

Viability assay

MTT protocol

Determination of sample cytotoxicity on cells (MTT protocol)

1- the 96 well tissue culture plate was inoculated with 1×10^5 cells / ml (100 ul / well) and incubated at 37°C for 24 hours to develop a complete monolayer sheet.

2- Growth medium was decanted from 96 well micro titer plates after confluent sheet of cells were formed, cell monolayer was washed twice with wash media.

3- two-fold dilutions of tested sample was made in RPMI medium with 2% serum (maintenance medium).

4- 0.1 ml of each dilution was tested in different wells leaving 3 wells as control, receiving only maintenance medium.

5- Plate was incubated at 37°C and examined. Cells were checked for any physical signs of toxicity, e.g. partial or complete loss of the monolayer, rounding, shrinkage, or cell granulation.

6- MTT solution was prepared (5mg/ml in PBS) (BIO BASIC CANADA INC).

8- 20ul MTT solution were added to each well. Place on a shaking table, 150rpm for 5 minutes, to thoroughly mix the MTT into the media.

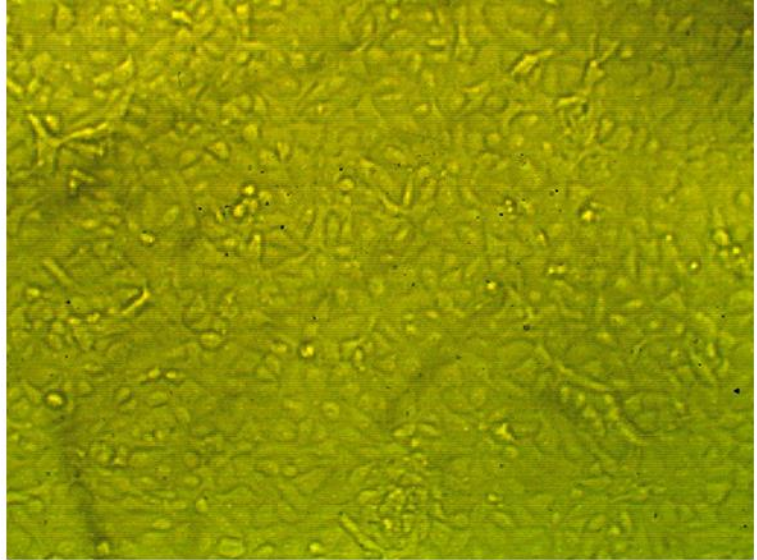
9) Incubate (37C, 5% CO₂) for 4 hours to allow the MTT to be metabolized.

10) Dump off the media. (dry plate on paper towels to remove residue if necessary).

11) Resuspend formazan (MTT metabolic product) in 200ul DMSO. Place on a shaking table, 150rpm for 5 minutes, to thoroughly mix the formazan into the solvent.

12) Read optical density at 560nm and subtract background at 620nm. Optical density should be directly correlated with cell quantity.

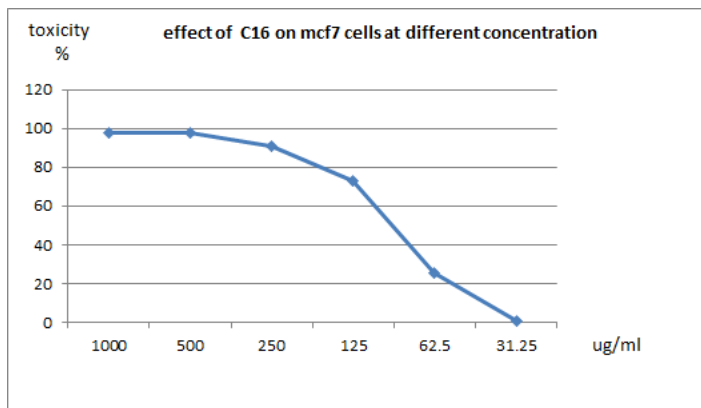
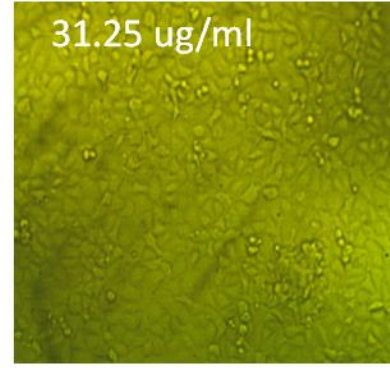
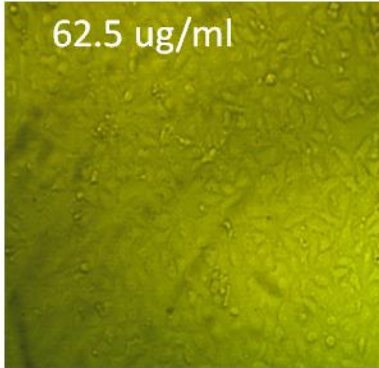
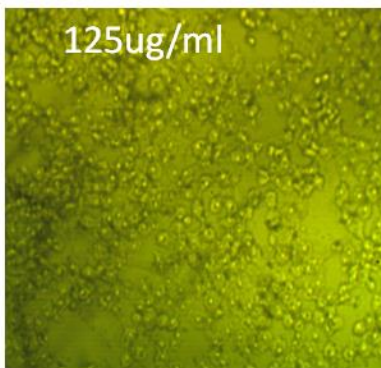
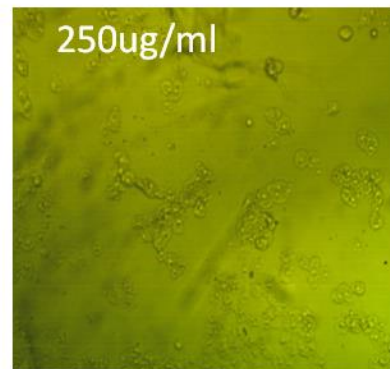
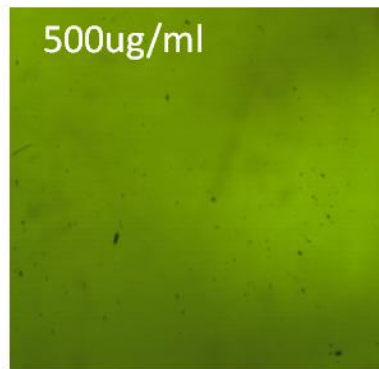
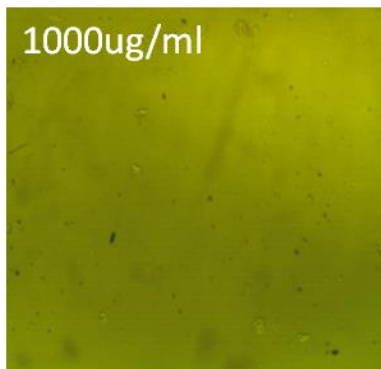
| ID | ug/ml | O.D | | | Mean O.D | ±SE | Viability % | Toxicity % | IC50 ± SD |
|----------|-------|-------|-------|-------|----------|----------|-------------|-------------|----------------|
| Mcf7 | ----- | 0.782 | 0.788 | 0.764 | 0.778 | 0.007211 | 100 | 0 | ug |
| C16 (2b) | 1000 | 0.016 | 0.018 | 0.016 | 0.016667 | 0.000667 | 2.142245073 | 97.85775493 | 95 ± 2.01 |
| | 500 | 0.019 | 0.017 | 0.018 | 0.018 | 0.000577 | 2.313624679 | 97.68637532 | |
| | 250 | 0.064 | 0.068 | 0.088 | 0.073333 | 0.007424 | 9.42587832 | 90.57412168 | |
| | 125 | 0.219 | 0.189 | 0.224 | 0.210667 | 0.010929 | 27.07797772 | 72.92202228 | |
| | 62.5 | 0.564 | 0.588 | 0.583 | 0.578333 | 0.007311 | 74.33590403 | 25.66409597 | |
| | 31.25 | 0.774 | 0.78 | 0.769 | 0.774333 | 0.00318 | 99.52870608 | 0.471293916 | |
| C17(2a) | 1000 | 0.033 | 0.028 | 0.041 | 0.034 | 0.003786 | 4.370179949 | 95.62982005 | 419.33 ± 10.23 |
| | 500 | 0.274 | 0.234 | 0.257 | 0.255 | 0.01159 | 32.77634961 | 67.22365039 | |
| | 250 | 0.758 | 0.744 | 0.78 | 0.760667 | 0.010477 | 97.77206512 | 2.227934876 | |
| | 125 | 0.784 | 0.764 | 0.776 | 0.774667 | 0.005812 | 99.57155099 | 0.428449015 | |
| | 62.5 | 0.772 | 0.779 | 0.758 | 0.769667 | 0.006173 | 98.92887746 | 1.071122536 | |
| | 31.25 | 0.778 | 0.783 | 0.756 | 0.772333 | 0.008293 | 99.27163668 | 0.728363325 | |
| M11(2c) | 1000 | 0.028 | 0.034 | 0.031 | 0.031 | 0.001732 | 3.984575835 | 96.01542416 | 227.87 ± 3.67 |
| | 500 | 0.056 | 0.074 | 0.057 | 0.062333 | 0.00584 | 8.011996572 | 91.98800343 | |
| | 250 | 0.317 | 0.324 | 0.33 | 0.323667 | 0.003756 | 41.60239931 | 58.39760069 | |
| | 125 | 0.699 | 0.732 | 0.718 | 0.716333 | 0.009563 | 92.07369323 | 7.926306769 | |
| | 62.5 | 0.774 | 0.769 | 0.782 | 0.775 | 0.003786 | 99.61439589 | 0.385604113 | |
| | 31.25 | 0.781 | 0.774 | 0.771 | 0.775333 | 0.002963 | 99.65724079 | 0.342759212 | |
| M12(2d) | 1000 | 0.018 | 0.02 | 0.022 | 0.02 | 0.001155 | 2.570694087 | 97.42930591 | 307.78 ± 3.3 |
| | 500 | 0.045 | 0.052 | 0.044 | 0.047 | 0.002517 | 6.041131105 | 93.95886889 | |
| | 250 | 0.453 | 0.472 | 0.444 | 0.456333 | 0.008253 | 58.65467009 | 41.34532991 | |
| | 125 | 0.738 | 0.759 | 0.766 | 0.754333 | 0.008413 | 96.958012 | 3.041988003 | |
| | 62.5 | 0.775 | 0.776 | 0.778 | 0.776333 | 0.000882 | 99.78577549 | 0.214224507 | |
| | 31.25 | 0.762 | 0.775 | 0.778 | 0.771667 | 0.00491 | 99.18594687 | 0.814053128 | |
| RM1(2e) | 1000 | 0.023 | 0.019 | 0.032 | 0.024667 | 0.003844 | 3.170522708 | 96.82947729 | 317.22 ± 4.52 |
| | 500 | 0.087 | 0.089 | 0.104 | 0.093333 | 0.005364 | 11.99657241 | 88.00342759 | |
| | 250 | 0.465 | 0.488 | 0.456 | 0.469667 | 0.009528 | 60.36846615 | 39.63153385 | |
| | 125 | 0.721 | 0.738 | 0.743 | 0.734 | 0.006658 | 94.34447301 | 5.655526992 | |
| | 62.5 | 0.779 | 0.765 | 0.781 | 0.775 | 0.005033 | 99.61439589 | 0.385604113 | |
| | 31.25 | 0.784 | 0.758 | 0.775 | 0.772333 | 0.007623 | 99.27163668 | 0.728363325 | |
| RM22(2f) | 1000 | 0.017 | 0.015 | 0.016 | 0.016 | 0.000577 | 2.05655527 | 97.94344473 | 87.11 ± 2.08 |
| | 500 | 0.032 | 0.04 | 0.02 | 0.030667 | 0.005812 | 3.941730934 | 96.05826907 | |
| | 250 | 0.089 | 0.094 | 0.078 | 0.087 | 0.004726 | 11.18251928 | 88.81748072 | |
| | 125 | 0.095 | 0.167 | 0.143 | 0.135 | 0.021166 | 17.35218509 | 82.64781491 | |
| | 62.5 | 0.546 | 0.537 | 0.55 | 0.544333 | 0.003844 | 69.96572408 | 30.03427592 | |
| | 31.25 | 0.778 | 0.772 | 0.775 | 0.775 | 0.001732 | 99.61439589 | 0.385604113 | |



