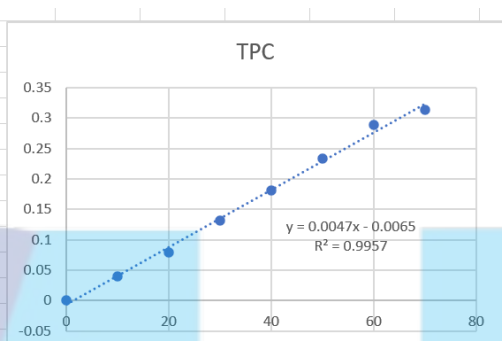


APPENDICES

Appendix 1. Gallic acid absorbances and standard curve (Total Phenolic Compound)

standard	concentration	abs1	abs2	abs3	mean
1	0	0.0001	0.0001	0.0000	0.0001
2	10	0.0400	0.0400	0.0399	0.039967
3	20	0.0787	0.0786	0.0786	0.078633
4	30	0.1313	0.1312	0.1314	0.1313
5	40	0.1804	0.1808	0.1809	0.1807
6	50	0.2335	0.2336	0.2334	0.2335
7	60	0.2889	0.2889	0.2889	0.2889
8	70	0.3145	0.3146	0.3141	0.3144



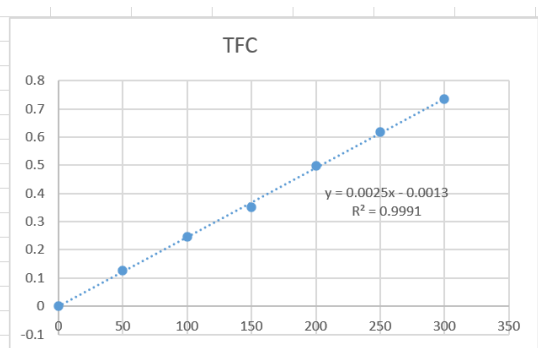
Appendix 2. *A. marina* roots ethyl acetate extract absorbance, average, concentration and standard deviation (Total Phenolic Compound)

$y = 0.0047x - 0.0065$	df	10
m	weight	0.01
c	vol	10

	abs1	abs2	abs3	mean	ppm avg	ppm 1	ppm 2	ppm 3	mg/g	stdev
sample	0.1784	0.1780	0.1780	0.178133	39.28369	39.34043	39.25532	39.25532	392.8369	0.04012

Appendix 3. Quercetin absorbances and standard curve (Total Flavonoid Compound)

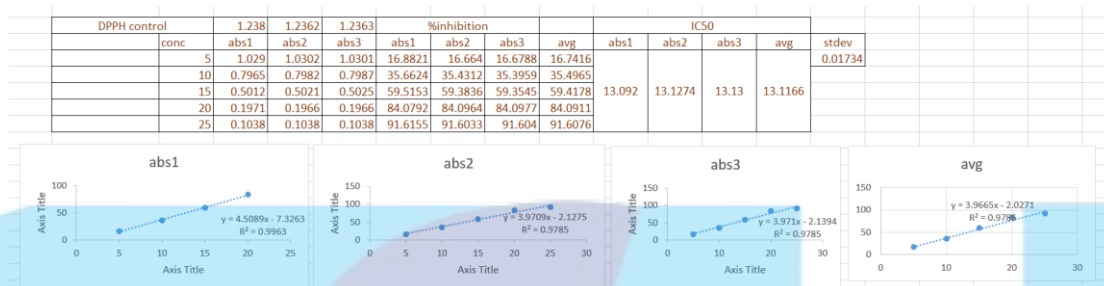
standard	concentration	abs1	abs2	abs3	average
1	0	-0.0001	0.0001	0	0
2	50	0.1249	0.1254	0.1256	0.1253
3	100	0.246	0.2458	0.246	0.245933
4	150	0.3497	0.3497	0.3497	0.3497
5	200	0.4967	0.4964	0.4964	0.4965
6	250	0.6163	0.6161	0.6164	0.616267
7	300	0.7352	0.735	0.7345	0.7349



