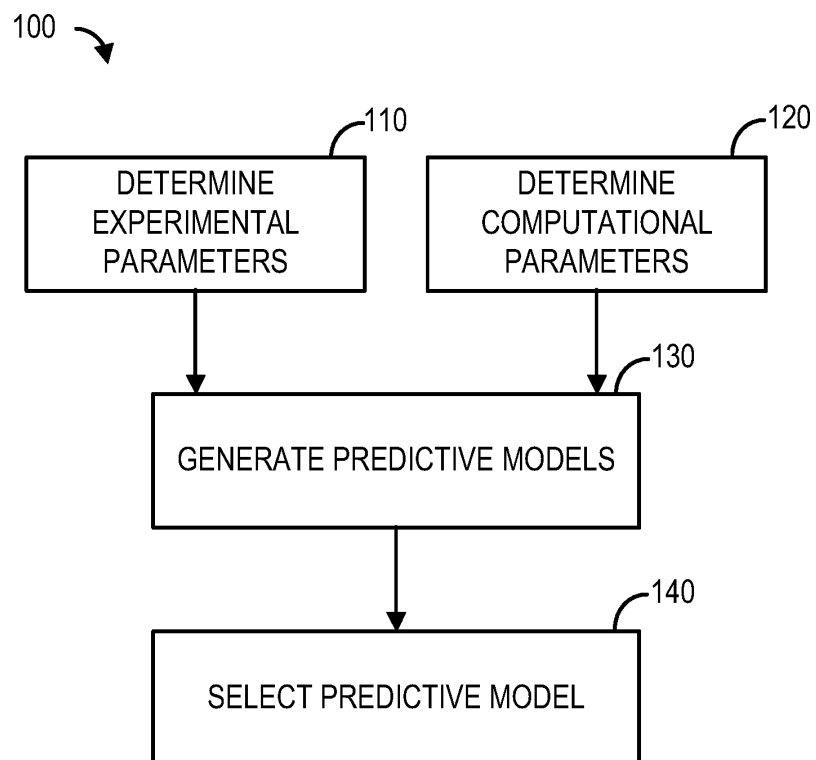


FIG. 1



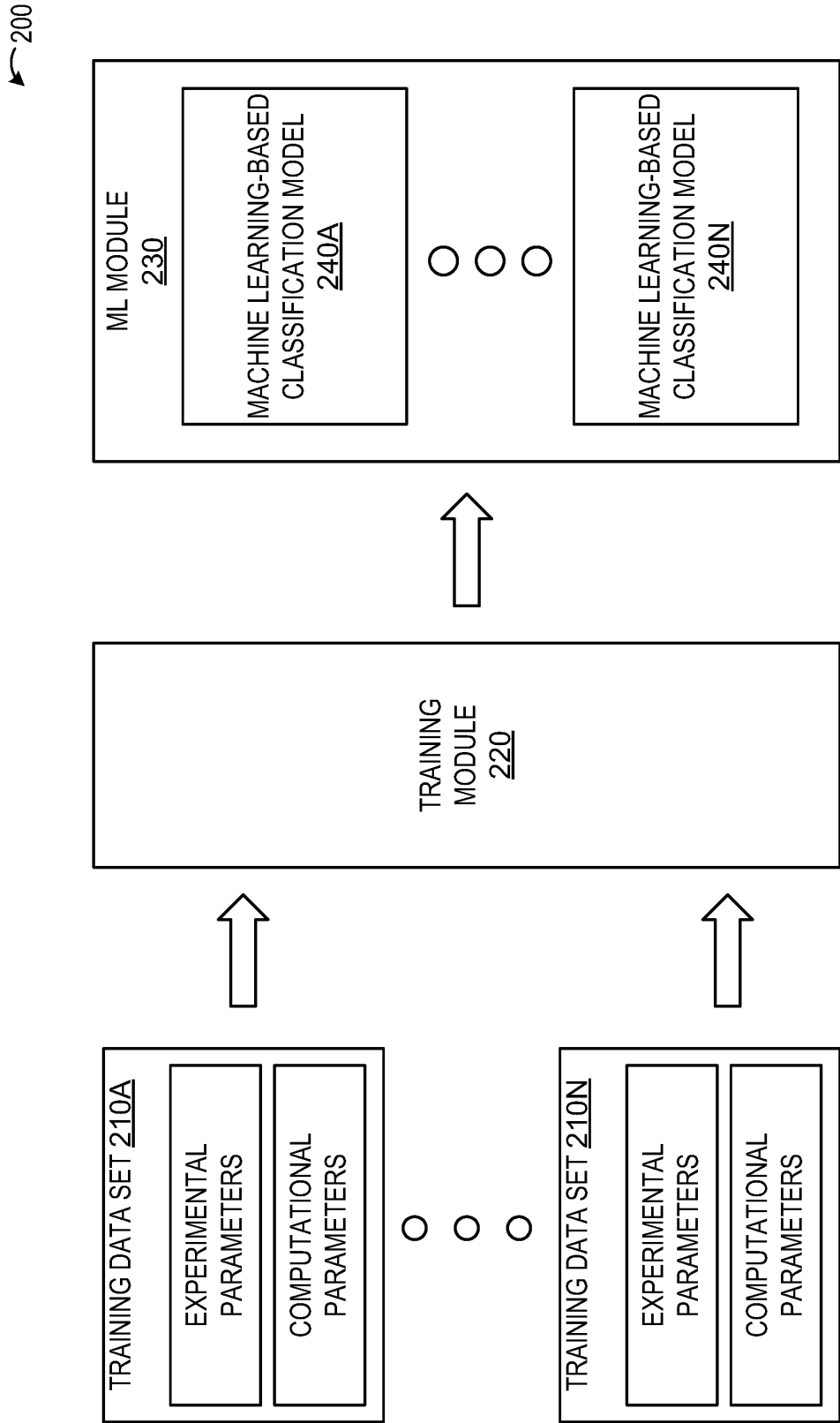
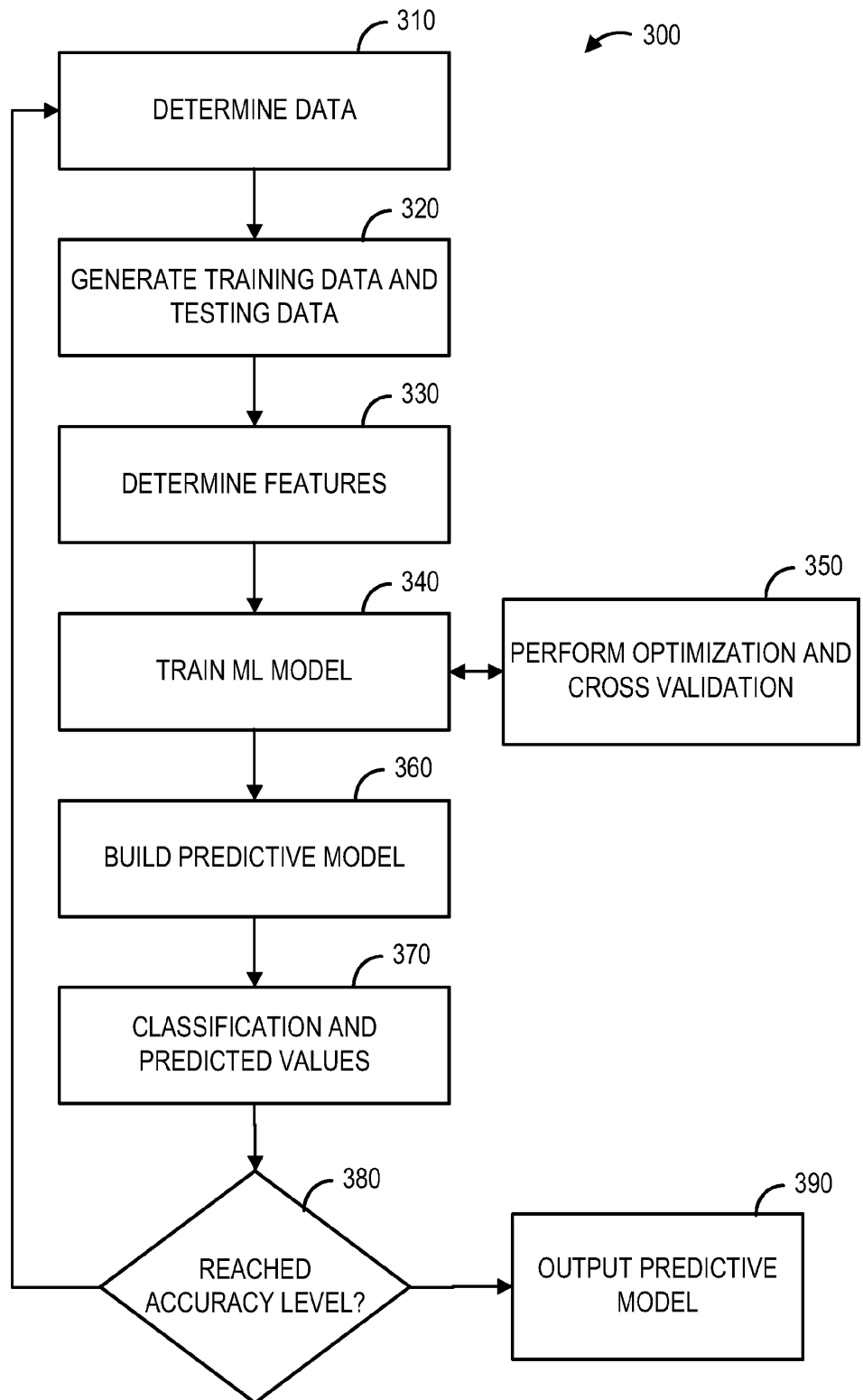


