Supporting Information for: Computational modeling of in vitro biological responses on polymethacrylate surfaces by Ghosh et al.

The tables below contain the experimental data collected for protein attachment, cell attachment and cell proliferation for the homopolymers, copolymers, and terpolymers described in the manuscript.

Protein attachment-Homopolymers

#	Name	Exp	SD
1	poly-noctyl-MA	103.0	11.9
2	poly-butyl-MA	111.9	14.6
3	poly-isobutyl-MA	116.8	16.3
4	poly-ethyleneglycolmehtylether-MA	180.0	41.3
5	poly-benzyl-MA	233.1	30.2
6	poly-2hydroxypropyl-MA	329.2	73.9
7	poly-tetrahydrofurfuryl-MA	437.2	112.7
8	poly-phenyl-MA	520.6	127.8

Protein attachment-Copolymers

#	Name	Comp. 1	Comp. 2	Exp	SD
1	benzyl-hydroxypropyl	51	49	291.5	45.5
2	benzyl-hydroxypropyl	71	29	118.8	15.8
3	benzyl-methyl	21	79	258.8	64.3
4	benzyl-methyl	50	50	233.1	46.7
5	benzyl-methyl	70	30	432.2	58.1
6	benzyl-methyl	30	70	694.0	162.1
7	cyclohexyl-hydroxypropyl	23	77	236.3	42.6
8	cyclohexyl-hydroxypropyl	51	49	415.6	75.3
9	cyclohexyl-methyl	21	79	815.6	194.0
10	cyclohexyl-methyl	44	56	802.4	200.6
11	cyclohexyl-methyl	75	25	597.3	94.6
12	dimethylaminoethyl-methyl	63	37	10372.4	1075.2
13	ethylene glycol methyl ether-hydroxyethyl	78	22	228.4	53.4
14	ethylene glycol methyl ether-hydroxyethyl	32	68	69.0	10.6
15	ethylene glycol methyl ether-Methyl	53	47	682.8	153.8
16	ethylene glycol methyl ether-methyl	76	24	104.5	18.5
17	ethyl-methyl	44	56	966.3	190.7
18	ethyl-methyl	74	26	600.5	138.0
19	hydroxyethyl-methyl	24	76	460.7	70.2
20	hydroxyethyl-methyl	54	46	483.2	105.8
21	hydroxypropyl-methyl	35	65	313.1	31.2
22	hydroxypropyl-methyl	52	48	274.5	56.8
23	n-butyl-hydroxyethyl	60	40	97.8	20.4
24	n-butyl-methyl	73	27	310.1	70.0
25	n-butyl-methyl	59	41	138.0	31.7
26	n-butyl-methyl	31	69	634.0	156.7

27	octyl-methyl	50	50	103.5	11.2
28	t-butyl-methyl	57	43	446.9	115.7
29	t-butyl-methyl	70	30	402.8	100.2
30	tetrahydrofurfuryl-cyclohexyl	27	73	384.9	92.2
31	tetrahydrofurfuryl-cyclohexyl	50	50	467.1	112.5
32	tetrahydrofurfuryl-cyclohexyl	77	23	291.4	64.4
33	tetrahydrofurfuryl-hydroxypropyl	49	51	123.7	19.0
34	tetrahydrofurfuryl-isobornyl	66	34	108.7	7.9
35	tetrahydrofurfuryl-Methyl	24	76	422.0	56.0
36	tetrahydrofurfuryl-methyl	29	71	468.2	89.4
37	tetrahydrofurfuryl-methyl	53	47	155.8	25.8
38	tetrahydrofurfuryl-methyl	83	17	117.8	12.8
39	tetrahydrofurfuryl-methyl	29	71	398.4	84.1
40	trifluoroethyl-methyl	52	48	259.8	60.3
41	trifluoroethyl-methyl	80	20	303.7	65.1
42	trifluoroethyl-methyl	54	46	177.3	25.3
43	trifluoroethyl-methyl	35	65	360.8	85.3

