Table S1. Dietary intake per day expressed as Q1, median and Q3, for absolute energy intake, daily energy contribution by every nutrient, absolute nutrients intake and protein intake adjusted by body weight. Data is segregated by diet groups.

		Animal protein			Balanced			Plant-based protein		
		Q1	Median	Q3	Q1	Median	Q3	Q1	Median	Q3
Total energy (kcal/day)	*Energy intake*	1357.63	1536.23	1874.86	1657.57	1981.37	2139.23	1904.35	2212.23	2558.95
Energy contribution (%)	*Lipids*	39.91	46.28	48.85	39.39	41.43	47.42	35.32	40.49	42.61
	SFA	10.06	13.83	15.14	9.56	11.73	13.75	8.93	9.83	10.82
	MUFA	18.75	21.58	26.95	17.19	19.37	23.49	14.63	19.02	25.88
	PUFA	5.60	7.21	8.27	6.33	8.07	10.61	6.83	7.79	10.29
	Total protein	19.79	20.57	21.72	15.79	17.76	20.07	13.26	14.71	16.26
	Vegetable protein	4.38	4.91	5.88	5.82	6.65	7.39	6.54	7.69	7.88
	Animal protein	14.23	15.42	16.24	9.59	10.97	12.56	6.15	6.74	8.11
	Carbohydrates	28.10	31.85	35.54	29.68	37.82	41.26	37.30	42.51	48.97
	Sugar	10.14	14.52	20.66	12.73	15.41	18.69	10.78	13.15	18.34
	Polysaccharides	8.96	14.09	22.39	14.02	19.78	24.40	23.32	25.73	31.40
Nutrients intake (g/day)	*Lipids*	59.60	82.34	101.59	81.36	88.20	109.29	87.78	104.96	116.99
	SFA	21.93	24.13	28.86	19.09	24.73	31.82	20.25	23.73	26.46
	MUFA	28.82	40.48	59.57	35.93	40.08	45.71	35.31	46.66	64.45
	PUFA	7.57	12.25	16.16	11.59	17.57	20.22	14.52	19.88	31.55
	Total protein	73.69	79.80	98.40	72.30	84.90	100.30	67.64	85.26	95.18
	Vegetable protein	15.69	19.85	24.81	25.26	30.93	37.53	33.69	41.35	49.89
	Animal protein	52.86	63.90	76.44	44.79	53.67	64.35	31.76	41.06	46.02
	Carbohydrates	111.52	126.24	148.34	136.02	174.58	193.36	174.00	231.66	279.06
	Sugar	46.29	59.90	91.87	59.15	75.99	87.82	57.38	75.53	97.37
	Polysaccharides	29.83	57.63	99.22	54.29	92.28	124.02	109.69	148.59	200.63
	Fibre	18.58	22.38	27.46	23.24	28.53	35.57	26.84	32.19	37.51
Adjusted protein intake (g/(day · kg))	Total protein	0.99	1.11	1.22	1.00	1.22	1.46	1.14	1.31	1.56

Table S2. Significative Pearson correlations between different dietary variables. Columns show correlation coefficient (*r*) and p-value (*p*).

Nutrition fact	Nutrient	r	p
Plant-based protein	Carbohydrates	0.79	$6.8*10^{-13}$
Plant-based protein	Polysaccharides	0.73	$2.5*10^{-10}$
Plant-based protein	Fiber	0.76	$1.6*10^{-11}$
Energy contribution of lipids	Energy contribution of carbohydrates	0.83	$3.9*10^{-15}$

Table S3. Complete output of 1 repetition of PERMANOVA analysis per type of measure. R^2 and p-values slightly differ from those mentioned in the main text because only one analysis is shown here, whereas for the final result, the mean of the values of 10 repetitions has been taken for greater robustness.

Bray-Curtis	Df	SumOfSqs	R2	F	Pr(>F)
Diet	2	0.32144914	0.035145	0.955278	0.5102
Sex	1	0.22420573	0.024513	1.332582	0.1584
Age	1	0.13625243	0.014897	0.809826	0.6441
Alcohol.intake	1	0.16973289	0.018557	1.008819	0.4137
Medication	1	0.20474776	0.022386	1.216933	0.2275
Residual	48	8.07595471	0.882964		
Total	54	9.1464188	1		

Jaccard	Df	SumOfSqs	R2	F	Pr(>F)
Diet	2	0.52040717	0.036609	0.993498	0.4501
Sex	1	0.29976382	0.021088	1.144545	0.2361
Age	1	0.23362508	0.016435	0.892017	0.6049
Alcohol.intake	1	0.26825928	0.018871	1.024256	0.3790
Medication	1	0.30555008	0.021495	1.166638	0.2113
Residual	48	12.5715101	0.884371		
Total	54	14.2151979	1		

Table S4. Mean abundances of 50 first most abundant genera in samples, accompanied by its standard deviation, both given in percentage of relative abundance. The rest of the genera, less abundant, are gathered inside "*Other*" category.