FIG. 2

FIG. 3



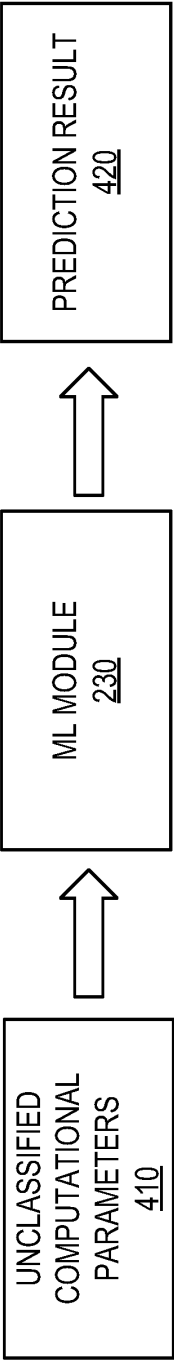


FIG. 4

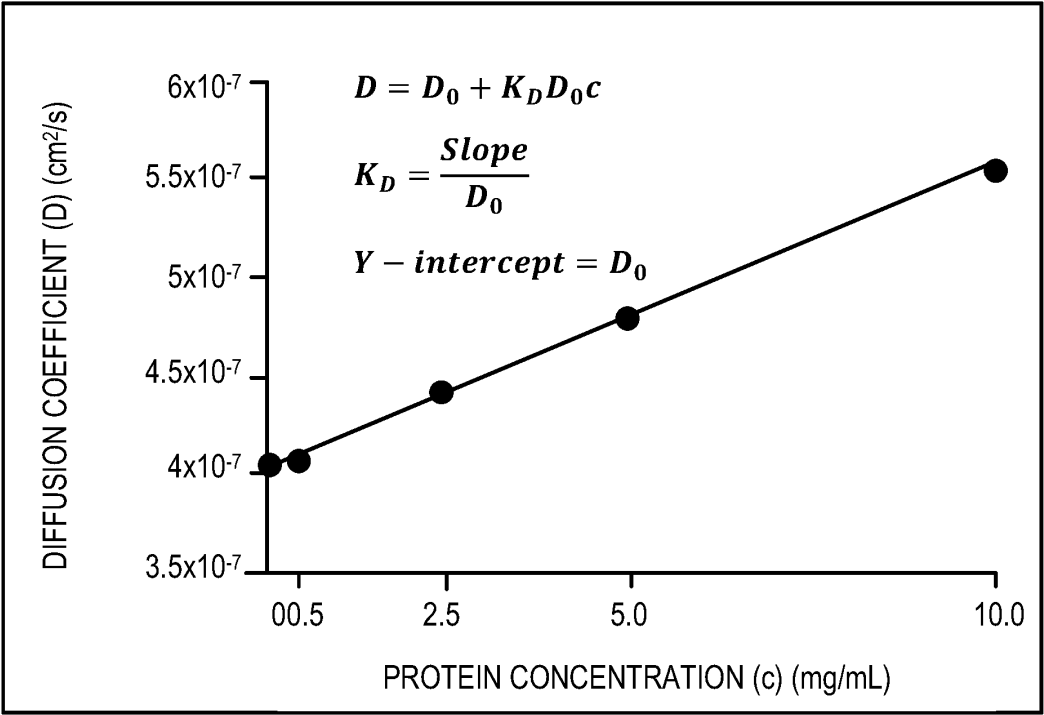


FIG. 5

Antibody	Isotype	Z_{VL}	Z_{VH}	Z_{CL}	Z_{CH1}	Z_{Hinge}	Z_{CH2}	Z_{CH3}	Z_{mAb}	Z_{VL}	Z_{VH}	Z_{CL}	Z_{CH1}	Z_{Hinge}	Z_{CH2}	Z_{CH3}	Antibody
mAb1	IgG1	3.02	4.70	-2.22	4.78	-0.56	4.29	-0.04	30.50	0.0155	0.0191	-0.0029	0.0165	-0.0011	0.0185	0.0185	mAb16
mAb2	IgG1	3.09	3.78	-2.18	5.82	-0.41	4.22	0.01	30.18	0.0172	0.0174	0.0029	0.0101	0.0019	0.0219	0.0037	mAb17
mAb3	IgG1	3.01	4.38	-2.33	5.50	-0.37	4.17	0.20	29.89	0.0154	0.0205	0.0024	0.0134	-0.0007	0.0162	0.0021	mAb18
mAb4	IgG1	3.25	3.15	-2.27	5.42	-0.43	4.51	-0.17	28.41	0.0098	0.0232	0.0020	0.0179	-0.0010	0.0176	0.0016	mAb19
mAb5	IgG4	1.92	2.26	-1.97	4.58	0.23	2.89	-1.44	18.63	0.0116	0.0166	0.0021	0.0105	0.0015	0.0185	-0.0114	mAb20
mAb6	IgG1	4.11	3.31	-2.20	5.22	-0.64	4.62	0.06	30.83	0.0212	0.0158	0.0040	0.0138	-0.0031	0.0172	0.0026	mAb21
mAb7	IgG4	2.03	5.16	-2.04	4.54	0.30	2.65	-1.63	22.98	0.0127	0.0236	-0.0001	0.0124	0.0013	0.0198	-0.0071	mAb22
mAb8	IgG4	3.03	3.45	-2.12	4.74	0.23	2.69	-1.38	21.53	0.0168	0.0200	0.0000	0.0085	0.0014	0.0211	-0.0104	mAb23
mAb9	IgG4	0.97	3.34	-2.03	4.60	-0.22	2.71	-1.43	18.72	0.0014	0.0200	-0.0007	0.0113	0.0014	0.0154	-0.0088	mAb24
mAb10	IgG4	3.06	3.57	-2.07	3.98	0.13	2.36	-1.67	21.08	0.0172	0.0102	-0.0006	0.0089	0.0019	0.0153	-0.0123	mAb25
mAb11	IgG1	2.68	2.55	-2.33	5.19	-0.22	4.49	-0.02	26.01	0.0153	0.0193	0.0022	0.0114	0.0009	0.0159	0.0047	mAb26
mAb12	IgG4	4.04	3.84	-2.42	4.21	0.10	2.49	-1.56	22.92	0.0225	0.0191	-0.0025	-0.0132	0.0011	0.0201	-0.0119	mAb27
mAb13	IgG4	5.16	2.37	-2.33	4.04	0.13	2.53	-1.18	24.50	0.0270	0.0160	0.0005	0.0113	0.0021	0.0199	-0.0105	mAb28
mAb14	IgG4	4.27	-0.57	-2.05	3.96	0.05	2.89	-1.52	17.06	0.0215	0.0036	0.0039	0.0112	0.0015	0.0175	-0.0097	mAb29
mAb15	IgG4	3.01	2.72	-1.54	4.77	0.10	2.84	-0.98	21.3	0.0142	0.0177	-0.0008	0.0120	0.0014	0.0178	-0.0110	mAb30
mAb16	IgG4	4.04	3.55	-2.01	4.07	-0.50	2.46	-0.67	23.14	0.0205	0.0176	-0.0053	0.0097	0.0014	0.0168	-0.0088	mAb31

FIG. 6A

Antibody	Isotype	HI	D _{mAb}	pI _{Sequence}	pI _{Structure}	AP
mAb1	IgG1	1.23	615.8	9.37	10.94	-6275.85
mAb2	IgG1	1.22	622.095	9.29	9.62	-6486.04
mAb3	IgG1	1.23	781.932	9.37	9.68	-6402.95
mAb4	IgG1	1.06	358.01	9.11	9.44	-6543.17
mAb5	IgG4	1.32	1046.12	7.76	8.29	-5917.39
mAb6	IgG1	1.21	848.615	9.45	10.98	-6677.57
mAb7	IgG4	1.35	2349.38	9.14	9.38	-6153.84
mAb8	IgG4	1.13	1319.31	8.94	9.21	-6607.31
mAb9	IgG4	1.11	1280.63	7.72	8.23	-6437.43
mAb10	IgG4	1.28	1787.47	8.77	8.86	-6369.26
mAb11	IgG1	1.10	271.935	9.14	9.47	-7387.04
mAb12	IgG4	1.21	1866.28	8.77	9.06	-6075.37
mAb13	IgG4	1.11	1623.68	9.10	9.46	-6098.54
mAb14	IgG4	1.16	528.071	6.98	7.93	-6242.53
mAb15	IgG4	1.14	1265.22	8.79	8.92	-6674.37
mAb16	IgG4	1.09	1395.61	9.07	9.39	-6258.63

FIG. 6B

Antibody	Isotype	Z _{VL}	Z _{VH}	Z _{CL}	Z _{CH3}	Z _{Lak}	Z _{VL}	Z _{VH}	Z _{CL}	Z _{CH3}	Z _{Lak}	Z _{VL}	Z _{VH}	Z _{CL}	Z _{CH3}	Z _{Lak}	Z _{VL}	Z _{VH}	Z _{CL}	Z _{CH3}	Z _{Lak}	HL	D _{max}	pl _{sequence}	pl _{structure}	AP	RMSD
mAb1	IgG1	3.05	4.72	-2.02	4.54	11.29	0.0267	0.0308	-0.0063	0.0248	0.0248	0.0248	0.0308	-0.0063	0.0248	0.0248	0.0267	0.0308	-0.0063	0.0248	0.0248	1.23	316.418	9.37	9.92	-1963.86	1.872
mAb2	IgG1	3.14	3.72	-2.16	4.67	10.36	0.0295	0.0311	-0.0002	0.0240	0.0240	0.0240	0.0295	-0.0002	0.0240	0.0240	0.0295	0.0311	-0.0002	0.0240	0.0240	1.22	250.287	9.29	9.95	-1892.09	1.907
mAb3	IgG1	3.04	4.63	-2.20	4.23	10.70	0.0279	0.0342	0.0047	0.0211	0.0211	0.0211	0.0279	0.0047	0.0211	0.0211	0.0279	0.0342	0.0047	0.0211	0.0211	1.23	295.767	9.37	9.94	-2084.41	2.294
mAb4	IgG1	3.22	3.47	-1.95	4.37	10.11	0.0362	0.0518	0.0042	0.0231	0.0231	0.0231	0.0362	0.0042	0.0231	0.0231	0.0362	0.0518	0.0042	0.0231	0.0231	1.06	372.093	9.11	9.84	-2147.38	2.384
mAb5	IgG4	2.02	2.45	-1.61	3.67	7.52	0.0189	0.0243	0.0038	0.0142	0.0142	0.0142	0.0189	0.0038	0.0142	0.0142	0.0189	0.0243	0.0038	0.0142	0.0142	1.32	318.258	7.76	9.62	-2132.05	1.785
mAb6	IgG4	4.08	3.50	-2.39	4.46	10.54	0.0314	0.0268	-0.0049	0.0215	0.0215	0.0215	0.0314	-0.0049	0.0215	0.0215	0.0314	0.0268	-0.0049	0.0215	0.0215	1.21	450.961	9.45	10.06	-2090.23	1.999
mAb7	IgG4	2.07	5.82	-1.93	3.83	10.79	0.0154	0.0375	-0.0047	0.0188	0.0188	0.0188	0.0154	-0.0047	0.0188	0.0188	0.0154	0.0375	-0.0047	0.0188	0.0188	1.35	557.576	9.14	10.17	-2043.86	1.970
mAb8	IgG4	3.15	3.15	-1.55	3.69	9.43	0.0269	0.0279	0.0065	0.0184	0.0184	0.0184	0.0269	0.0065	0.0184	0.0184	0.0269	0.0279	0.0065	0.0184	0.0184	1.13	467.066	8.94	10.01	-2338.8	2.394
mAb10	IgG4	3.04	3.32	-1.84	3.69	9.20	0.0235	0.0176	0.0053	0.0119	0.0119	0.0119	0.0235	0.0053	0.0119	0.0119	0.0235	0.0176	0.0053	0.0119	0.0119	1.28	355.414	8.77	9.89	-2276.99	2.201
mAb11	IgG1	2.19	2.72	-1.90	4.48	8.49	0.0213	0.0306	-0.0024	0.0210	0.0210	0.0210	0.0213	-0.0024	0.0210	0.0210	0.0213	0.0306	-0.0024	0.0210	0.0210	1.10	347.14	9.14	9.74	-2389.93	2.283
mAb12	IgG4	4.14	3.42	-1.82	3.77	10.51	0.0354	0.0276	-0.0021	0.0285	0.0285	0.0285	0.0354	-0.0021	0.0285	0.0285	0.0354	0.0276	-0.0021	0.0285	0.0285	1.21	310.087	8.77	10.06	-2092.8	2.334
mAb13	IgG4	5.26	2.30	-2.07	3.43	9.91	0.0406	0.0237	0.0017	0.0213	0.0213	0.0213	0.0406	0.0017	0.0213	0.0213	0.0406	0.0237	0.0017	0.0213	0.0213	1.11	314.203	9.10	10.13	-2201.58	2.159
mAb14	IgG4	4.37	-0.42	-1.93	3.75	6.77	0.0346	0.0100	0.0011	0.0168	0.0168	0.0168	0.0346	0.0011	0.0168	0.0168	0.0346	0.0100	0.0011	0.0168	0.0168	1.16	233.192	6.98	9.24	-2254.63	2.674
mAb15	IgG4	3.07	2.92	-2.01	3.77	8.74	0.0208	0.0286	-0.0038	0.0232	0.0232	0.0232	0.0208	-0.0038	0.0232	0.0232	0.0208	0.0286	-0.0038	0.0232	0.0232	1.14	300.056	8.79	9.81	-2494.02	2.431