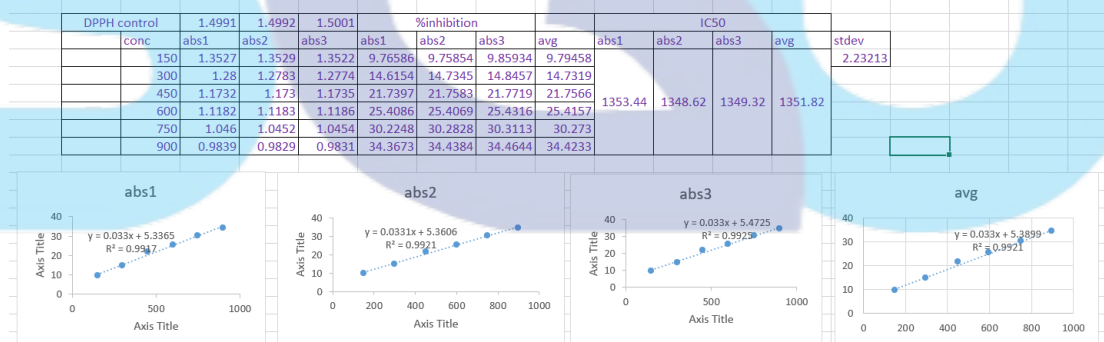
Appendix 4. *A. marina* roots ethyl acetate extract absorbance, average, concentration and standard deviation (Total Flavonoid Compound)

y = 0.0025x - 0.0013				non encap	encap					
		extract weight(g)		0.01	0.1					
m	0.0025	df		10	100					
c	-0.0013	vol		10	10					
	abs1	abs2	abs3	average	x (ppm) avg	x1	x2	x3	mg/g	stdev
non encap	0.7387	0.7391	0.7386	0.7388	296.04	296	296.16	295.96	2960.4	0.105830052

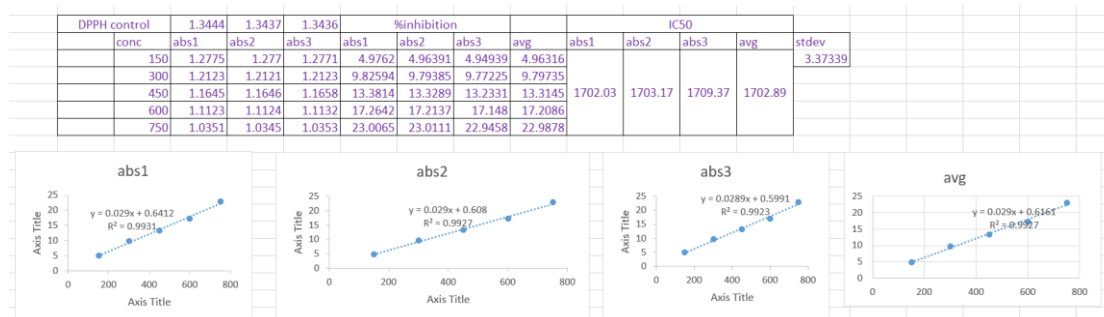
Appendix 5. Ascorbic acid absorbance, inhibition percentage, standard curve, and IC₅₀ (DPPH method)



Appendix 6. *A. marina* roots ethyl acetate extract absorbance, inhibition percentage, standard curve, and IC₅₀ (DPPH method)