Genus	Mean	SD
Bacteroides	20.442	15.914
Faecalibacterium	7.979	8.836
Oscillospiraceae UCG-002	4.650	4.996
Alistipes	4.519	3.607
Eubacterium	3.804	3.030
Ruminococcus	2.957	3.685
Agathobacter	2.855	4.651
Christensenellaceae R-7 group	2.631	3.994
Lachnospiraceae NK4A136 group	2.625	4.285
Subdoligranulum	2.569	2.663
Blautia	2.202	2.047
Akkermansia	2.090	3.212
Prevotella	2.079	4.930
Parabacteroides	1.808	1.815
Phascolarctobacterium	1.672	1.973
Coprococcus	1.608	1.862
Roseburia	1.449	1.189
Prevotellaceae NK3B31 group	1.352	3.311
Barnesiella	1.015	1.162
Dialister	0.897	1.719
Dorea	0.889	1.492
Oscillospiraceae NK4A214 group	0.864	0.990
Ruminococcaceae CAG-352	0.814	1.918
Oscillospiraceae UCG-005	0.667	0.839
Escherichia-Shigella	0.612	1.821
Romboutsia	0.557	1.196
Monoglobus	0.509	0.512
Paraprevotella	0.491	1.148
Butyrivibrio	0.464	1.931
Fusicatenibacter	0.455	0.639
Anaerostipes	0.434	0.463
Bifidobacterium	0.361	0.609
Muribaculaceae CAG-873	0.354	1.804
Lachnoclostridium	0.346	0.350
Collinsella	0.340	0.482
Streptococcus	0.334	0.494
Butyricicoccus	0.318	0.330
Erysipelotrichaceae UCG-003	0.298	0.381
Odoribacter	0.280	0.266
Clostridium	0.279	0.649
Prevotellaceae UCG-001	0.272	1.665
Lachnospira	0.266	0.348
Oscillibacter	0.263	0.643
Parasutterella	0.260	0.479
Lachnospiraceae UCG-001	0.250	0.352
Oscillospiraceae UCG-003	0.233	0.310
Lachnospiraceae UCG-010	0.227	0.333
Alloprevotella	0.216	1.120
Anaerovoracaceae Family XIII AD3011 group	0.203	0.270
Ruminococcaceae UBA1819	0.159	0.266
Other	0.168	0.117

Table S5. Significant Pearson correlations of short-chain fatty acids (SCFA) with microbiota composition and faecal pH. Columns show correlation coefficient (*r*) and p-value (*p*).

Bacteria	**SCFA**	**r**	**p**
Prevotella/Bacteroides ratio	Propionic acid	0.48	$1.9*10^{-4}$
Prevotella/Bacteroides ratio	Valeric acid	0.63	$3.0*10^{-7}$
Prevotella/Bacteroides ratio	Isovaleric acid	0.45	$6.7*10^{-4}$
SCFA		**r**	**p**
Propionic acid	Faecal pH	-0.52	$4.7*10^{-5}$
Butyric acid	Faecal pH	-0.70	$2.5*10^{-9}$
Acetic acid	Faecal pH	-0.67	$2.0*10^{-8}$

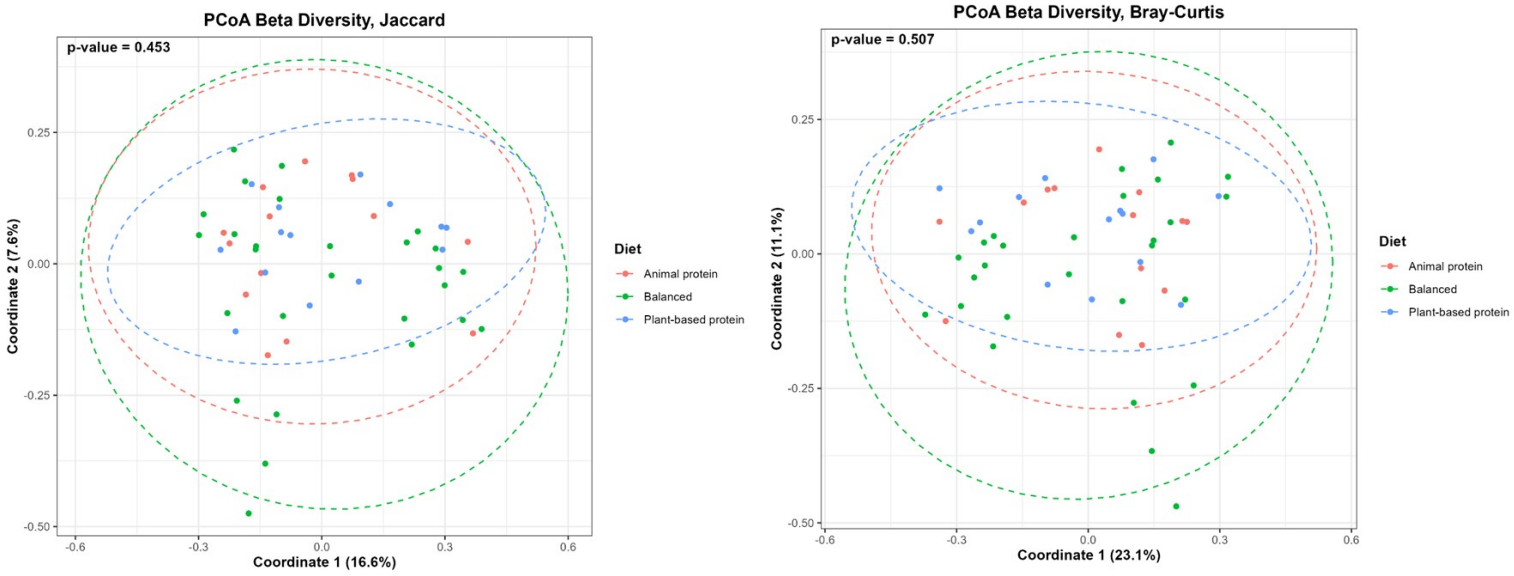

Figure S1. Beta diversity analysis among three different diet groups. Represented p-value is the mean of repeating the analysis 10 times, with 9999 permutations each one.