FIG. 7

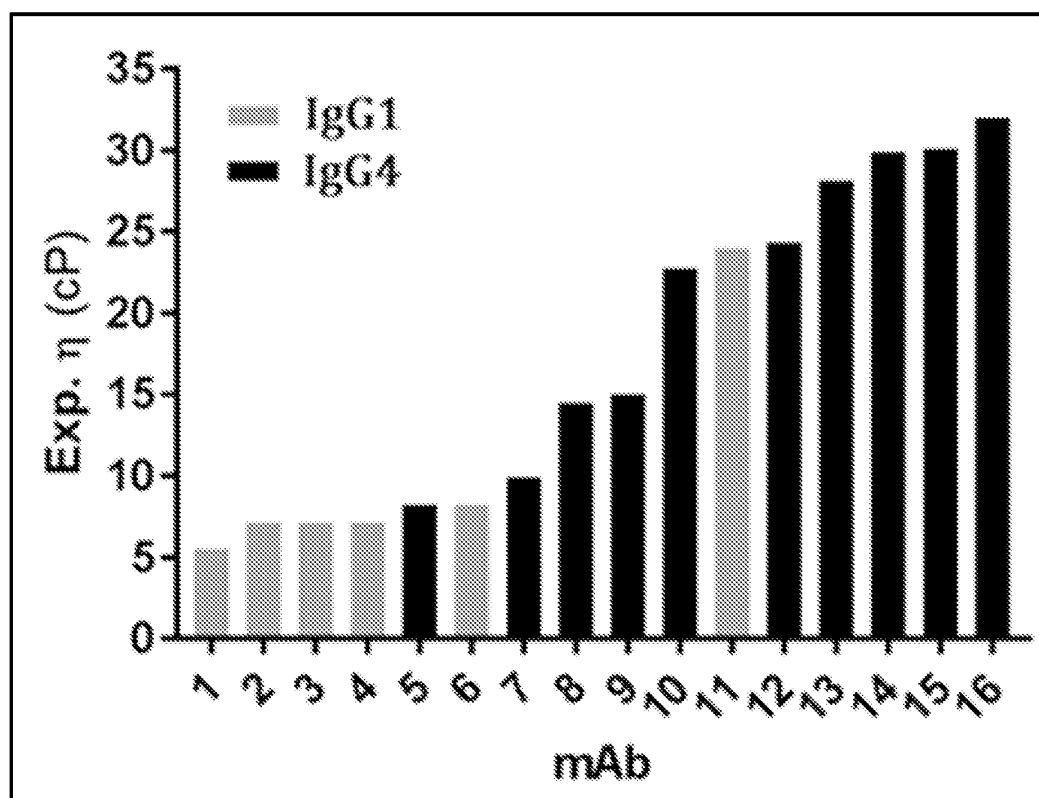


FIG. 8

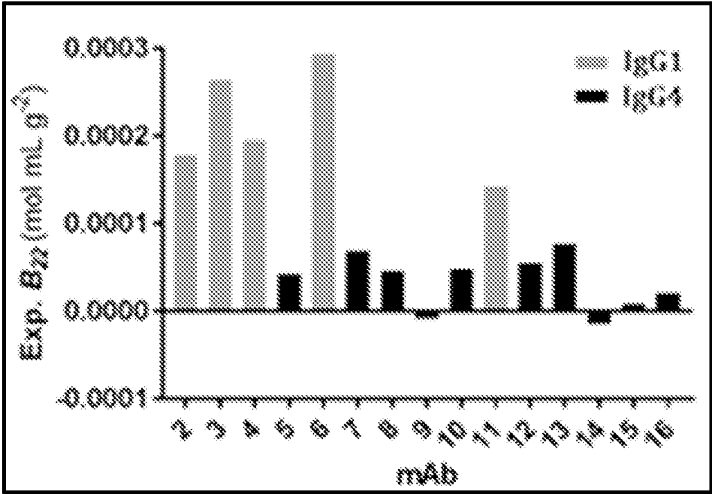


FIG. 9A

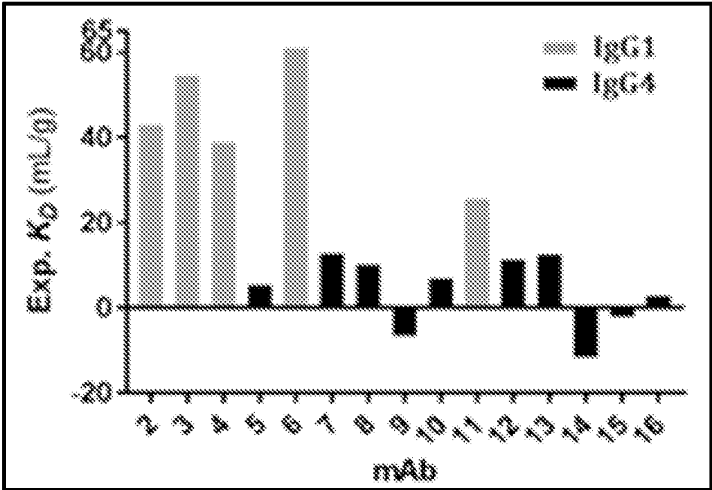


FIG. 9B

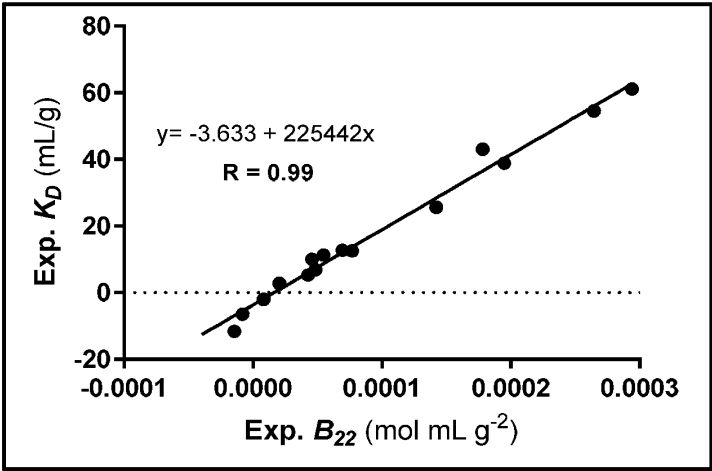


FIG. 9C

