

**Table S1.** Effect of defatted rice bran on body weight change (%) (mean  $\pm$  S.E.M.).

Week	Experimental group					
	Control (n=10)	DRBL (n=10)	DRBH (n=10)	Induction (n=12)	Induction + DRBL (n=12)	Induction + DRBH (n=12)
1	65.31 $\pm$ 5.68	65.98 $\pm$ 3.75	65.16 $\pm$ 4.76	69.61 $\pm$ 3.97	67.81 $\pm$ 3.66	69.79 $\pm$ 4.48
2	115.88 $\pm$ 7.79	114.61 $\pm$ 5.51	112.09 $\pm$ 6.49	119.99 $\pm$ 5.00	117.48 $\pm$ 5.25	114.77 $\pm$ 6.00
3	175.37 $\pm$ 10.73	169.10 $\pm$ 8.23	168.77 $\pm$ 8.72	175.92 $\pm$ 5.93	171.93 $\pm$ 5.61	171.00 $\pm$ 7.35
4	228.62 $\pm$ 13.93	222.59 $\pm$ 11.05	220.52 $\pm$ 10.94	217.61 $\pm$ 7.65	214.51 $\pm$ 7.17	214.74 $\pm$ 8.53
5	274.13 $\pm$ 16.13	279.09 $\pm$ 16.48	260.53 $\pm$ 13.45	239.63 $\pm$ 8.96	242.53 $\pm$ 9.77	247.40 $\pm$ 10.16
6	309.73 $\pm$ 18.86	296.70 $\pm$ 13.61	294.11 $\pm$ 15.30	236.49 $\pm$ 11.63*	245.97 $\pm$ 11.83*	256.68 $\pm$ 12.57*
7	338.99 $\pm$ 19.61	328.11 $\pm$ 16.72	321.93 $\pm$ 17.32	295.20 $\pm$ 13.22*	299.08 $\pm$ 13.24*	302.75 $\pm$ 12.59*
8	362.07 $\pm$ 21.62	355.31 $\pm$ 16.71	349.30 $\pm$ 18.69	274.95 $\pm$ 11.85*	280.11 $\pm$ 17.09*	290.18 $\pm$ 11.66*
9	382.62 $\pm$ 23.65	376.60 $\pm$ 18.17	368.90 $\pm$ 20.08	329.39 $\pm$ 15.20	329.69 $\pm$ 16.99	328.92 $\pm$ 15.19
10	401.59 $\pm$ 24.51	396.89 $\pm$ 20.16	387.29 $\pm$ 22.17	348.36 $\pm$ 14.31	352.13 $\pm$ 15.92	355.89 $\pm$ 15.13
11	413.06 $\pm$ 25.76	411.38 $\pm$ 21.15	395.44 $\pm$ 24.62	368.98 $\pm$ 16.27	371.19 $\pm$ 16.22	372.01 $\pm$ 15.54
12	425.31 $\pm$ 25.57	423.96 $\pm$ 21.38	411.80 $\pm$ 22.16	379.68 $\pm$ 14.94	383.06 $\pm$ 15.50	382.44 $\pm$ 14.80
13	434.13 $\pm$ 26.29	435.77 $\pm$ 21.87	423.43 $\pm$ 22.03	388.10 $\pm$ 16.42	390.43 $\pm$ 17.52	393.80 $\pm$ 15.61

Data from all experimental groups are compared using one-way ANOVA followed by Tukey's HSD post-hoc test. Mean with an asterisk (\*) superscript in each column is significantly different ( $p < 0.05$ ) when compared to the control group.