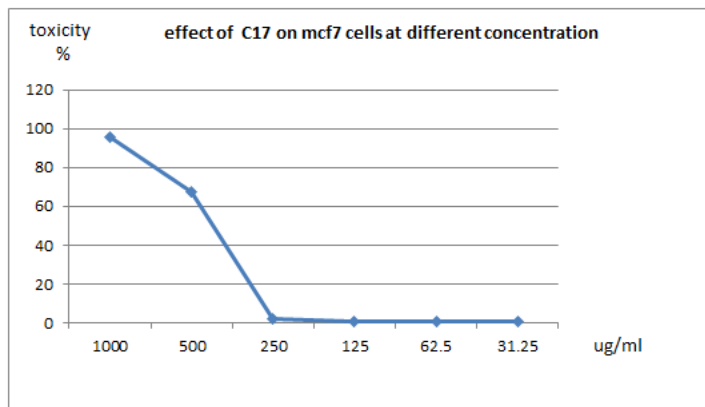
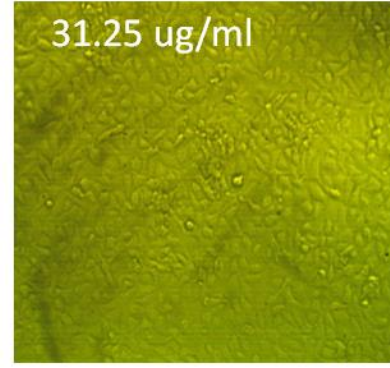
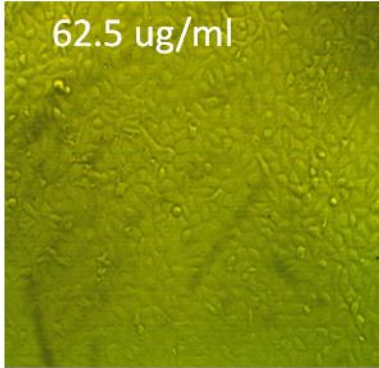
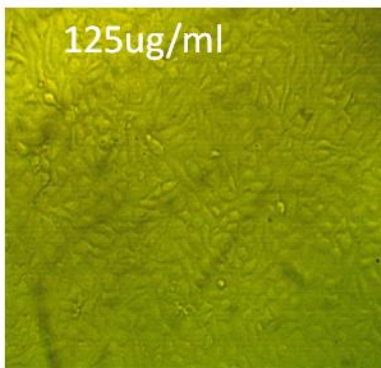
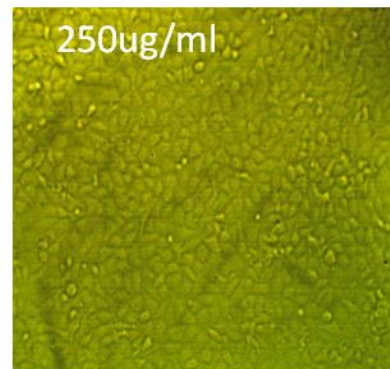
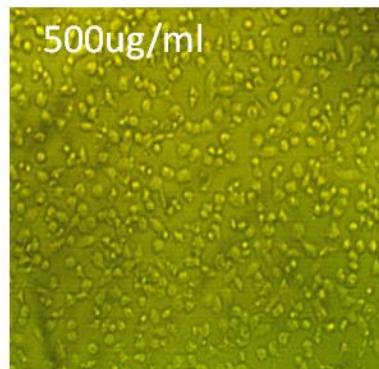
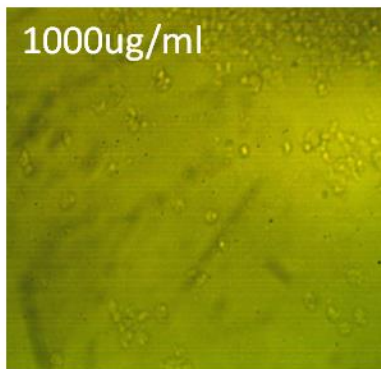
**control
Mcf7 cells**

Organism : *Homo sapiens*, human
Tissue : mammary gland, breast; derived from metastatic site: pleural effusion
Cell Type : epithelial
Culture Properties : adherent
Disease : adenocarcinoma
ATCC : HTB-22

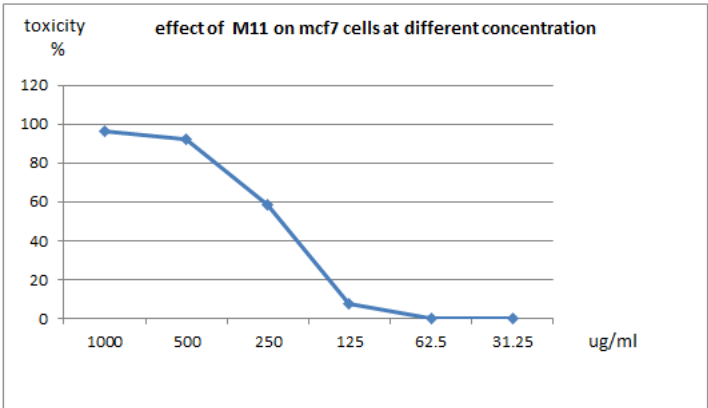
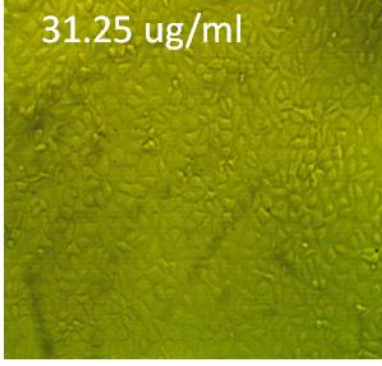
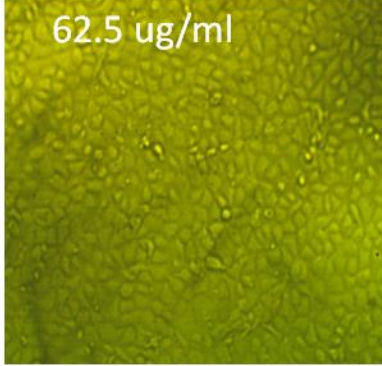
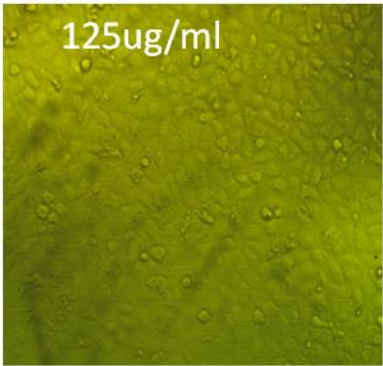
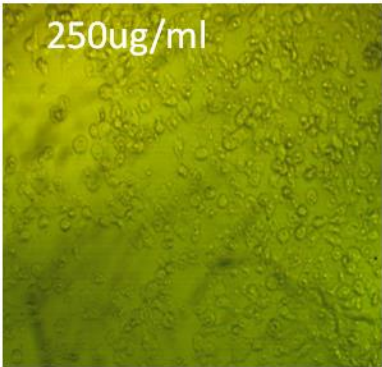
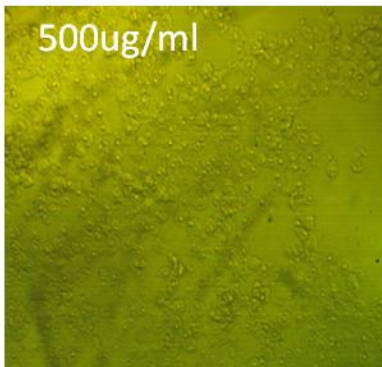
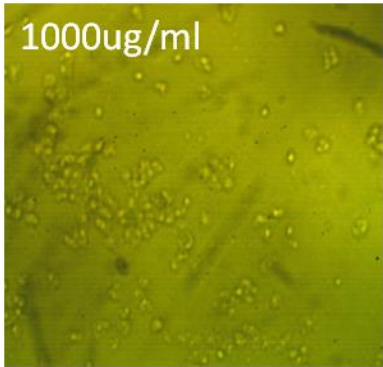
Effect of C16 on MCF7 cells at different concentration



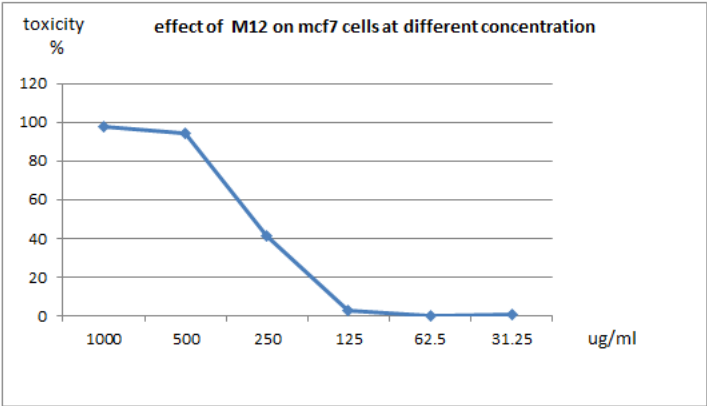
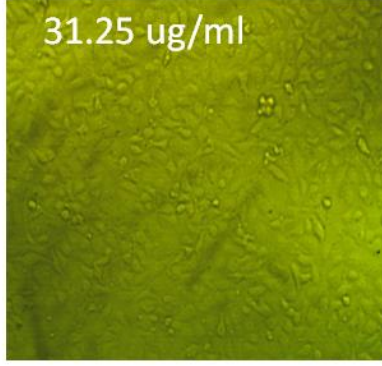
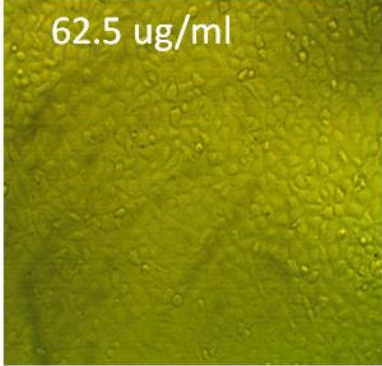
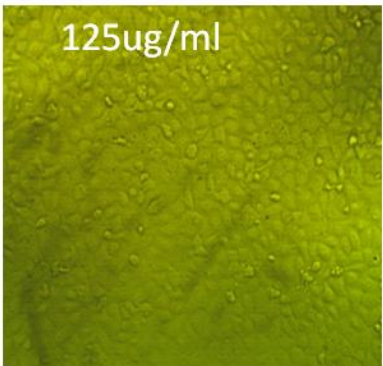
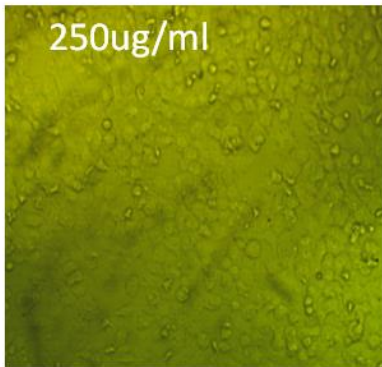
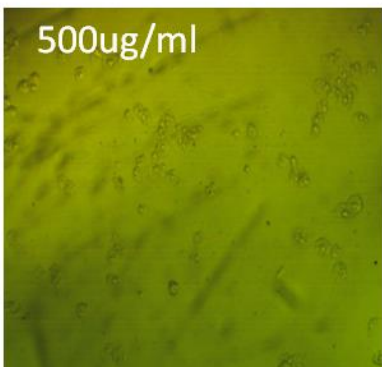
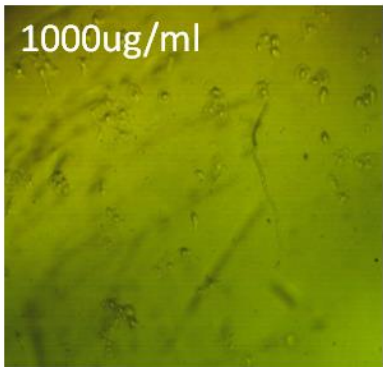
Effect of C17 on Mcf7 cells at different concentration



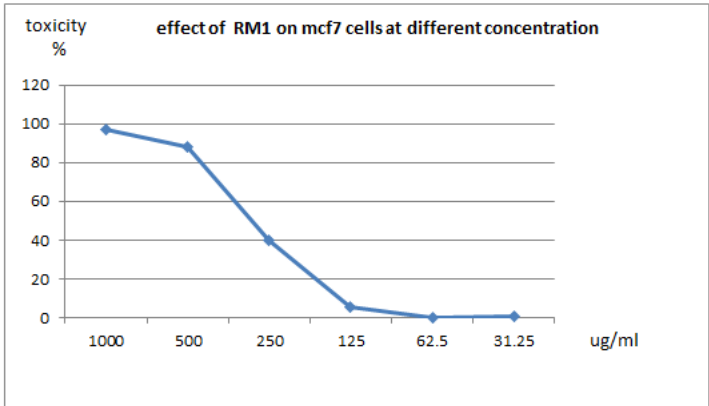
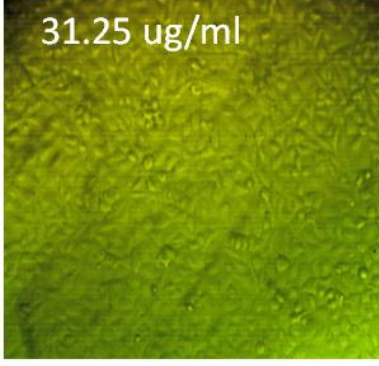
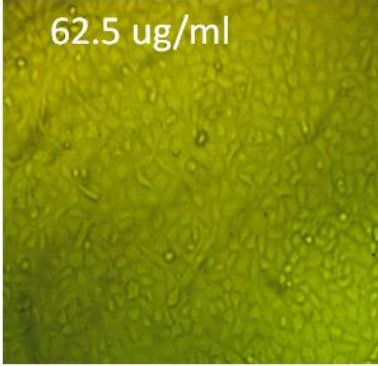
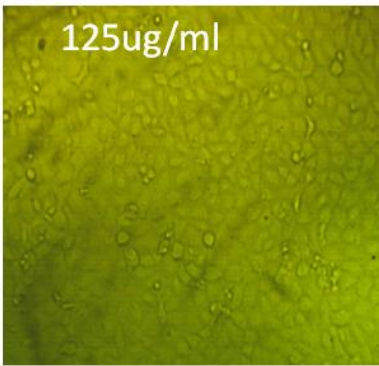
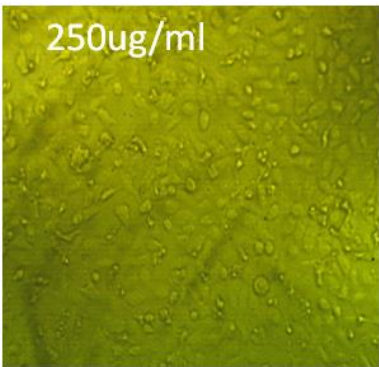
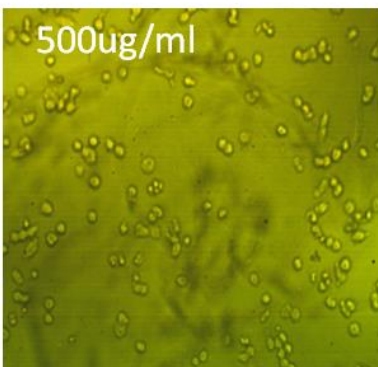
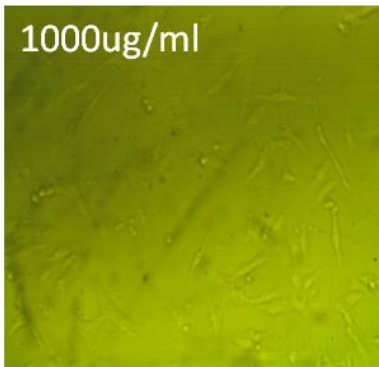
Effect of M11 on Mcf7 cells at different concentration