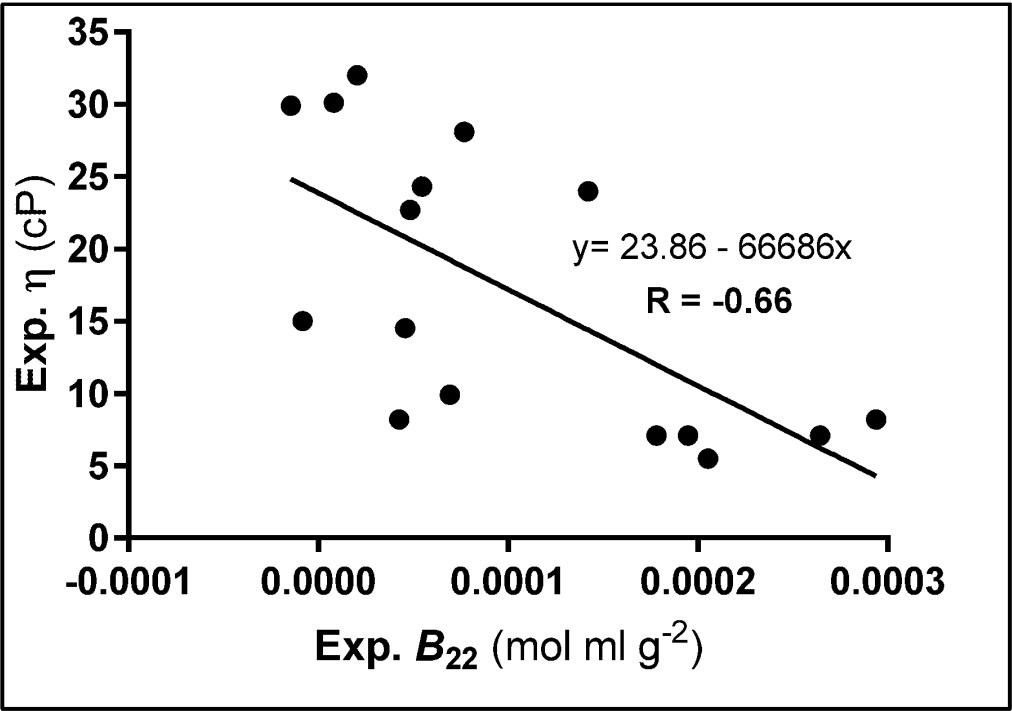


FIG. 10A

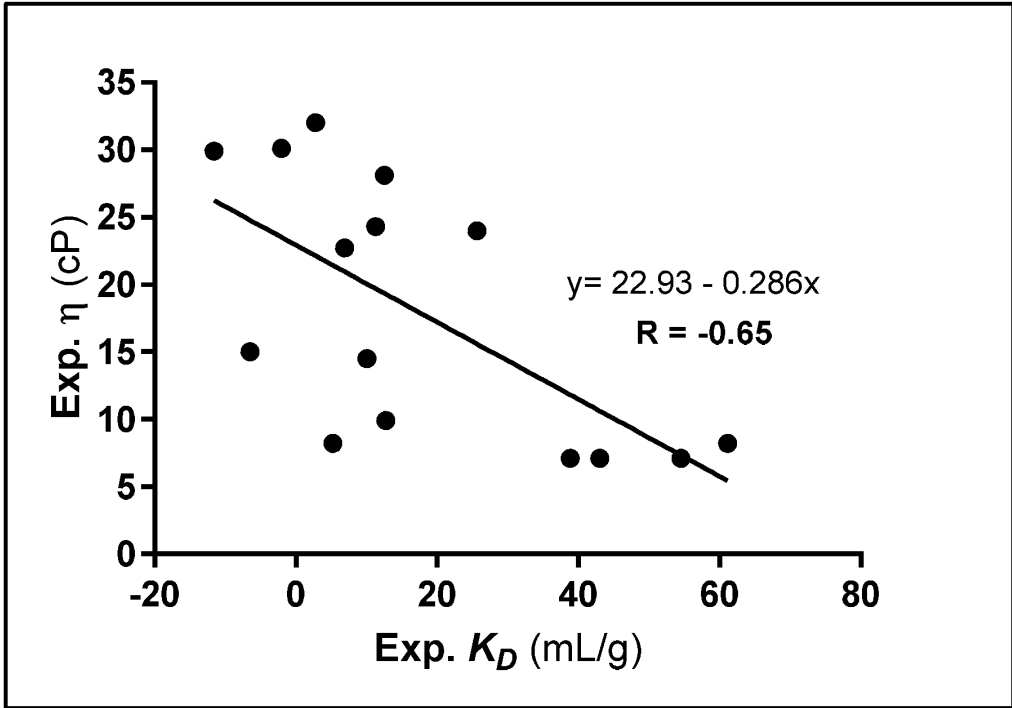


FIG. 10B

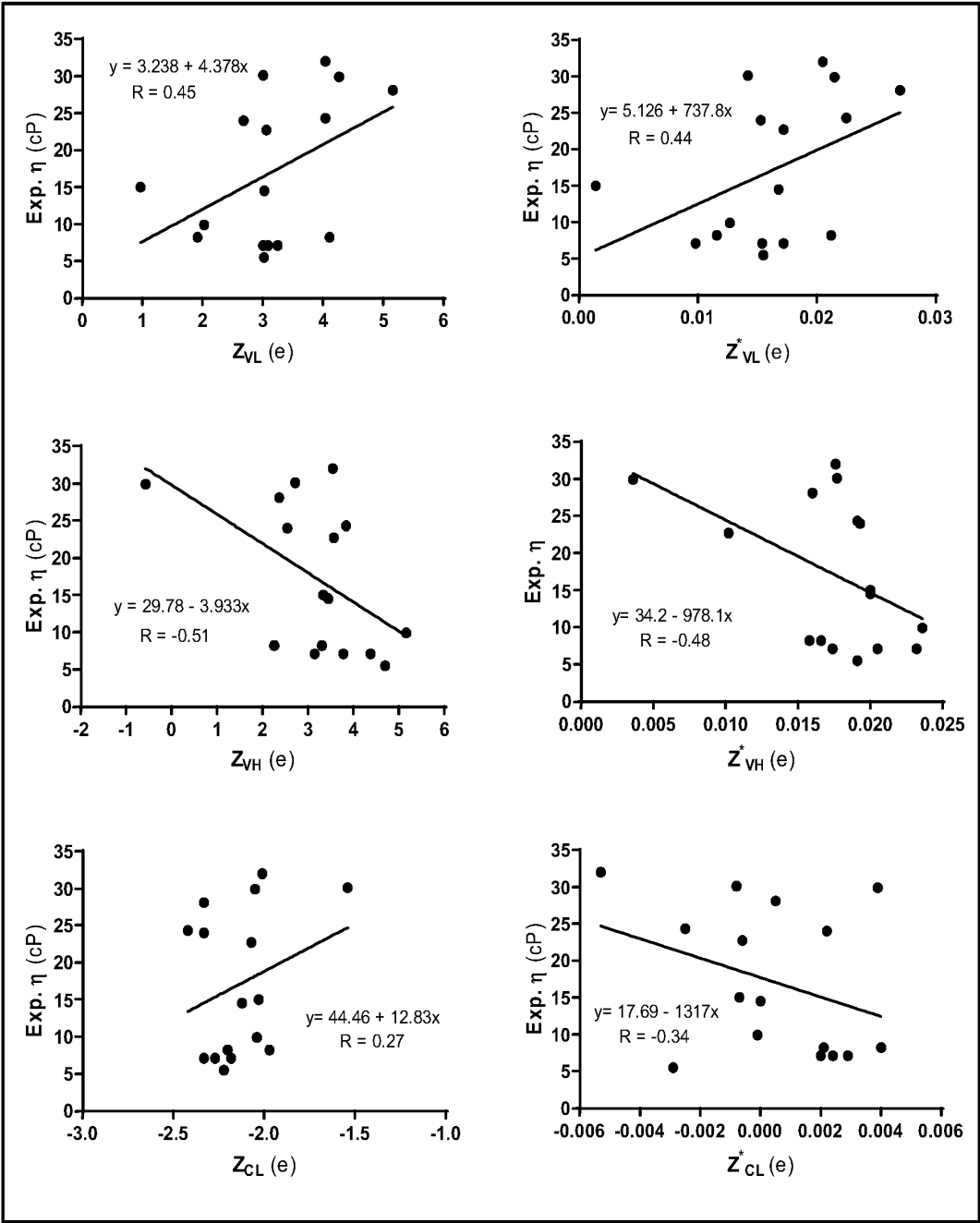


FIG. 11A

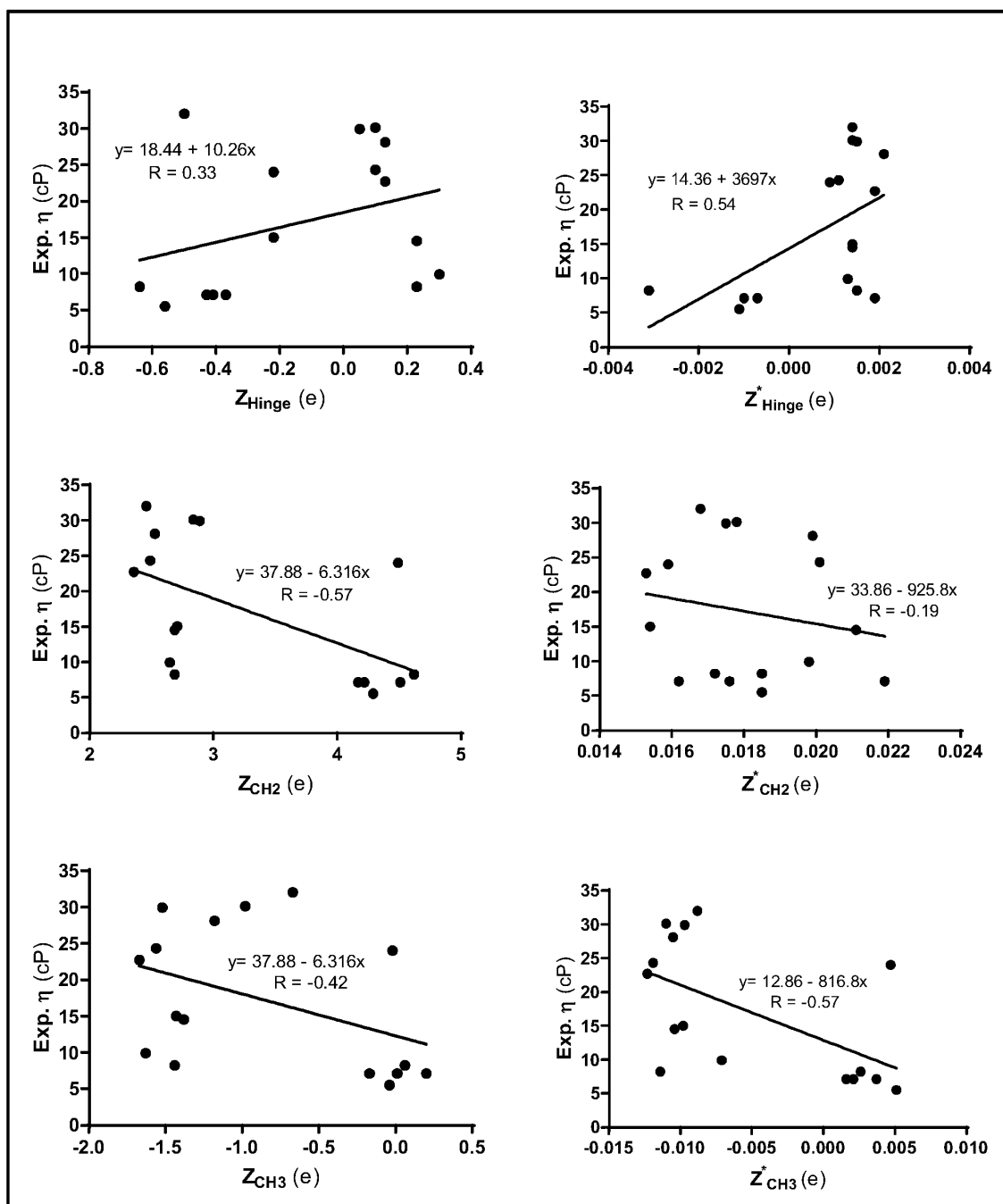


FIG. 11B

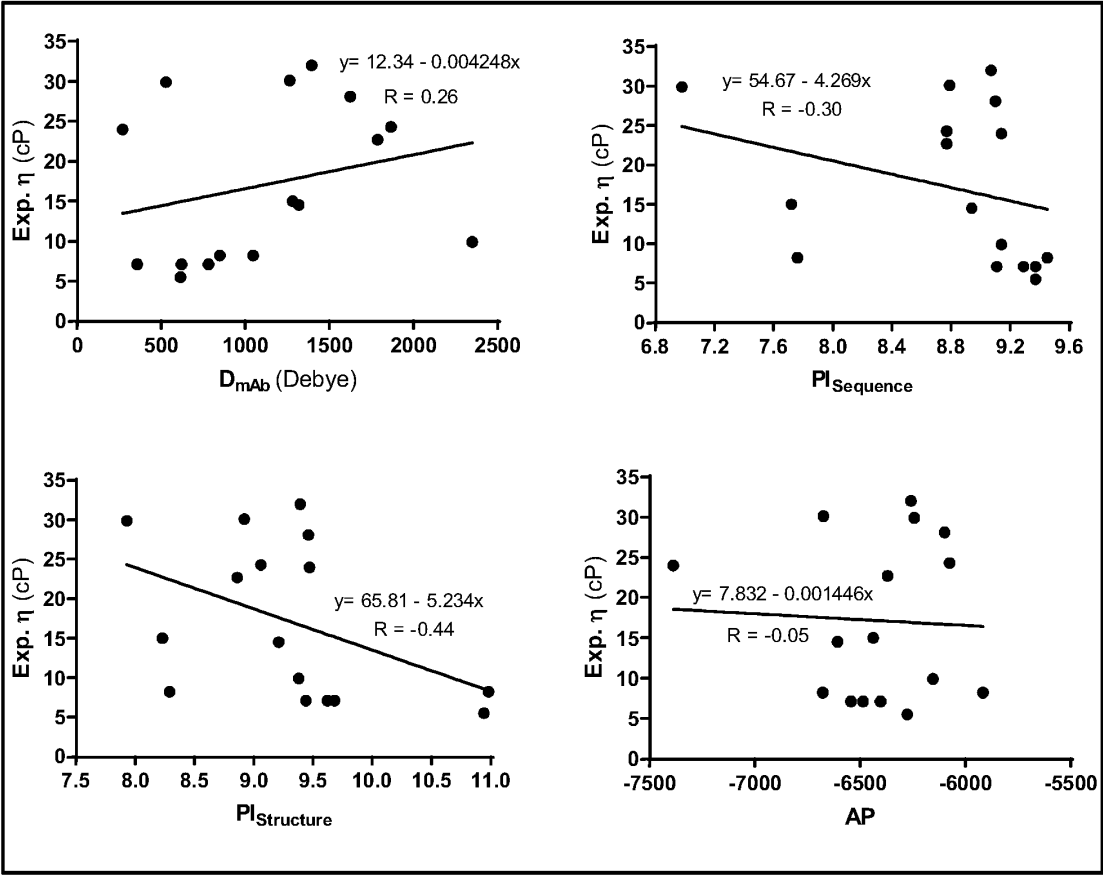