**Table S2.** Effect of defatted rice bran on food intake (g) (mean  $\pm$  S.E.M.).

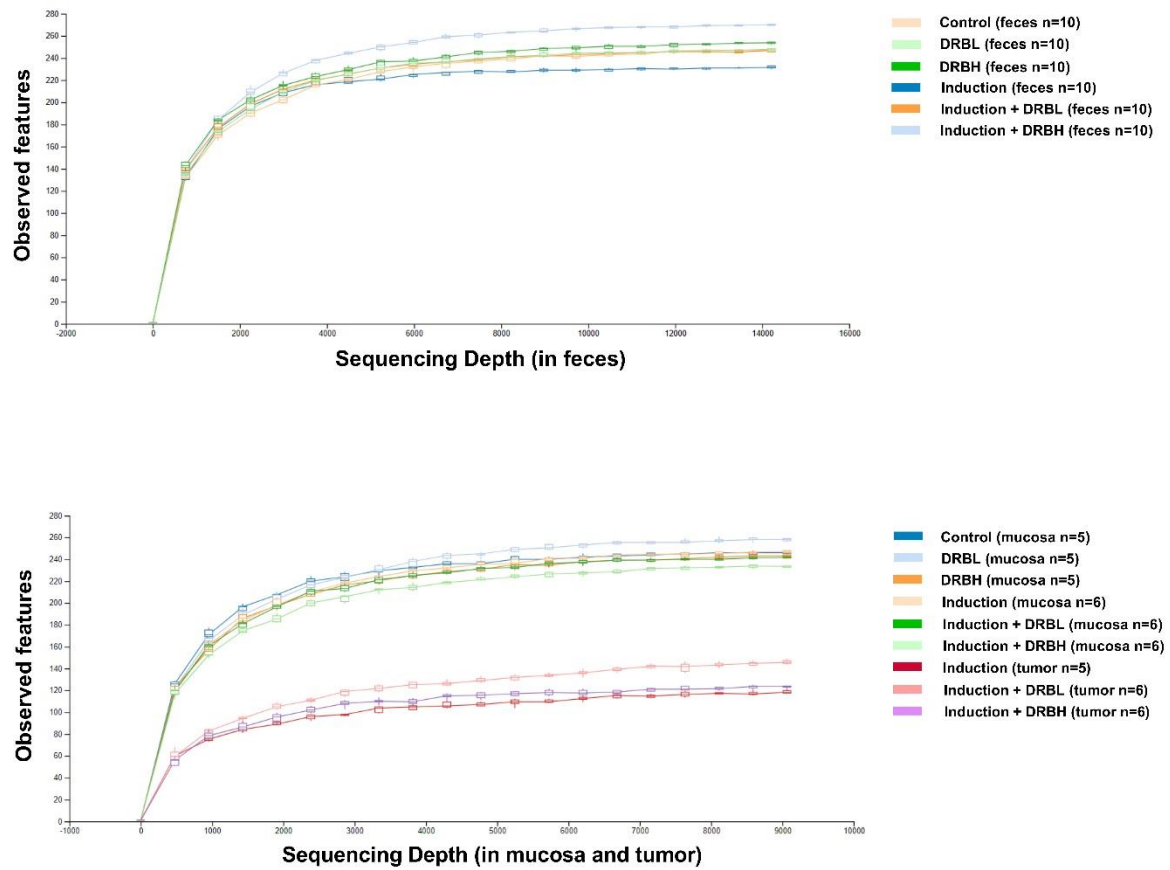
Week	Experimental group					
	Control (n=10)	DRBL (n=10)	DRBH (n=10)	Induction (n=12)	Induction + DRBL (n=12)	Induction + DRBH (n=12)
1	19.94 $\pm$ 0.25	20.86 $\pm$ 0.54	20.45 $\pm$ 0.51	19.08 $\pm$ 0.46	18.97 $\pm$ 0.60	19.20 $\pm$ 0.44
2	21.60 $\pm$ 0.63	22.34 $\pm$ 0.55	21.42 $\pm$ 0.74	21.60 $\pm$ 0.43	21.22 $\pm$ 0.55	20.68 $\pm$ 0.73
3	25.48 $\pm$ 0.32	24.92 $\pm$ 0.55	24.78 $\pm$ 0.35	23.43 $\pm$ 0.36*	23.17 $\pm$ 0.25*	21.37 $\pm$ 0.94*
4	20.34 $\pm$ 1.64	20.50 $\pm$ 1.93	21.94 $\pm$ 1.21	22.75 $\pm$ 1.31	20.53 $\pm$ 1.23	20.10 $\pm$ 1.31
5	26.32 $\pm$ 0.48	24.90 $\pm$ 0.56	22.66 $\pm$ 0.73	21.70 $\pm$ 0.58*	21.95 $\pm$ 0.50*	23.50 $\pm$ 0.83*
6	25.20 $\pm$ 0.70	24.90 $\pm$ 0.31	23.46 $\pm$ 0.51	18.17 $\pm$ 1.08*	16.98 $\pm$ 0.52*	18.82 $\pm$ 0.50*
7	23.78 $\pm$ 0.79	22.74 $\pm$ 0.66	20.80 $\pm$ 1.01	24.15 $\pm$ 0.66	22.95 $\pm$ 0.65	21.07 $\pm$ 0.84#
8	22.86 $\pm$ 1.50	24.16 $\pm$ 1.09	22.14 $\pm$ 0.61	18.60 $\pm$ 1.05*	14.35 $\pm$ 1.94*	14.15 $\pm$ 1.38*
9	26.06 $\pm$ 0.32	22.42 $\pm$ 1.27	22.00 $\pm$ 0.98	25.22 $\pm$ 0.94	23.98 $\pm$ 0.65	23.75 $\pm$ 0.79
10	24.62 $\pm$ 0.42	22.16 $\pm$ 0.69	21.42 $\pm$ 0.38	23.33 $\pm$ 0.67	20.34 $\pm$ 1.09*	21.58 $\pm$ 0.75*
11	22.02 $\pm$ 0.84	19.48 $\pm$ 0.97	21.42 $\pm$ 0.96	23.67 $\pm$ 0.59	19.90 $\pm$ 1.16#	18.75 $\pm$ 0.72#
12	22.78 $\pm$ 0.34	21.44 $\pm$ 0.67	19.52 $\pm$ 0.72	22.83 $\pm$ 0.69	20.83 $\pm$ 1.01	21.27 $\pm$ 0.77
13	21.24 $\pm$ 0.80	21.26 $\pm$ 0.77	20.52 $\pm$ 0.65	20.93 $\pm$ 0.84	18.58 $\pm$ 0.76*#	16.67 $\pm$ 0.83*#