Protein attachment-Terpolymers

#	Name	Comp. 1	Comp. 2	Comp. 3	Exp	SD
1	benzyl-methyl-methacrylic acid	42	40	18	619.7	149.2
2	benzyl-methyl-tetrahydrofurfuryl	32	30	38	159.7	17.5
3	Cyclohexyl-EGMA-(Methacryloxysuc	38	39	23	92.6	18.7
4	Cyclohexyl-TEGMA-Benzyl	33	33	34	118.3	17.3
5	EGMA-Hydroxyethyl-THF	40	30	30	119.8	13.2
6	EGMA-THF-Trifluoroethyl	33	33	34	137.1	12.9
7	Ethyl-Octyl-Hydroxypropyl	33	33	34	96.1	10.6
8	Ethyl-Octyl-Isobornyl	31	33	36	114.4	21.8
9	Ethyl-tButyl-Lauryl	28	36	36	112.0	16.9
10	hydroxypropyl-hydroxyethyl-dimethylaminoethyl	35	29	36	475.2	109.7
11	isoButyl-Benzyl-THF	31	31	38	447.1	95.6
12	isoButyl-EGMA-(methacryloxysuc	38	43	19	81.4	11.2
13	isoButyl-Octyl-EGMA	37	26	37	118.8	13.6
14	isoButyl-Undecyl-Cyclohexyl	33	33	34	108.5	13.4
15	Lauryl-Cyclohexyl-Benzyl	35	35	30	104.5	10.1
16	Lauryl-Isobornyl-Hydroxyethyl	33	33	34	93.7	8.4
17	Methacrylic acid-nButyl-THF	33	33	34	474.5	58.7
18	nButyl-Cyclohexyl-Undecyl	33	33	34	90.7	6.6
19	nButyl-THF-Trifluoroethyl	38	31	31	618.0	151.8
20	nButyl-Undecyl-EGMA	30	35	35	96.6	9.4
21	Octyl-EGMA-THF	33	33	34	116.8	13.9
22	Octyl-Isobornyl-Hydroxypropyl	33	33	34	96.1	7.5
23	tButyl-Hydroxypropyl-THF	36	32	32	364.3	51.2
24	tButyl-Lauryl-Hydroxypropyl	33	33	34	80.4	8.8
25	tetrahydrofurfuryl-methyl-benzyl	41	33	26	327.6	71.0

26	tetrahydrofurfuryl-methyl-isobutyl	41	29	30	120.8	13.7
27	Undecyl-Benzyl-Hydroxyethyl	33	33	34	90.2	12.8
28	Undecyl-Benzyl-Trifluoroethyl	33	33	34	88.1	11.7
29	Undecyl-Cyclohexyl-THF	33	33	34	108.0	18.3

Cell Attachment-Homopolymers

No	Name	Exp	SD
1	poly-methyl-MA	0.42	0.03
2	poly-ethyl-MA	0.37	0.02
3	poly-isobutyl-MA	0.31	0.03
4	poly-tbutyl-MA	0.31	0.04
5	poly-noctyl-MA	0.93	0.04
6	poly-cyclohexyl-MA	0.24	0.02
7	poly-phenyl-MA	0.34	0.05
8	poly-benzyl-MA	0.30	0.09
9	poly-isobornyl-MA	0.62	0.05
10	poly-ethyleneglycolmehtylether-MA	0.63	0.05
11	poly-2hydroxypropyl-MA	0.21	0.02
12	poly-tetrahydrofurfuryl-MA	0.69	0.05
13	poly-2dimethylaminoethyl-MA	0.80	0.03

Cell Attachment-Copolymers

#	Name	Comp. 1	Comp. 2	Exp	SD
1	benzyl-hydroxyethyl	49	51	0.66	0.08
2	benzyl-hydroxypropyl	51	49	0.56	0.06
3	benzyl-hydroxypropyl	71	29	0.42	0.03
4	benzyl-methyl	21	79	0.42	0.06
5	benzyl-methyl	50	50	0.64	0.07
6	benzyl-methyl	70	30	0.52	0.04
7	benzyl-methyl	30	70	0.51	0.05
8	benzyl-methyl	54	46	0.54	0.03
9	cyclohexyl-hydroxypropyl	23	77	0.52	0.02
10	cyclohexyl-hydroxypropyl	51	49	0.50	0.06
11	cyclohexyl-methyl	21	79	0.50	0.06
12	cyclohexyl-methyl	44	56	0.47	0.04
13	cyclohexyl-methyl	75	25	0.38	0.02
14	dimethylaminoethyl-methyl	63	37	0.22	0.07
15	ethylene glycol methyl ether-hydroxyethyl	54	46	0.52	0.06
16	ethylene glycol methyl ether-Methyl	53	47	0.42	0.08
17	ethylene glycol methyl ether-methyl	76	24	0.85	0.07
18	ethyl-methyl	44	56	0.83	0.04
19	ethyl-methyl	74	26	0.83	0.05