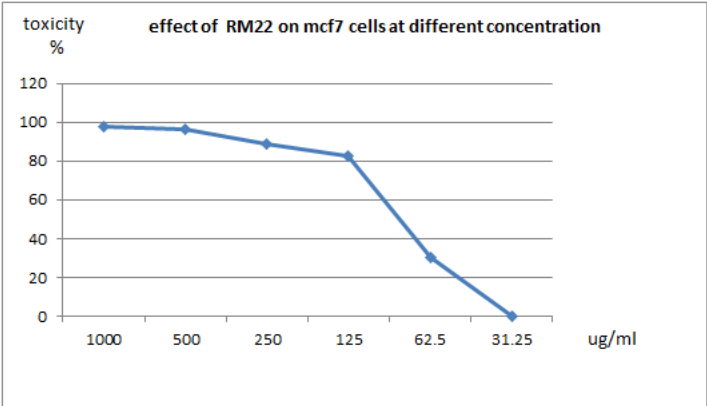
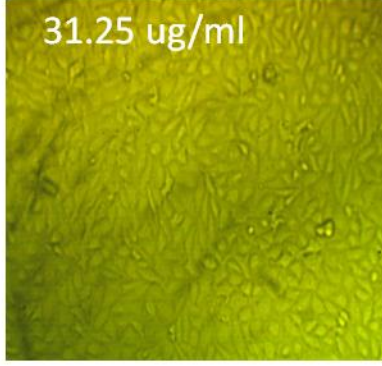
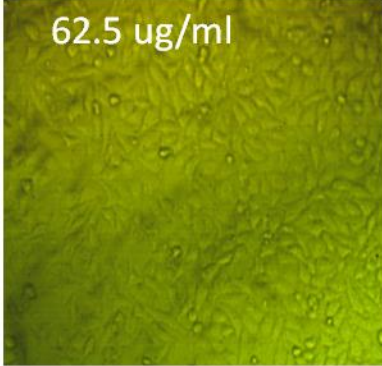
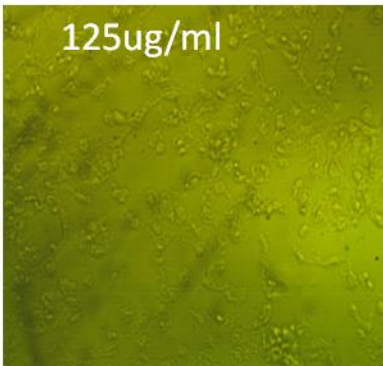
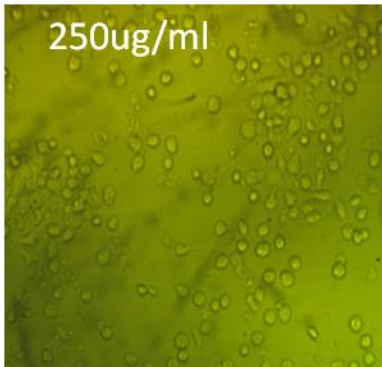
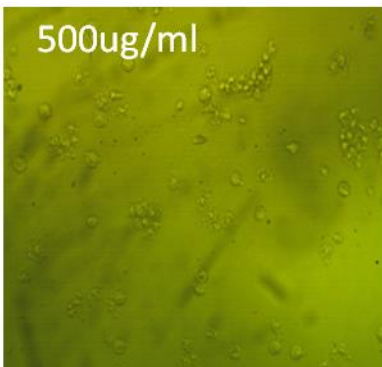
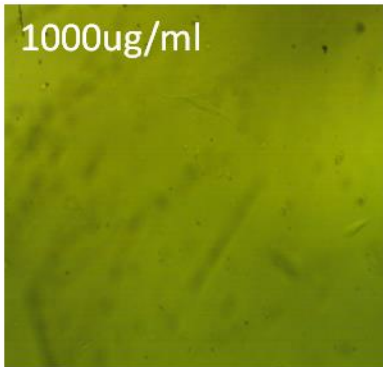
Effect of M12 on MCF7 cells at different concentration



Effect of RM1 on MCF7 cells at different concentration



Effect of RM22 on MCF7 cells at different concentration



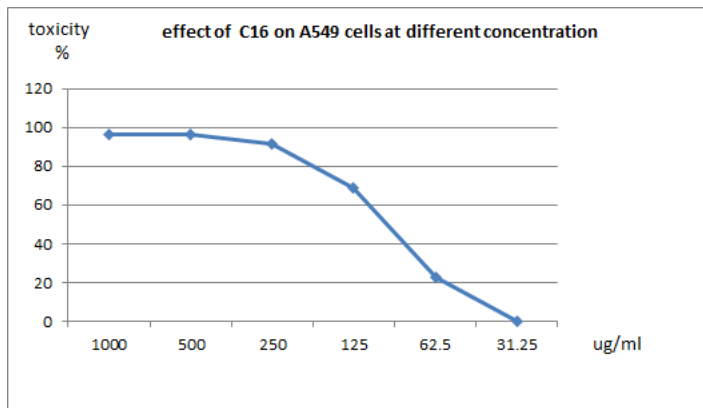
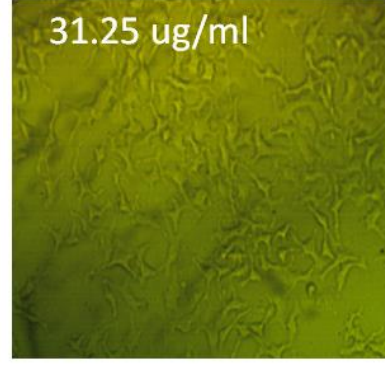
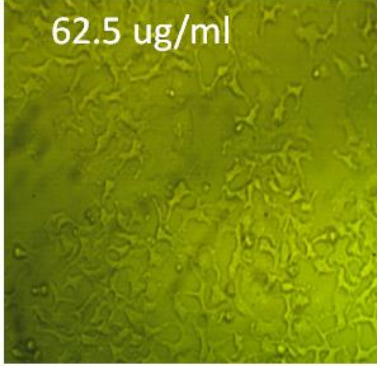
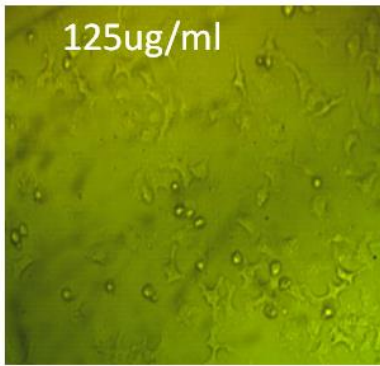
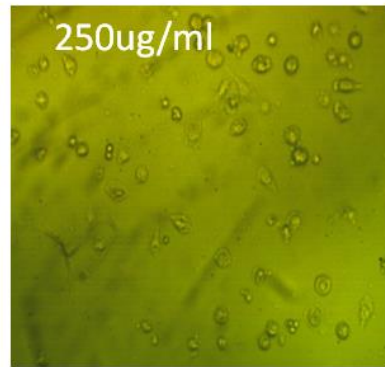
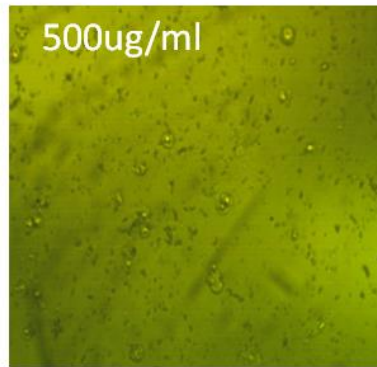
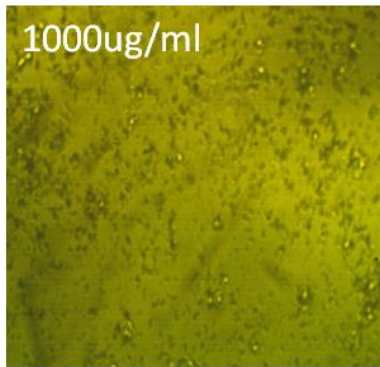
| ID | ug/ml | O.D | | | Mean O.D | ±SE | Viability % | Toxicity % | IC50 ± SD |
|----------|-------|-------|-------|-------|----------|----------|-------------|-------------|------------------|
| A549 | ----- | 0.478 | 0.484 | 0.499 | 0.487 | 0.006245 | 100 | 0 | ug |
| C16(2b) | 1000 | 0.019 | 0.017 | 0.018 | 0.018 | 0.000577 | 3.696098563 | 96.30390144 | 99.57 ± 5.21 |
| | 500 | 0.019 | 0.018 | 0.019 | 0.018667 | 0.000333 | 3.832991102 | 96.1670089 | |
| | 250 | 0.028 | 0.043 | 0.056 | 0.042333 | 0.00809 | 8.692676249 | 91.30732375 | |
| | 125 | 0.174 | 0.139 | 0.144 | 0.152333 | 0.010929 | 31.27994524 | 68.72005476 | |
| | 62.5 | 0.395 | 0.337 | 0.401 | 0.377667 | 0.020407 | 77.54962355 | 22.45037645 | |
| | 31.25 | 0.498 | 0.475 | 0.488 | 0.487 | 0.006658 | 100 | 0 | |
| C17(2a) | 1000 | 0.018 | 0.017 | 0.019 | 0.018 | 0.000577 | 3.696098563 | 96.30390144 | 164.46 ± 0.99 |
| | 500 | 0.019 | 0.031 | 0.027 | 0.025667 | 0.003528 | 5.270362765 | 94.72963723 | |
| | 250 | 0.075 | 0.068 | 0.08 | 0.074333 | 0.00348 | 15.26351814 | 84.73648186 | |
| | 125 | 0.318 | 0.348 | 0.352 | 0.339333 | 0.010729 | 69.67830253 | 30.32169747 | |
| | 62.5 | 0.467 | 0.427 | 0.441 | 0.445 | 0.011719 | 91.37577002 | 8.624229979 | |
| | 31.25 | 0.473 | 0.49 | 0.465 | 0.476 | 0.007371 | 97.7412731 | 2.258726899 | |
| M11(2c) | 1000 | 0.016 | 0.018 | 0.016 | 0.016667 | 0.000667 | 3.422313484 | 96.57768652 | 129.93 ± 3.14 |
| | 500 | 0.019 | 0.015 | 0.017 | 0.017 | 0.001155 | 3.490759754 | 96.50924025 | |
| | 250 | 0.022 | 0.028 | 0.023 | 0.024333 | 0.001856 | 4.996577687 | 95.00342231 | |
| | 125 | 0.218 | 0.237 | 0.204 | 0.219667 | 0.009563 | 45.10609172 | 54.89390828 | |
| | 62.5 | 0.385 | 0.369 | 0.392 | 0.382 | 0.006807 | 78.43942505 | 21.56057495 | |
| | 31.25 | 0.428 | 0.465 | 0.452 | 0.448333 | 0.010837 | 92.06023272 | 7.939767283 | |
| M12(2d) | 1000 | 0.014 | 0.018 | 0.017 | 0.016333 | 0.001202 | 3.353867214 | 96.64613279 | 134.01 ± 2.79 |
| | 500 | 0.017 | 0.016 | 0.017 | 0.016667 | 0.000333 | 3.422313484 | 96.57768652 | |
| | 250 | 0.02 | 0.018 | 0.034 | 0.024 | 0.005033 | 4.928131417 | 95.07186858 | |
| | 125 | 0.216 | 0.246 | 0.223 | 0.228333 | 0.009062 | 46.88569473 | 53.11430527 | |
| | 62.5 | 0.411 | 0.385 | 0.358 | 0.384667 | 0.015301 | 78.98699521 | 21.01300479 | |
| | 31.25 | 0.475 | 0.468 | 0.489 | 0.477333 | 0.006173 | 98.01505818 | 1.984941821 | |
| RM1(2e) | 1000 | 0.017 | 0.019 | 0.017 | 0.017667 | 0.000667 | 3.627652293 | 96.37234771 | 222.27 ± 9.43 |
| | 500 | 0.018 | 0.019 | 0.022 | 0.019667 | 0.001202 | 4.038329911 | 95.96167009 | |
| | 250 | 0.189 | 0.216 | 0.204 | 0.203 | 0.00781 | 41.68377823 | 58.31622177 | |
| | 125 | 0.423 | 0.395 | 0.355 | 0.391 | 0.019732 | 80.28747433 | 19.71252567 | |
| | 62.5 | 0.478 | 0.453 | 0.496 | 0.475667 | 0.012468 | 97.67282683 | 2.327173169 | |
| | 31.25 | 0.489 | 0.476 | 0.473 | 0.479333 | 0.00491 | 98.4257358 | 1.574264203 | |
| RM22(2f) | 1000 | 0.032 | 0.046 | 0.054 | 0.044 | 0.006429 | 9.034907598 | 90.9650924 | 64.88 ± 0.53 |
| | 500 | 0.039 | 0.047 | 0.057 | 0.047667 | 0.005207 | 9.787816564 | 90.21218344 | |
| | 250 | 0.074 | 0.058 | 0.069 | 0.067 | 0.004726 | 13.75770021 | 86.24229979 | |
| | 125 | 0.084 | 0.079 | 0.094 | 0.085667 | 0.00441 | 17.59069131 | 82.40930869 | |
| | 62.5 | 0.147 | 0.138 | 0.188 | 0.157667 | 0.015388 | 32.37508556 | 67.62491444 | |
| | 31.25 | 0.389 | 0.402 | 0.391 | 0.394 | 0.004041 | 80.90349076 | 19.09650924 | |