Data from all experimental groups are compared using one-way ANOVA followed by Tukey's HSD post-hoc test. Mean with an asterisk (\*) and number signs (#) superscript in each column is significantly different ( $p < 0.05$ ) when compared to the control and induction groups, respectively.

**Table S3.** Effect of defatted rice bran on colon weight (g), length (cm), and relative colonic weight/length ratio (g/cm) in experimental group (mean  $\pm$  S.E.M.).

Parameters	Experimental group					
	Control (n=10)	DRBL (n=10)	DRBH (n=10)	Induction (n=12)	Induction + DRBL (n=12)	Induction + DRBH (n=12)
Colon weight (g)	1.33 $\pm$ 0.17	1.33 $\pm$ 0.11	1.34 $\pm$ 0.18	1.40 $\pm$ 0.18	1.32 $\pm$ 0.23	1.35 $\pm$ 0.24
Colon length (cm)	20.45 $\pm$ 1.44	21.27 $\pm$ 2.31	20.57 $\pm$ 2.28	17.89 $\pm$ 1.07	18.39 $\pm$ 1.13	18.70 $\pm$ 2.17
Relative colon weight/length ratio (g/cm)	0.065 $\pm$ 0.007	0.063 $\pm$ 0.008	0.066 $\pm$ 0.008	0.078 $\pm$ 0.007*	0.070 $\pm$ 0.010	0.072 $\pm$ 0.009

Data from all experimental groups are compared using one-way ANOVA followed by Tukey's HSD post-hoc test. Mean with an asterisk (\*) superscript in each column is significantly different ( $p < 0.05$ ) when compared to the control group.



**Figure S1.** The rare fraction curves of alpha diversity in colonic feces, mucosa, and tumors.

**Table S4.** Comparison of relative abundance (%) of bacterial phylum in feces.

Phylum	Experimental group (in feces)					
	Control (n=10)	DRBL (n=10)	DRBH (n=10)	Induction (n=12)	Induction + DRBL (n=12)	Induction + DRBH (n=12)
<i>Firmicutes</i>	58.76	69.27	64.78	63.08	68.66	63.66
<i>Verrucomicrobia</i>	23.02	17.76	14.48	20.25	16.29	19.87
<i>Bacteroidetes</i>	15.75	11.15	18.59	14.58	13.06	14.40
<i>Actinobacteria</i>	1.84	1.42	1.50	1.43	1.54	1.46
<i>Proteobacteria</i>	0.48	0.29	0.53	0.52	0.28	0.44
<i>Patescibacteria</i>	0.15	0.11	0.12	0.13	0.17	0.17