20	glycidyl-methyl	36	64	0.89	0.05
21	glycidyl-methyl	44	56	0.85	0.04
22	hydroxyethyl-methyl	24	76	0.64	0.06
23	hydroxyethyl-methyl	54	46	0.66	0.03
24	hydroxypropyl-methyl	35	65	0.80	0.02
25	hydroxypropyl-methyl	52	48	0.92	0.03
26	isobornyl-methyl	20	80	0.74	0.09
27	isobornyl-methyl	57	43	0.80	0.08
28	isobornyl-methyl	82	18	0.81	0.09
29	n-butyl-hydroxyethyl	60	40	0.64	0.05
30	n-butyl-hydroxyethyl	79	21	0.72	0.04
31	n-butyl-methyl	73	27	0.72	0.07
32	n-butyl-methyl	59	41	0.58	0.07
33	n-butyl-methyl	31	69	0.53	0.05
34	octyl-methyl	50	50	0.52	0.06
35	octyl-methyl	75	25	0.56	0.06
36	t-butyl-methyl	20	80	0.59	0.08
37	t-butyl-methyl	57	43	0.69	0.13
38	t-butyl-methyl	70	30	0.59	0.07
39	tetrahydrofurfuryl-cyclohexyl	27	73	0.51	0.04
40	tetrahydrofurfuryl-cyclohexyl	50	50	0.54	0.02
41	tetrahydrofurfuryl-cyclohexyl	77	23	0.57	0.03
42	tetrahydrofurfuryl-hydroxypropyl	49	51	0.70	0.15
43	tetrahydrofurfuryl-isobornyl	46	54	0.53	0.05
44	tetrahydrofurfuryl-isobornyl	66	34	0.63	0.05
45	tetrahydrofurfuryl-Methyl	24	76	0.74	0.08
46	tetrahydrofurfuryl-methyl	29	71	0.80	0.09
47	tetrahydrofurfuryl-methyl	53	47	0.59	0.09
48	tetrahydrofurfuryl-methyl	83	17	0.73	0.07
49	tetrahydrofurfuryl-methyl	29	71	0.72	0.05
50	trifluoroethyl-methyl	52	48	0.75	0.08
51	trifluoroethyl-methyl	80	20	0.45	0.04
52	trifluoroethyl-methyl	54	46	0.58	0.08
53	trifluoroethyl-methyl	35	65	0.67	0.05

Cell Attachment-Terpolymers

#	Name	Comp. 1	Comp.2	Comp.3	Exp	SD
1	benzyl-methyl-tetrahydrofurfuryl	32	30	38	0.82	0.09
2	Cyclohexyl-EGMA-(Methacryloxysuc	38	38	24	0.82	0.06
3	Cyclohexyl-TEGMA-Benzyl	33	33	34	0.88	0.03
4	EGMA-Hydroxyethyl-THF	4	30	30	0.84	0.04
5	EGMA-THF-Trifluoroethyl	33	33	34	0.70	0.05
6	Ethyl-Benzyl-TEGMA	40	30	30	0.81	0.06
7	Ethyl-Octyl-Hydroxypropyl	33	33	34	0.59	0.07