FIG. 11C

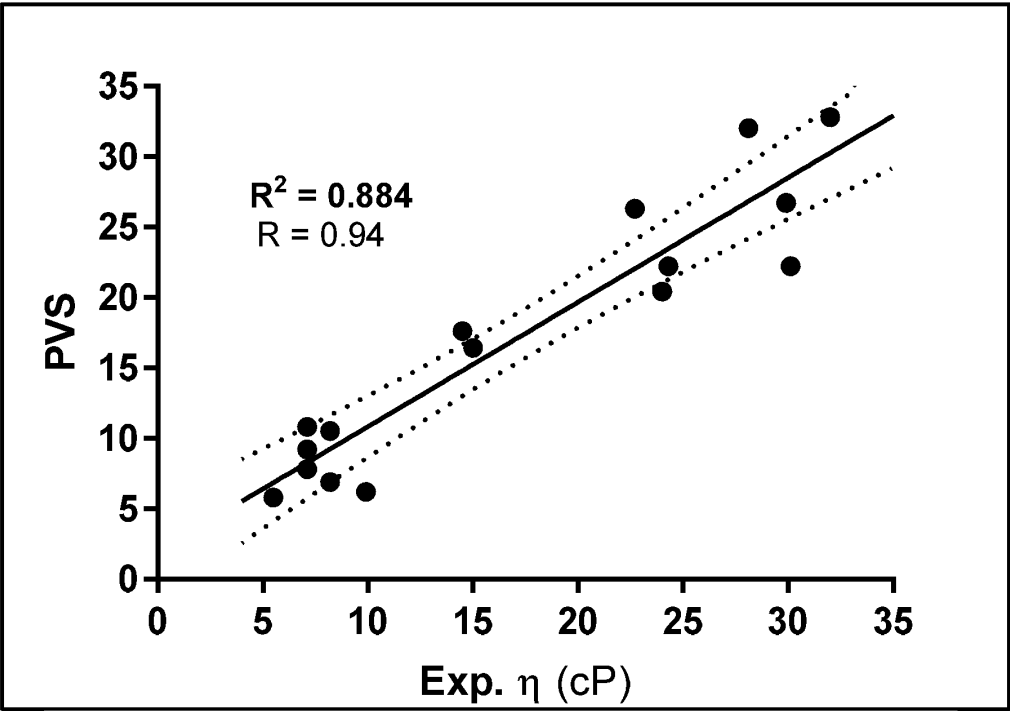


FIG. 12

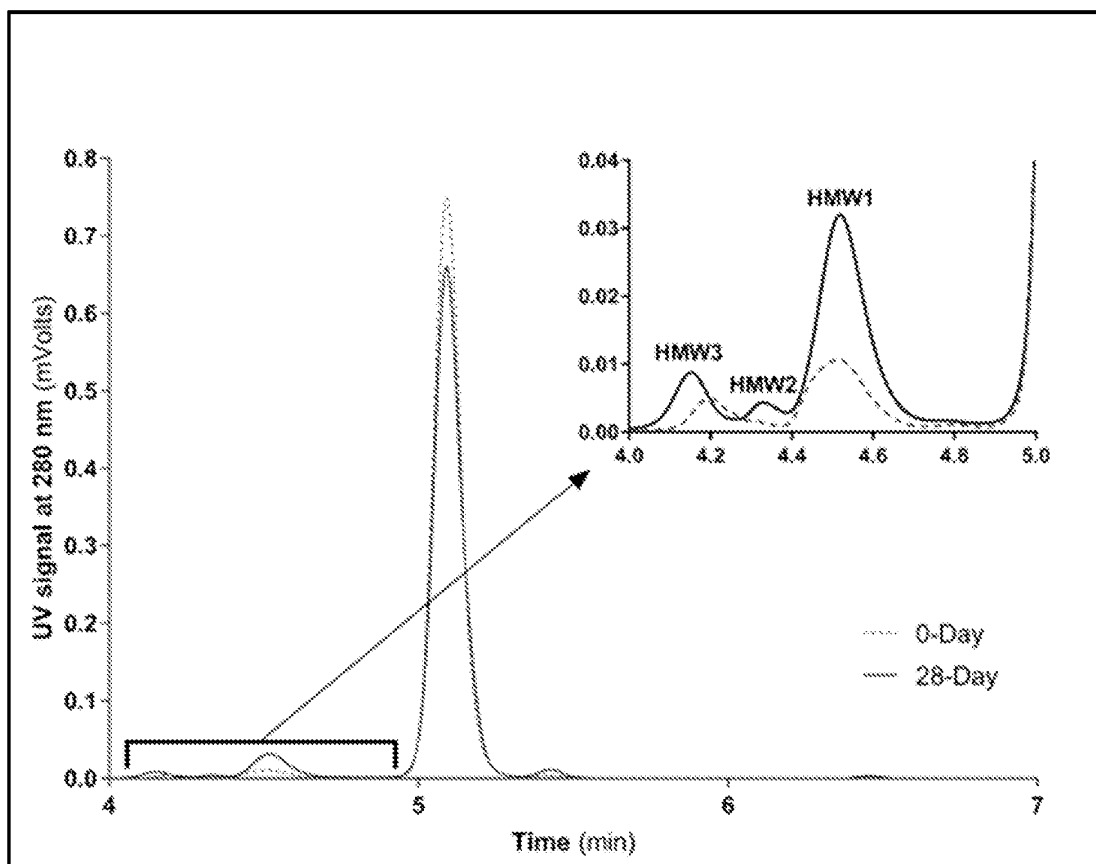


FIG. 13

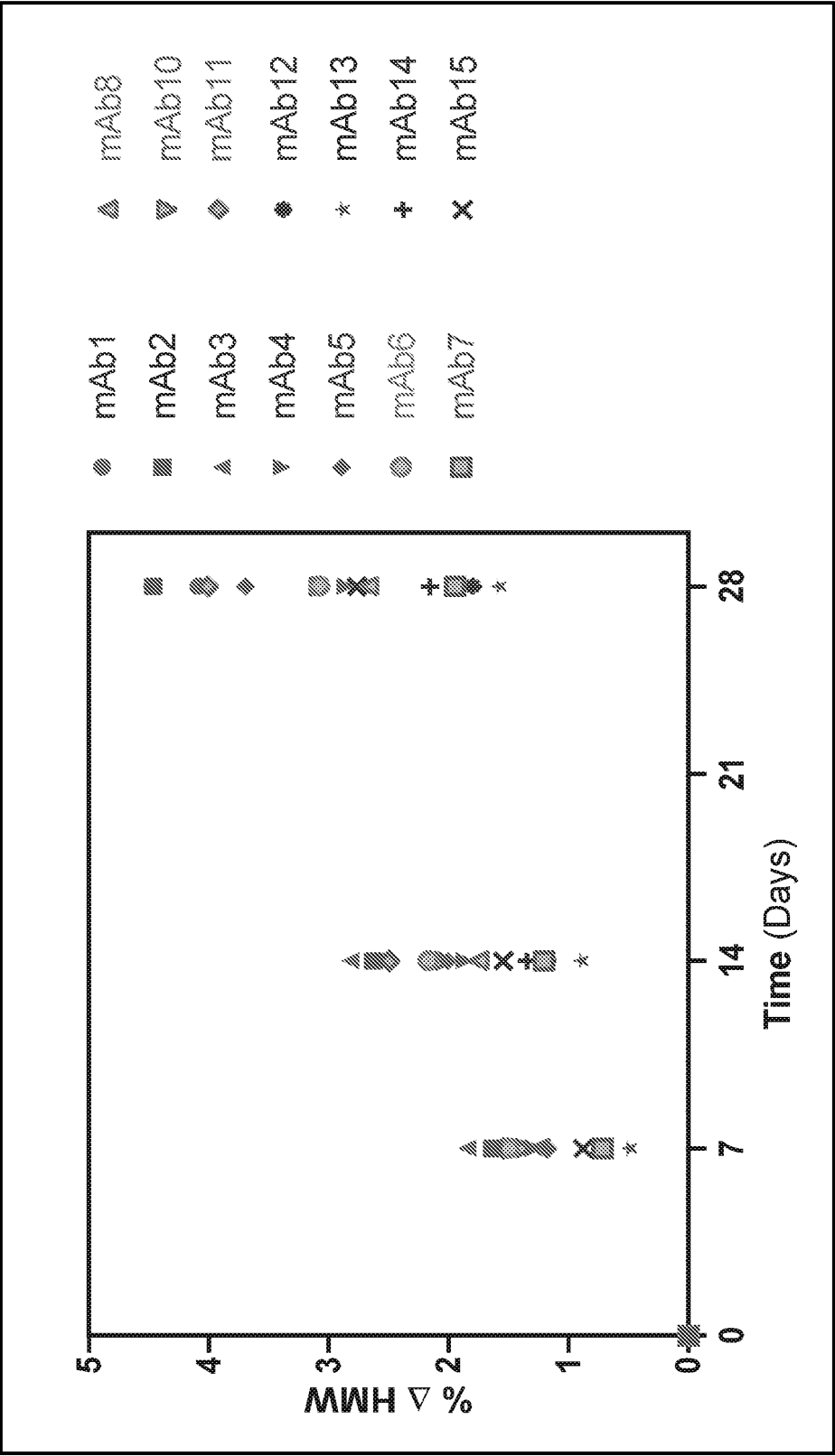


FIG. 14

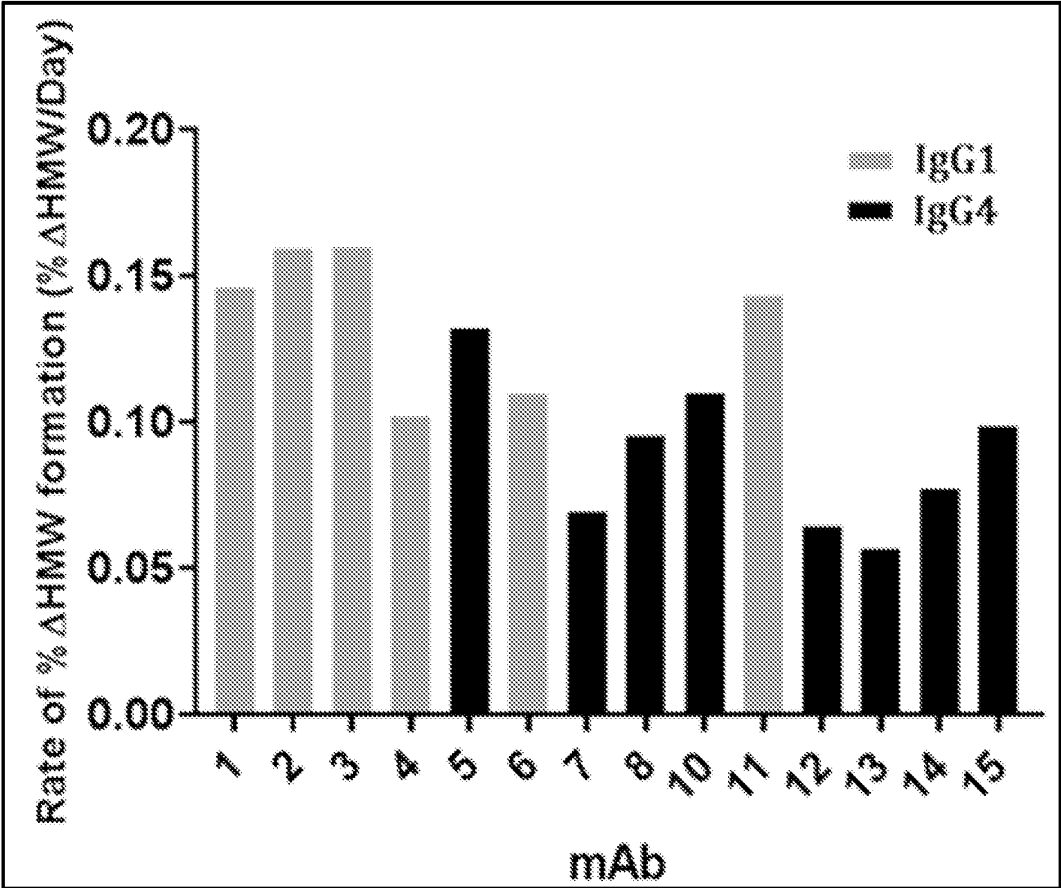


FIG. 15