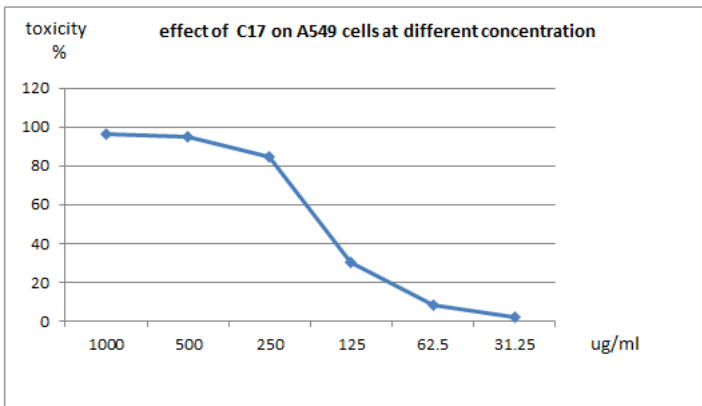
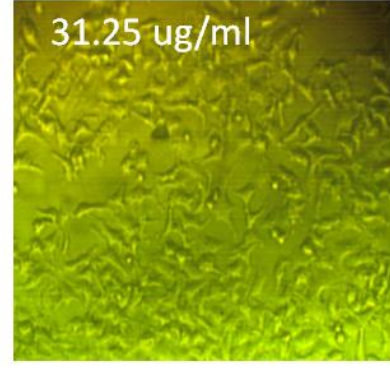
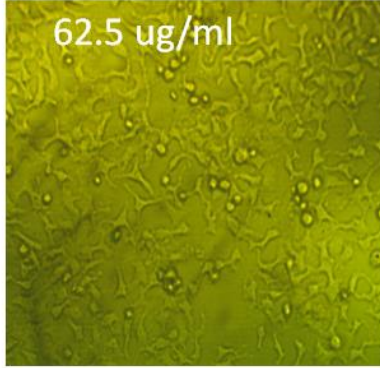
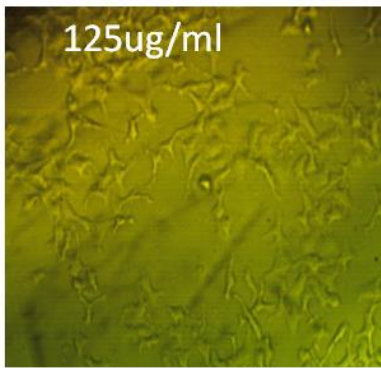
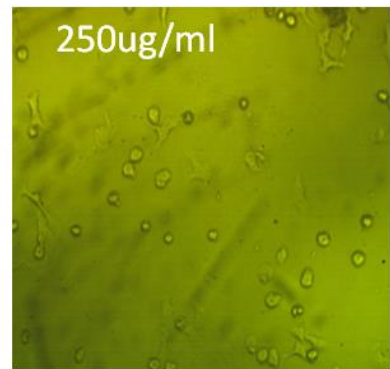
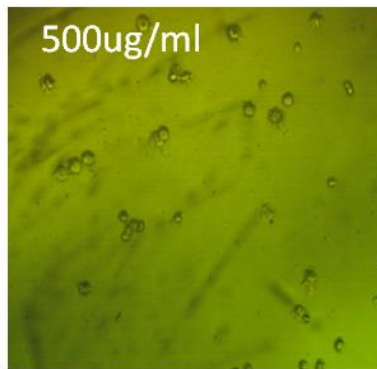
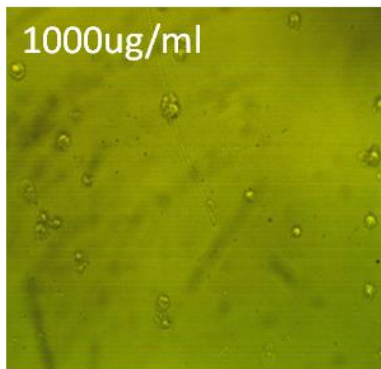
control
A549 cells

| | |
|----------------------|-----------------------------|
| Organism : | <i>Homo sapiens</i> , human |
| Tissue : | lung |
| Cell Type : | epithelial |
| Culture Properties : | adherent |
| Disease : | Carcinoma |

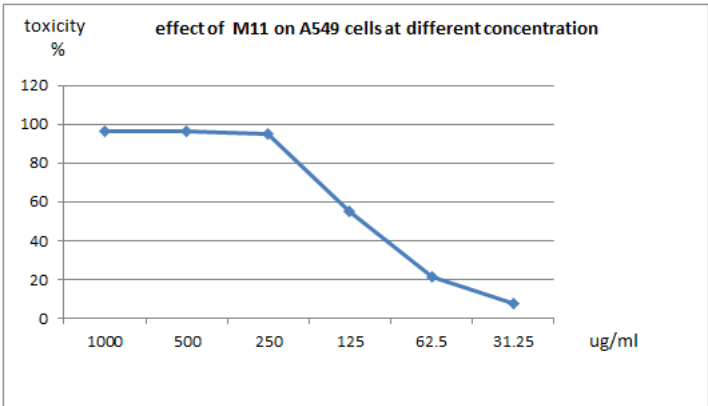
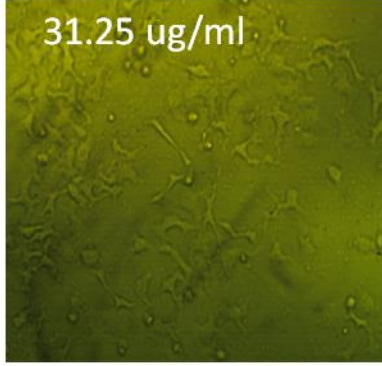
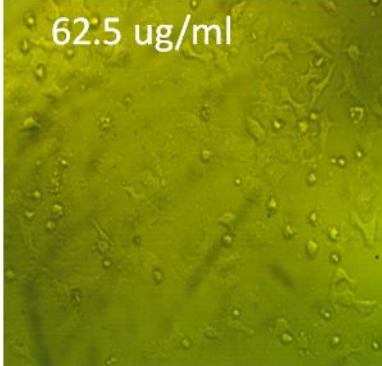
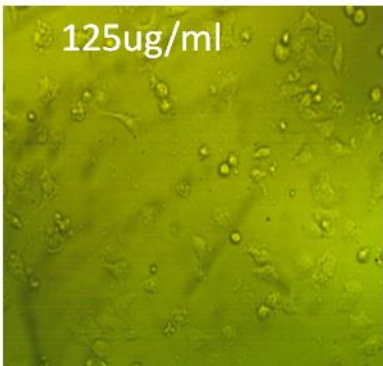
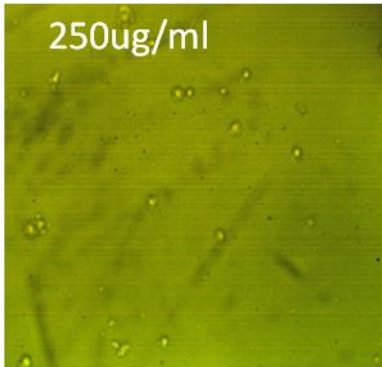
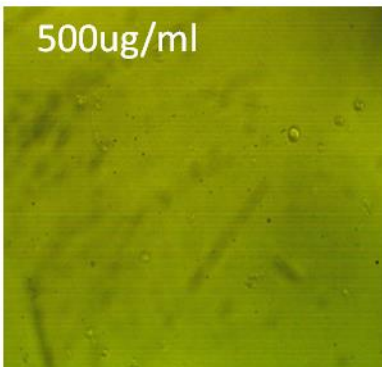
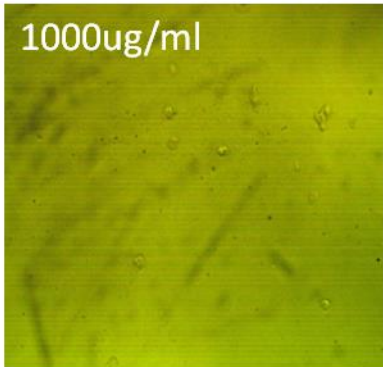
Effect of C16 on A549 cells at different concentration



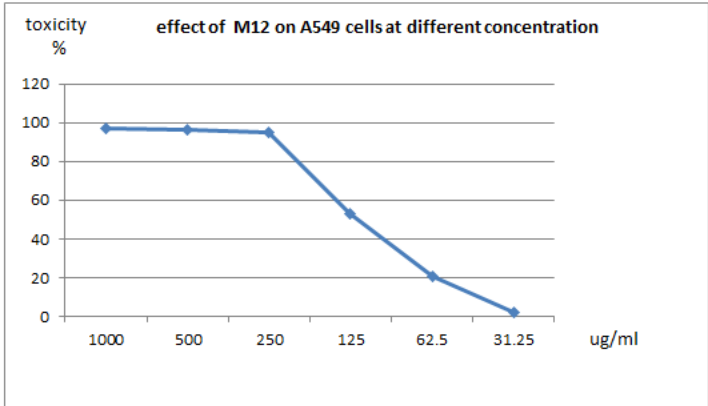
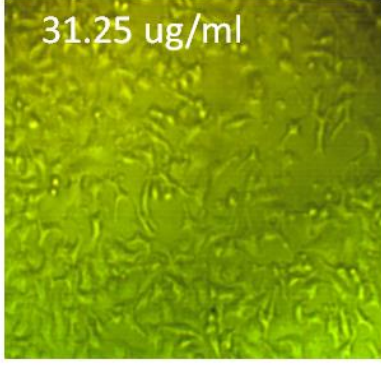
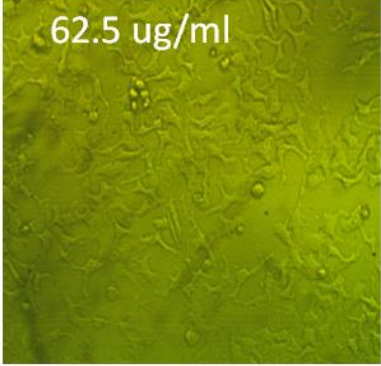
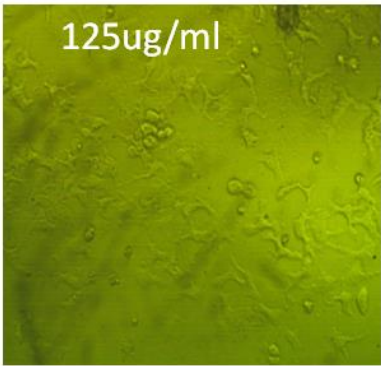
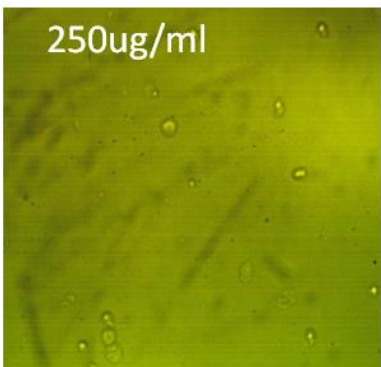
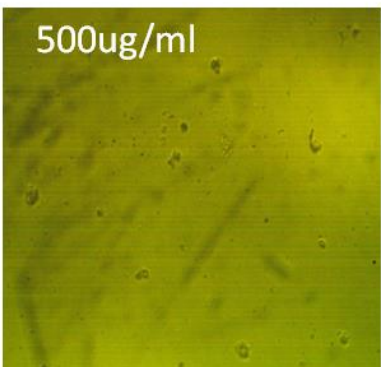
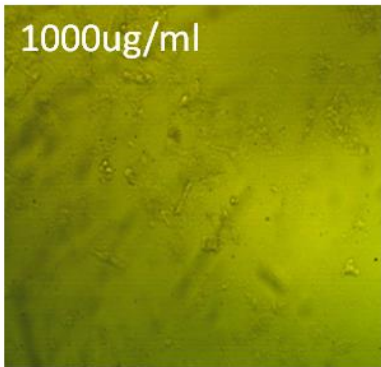
Effect of C17 on A549 cells at different concentration