8	Ethyl-Octyl-Isobornyl	31	33	36	0.81	0.04
9	Ethyl-tButyl-Lauryl	28	36	36	0.57	0.07
10	hydroxypropyl-hydroxyethyl-dimethylaminoethyl	35	29	36	0.81	0.05
11	isoButyl-EGMA-(methacryloxysuc	38	43	19	0.70	0.09
12	isoButyl-Undecyl-Cyclohexyl	33	33	34	0.30	0.07
13	Lauryl-Cyclohexyl-Benzyl	35	35	30	0.38	0.05
14	Lauryl-Isobornyl-Hydroxyethyl	33	33	34	0.44	0.07
15	Methacrylic acid-nButyl-THF	33	33	34	0.19	0.05
16	Methyl-Isobornyl-Trifluoroethyl	31	31	38	1.03	0.12
17	nButyl-Cyclohexyl-Undecyl	33	33	34	0.45	0.14
18	nButyl-THF-Trifluoroethyl	38	31	31	0.36	0.15
19	nButyl-Undecyl-EGMA	30	35	35	0.57	0.10
20	Octyl-EGMA-THF	33	33	34	0.55	0.13
21	Octyl-Isobornyl-Hydroxypropyl	33	33	34	0.39	0.09
22	tButyl-Hydroxypropyl-THF	36	32	32	0.27	0.06
23	tButyl-Lauryl-Hydroxypropyl	33	33	34	0.40	0.07
24	tetrahydrofurfuryl-methyl-benzyl	41	33	26	0.44	0.07
25	tetrahydrofurfuryl-methyl-cyclohexyl	37	28	35	0.37	0.05
26	tetrahydrofurfuryl-methyl-isobutyl	41	29	30	0.37	0.07

Cell Proliferation-Homopolymers

#	Name	Exp	SD
1	poly-methyl-MA	0.36	0.08
2	poly-ethyl-MA	0.43	0.08
3	poly-isobutyl-MA	0.99	0.16
4	poly-tbutyl-MA	0.51	0.07
5	poly-noctyl-MA	0.44	0.08
6	poly-cyclohexyl-MA	0.31	0.09
7	poly-phenyl-MA	0.13	0.06
8	poly-benzyl-MA	0.17	0.05
9	poly-isobornyl-MA	-0.06	-0.03
10	poly-ethyleneglycolmehtylether-MA	0.67	0.15
11	poly-2hydroxypropyl-MA	0.08	0.03
12	poly-tetrahydrofurfuryl-MA	1.26	0.21
13	poly-2dimethylaminoethyl-MA	0.74	0.12

Cell Proliferation-Copolymers

#	Name	compo1	compo2	Exp	SD
1	benzyl-hydroxyethyl	49	51	0.73	0.10
2	benzyl-hydroxypropyl	51	49	1.21	0.19
3	benzyl-hydroxypropyl	71	29	0.76	0.13
4	benzyl-methyl	21	79	1.18	0.16
5	benzyl-methyl	50	50	0.72	0.15

6	benzyl-methyl	70	30	0.80	0.13
7	benzyl-methyl	30	70	1.39	0.19
8	benzyl-methyl	54	46	0.75	0.13
9	cyclohexyl-hydroxypropyl	23	77	1.09	0.16
10	cyclohexyl-hydroxypropyl	51	49	0.94	0.17
11	cyclohexyl-methyl	21	79	0.71	0.12
12	cyclohexyl-methyl	44	56	0.69	0.10
13	cyclohexyl-methyl	75	25	0.77	0.13
14	dimethylaminoethyl-methyl	63	37	0.01	0.02
15	ethylene glycol methyl ether-hydroxyethyl	54	46	0.32	0.05
16	ethylene glycol methyl ether-Methyl	53	47	1.11	0.13
17	ethylene glycol methyl ether-methyl	76	24	0.63	0.74
18	ethyl-methyl	44	56	0.05	0.07
19	ethyl-methyl	74	26	0.37	0.45
20	glycidyl-methyl	36	64	0.72	0.85
21	glycidyl-methyl	44	56	0.22	0.26
22	hydroxyethyl-methyl	24	76	0.48	0.56
23	hydroxyethyl-methyl	54	46	0.82	0.96
24	hydroxypropyl-methyl	35	65	0.47	0.55
25	hydroxypropyl-methyl	52	48	1.10	1.29
26	isobornyl-methyl	20	80	0.56	0.66
27	isobornyl-methyl	57	43	0.52	0.61
28	isobornyl-methyl	82	18	0.43	0.50
29	n-butyl-hydroxyethyl	60	40	0.42	0.11
30	n-butyl-hydroxyethyl	79	21	0.35	0.08
31	n-butyl-methyl	73	27	0.29	0.07
32	n-butyl-methyl	59	41	0.28	0.06
33	n-butyl-methyl	31	69	0.06	0.01
34	octyl-methyl	50	50	0.05	0.02
35	octyl-methyl	75	25	0.05	0.02
36	t-butyl-methyl	20	80	0.16	0.05
37	t-butyl-methyl	57	43	0.26	0.06
38	t-butyl-methyl	70	30	0.30	0.06
39	tetrahydrofurfuryl-cyclohexyl	27	73	0.34	0.06
40	tetrahydrofurfuryl-cyclohexyl	50	50	0.76	0.09
41	tetrahydrofurfuryl-cyclohexyl	77	23	0.88	0.06
42	tetrahydrofurfuryl-hydroxypropyl	49	51	0.39	0.09
43	tetrahydrofurfuryl-isobornyl	46	54	0.44	0.08
44	tetrahydrofurfuryl-isobornyl	66	34	0.44	0.04
45	tetrahydrofurfuryl-Methyl	24	76	0.44	0.07
46	tetrahydrofurfuryl-methyl	29	71	0.63	0.10
47	tetrahydrofurfuryl-methyl	53	47	0.50	0.08
48	tetrahydrofurfuryl-methyl	83	17	0.93	0.13
49	tetrahydrofurfuryl-methyl	29	71	0.42	0.07
50	trifluoroethyl-methyl	52	48	0.41	0.07