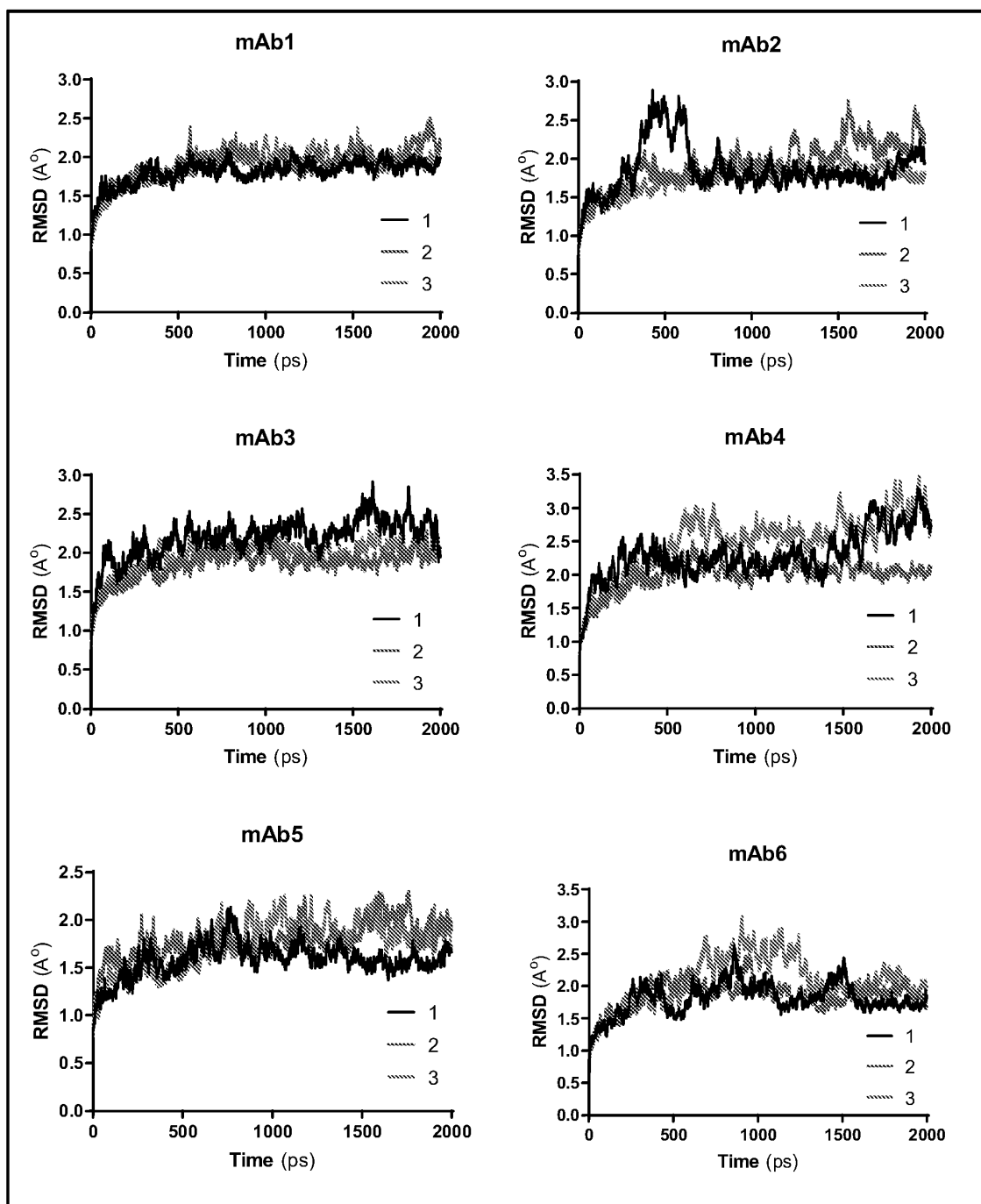


FIG. 16A

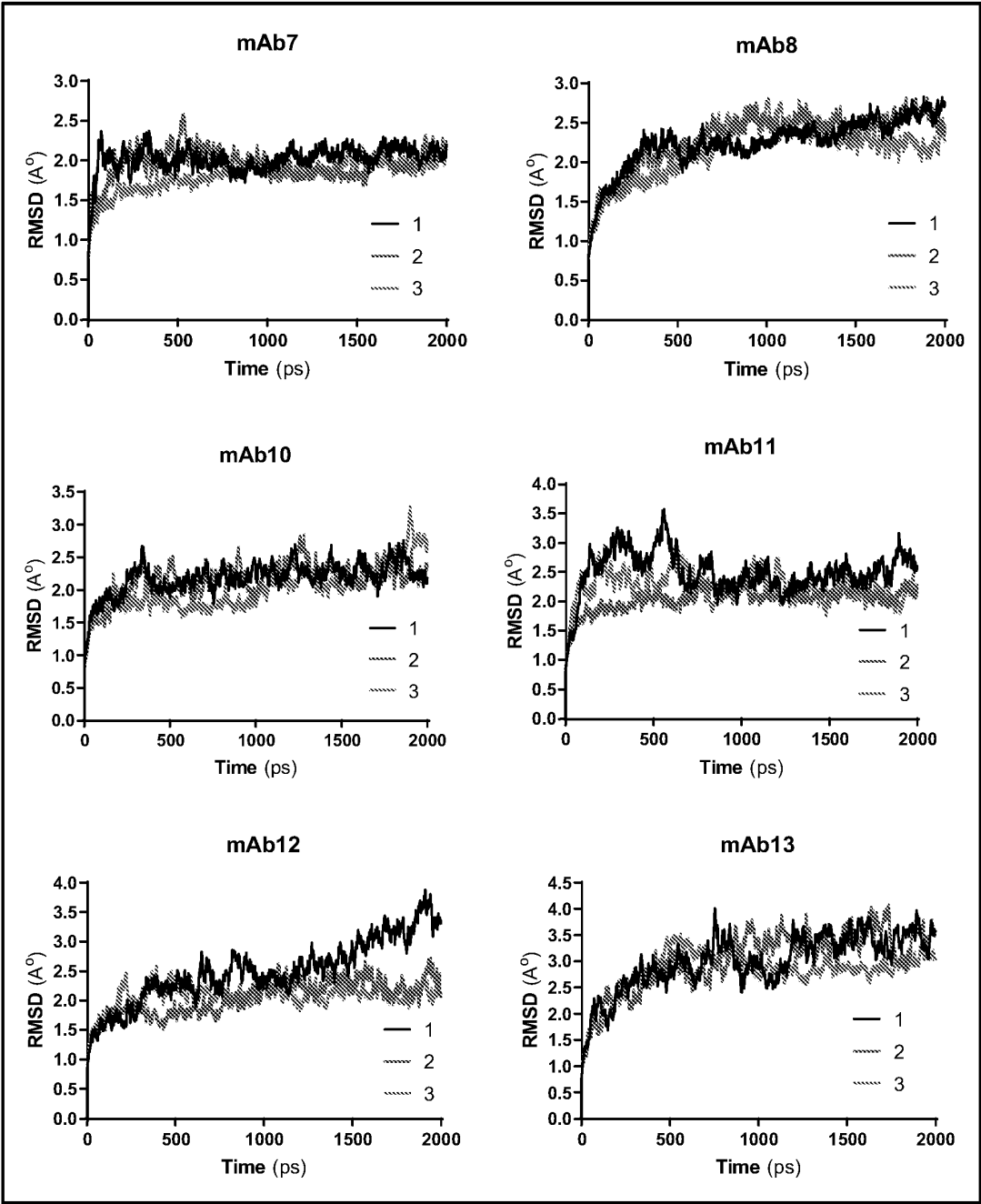


FIG. 16B

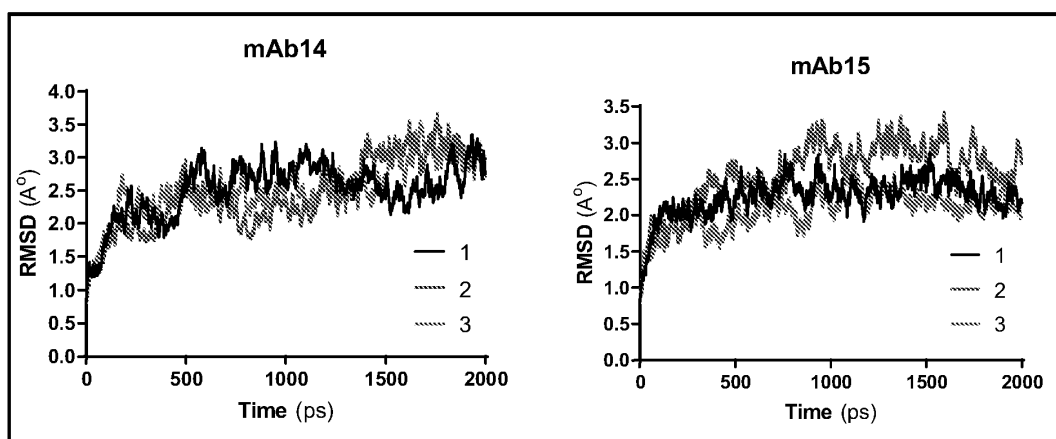


FIG. 16C

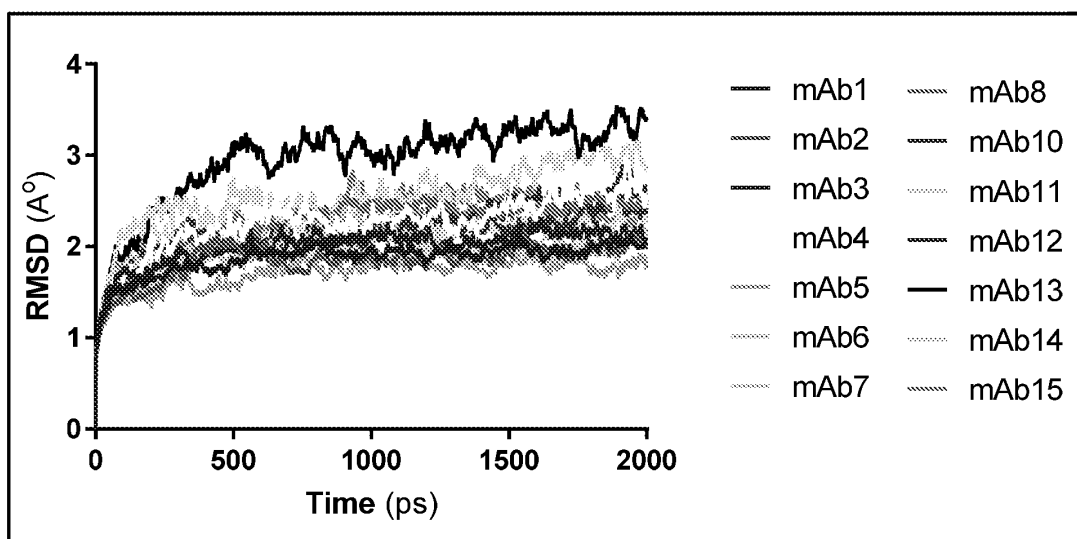


FIG. 17

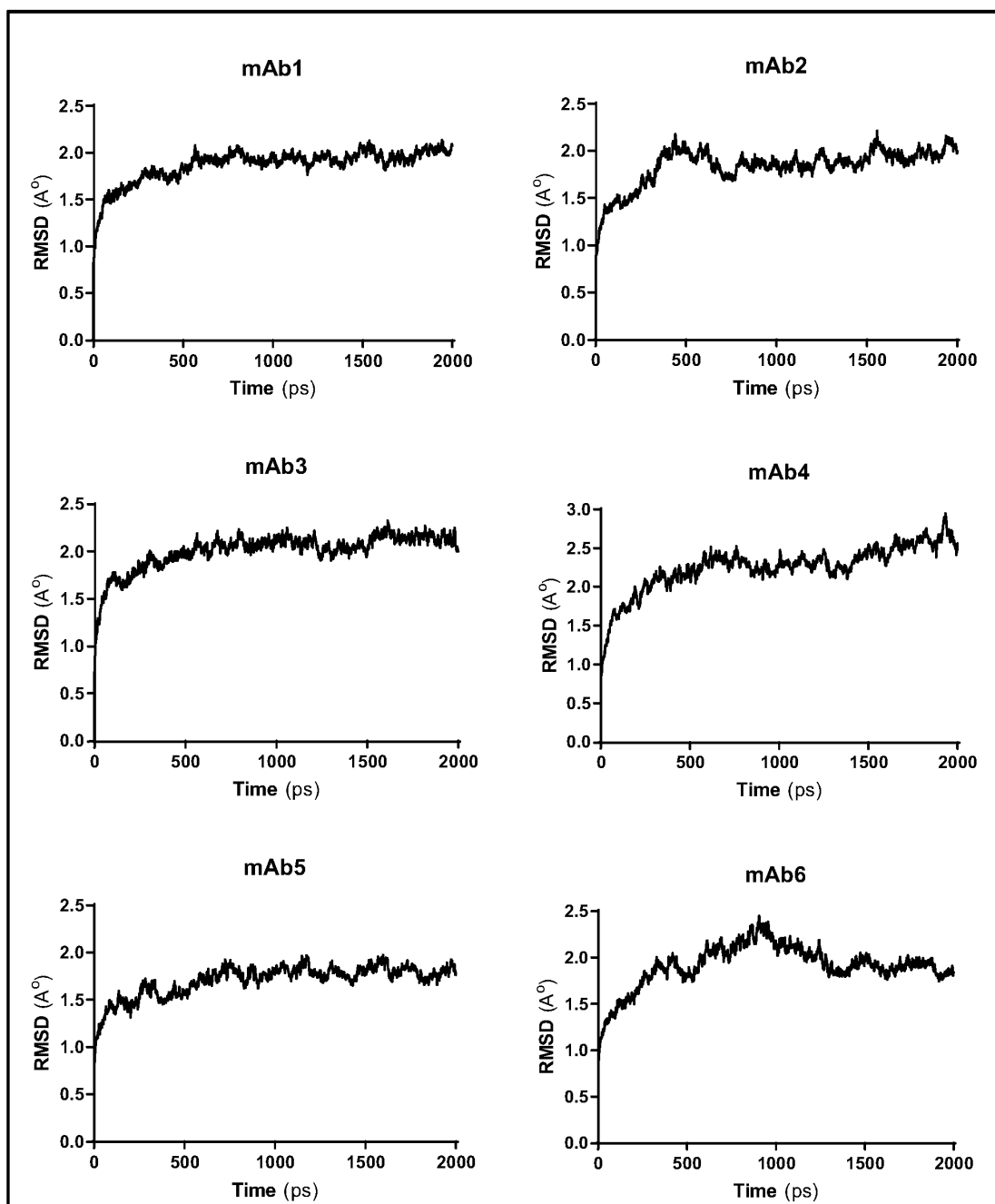