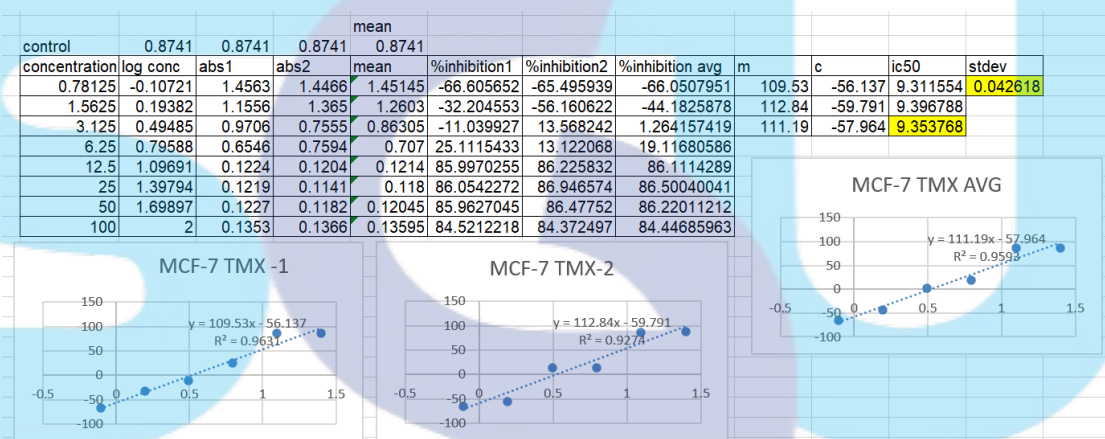
Appendix 7. *A. marina* roots ethyl acetate encapsulated extract absorbance, inhibition percentage, standard curve, and IC₅₀ (DPPH method)



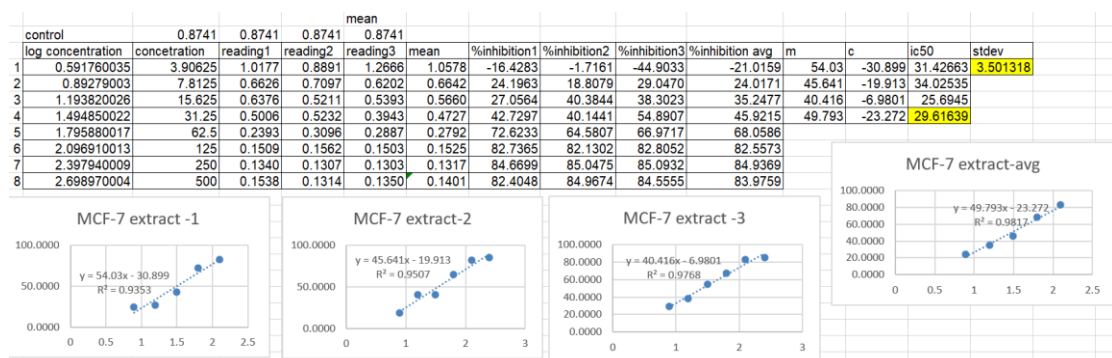
Appendix 8. *A. marina* roots ethyl acetate encapsulated extract absorbance, average, concentration, standard deviation and encapsulation efficiency

y = 0.0025x - 0.0013				non encap	encap					
		extract weight(g)		0.01	0.1					
m	0.0025	df		10	100					
c	-0.0013	vol		10	10					
	abs1	abs2	abs3	average	x (ppm) avg	x1	x2	x3	mg/g	stdev
non encap	0.7387	0.7391	0.7386	0.7388	296.04	296	296.16	295.96	2960.4	0.105830052
encap	0.1922	0.1923	0.1919	0.192133333	77.373333	77.4	77.44	77.28	773.7333	0.08326664
	1	2	3 avg							
efficiency	73.85135	73.85197	73.88836329		73.86389227					
stdev	0.017303									

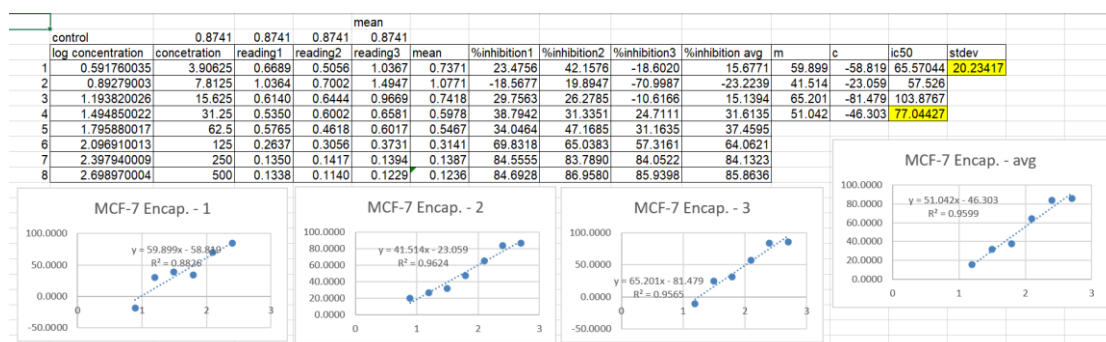
Appendix 9. Tamoxifen absorbance, average, inhibition percentage, standard deviation, standard curve, and IC₅₀ (MTT assay with MCF-7)