**Table S5.** Comparison of relative abundance (%) of bacterial family in feces.

Family	Experimental group (in feces)					
	Control (n=10)	DRBL (n=10)	DRBH (n=10)	Induction (n=12)	Induction + DRBL (n=12)	Induction + DRBH (n=12)
<i>Lachnospiraceae</i>	18.66	23.54	24.95	21.19	25.24	23.09
<i>Akkermansiaceae</i>	23.02	17.76	14.48	20.25	16.29	19.87
<i>Peptostreptococcaceae</i>	10.66	15.85	10.42	12.69	12.10	11.94
<i>Lactobacillaceae</i>	10.05	8.32	8.39	6.99	9.09	8.86
<i>Muribaculaceae</i>	10.23	6.94	10.21	8.94	7.41	7.70
<i>Oscillospiraceae</i>	2.93	4.20	5.74	4.48	5.13	4.74
<i>Erysipelotrichaceae</i>	4.10	4.30	3.10	5.02	4.26	3.35
<i>Ruminococcaceae</i>	4.43	4.30	5.14	2.96	3.77	3.66
<i>Prevotellaceae</i>	3.04	2.48	5.38	3.21	3.71	4.67
<i>Clostridiaceae</i>	2.46	2.98	0.98	4.02	3.15	2.19
<i>[Eubacterium] coprostanoligenes group</i>	1.93	2.02	2.16	1.92	2.29	2.30
<i>Eggerthellaceae</i>	1.66	1.33	1.41	1.29	1.45	1.38
<i>Bacteroidaceae</i>	1.41	0.97	1.76	1.38	1.15	1.25
<i>Rikenellaceae</i>	1.07	0.75	1.24	1.05	0.78	0.78

**Table S6.** Comparison of relative abundance (%) of bacterial genus in feces.

Genus	Experimental group (in feces)					
	Control (n=10)	DRBL (n=10)	DRBH (n=10)	Induction (n=12)	Induction + DRBL (n=12)	Induction + DRBH (n=12)
<i>Akkermansia</i>	23.019	17.760	14.479	20.254	16.295	19.873
<i>Lactobacillus</i>	10.053	8.317	8.394	6.986	9.092	8.858
<i>Alloprevotella</i>	2.402	1.688	3.749	2.601	2.779	3.045
<i>Prevotellaceae</i> UCG-001	0.636	0.795	1.626	0.610	0.928	1.624
<i>Ruminococcus</i>	0.814	0.731	1.305	0.523	0.825	0.983
<i>Ruminococcaceae</i>	0.034	0.146	0.129	0.020	0.075	0.142
<i>Butyricicoccus</i>	0.018	0.018	0.034	0.019	0.033	0.028
<i>Roseburia</i>	0.013	0.037	0.058	0.055	0.043	0.053
<i>Turicibacter</i>	3.498	3.737	2.982	4.061	4.078	3.116
<i>Clostridium sensu stricto</i> 1	2.458	2.977	0.984	4.016	3.146	2.185
<i>Enterococcus</i>	0.044	0.105	0.085	0.291	0.182	0.264
<i>Escherichia-Shigella</i>	0.021	0.024	0.014	0.238	0.056	0.148
<i>Citrobacter</i>	0.000	0.000	0.000	0.014	0.007	0.009

**Table S7.** Comparison of relative abundance (%) of bacterial phylum in colonic mucosa and tumor.

Phylum	Experimental group (in mucosa)						Experimental group (in tumor)		
	Control (n=5)	DRBL (n=5)	DRBH (n=5)	Induction (n=6)	Induction + DRBL (n=6)	Induction + DRBH (n=6)	Induction (n=5)	Induction + DRBL (n=6)	Induction + DRBH (n=6)
<i>Firmicutes</i>	55.45	57.91	51.56	54.50	56.88	55.63	48.77	66.90	52.99
<i>Bacteroidetes</i>	24.64	18.38	27.95	17.74	22.60	22.96	6.89	8.17	6.52
<i>Verrucomicrobia</i>	11.32	18.90	11.86	11.05	9.03	12.86	5.48	4.23	5.98
<i>Proteobacteria</i>	5.49	2.82	6.13	15.48	9.36	6.50	37.31	19.68	31.56
<i>Actinobacteria</i>	2.99	1.87	2.29	1.17	1.98	1.97	1.37	0.93	2.94
<i>Patescibacteria</i>	0.06	0.11	0.11	0.06	0.13	0.07	0.02	0.08	0.01