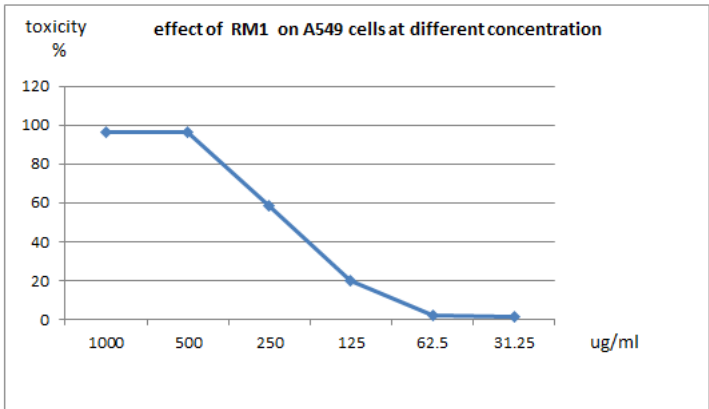
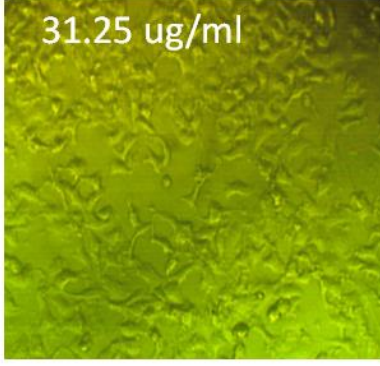
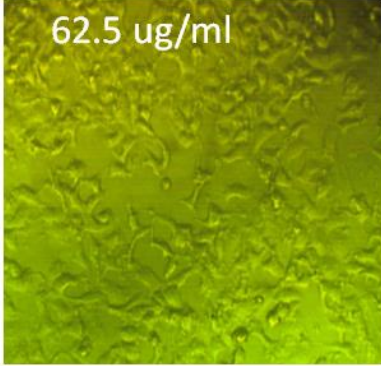
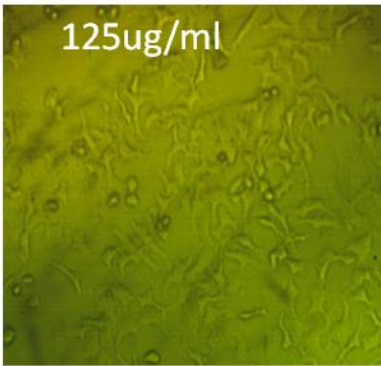
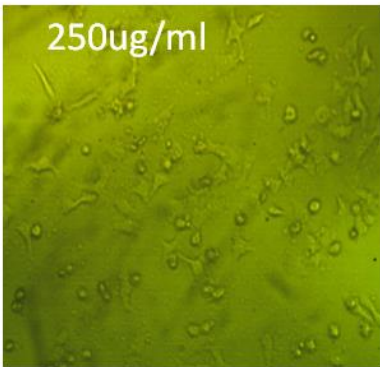
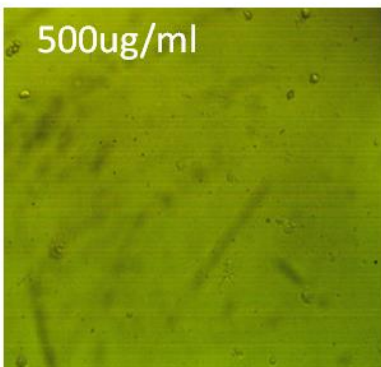
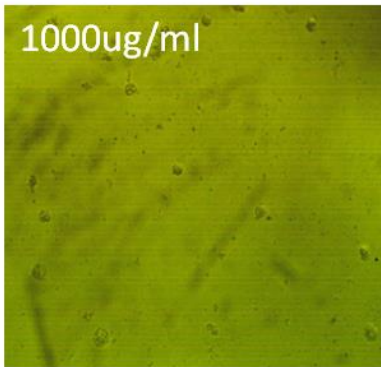
Effect of M11 on A549 cells at different concentration



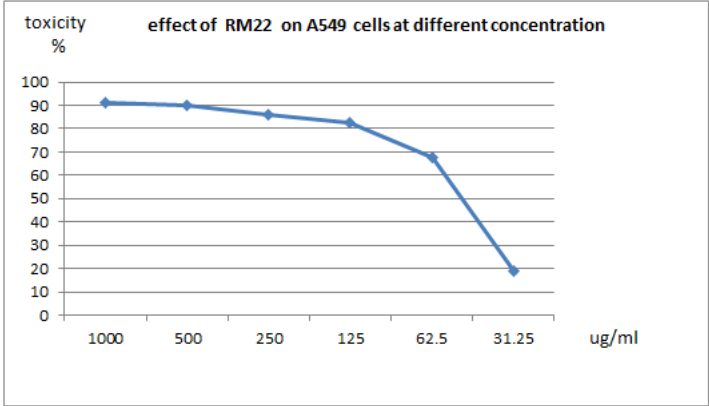
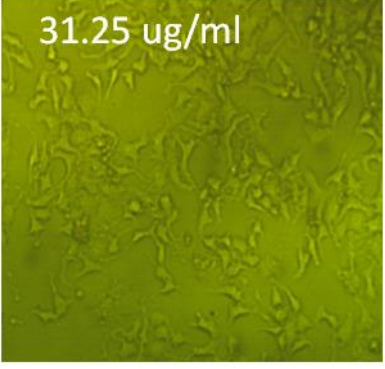
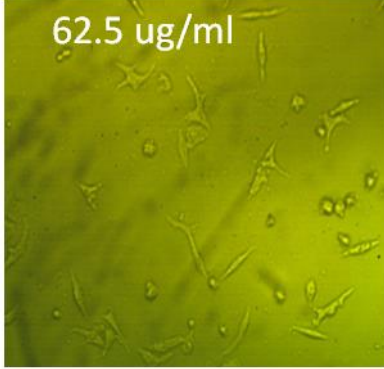
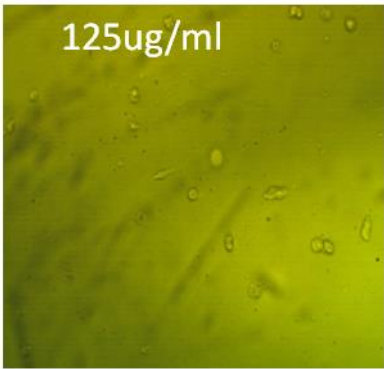
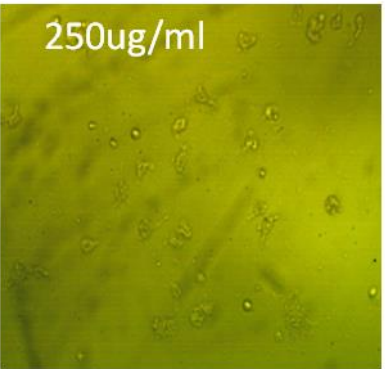
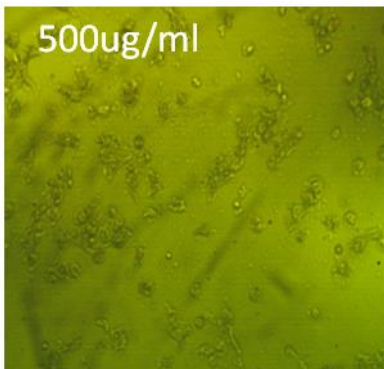
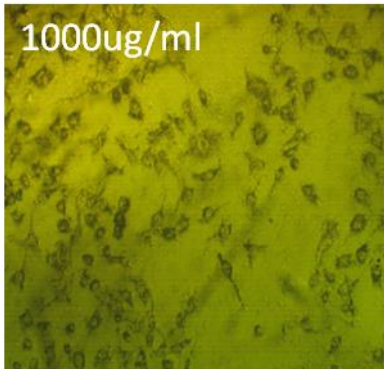
Effect of M12 on A549 cells at different concentration



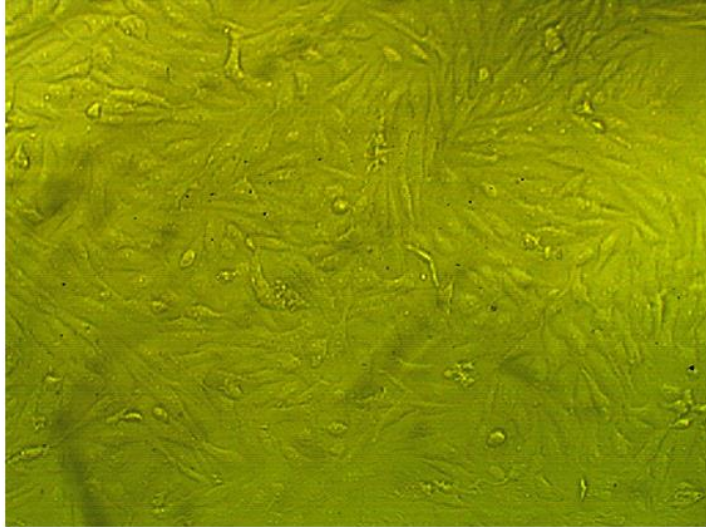
Effect of RM1 on A549 cells at different concentration



Effect of RM22 on A549 cells at different concentration



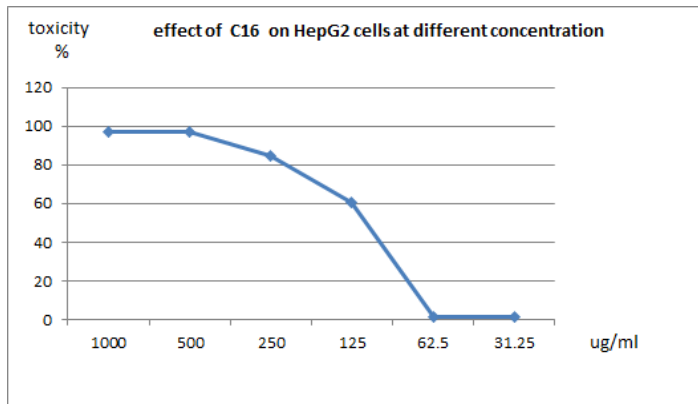
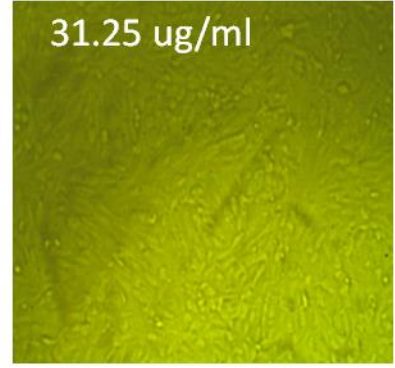
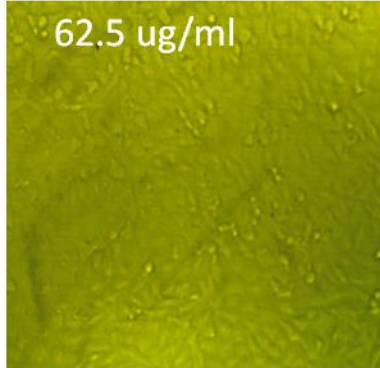
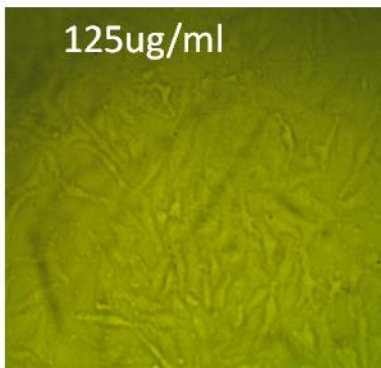
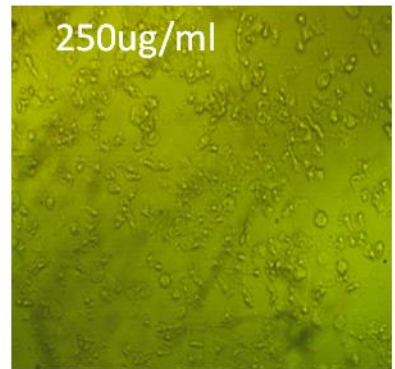
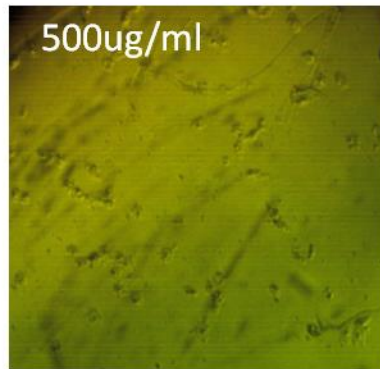
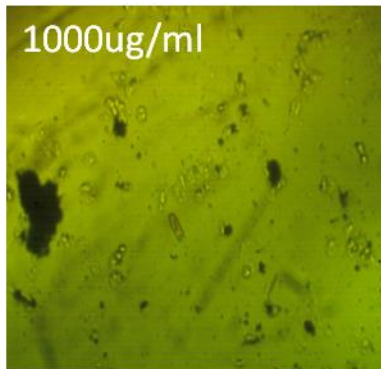
| ID | ug/ml | O.D | | | Mean O.D | ±SE | Viability % | Toxicity % | IC50 ± SD |
|----------|-------|-------|-------|-------|----------|----------|-------------|-------------|---------------|
| HepG2 | ----- | 0.683 | 0.647 | 0.677 | 0.669 | 0.011136 | 100 | 0 | ug |
| C16(2b) | 1000 | 0.018 | 0.023 | 0.015 | 0.018667 | 0.002333 | 2.79023418 | 97.20976582 | 110.65 ± 1.51 |
| | 500 | 0.018 | 0.019 | 0.021 | 0.019333 | 0.000882 | 2.889885401 | 97.1101146 | |
| | 250 | 0.111 | 0.094 | 0.109 | 0.104667 | 0.005364 | 15.64524165 | 84.35475835 | |
| | 125 | 0.274 | 0.248 | 0.266 | 0.262667 | 0.007688 | 39.26258097 | 60.73741903 | |
| | 62.5 | 0.637 | 0.657 | 0.689 | 0.661 | 0.015144 | 98.80418535 | 1.195814649 | |
| | 31.25 | 0.667 | 0.684 | 0.633 | 0.661333 | 0.014993 | 98.85401096 | 1.145989038 | |
| C17(2a) | 1000 | 0.033 | 0.042 | 0.056 | 0.043667 | 0.006692 | 6.527154958 | 93.47284504 | 217.82 ± 4.61 |
| | 500 | 0.104 | 0.119 | 0.147 | 0.123333 | 0.012601 | 18.43547583 | 81.56452417 | |
| | 250 | 0.274 | 0.226 | 0.248 | 0.249333 | 0.013872 | 37.26955655 | 62.73044345 | |
| | 125 | 0.657 | 0.667 | 0.662 | 0.662 | 0.002887 | 98.95366218 | 1.046337818 | |
| | 62.5 | 0.679 | 0.658 | 0.648 | 0.661667 | 0.009135 | 98.90383657 | 1.096163428 | |
| | 31.25 | 0.662 | 0.674 | 0.664 | 0.666667 | 0.003712 | 99.65122073 | 0.348779273 | |
| M11(2c) | 1000 | 0.017 | 0.019 | 0.018 | 0.018 | 0.000577 | 2.69058296 | 97.30941704 | 165.92 ± 3.91 |
| | 500 | 0.037 | 0.047 | 0.053 | 0.045667 | 0.004667 | 6.82610862 | 93.17389138 | |
| | 250 | 0.189 | 0.163 | 0.142 | 0.164667 | 0.013593 | 24.61385152 | 75.38614848 | |
| | 125 | 0.327 | 0.348 | 0.362 | 0.345667 | 0.010171 | 51.66915795 | 48.33084205 | |
| | 62.5 | 0.647 | 0.689 | 0.66 | 0.665333 | 0.012414 | 99.45191829 | 0.548081714 | |
| | 31.25 | 0.663 | 0.668 | 0.659 | 0.663333 | 0.002603 | 99.15296462 | 0.847035376 | |
| M12(2d) | 1000 | 0.017 | 0.014 | 0.017 | 0.016 | 0.001 | 2.391629297 | 97.6083707 | 154.83 ± 4.6 |
| | 500 | 0.016 | 0.017 | 0.016 | 0.016333 | 0.000333 | 2.441454908 | 97.55854509 | |
| | 250 | 0.094 | 0.103 | 0.115 | 0.104 | 0.006083 | 15.54559043 | 84.45440957 | |
| | 125 | 0.295 | 0.346 | 0.321 | 0.320667 | 0.014723 | 47.93223717 | 52.06776283 | |
| | 62.5 | 0.669 | 0.653 | 0.661 | 0.661 | 0.004619 | 98.80418535 | 1.195814649 | |
| | 31.25 | 0.664 | 0.666 | 0.67 | 0.666667 | 0.001764 | 99.65122073 | 0.348779273 | |
| RM1(2e) | 1000 | 0.064 | 0.058 | 0.064 | 0.062 | 0.002 | 9.267563528 | 90.73243647 | 211.36 ± 13.5 |
| | 500 | 0.068 | 0.084 | 0.069 | 0.073667 | 0.005175 | 11.01145989 | 88.98854011 | |
| | 250 | 0.194 | 0.275 | 0.214 | 0.227667 | 0.024361 | 34.03089188 | 65.96910812 | |
| | 125 | 0.584 | 0.628 | 0.611 | 0.607667 | 0.012811 | 90.83208769 | 9.167912307 | |
| | 62.5 | 0.678 | 0.645 | 0.66 | 0.661 | 0.009539 | 98.80418535 | 1.195814649 | |
| | 31.25 | 0.663 | 0.674 | 0.662 | 0.666333 | 0.003844 | 99.60139512 | 0.398604883 | |
| RM22(2f) | 1000 | 0.014 | 0.017 | 0.016 | 0.015667 | 0.000882 | 2.341803687 | 97.65819631 | 39.18 ± 1.95 |
| | 500 | 0.017 | 0.016 | 0.018 | 0.017 | 0.000577 | 2.541106129 | 97.45889387 | |
| | 250 | 0.018 | 0.017 | 0.017 | 0.017333 | 0.000333 | 2.590931739 | 97.40906826 | |
| | 125 | 0.019 | 0.016 | 0.109 | 0.048 | 0.030512 | 7.174887892 | 92.82511211 | |
| | 62.5 | 0.085 | 0.099 | 0.093 | 0.092333 | 0.004055 | 13.80169407 | 86.19830593 | |
| | 31.25 | 0.396 | 0.433 | 0.424 | 0.417667 | 0.011141 | 62.43148979 | 37.56851021 | |



