

Supplementary Materials

Comparative Early Local and Systemic Biochemical Host Response to Bovine Peritoneum-Derived Extracellular Matrix and Permacol in a Rat Abdominal Wall Repair Model

Tables S1 and S2 report all 56 time-specific BPEM-versus-Permacol comparisons (28 for peri-implant tissue and 28 for plasma). Values are median [Q1-Q3]. Exact two-sided Mann-Whitney U tests were used. For each biochemical outcome, the four time-specific p values were adjusted as one family using the Holm-Bonferroni procedure. r_{rb} denotes rank-biserial correlation; positive values indicate higher ranks with BPEM and negative values lower ranks with BPEM. ASF, RNA, DNA, and histone-like fractions are reported in arbitrary units per milliliter (a.u./mL); xanthine is reported in extinction units.

Table S3 reports the sex distribution within each material $\times$ time-point group.

Table S1. Complete time-specific comparisons for peri-implant tissue.

Indicator	Day	BPEM, median [Q1-Q3]	Permacol, median [Q1-Q3]	Raw p	Holm-adjusted p	r_{rb}
ASF	5	0.438 [0.403-0.514]	0.286 [0.266-0.381]	0.007	0.028	0.781
ASF	7	0.269 [0.251-0.307]	0.328 [0.269-0.440]	0.279	0.836	-0.344
ASF	14	0.251 [0.220-0.346]	0.233 [0.168-0.331]	0.645	0.836	0.156
ASF	21	0.342 [0.264-0.399]	0.474 [0.332-0.497]	0.279	0.836	-0.344
RNA	5	0.470 [0.313-0.534]	0.326 [0.309-0.341]	0.234	0.938	0.375
RNA	7	0.321 [0.291-0.357]	0.278 [0.215-0.349]	0.574	0.938	0.203
RNA	14	0.136 [0.102-0.171]	0.102 [0.086-0.133]	0.328	0.938	0.312
RNA	21	0.310 [0.233-0.348]	0.184 [0.067-0.272]	0.279	0.938	0.344
DNA	5	0.184 [0.170-0.214]	0.370 [0.321-0.374]	0.007	0.028	-0.781
DNA	7	0.197 [0.172-0.260]	0.235 [0.159-0.267]	0.878	1.000	-0.062
DNA	14	0.124 [0.078-0.138]	0.083 [0.050-0.102]	0.130	0.391	0.469
DNA	21	0.252 [0.179-0.314]	0.283 [0.263-0.310]	0.645	1.000	-0.156
xanthine	5	0.698 [0.432-0.804]	0.431 [0.414-0.471]	0.234	0.703	0.375
xanthine	7	0.380 [0.330-0.395]	0.403 [0.337-0.422]	0.234	0.703	-0.375
xanthine	14	0.337 [0.248-0.381]	0.470 [0.400-0.565]	0.005	0.019	-0.812
xanthine	21	0.404 [0.395-0.539]	0.395 [0.376-0.471]	0.382	0.703	0.281
H1	5	1.558 [1.446-1.635]	1.091 [0.933-1.212]	<0.001	<0.001	1.000
H1	7	1.374 [1.308-1.467]	0.897 [0.633-1.443]	0.195	0.321	0.406
H1	14	0.319 [0.262-0.350]	0.470 [0.366-0.528]	0.050	0.150	-0.594
H1	21	1.457 [1.398-1.958]	1.899 [1.602-2.007]	0.161	0.321	-0.438
H2A-H3-H4	5	0.804 [0.638-0.886]	1.598 [1.326-1.857]	0.002	0.004	-0.875
H2A-H3-H4	7	0.644 [0.596-0.754]	1.575 [1.293-1.691]	<0.001	0.002	-0.938
H2A-H3-H4	14	1.259 [1.197-1.481]	1.185 [1.124-1.432]	0.878	0.878	0.062
H2A-H3-H4	21	1.091 [0.626-1.570]	1.771 [1.659-1.834]	0.001	0.003	-0.906
H2B	5	0.937 [0.931-1.007]	1.980 [1.649-2.032]	<0.001	<0.001	-1.000
H2B	7	1.692 [1.097-1.900]	1.763 [1.705-1.952]	0.328	0.656	-0.312
H2B	14	1.793 [1.679-1.921]	1.795 [1.683-1.880]	0.959	0.959	0.031
H2B	21	1.838 [1.728-1.980]	1.683 [1.627-1.727]	0.083	0.249	0.547

Table S2. Complete time-specific comparisons for plasma.