**Table S8.** Comparison of relative abundance (%) of bacterial family in colonic mucosa and tumor.

Family	Experimental group (in mucosa)						Experimental group (in tumor)		
	Control (n=5)	DRBL (n=5)	DRBH (n=5)	Induction (n=6)	Induction + DRBL (n=6)	Induction + DRBH (n=6)	Induction (n=5)	Induction + DRBL (n=6)	Induction + DRBH (n=6)
<i>Lachnospiraceae</i>	17.97	18.47	18.29	17.53	14.07	17.55	5.76	6.74	4.40
<i>Muribaculaceae</i>	15.37	11.13	15.85	10.06	13.15	11.87	4.07	4.07	2.57
<i>Ruminococcaceae</i>	14.67	15.81	16.86	12.06	12.49	14.76	5.85	6.52	6.21
<i>Akkermansiaceae</i>	11.32	18.90	11.86	11.05	9.03	12.86	5.48	4.23	5.98
<i>Lactobacillaceae</i>	9.33	7.33	6.11	5.07	8.47	7.19	18.32	27.92	7.24
<i>Prevotellaceae</i>	6.71	4.92	8.18	3.91	5.85	6.82	1.76	2.01	1.94
<i>Peptostreptococcaceae</i>	6.21	7.89	5.38	6.96	7.67	4.69	2.72	3.50	1.19
<i>Erysipelotrichaceae</i>	3.54	3.08	1.71	2.88	3.36	2.11	1.22	1.62	0.55
<i>Caulobacteraceae</i>	2.94	1.45	4.40	1.84	0.19	0.27	10.20	6.29	3.83
<i>Eggerthellaceae</i>	2.64	1.64	1.95	1.04	1.80	1.81	0.94	0.56	2.71
<i>Clostridiaceae 1</i>	1.62	2.44	0.53	2.02	1.40	1.04	0.44	0.78	0.30
<i>Bacteroidaceae</i>	1.59	1.26	2.18	2.76	2.52	3.34	0.61	1.40	1.78
<i>Burkholderiaceae</i>	1.46	0.76	0.91	0.47	0.39	0.59	0.18	0.20	0.03
<i>Rikenellaceae</i>	0.95	1.02	1.58	0.97	1.08	0.88	0.36	0.68	0.21
<i>Clostridiales vadinBB60 group</i>	0.71	1.17	1.01	1.19	1.38	1.11	0.72	0.66	0.33

**Table S9.** Comparison of relative abundance (%) of bacterial genus in colonic mucosa and tumor.

Genus	Experimental group (in mucosa)						Experimental group (in tumor)		
	Control (n=5)	DRBL (n=5)	DRBH (n=5)	Induction (n=6)	Induction + DRBL (n=6)	Induction + DRBH (n=6)	Induction (n=5)	Induction + DRBL (n=6)	Induction + DRBH (n=6)
<i>Lactobacillus</i>	9.327	7.328	6.108	5.066	8.471	7.186	18.322	27.916	20.237
<i>Akkermansia</i>	11.324	18.899	11.856	11.051	9.034	12.860	5.480	4.227	5.977
<i>Alloprevotella</i>	5.613	3.517	5.761	3.256	4.192	4.141	1.289	1.410	0.929
<i>Prevotellaceae UCG-001</i>	1.015	1.364	2.319	0.634	1.649	2.670	0.272	0.524	0.982
<i>Ruminococcus</i>	0.373	0.554	0.741	0.362	0.502	0.688	0.235	0.259	0.172
<i>Roseburia</i>	0.232	0.801	1.070	0.557	0.171	0.506	0.175	0.195	0.132
<i>Butyricicoccus</i>	0.159	0.088	0.190	0.077	0.118	0.123	0.158	0.050	0.040
<i>Enterococcus</i>	0.104	0.203	0.057	5.472	6.883	6.164	12.693	18.583	24.232
<i>Escherichia-Shigella</i>	0.062	0.038	0.128	6.502	3.953	3.407	12.531	8.409	6.121
<i>Citrobacter</i>	0.013	0.013	0.000	4.358	3.280	1.274	12.892	2.754	9.598
<i>Clostridium sensu stricto 1</i>	1.562	2.445	0.525	2.001	1.399	1.039	0.430	0.719	0.296
<i>Mycobacterium</i>	0.000	0.000	0.000	0.004	0.000	0.000	0.055	0.037	0.031