Appendix 10. *A. marina* roots ethyl acetate extract absorbance, average, inhibition percentage, standard deviation, standard curve, and IC₅₀ (MTT assay with MCF-7)



Appendix 11. *A. marina* roots ethyl acetate encapsulated extract absorbance, average, inhibition percentage, standard deviation, standard curve, and IC₅₀ (MTT assay with MCF-7)



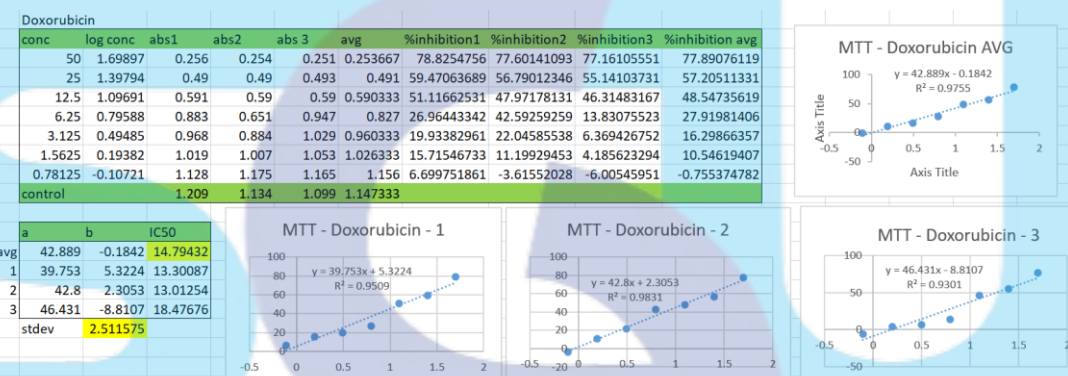
Appendix 12. *A. salina* mortality rate in *A. marina* roots ethyl acetate encapsulated extract (BSLT test)

log concentration	Concentration (ppm)	Dead	Alive	Total	%mortality	probit value
-	0	0	10	10	0	-
0.89279003	7.8125	0	10	10	0	-
1.193820026	15.625	0	10	10	0	-
1.494850022	31.25	0	10	10	0	-
1.795880017	62.5	0	10	10	0	-
2.096910013	125	0	10	10	0	-
2.397940009	250	0	10	10	0	-
2.698970004	500	0	10	10	0	-
3	1000	0	10	10	0	-

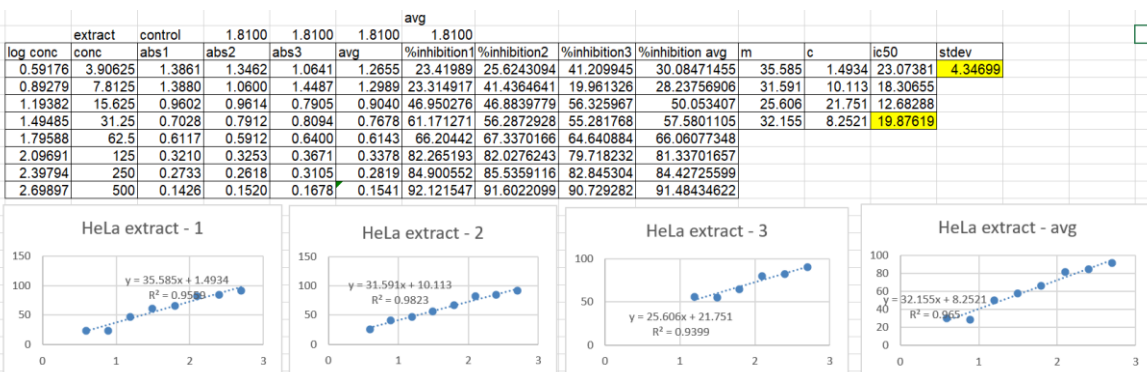
Appendix 13. *A. salina* mortality rate in *A. marina* roots ethyl acetate extract (BSLT test)