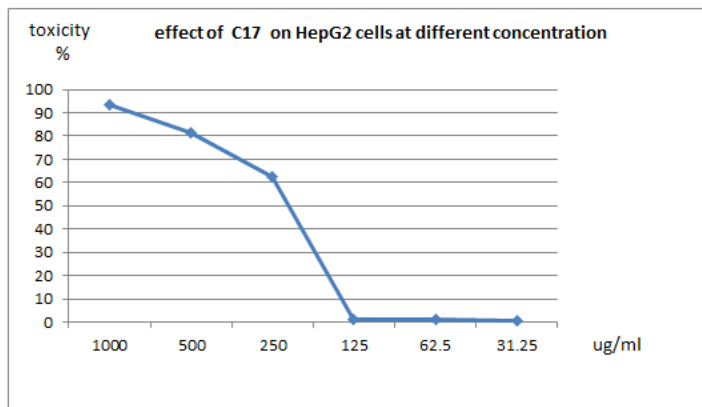
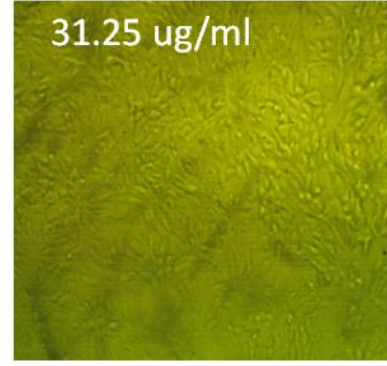
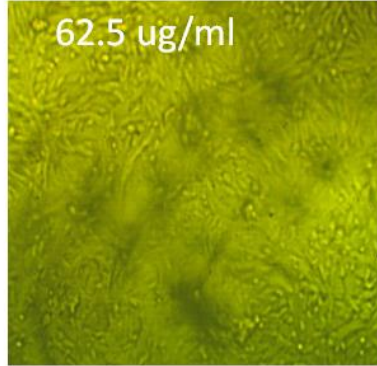
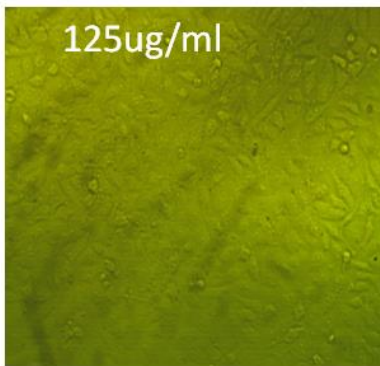
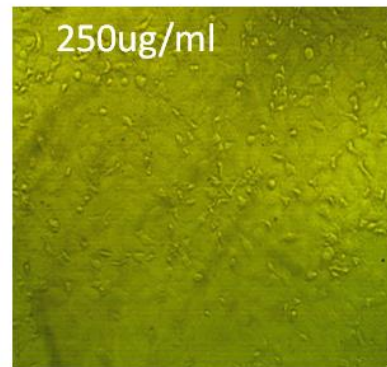
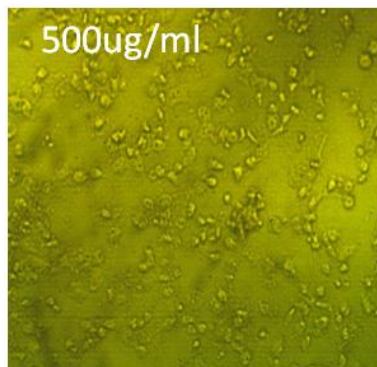
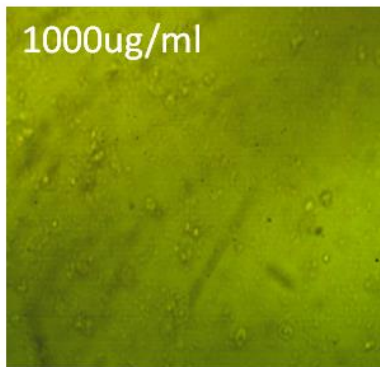
**control
HepG2 cells**

| | |
|----------------------|-----------------------------|
| Organism : | <i>Homo sapiens</i> , human |
| Tissue : | liver |
| Cell Type : | epithelial |
| Culture Properties : | adherent |
| Disease : | hepatocellular carcinoma |

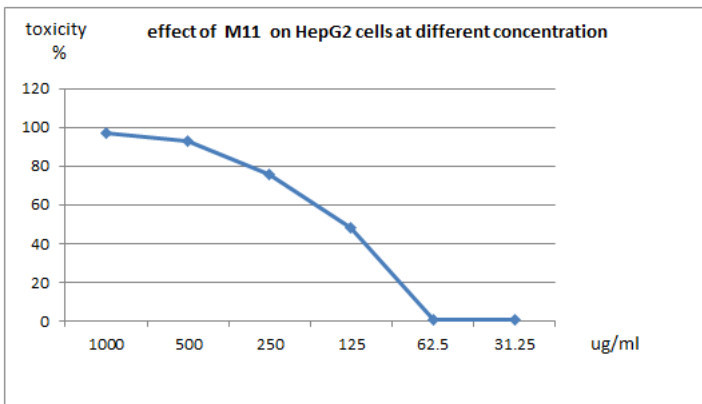
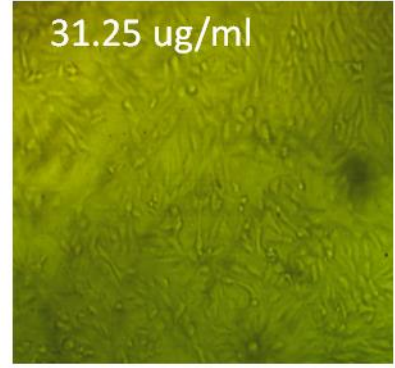
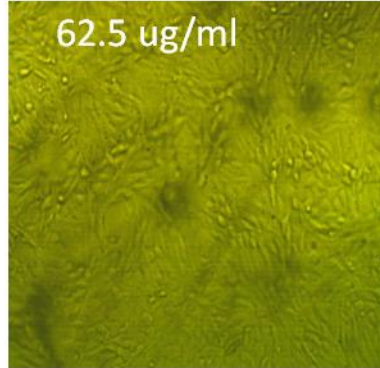
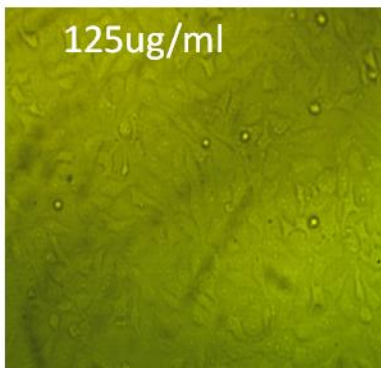
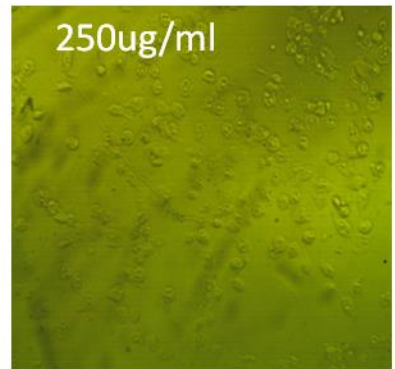
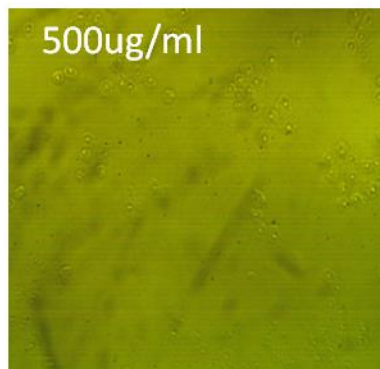
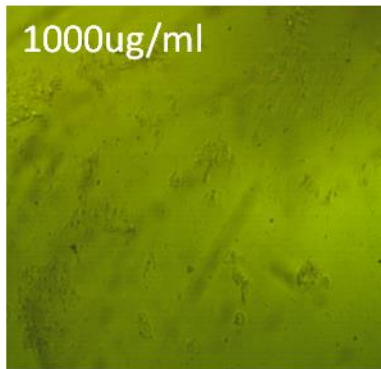
Effect of C16 on HepG2 cells at different concentration