FIG. 18A

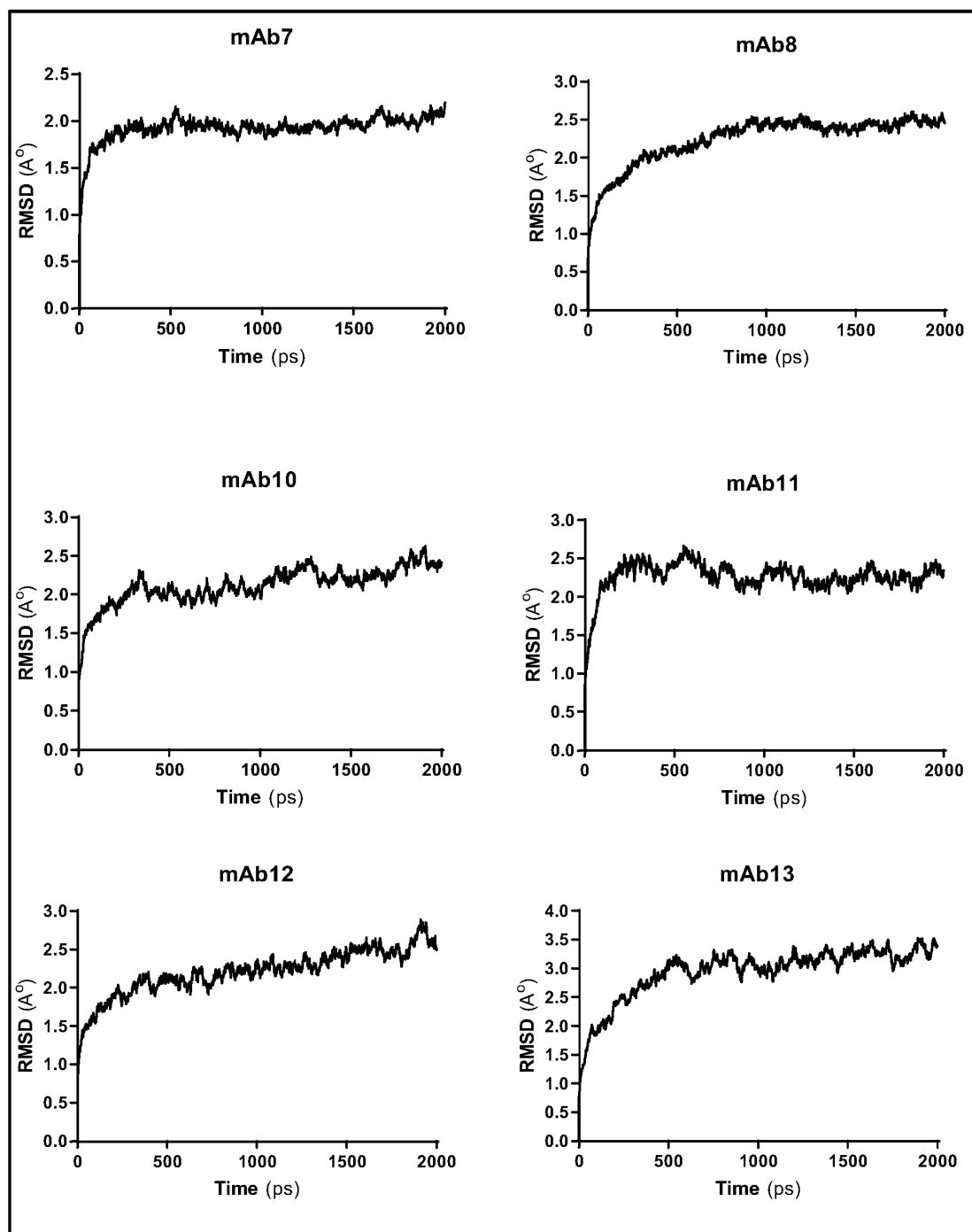


FIG. 18B

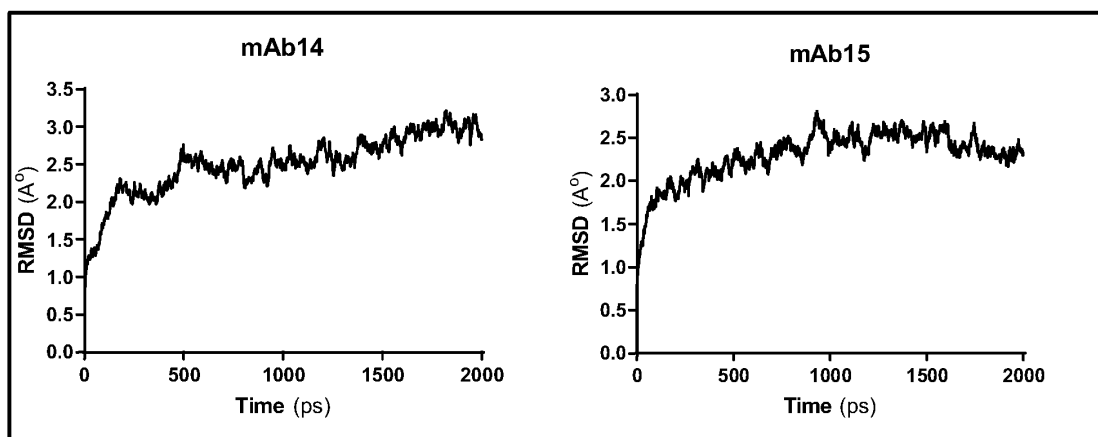


FIG. 18C

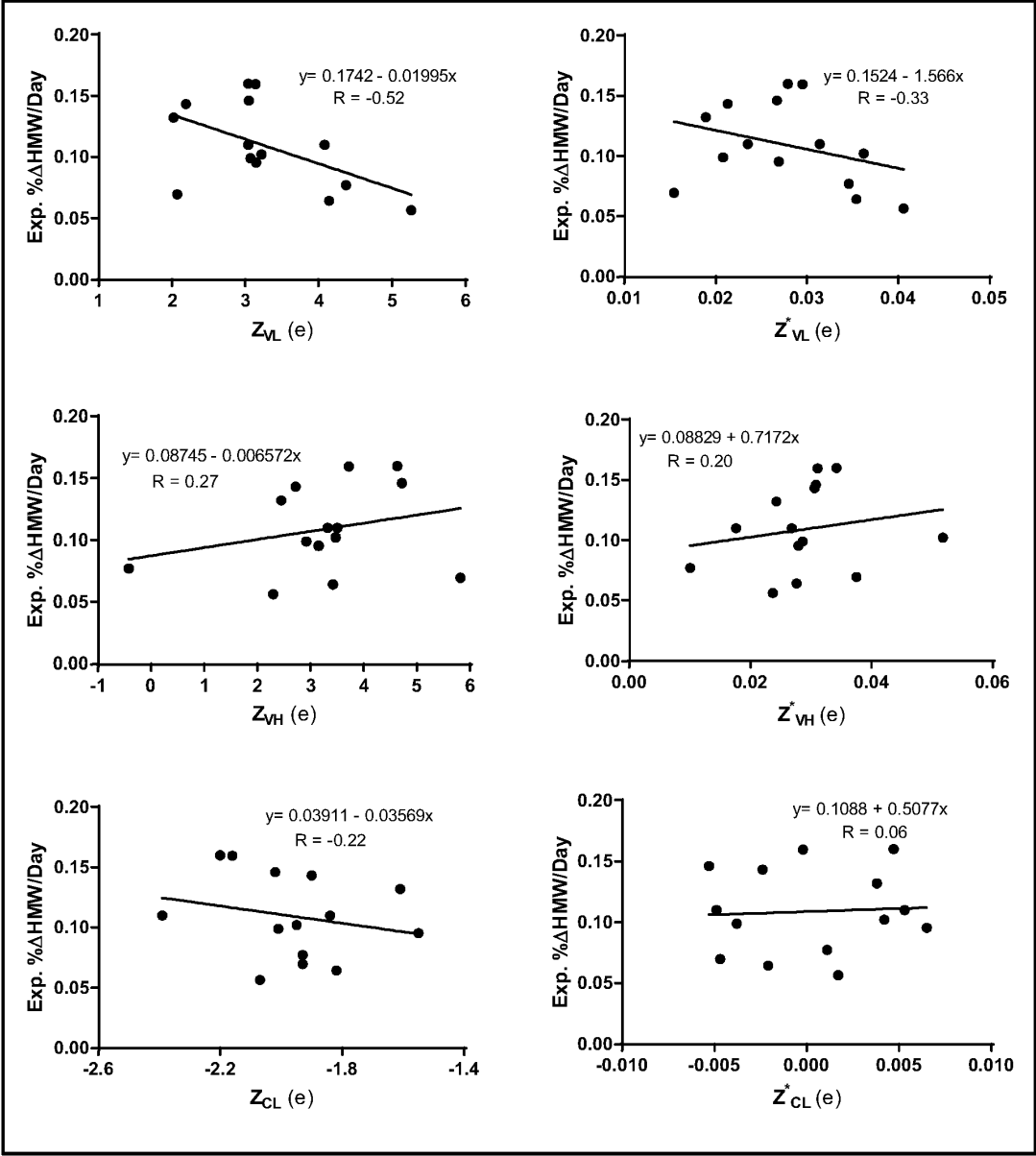


FIG. 19A

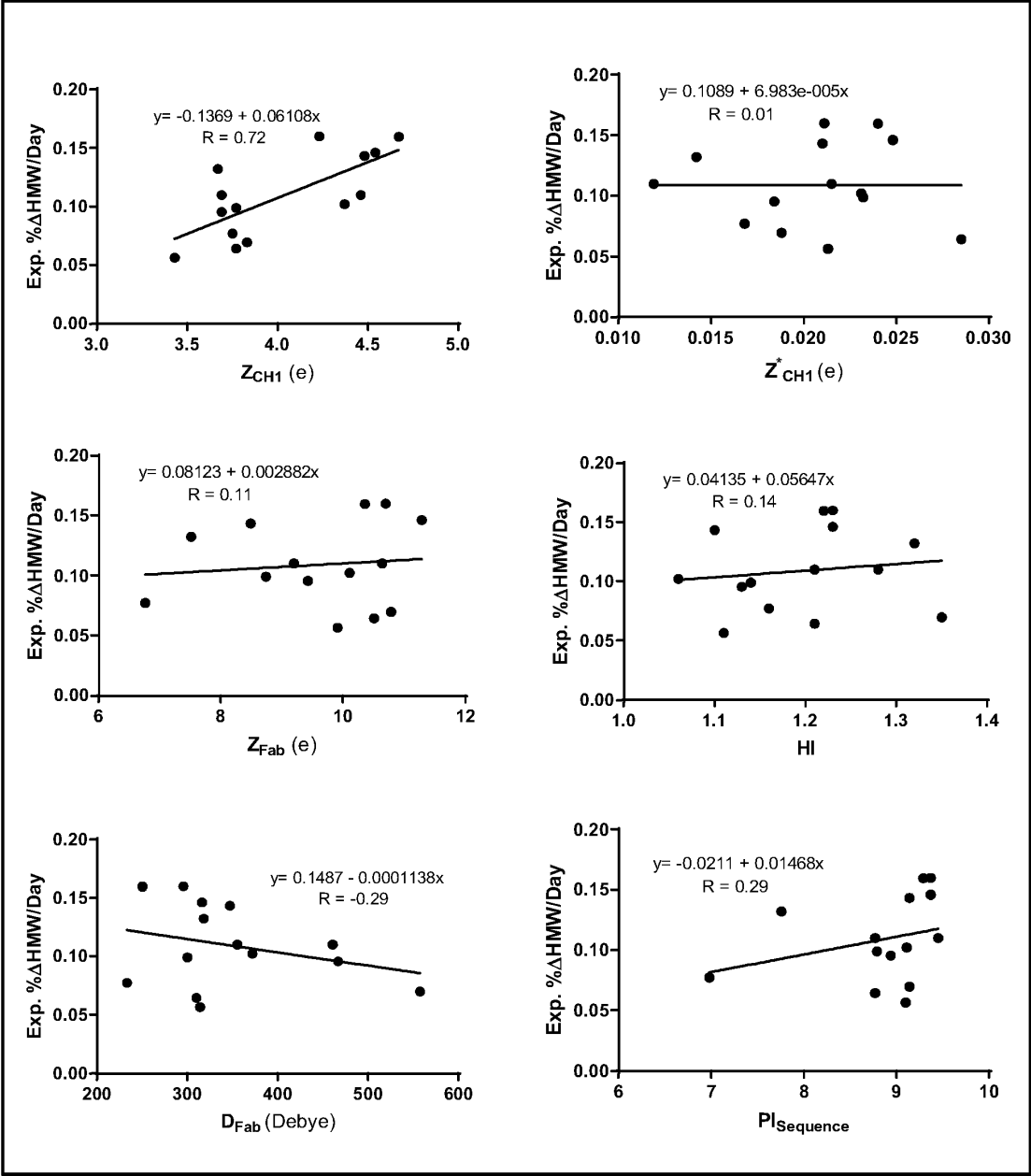