log concentration	Concentration (ppm)	Dead	Alive	Total	%mortality	probit value
-	0	0	10	10	0	-
0.89279003	7.8125	0	10	10	0	-
1.193820026	15.625	0	10	10	0	-
1.494850022	31.25	0	10	10	0	-
1.795880017	62.5	0	10	10	0	-
2.096910013	125	0	10	10	0	-
2.397940009	250	0	10	10	0	-
2.698970004	500	0	10	10	0	-
3	1000	0	10	10	0	-

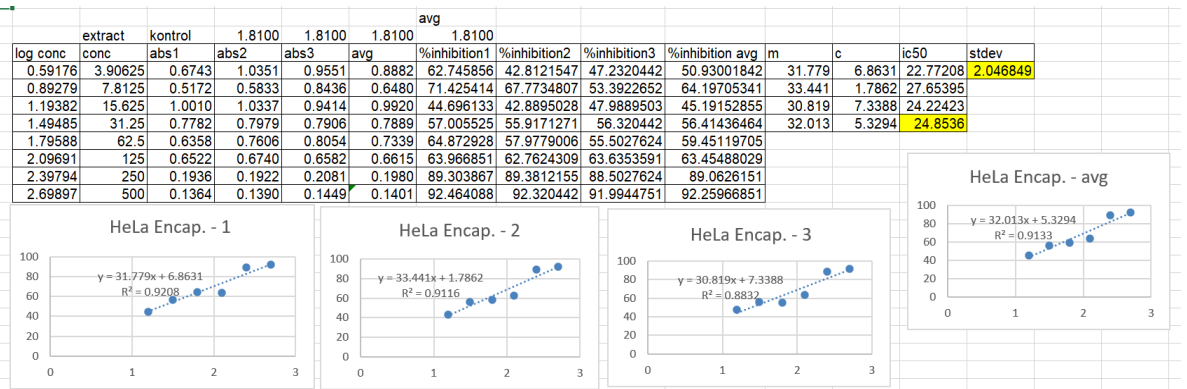
Appendix 14. Doxorubicin absorbance, average, inhibition percentage, standard curve, standard deviation, and IC₅₀ (MTT assay with HeLa)



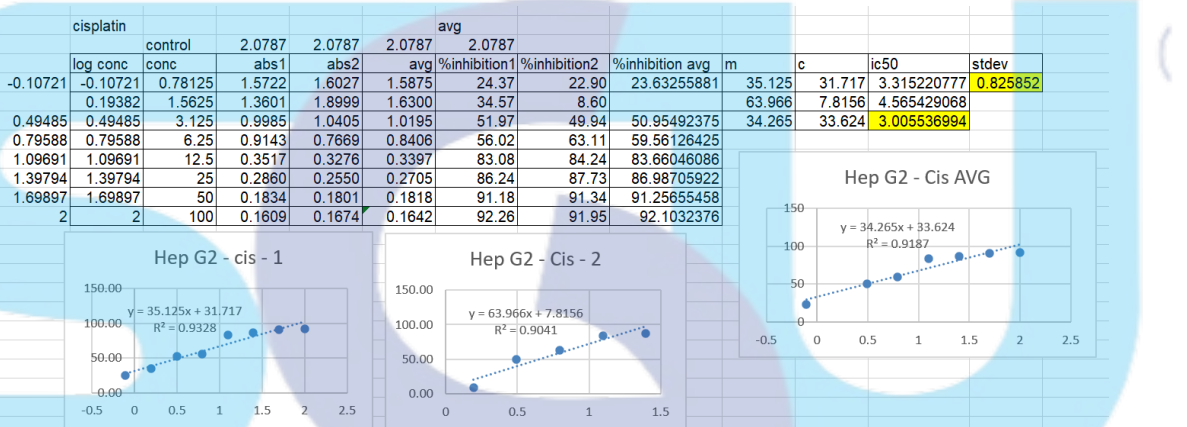
Appendix 15. *A. marina* roots ethyl acetate extract absorbance, average, inhibition percentage, standard curve, standard deviation, and IC₅₀ (MTT assay with HeLa)