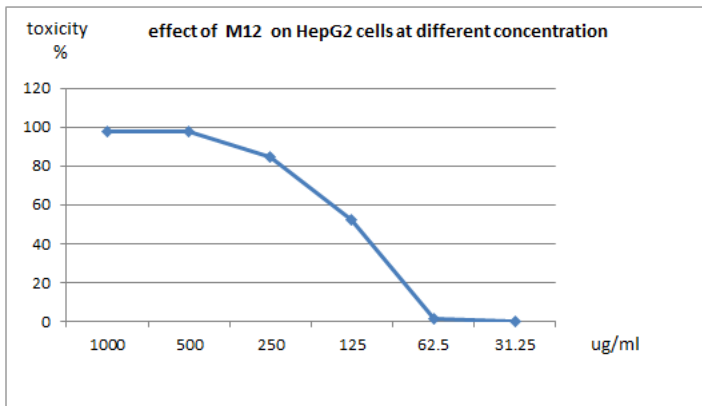
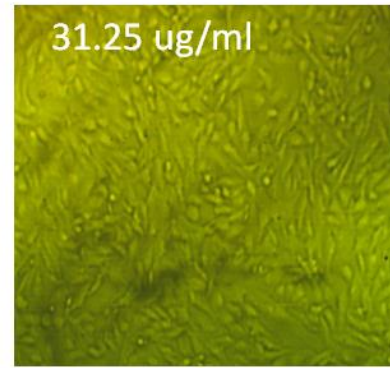
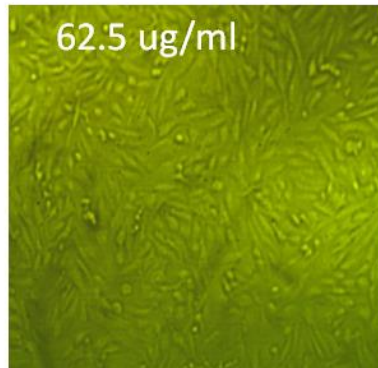
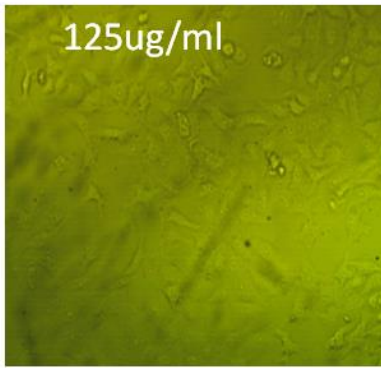
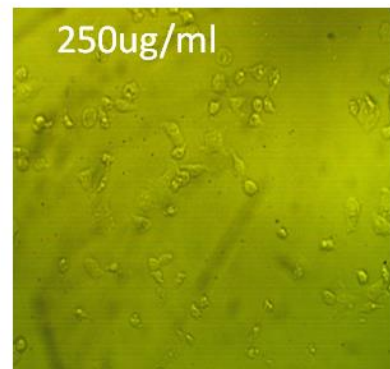
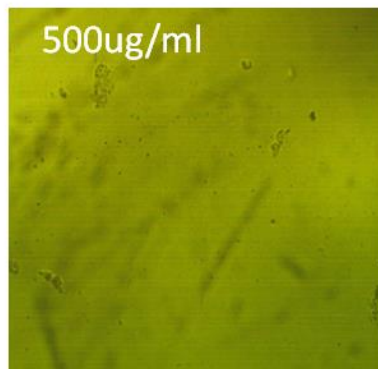
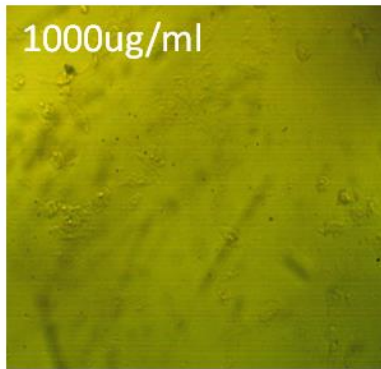
Effect of C17 on HepG2 cells at different concentration



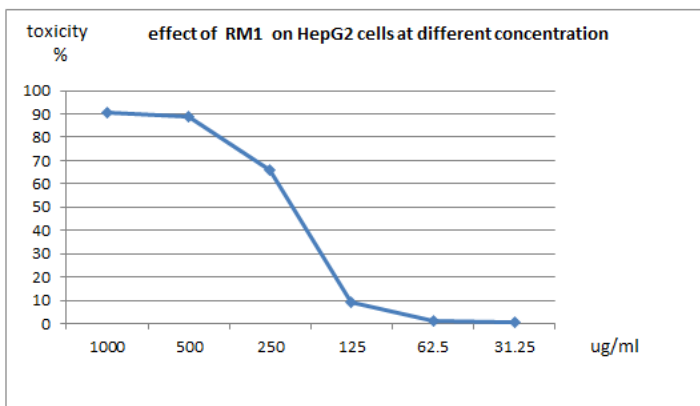
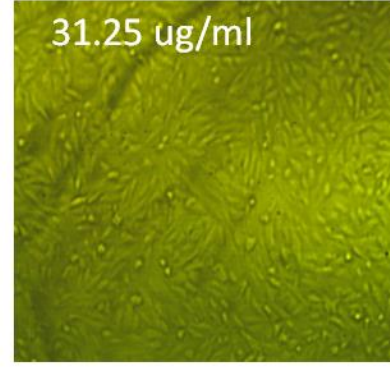
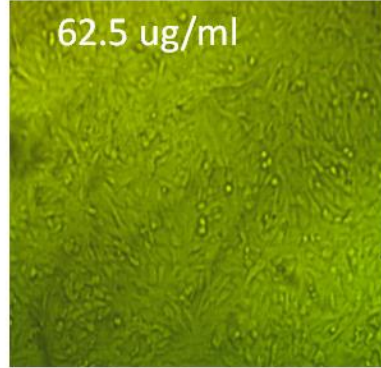
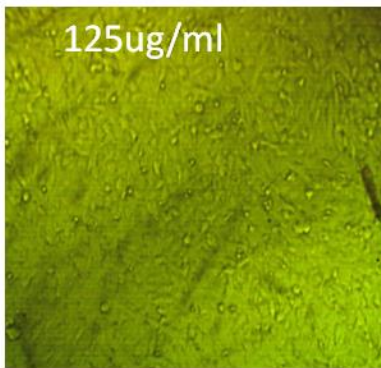
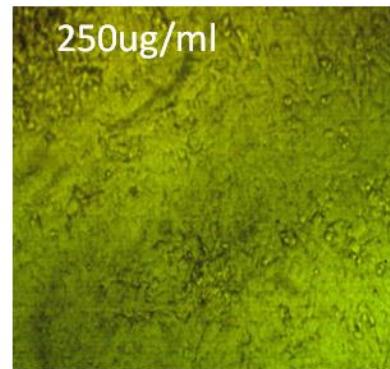
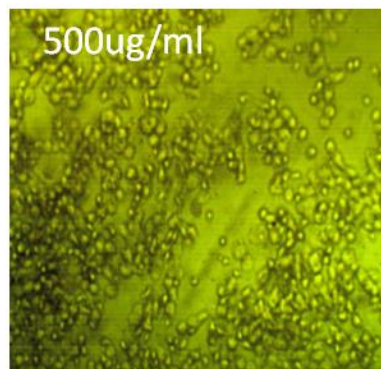
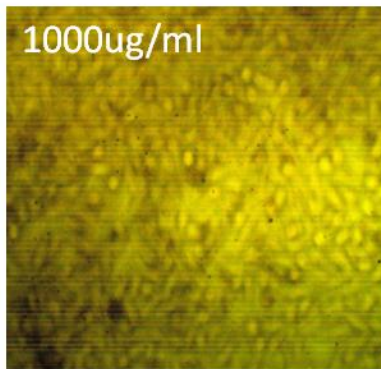
Effect of M11 on HepG2 cells at different concentration



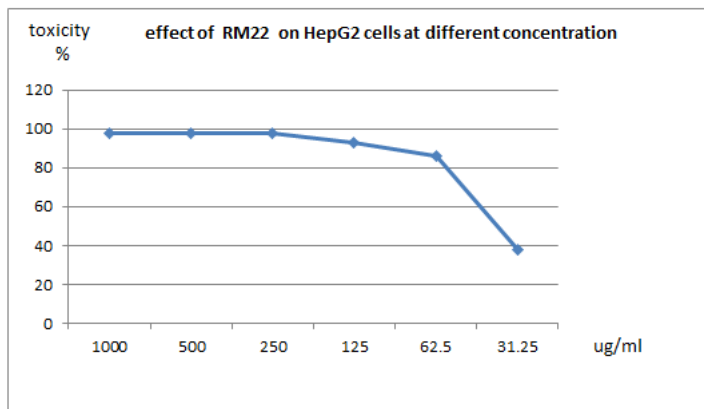
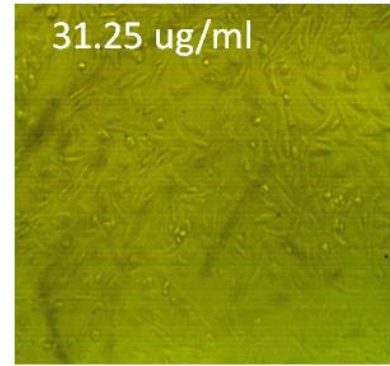
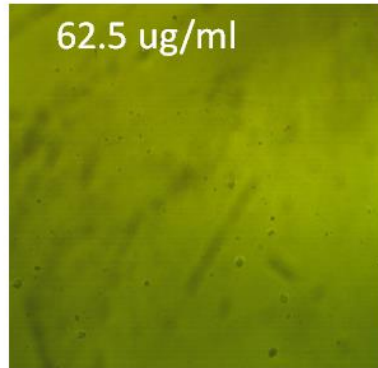
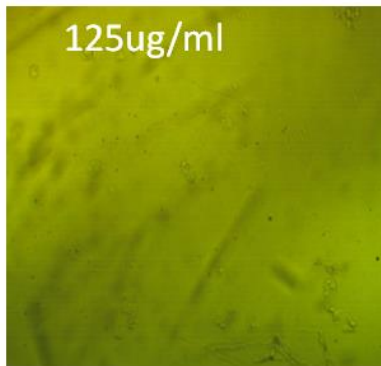
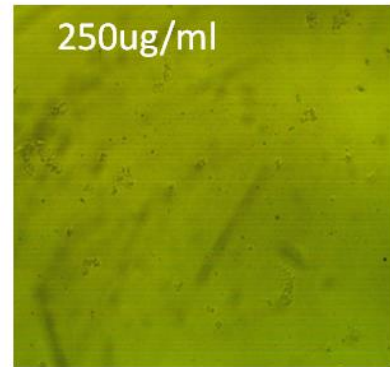
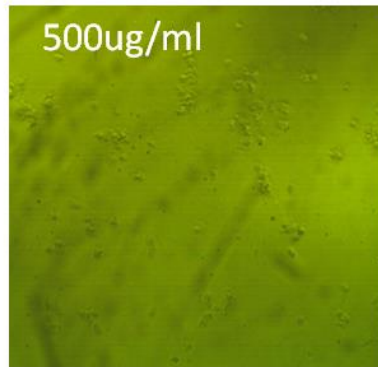
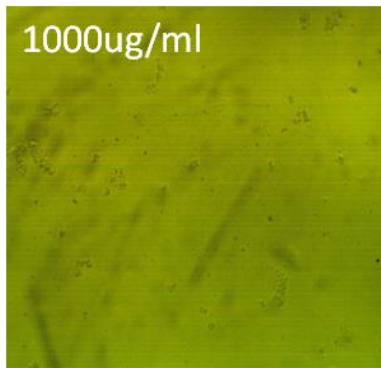
Effect of M12 on HepG2 cells at different concentration



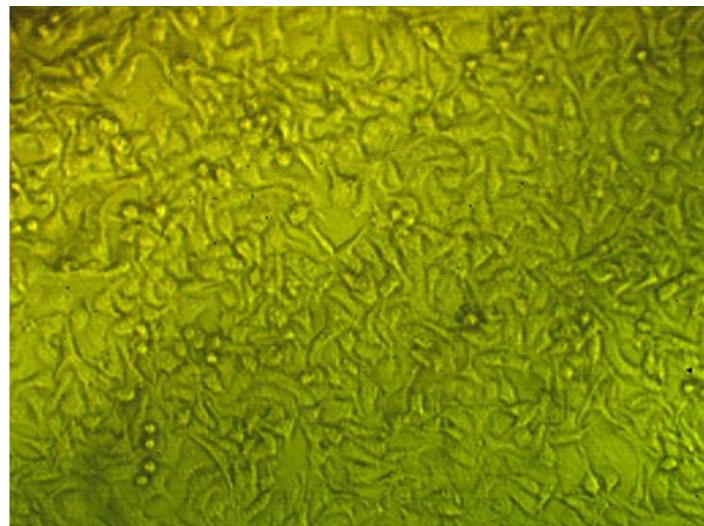
Effect of RM1 on HepG2 cells at different concentration