51	trifluoroethyl-methyl	80	20	2.18	0.26
52	trifluoroethyl-methyl	54	46	0.42	0.07
53	trifluoroethyl-methyl	35	65	0.30	0.06

Cell Proliferation-Terpolymers

#	Name	Comp. 1	Comp. 2	Comp. 3	Exp	SD
1	benzyl-methyl-tetrahydrofurfuryl	32	30	38	0.54	0.09
2	Cyclohexyl-EGMA-(Methacryloxysuc	38	38	24	0.31	0.06
3	Cyclohexyl-TEGMA-Benzyl	33	33	34	0.64	0.02
4	EGMA-Hydroxyethyl-THF	4	30	30	0.65	0.04
5	EGMA-THF-Trifluoroethyl	33	33	34	0.32	0.05
6	Ethyl-Benzyl-TEGMA	40	30	30	0.73	0.05
7	Ethyl-Octyl-Hydroxypropyl	33	33	34	0.46	0.07
8	Ethyl-Octyl-Isobornyl	31	33	36	0.19	0.04
9	Ethyl-tButyl-Lauryl	28	36	36	0.17	0.07
10	hydroxypropyl-hydroxyethyl-dimethylaminoethyl	35	29	36	0.86	0.05
11	isoButyl-EGMA-(methacryloxysuc	38	43	19	-0.02	0.09
12	isoButyl-Undecyl-Cyclohexyl	33	33	34	0.74	0.07
13	Lauryl-Cyclohexyl-Benzyl	35	35	30	0.65	0.05
14	Lauryl-Isobornyl-Hydroxyethyl	33	33	34	0.68	0.07
15	Methacrylic acid-nButyl-THF	33	33	34	0.03	0.05
16	Methyl-Isobornyl-Trifluoroethyl	31	31	38	0.43	0.12
17	nButyl-Cyclohexyl-Undecyl	33	33	34	0.67	0.14
18	nButyl-THF-Trifluoroethyl	38	31	31	0.81	0.15
19	nButyl-Undecyl-EGMA	30	35	35	1.00	0.10
20	Octyl-EGMA-THF	33	33	34	1.30	0.13
21	Octyl-Isobornyl-Hydroxypropyl	33	33	34	0.72	0.09
22	tButyl-Hydroxypropyl-THF	36	32	32	0.81	0.06
23	tButyl-Lauryl-Hydroxypropyl	33	33	34	0.94	0.07
24	tetrahydrofurfuryl-methyl-benzyl	41	33	26	0.86	0.07
25	tetrahydrofurfuryl-methyl-cyclohexyl	37	28	35	0.95	0.05
26	tetrahydrofurfuryl-methyl-isobutyl	41	29	30	1.03	0.07