

## Supplement 1

### Isolation of Kupffer cells

Briefly, livers from Sprague–Dawley rats (n=3) weighing 400–500 g were perfused with HBSS (Hanks balanced salt solution; Invitrogen), followed by a solution containing 150mg of pronase and 15 mg of collagenase A (Roche Diagnostics). Livers were removed and mechanically dispersed by gently mixing with 300 mg of pronase, 30 mg of collagenase A and 10mg of DNase (Roche Diagnostics) made up to a total volume of 100 ml of HBSS. This mixture was agitated constantly in an incubator at 37°C for 30 min and filtered through a 100µm nylon mesh to remove any undigested debris. This fraction was mostly composed of parenchymal hepatocytes and was seeded into T75 tissue culture flasks with culture medium composed of DMEM and 10% FCS. Parenchymal hepatocytes then lost their epithelial cell morphology within a few days in culture and transformed into fibroblast-like cells. After day 6, phase contrast-bright, round macrophage-like cells proliferated on the fibroblastic cell sheet, reaching a maximum at day 12. These KCs were then readily suspended by shaking at 120 strokes per minute for 30 minutes and then transferred to plastic dishes to result in selective adhesion of KCs. After several rinses with PBS, attached macrophages were then harvested. The total cell yield and viability was assessed by counting the number of dead and live cells, based on Trypan Blue exclusion, and was found to be >98%.

## Supplement 2

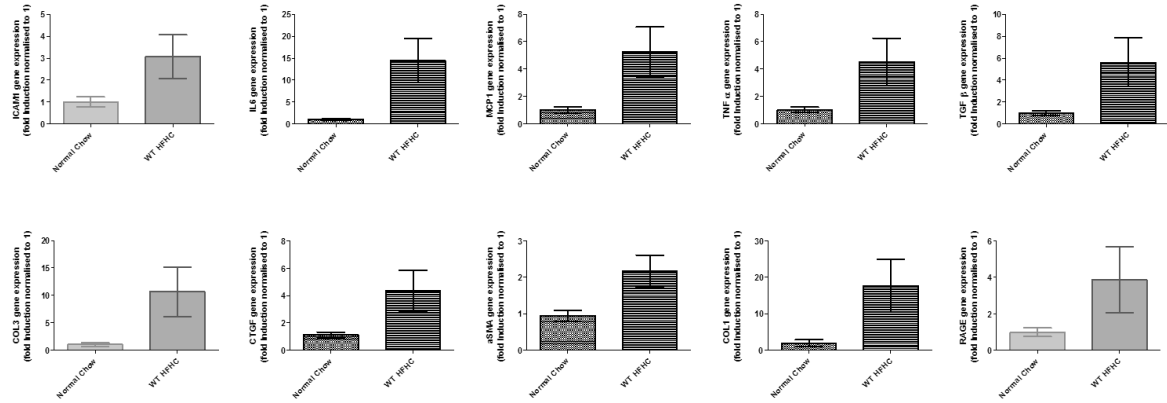
### HFHC diet

Calculated Nutritional Parameters	
Protein	19.00%
Total Fat	21.00%
Crude Fibre	4.70%
AD Fibre	4.70%
Digestible Energy	19.4 MJ / Kg
% Total calculated digestible energy from lipids	40.00%
% Total calculated digestible energy from protein	17.00%

Ingredients	
Casein (Acid)	195 g/Kg
Sucrose	211 g/Kg
Fructose	100 g/Kg
Clarified Butter (Ghee)	210 g/Kg
Cellulose	50 g/Kg
Wheat Starch	112 g/Kg
Dextrinised Starch	22 g/Kg
DL Methionine	5.0 g/Kg
Calcium Carbonate	28.5 g/Kg
Sodium Chloride	4.1 g/Kg
AIN93 Trace Minerals	2.3 g/Kg
Potassium Citrate	4.1 g/Kg
Potassium Dihydrogen Phosphate	11.4 g/Kg
Potassium Sulphate	2.7 g/Kg
Choline Chloride (75%)	4.2 g/Kg
AIN93 Vitamins	17 g/Kg
USP Cholesterol	20 g/Kg
Oxicap E2	0.04 g/Kg

Calculated Amino Acids		Calculated Total Vitamins	
Valine	1.23%	Vitamin A (Retinol)	8 330 IU/Kg
Leucine	1.80%	Vitamin D (Cholecalciferol)	1 670 IU/Kg
Isoleucine	0.85%	Vitamin E (a Tocopherol acetate)	130 mg/Kg
Threonine	0.80%	Vitamin K (Menadione)	2 mg/Kg
Methionine	1.02%	Vitamin C (Ascorbic acid)	None added
Cystine	0.06%	Vitamin B1 (Thiamine)	10 mg/Kg
Lysine	1.50%	Vitamin B2 (Riboflavin)	10 mg/Kg
Phenylalanine	1.00%	Niacin (Nicotinic acid)	50 mg/Kg
Tyrosine	1.00%	Vitamin B6 (Pyridoxine)	12 mg/Kg
Tryptophan	0.30%	Pantothenic Acid	27 mg/Kg
Calculated Total Minerals		Biotin	330 ug/Kg
Calcium	0.98%	Folic Acid	3 mg/Kg
Phosphorous	0.42%	Inositol	None added
Magnesium	0.15%	Vitamin B12 (Cyanocobalamin)	170 ug/Kg
Sodium	0.19%	Choline	2 400 mg/Kg
Chloride	0.25%	Calculated Fatty Acid Composition	
Potassium	0.64%	Saturated Fats C12:0 or less	1.80%
Sulphur	0.29%	Myristic Acid 14:0	2.60%
Iron	120 mg/Kg	Palmitic Acid 16:0	7.00%
Copper	11 mg/Kg	Stearic Acid 18:0	2.40%
Iodine	0.3 mg/Kg	Palmitoleic Acid 16:1	0.40%
Manganese	29 mg/Kg	Oleic Acid 18:1	5.50%
Cobalt	No data	Gadoleic Acid 20:1	No data
Zinc	72 mg/Kg	Linoleic Acid 18:2 n6	0.40%
Molybdenum	0.3 mg/Kg	a Linolenic Acid 18:3 n3	0.20%
Selenium	0.4 mg/Kg	EPA 20:5 n3	No data
Cadmium	No data	DHA 22:6 n3	No data
Chromium	1.6 mg/Kg	Total n3	0.35%
Fluoride	1.6 mg/Kg	Total n6	0.41%
Lithium	0.2 mg/Kg	Cholesterol	0.15%
Boron	1.9 mg/Kg	Total Mono Unsaturated Fats	6.23%
Nickel	0.8 mg/Kg	Total Polyunsaturated Fats	0.77%
Vanadium	0.2 mg/Kg	Total Saturated Fats	13.99%

## Supplement 3



**P < 0.05 WT HFHC versus normal chow for all groups**