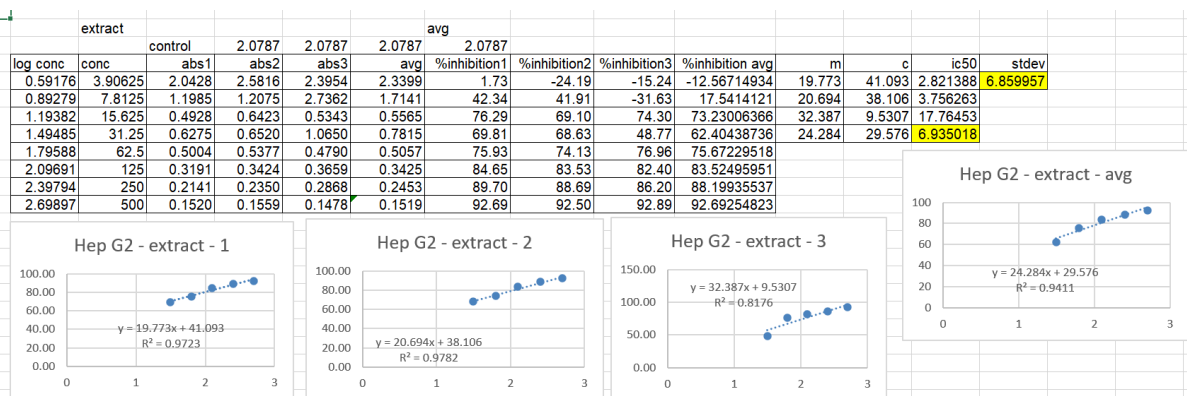
Appendix 16. *A. marina* roots ethyl acetate encapsulated extract absorbance, average, inhibition percentage, standard curve, standard deviation, and IC₅₀ (MTT assay with HeLa)



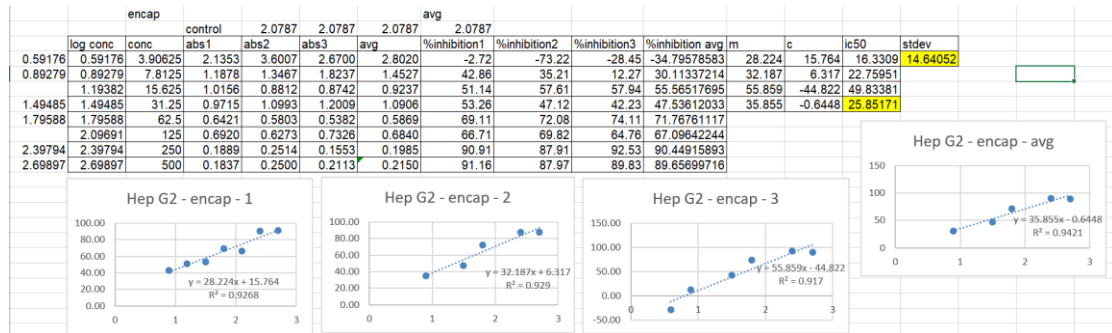
Appendix 17. Cisplatin absorbance, average, inhibition percentage, standard curve, standard deviation, and IC₅₀ (MTT assay with Hep G2)



Appendix 18. *A. marina* roots ethyl acetate extract absorbance, average, inhibition percentage, standard curve, standard deviation, and IC₅₀ (MTT assay with Hep G2)



Appendix 19. *A. marina* roots ethyl acetate encapsulated extract absorbance, average, inhibition percentage, standard deviation, standard curve, and IC₅₀ (MTT assay with Hep G2)



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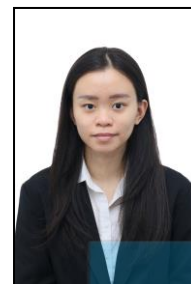
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Work Experiences

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Organizational experiences

2019 – present SGU – Biomedical Engineering Student Association (BEST)
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Language skills

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