<sup>h/h</sup> mice fed with atherogenic diet. Data are shown in box plots (box, 25th to 75th percentiles; whiskers, median and IQR) (n = 5 to 7) based on two-way ANOVA.



FIGURE S2. Effect of RWGP supplementation on spleen and liver weights of SR-B1 KO/*Apoe*R61<sup>h/h</sup> mice fed with atherogenic diet. (A) Spleen and (B) liver weights, relative to body weight, at baseline and after 7 and 14 days of HFC-supplemented diet. Data are shown in box plots (box, 25th to 75th percentiles; whiskers, median and IQR) (n = 5 to 7). # P < 0.01 and ## P < 0.01 compared to day 0; \* P < 0.01 vs HFC-Control based on two-way ANOVA.



FIGURE S3. Effect of RWGP supplementation on plasma liver enzymes. Plasma levels of (A) alanine transaminase (ALT) and (B) gamma-glutamyltransferase (GGT) at baseline and after 7 and 14 days of HFC-supplemented diet. Data are shown in box plots (box, 25th to 75th percentiles; whiskers, median and IQR) (n = 5 to 7). <sup>#</sup> P < 0.05 compared to day 0 based on two-way ANOVA.



**FIGURE S4.** Reconstruction of aortic arch/supra-aortic vessels in mice subjected to bright-blood MRI. (A) Aortic arch of mice reconstructed from bright-blood MR acquisition. Supra-aortic vessels are shown: brachiocephalic artery, subclavians arteries, and carotid arteries. (B) Axial section of a black-blood acquisition at the level of the aortic arch and the 3 supra-aortic vessels.