Effect of RM22 on HepG2 cells at different concentration



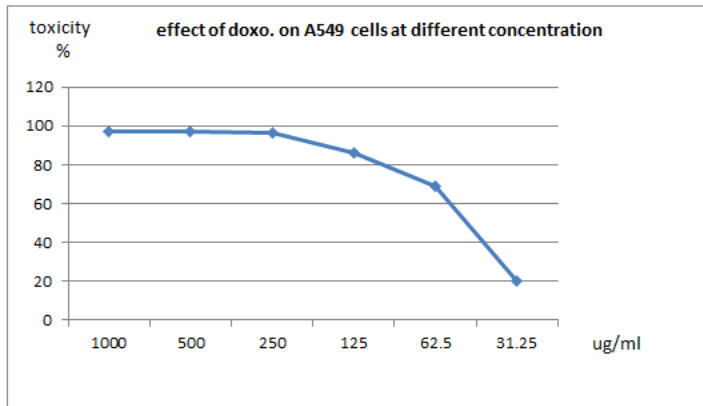
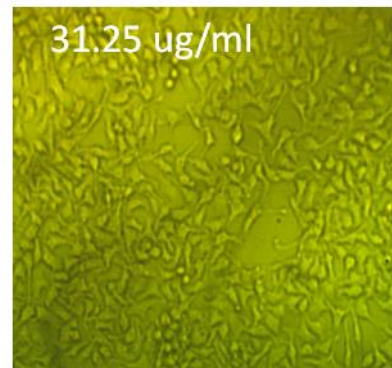
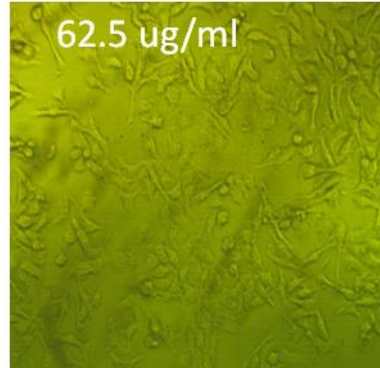
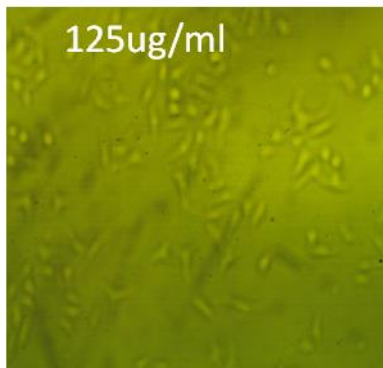
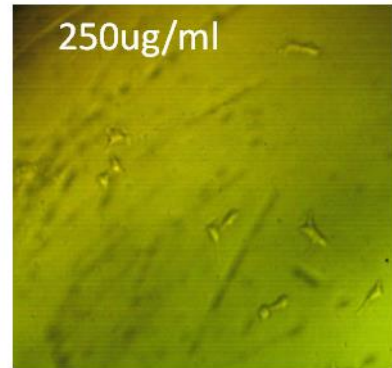
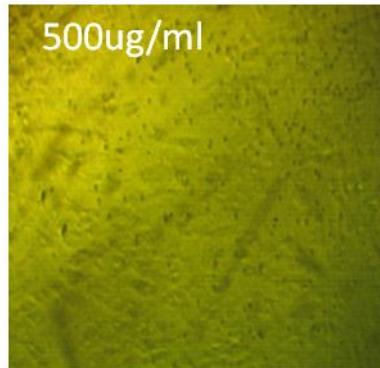
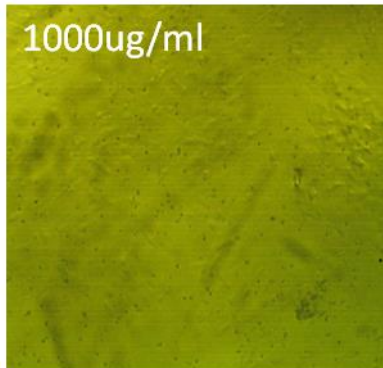
| ID | ug/ml | O.D | | | Mean O.D | ±SE | Viability % | Toxicity % | IC50 ± SD |
|------|-------|-------|-------|-------|----------|----------|-------------|-------------|--------------|
| A549 | ----- | 0.683 | 0.689 | 0.695 | 0.689 | 0.003464 | 100 | 0 | ug |
| doxo | 1000 | 0.018 | 0.02 | 0.018 | 0.018667 | 0.000667 | 2.709240445 | 97.29075955 | 50.47 ± 1.32 |
| | 500 | 0.019 | 0.017 | 0.019 | 0.018333 | 0.000667 | 2.660861151 | 97.33913885 | |
| | 250 | 0.02 | 0.034 | 0.025 | 0.026333 | 0.004096 | 3.821964199 | 96.1780358 | |
| | 125 | 0.089 | 0.11 | 0.094 | 0.097667 | 0.006333 | 14.17513304 | 85.82486696 | |
| | 62.5 | 0.219 | 0.235 | 0.194 | 0.216 | 0.01193 | 31.34978229 | 68.65021771 | |
| | 31.25 | 0.546 | 0.558 | 0.542 | 0.548667 | 0.004807 | 79.63231737 | 20.36768263 | |



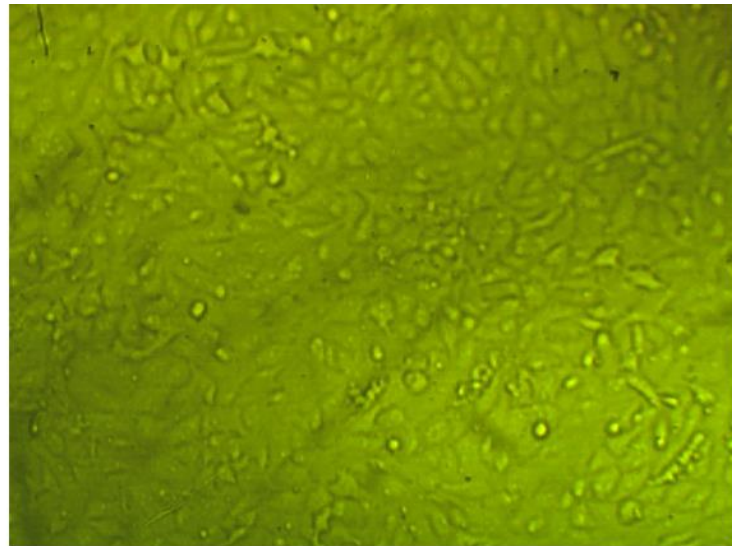
**control
A549 cells**

Organism : *Homo sapiens*, human
Tissue : lung
Cell Type : epithelial
Culture Properties : adherent
Disease : Carcinoma
ATCC : CCL-185

Effect of doxo on A549 cells at different concentration



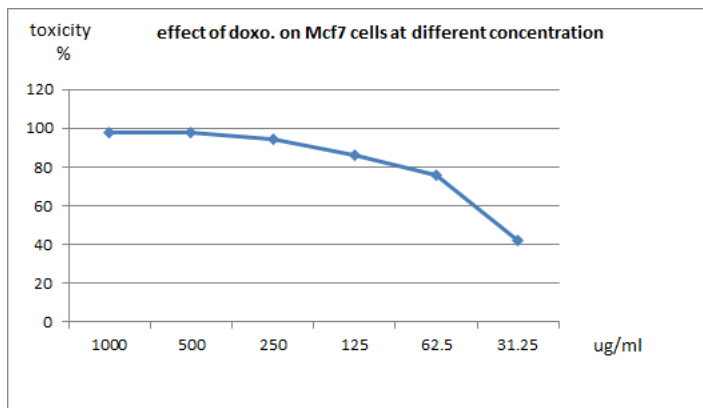
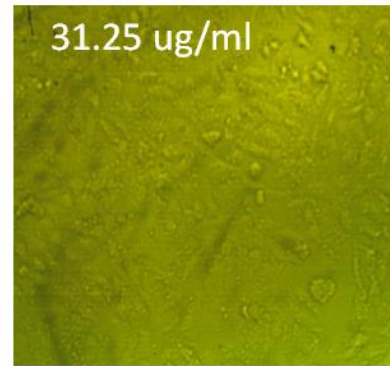
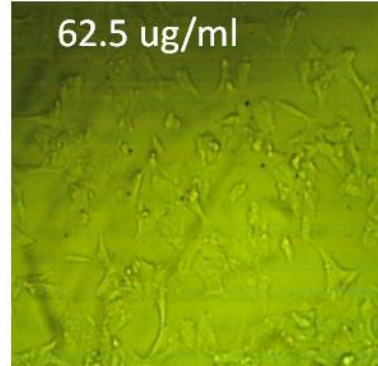
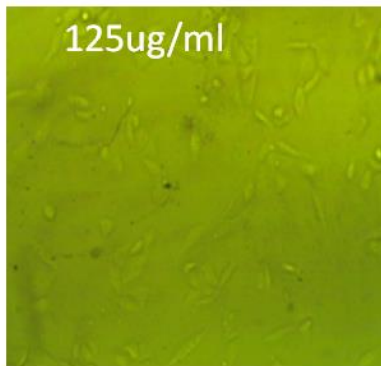
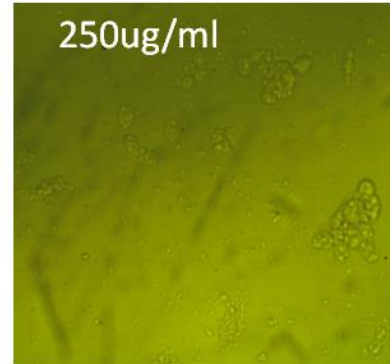
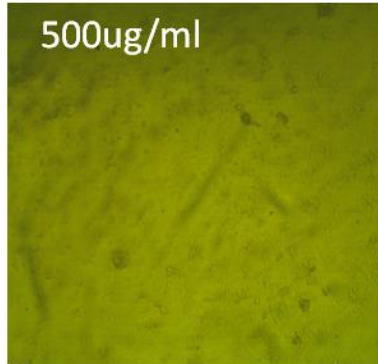
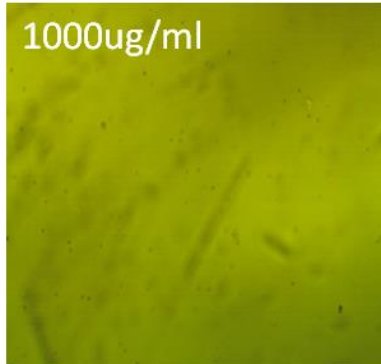
| ID | ug/ml | O.D | | | Mean O.D | ±SE | Viability % | Toxicity % | IC50 ± SD |
|------|-------|-------|-------|-------|----------|----------|-------------|-------------|--------------|
| | | | | | | | | | |
| Mcf7 | ----- | 0.784 | 0.762 | 0.758 | 0.768 | 0.008083 | 100 | 0 | ug |
| doxo | 1000 | 0.018 | 0.015 | 0.017 | 0.016667 | 0.000882 | 2.170138889 | 97.82986111 | 38.53 ± 0.49 |
| | 500 | 0.018 | 0.017 | 0.019 | 0.018 | 0.000577 | 2.34375 | 97.65625 | |
| | 250 | 0.036 | 0.053 | 0.048 | 0.045667 | 0.005044 | 5.946180556 | 94.05381944 | |
| | 125 | 0.089 | 0.119 | 0.107 | 0.105 | 0.008718 | 13.671875 | 86.328125 | |
| | 62.5 | 0.174 | 0.189 | 0.188 | 0.183667 | 0.004842 | 23.91493056 | 76.08506944 | |
| | 31.25 | 0.452 | 0.438 | 0.444 | 0.444667 | 0.004055 | 57.89930556 | 42.10069444 | |



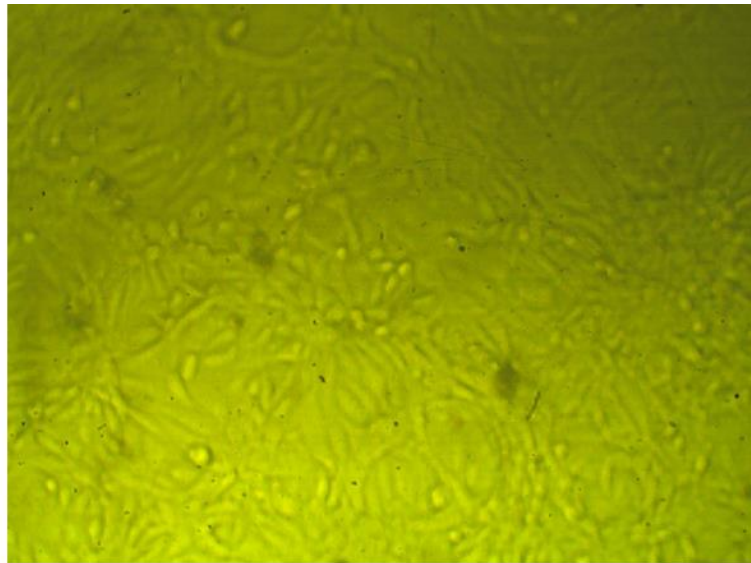
**control
Mcf7 cells**

Organism : *Homo sapiens*, human
Tissue : mammary gland, breast; derived from metastatic site: pleural effusion
Cell Type : epithelial
Culture Properties : adherent
Disease : adenocarcinoma
ATCC : HTB-22

Effect of doxo on Mcf7 cells at different concentration



| ID | ug/ml | O.D | | | Mean O.D | ±SE | Viability % | Toxicity % | IC50 ± SD |
|-------|-------|-------|-------|-------|-------------|----------|-------------|-------------|-----------------|
| | | | | | | | | | |
| HepG2 | ----- | 0.822 | 0.813 | 0.819 | 0.818 | 0.002646 | 100 | 0 | ug |
| doxo | 1000 | 0.018 | 0.017 | 0.019 | 0.018 | 0.000577 | 2.200488998 | 97.799511 | 47.59 ± 0.88 |
| | 500 | 0.016 | 0.018 | 0.018 | 0.017333 | 0.000667 | 2.118989405 | 97.88101059 | |
| | 250 | 0.034 | 0.021 | 0.04 | 0.031667 | 0.005608 | 3.871230644 | 96.12876936 | |
| | 125 | 0.094 | 0.089 | 0.11 | 0.097667 | 0.006333 | 11.9396903 | 88.0603097 | |
| | 62.5 | 0.164 | 0.189 | 0.174 | 0.175667 | 0.007265 | 21.47514262 | 78.52485738 | |
| | 31.25 | 0.645 | 0.678 | 0.672 | 0.665 | 0.010149 | 81.29584352 | 18.70415648 | |



**control
HepG2 cells**

Organism : *Homo sapiens*, human
Tissue : liver
Cell Type : epithelial
Culture Properties : adherent
Disease : hepatocellular carcinoma
ATCC : HB-8065

Effect of doxo on HepG2 cells at different concentration