FIG. 19B

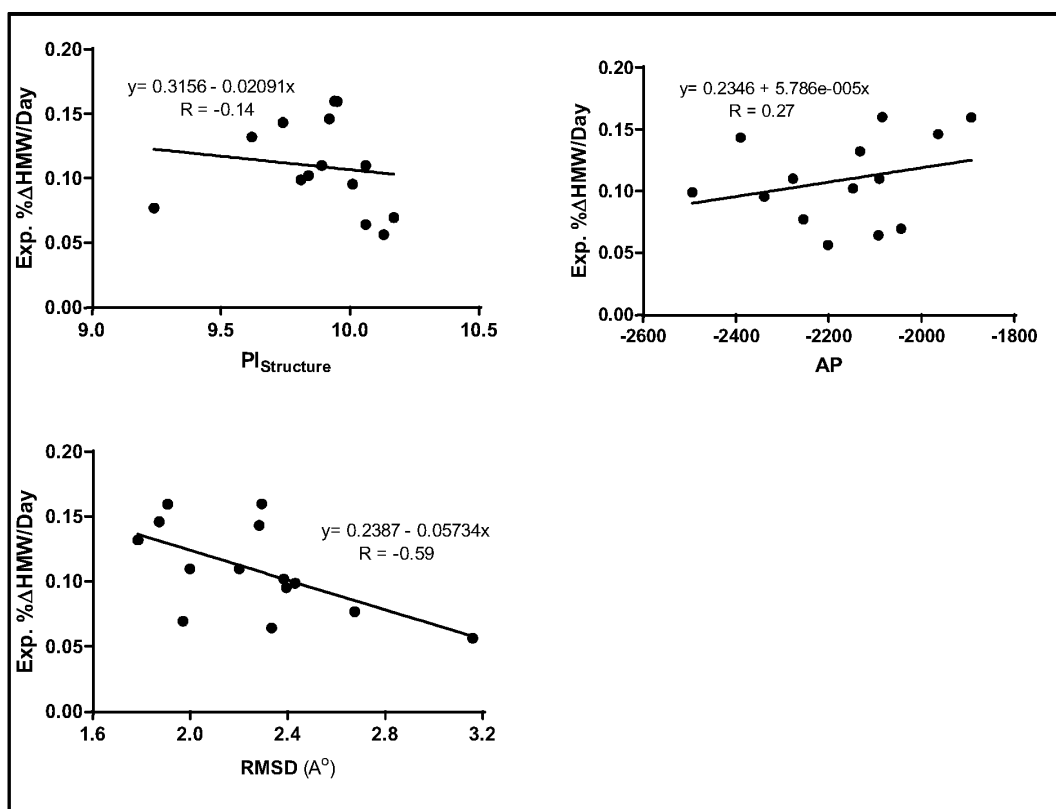


FIG. 19C

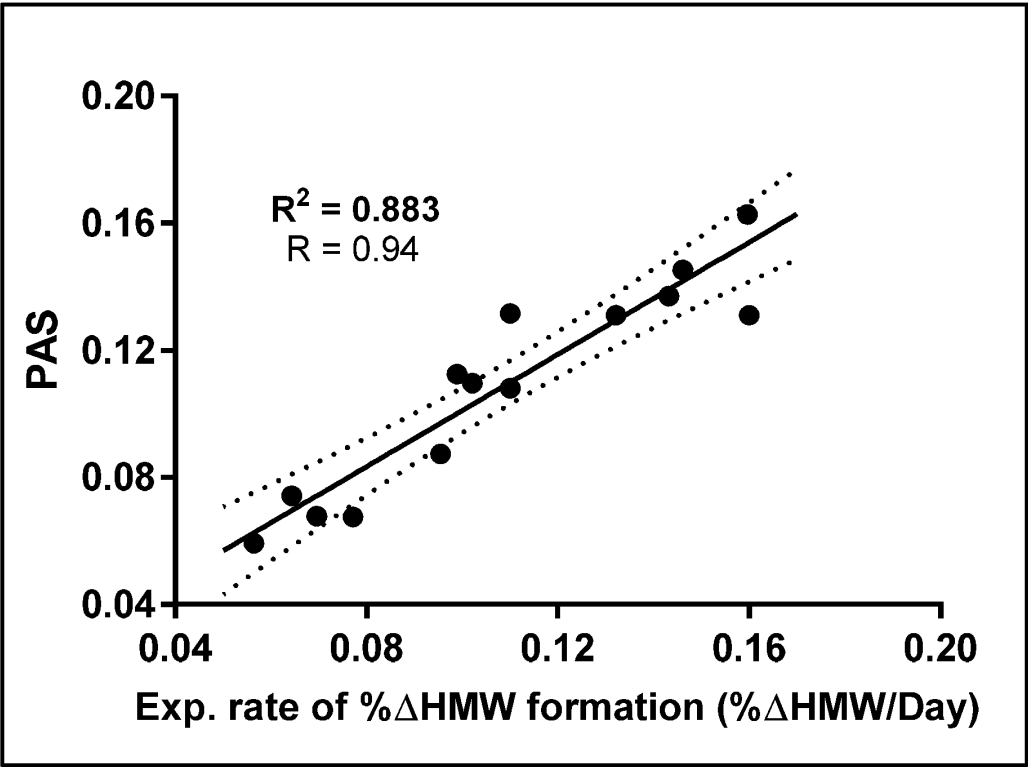


FIG. 20

FIG. 21

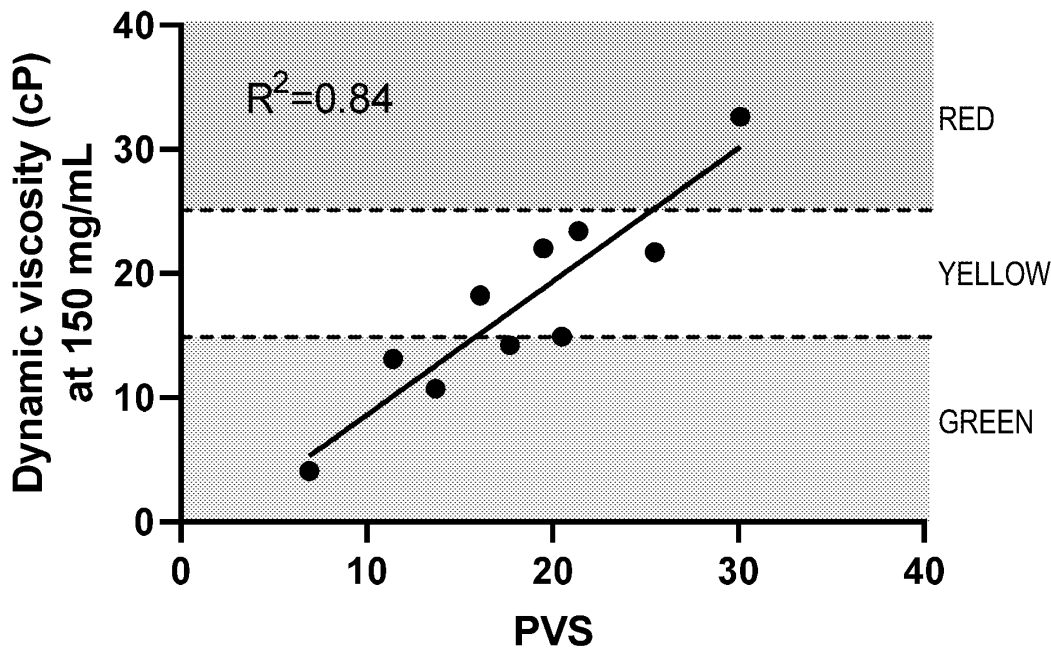
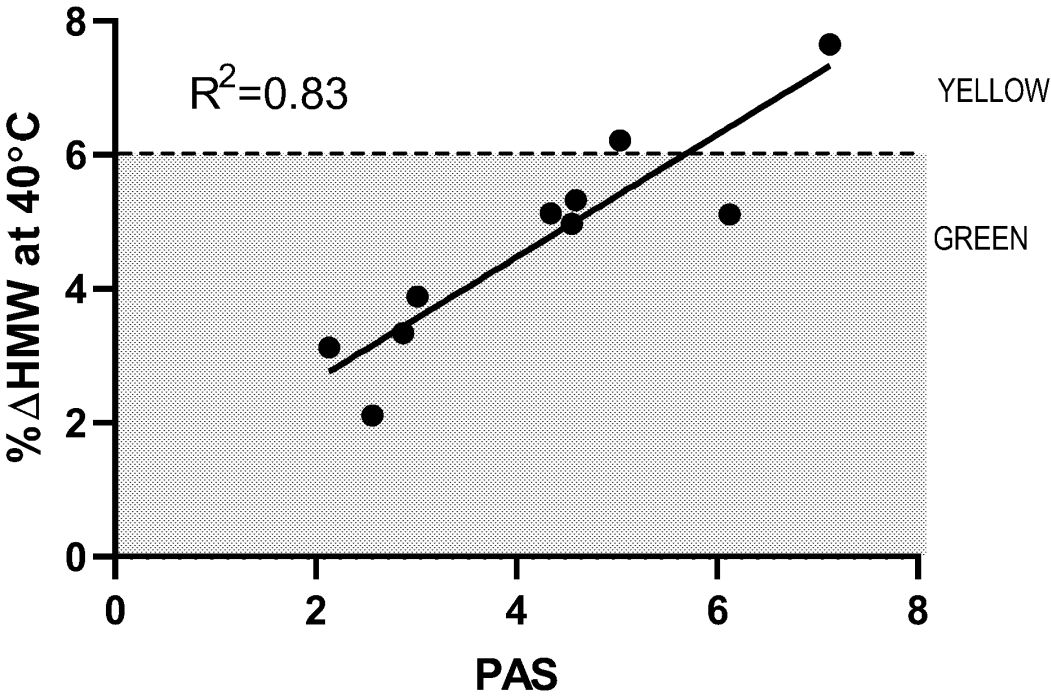


FIG. 22



2300 ↗

FIG. 23