Indicator	Day	BPEM, median [Q1-Q3]	Permacol, median [Q1-Q3]	Raw p	Holm-adjusted p	r_rb
ASF	5	0.399 [0.317-0.452]	0.347 [0.225-0.453]	0.798	1.000	0.094
ASF	7	0.299 [0.213-0.343]	0.299 [0.129-0.413]	0.798	1.000	-0.094
ASF	14	0.356 [0.268-0.409]	0.369 [0.223-0.510]	0.959	1.000	-0.031
ASF	21	0.207 [0.179-0.343]	0.449 [0.409-0.484]	0.003	0.012	-0.859
RNA	5	0.231 [0.197-0.260]	0.281 [0.245-0.366]	0.161	0.642	-0.453
RNA	7	0.223 [0.200-0.278]	0.310 [0.152-0.349]	0.878	1.000	-0.062
RNA	14	0.204 [0.164-0.280]	0.458 [0.223-0.767]	0.161	0.642	-0.438
RNA	21	0.264 [0.225-0.344]	0.287 [0.213-0.373]	0.878	1.000	-0.062
DNA	5	0.360 [0.312-0.383]	0.381 [0.363-0.396]	0.382	0.765	-0.281
DNA	7	0.294 [0.283-0.373]	0.374 [0.361-0.383]	0.234	0.703	-0.375
DNA	14	0.357 [0.327-0.382]	0.374 [0.357-0.386]	0.574	0.765	-0.188
DNA	21	0.306 [0.201-0.423]	0.438 [0.329-0.476]	0.083	0.332	-0.531
xanthine	5	0.489 [0.364-0.567]	0.755 [0.601-0.931]	0.105	0.210	-0.500
xanthine	7	0.438 [0.351-0.477]	0.631 [0.441-0.820]	0.065	0.195	-0.562
xanthine	14	0.487 [0.384-0.562]	0.729 [0.647-0.842]	0.028	0.113	-0.656
xanthine	21	0.313 [0.271-0.409]	0.415 [0.301-0.508]	0.328	0.328	-0.312
H1	5	1.540 [1.388-1.750]	1.270 [1.184-1.313]	0.038	0.114	0.625
H1	7	1.316 [1.261-1.440]	1.166 [1.110-1.315]	0.065	0.130	0.562
H1	14	1.321 [1.265-1.594]	1.196 [1.166-1.360]	0.279	0.279	0.344
H1	21	1.345 [1.310-1.495]	1.008 [0.800-1.238]	0.015	0.059	0.719
H2A-H3-H4	5	0.199 [0.166-0.456]	1.418 [1.306-1.501]	<0.001	0.001	-0.969
H2A-H3-H4	7	1.149 [1.138-1.189]	1.219 [1.170-1.302]	0.195	0.585	-0.406
H2A-H3-H4	14	1.315 [1.187-1.361]	1.262 [1.162-1.371]	0.959	1.000	0.031
H2A-H3-H4	21	1.151 [1.128-1.205]	0.817 [0.319-1.376]	0.878	1.000	0.062
H2B	5	1.172 [1.129-1.316]	1.347 [1.267-1.594]	0.195	0.585	-0.406
H2B	7	1.436 [1.197-1.661]	1.571 [1.332-1.647]	0.798	1.000	-0.094
H2B	14	1.320 [1.184-1.743]	1.381 [1.233-1.428]	0.959	1.000	-0.031
H2B	21	1.549 [1.421-1.699]	0.863 [0.363-1.253]	0.007	0.028	0.781

Note: Holm adjustment was performed separately for each biochemical outcome across its four postoperative time-point comparisons. Bold Holm-adjusted p values indicate statistical significance (p < 0.05).

Table S3. Sex distribution of experimental animals across material × time-point groups.

Material	Day	Male, n	Female, n
BPEM	5	4	4
BPEM	7	4	4
BPEM	14	4	4
BPEM	21	4	4
Permacol	5	4	4
Permacol	7	4	4
Permacol	14	4	4
Permacol	21	4	4

Note: Each material × time-point subgroup contained eight animals (4 males and 4 females).