

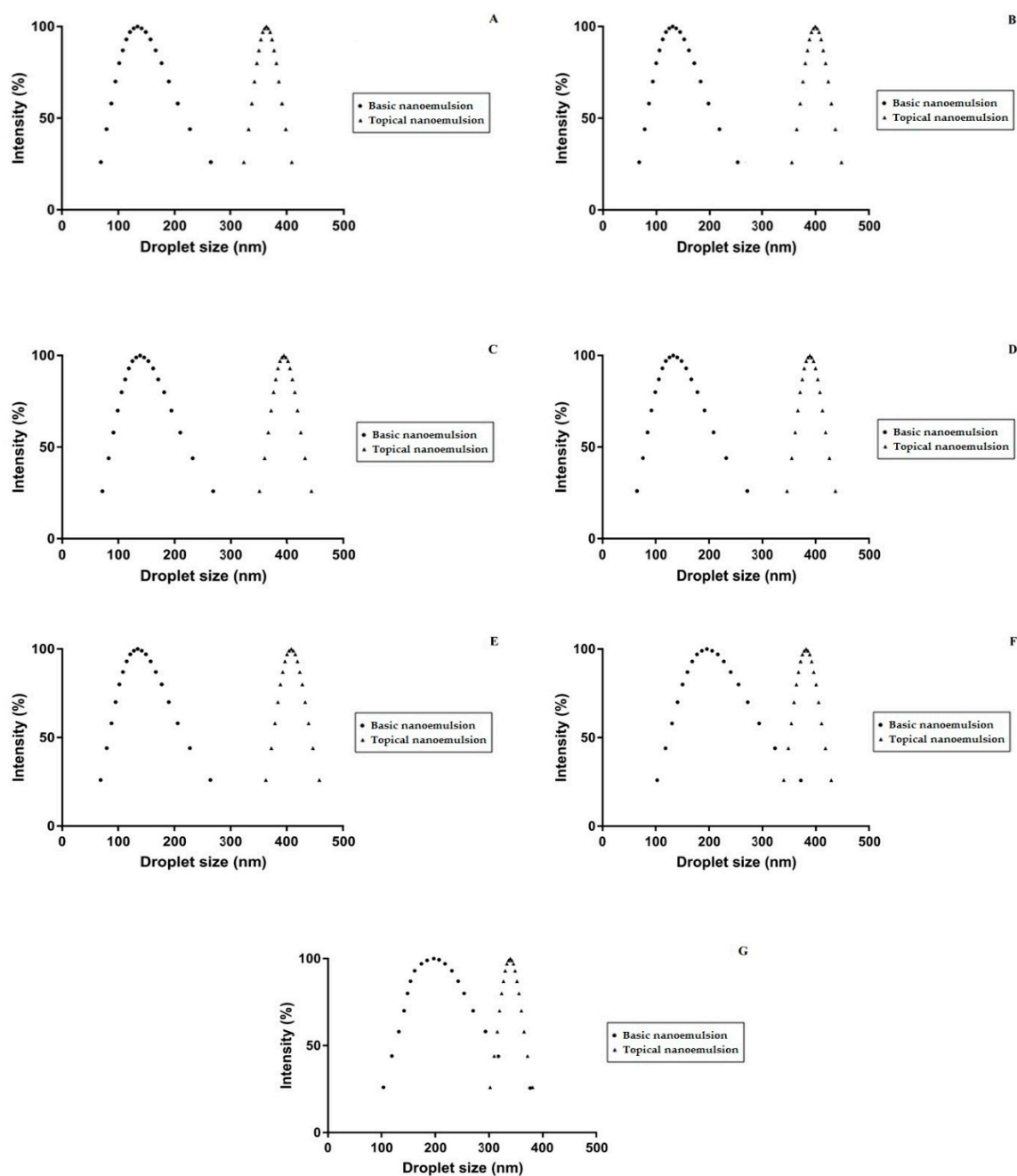
# Supplementary Materials: New Trends on Antineoplastic Therapy Research: Bullfrog (*Rana catesbeiana* Shaw) Oil Nanostructured Systems

Lucas Amaral-Machado, Francisco H. Xavier-Júnior, Renata Rutkevski, Andreza R.V. Morais, Éverton N. Alencar, Teresa R.F. Dantas, Ana K. M. Cruz, Julieta Genre, Arnóbio A. da Silva-Junior, Matheus F.F. Pedrosa, Hugo A.O. Rocha and Eryvaldo S.T. Egito

**Table S1.** Characterization of the second batch of nanoemulsion systems based on bullfrog oil to determine the HLB<sub>r</sub> after 60 days of evaluation at 25 °C.

| HLB  | Droplet Size (nm) ± SD | Polydispersity | Micro-Emultocrit (%) ± SD | pH ± SD   | Conductivity (S/cm) |
|------|------------------------|----------------|---------------------------|-----------|---------------------|
| 12.0 | 203.5 ± 20.6           | 0.23           | 2.4 ± 0.7                 | 5.6 ± 1.4 | 105.6               |
| 12.1 | 212.0 ± 13.6           | 0.213          | 2.4 ± 0.5                 | 5.2 ± 1.4 | 91.2                |
| 12.2 | 202.7 ± 21.6           | 0.22           | 2.4 ± 0.5                 | 5.1 ± 1.5 | 100.8               |
| 12.3 | 205.6 ± 21.7           | 0.242          | 2.2 ± 0.4                 | 5.3 ± 1.4 | 104.3               |
| 12.4 | 215.3 ± 20.9           | 0.227          | 3.0 ± 1.0                 | 5.3 ± 1.5 | 109.8               |
| 12.5 | 202.9 ± 29.8           | 0.215          | 2.2 ± 0.7                 | 5.4 ± 1.2 | 87.3                |
| 12.6 | 213.3 ± 22.0           | 0.23           | 2.2 ± 0.4                 | 5.4 ± 1.4 | 101.2               |
| 12.7 | 199.6 ± 16.6           | 0.232          | 2.7 ± .04                 | 5.1 ± 1.5 | 108.7               |
| 12.8 | 203.3 ± 20.8           | 0.233          | 2.4 ± 0.5                 | 5.4 ± 1.4 | 87.4                |
| 12.9 | 209.3 ± 18.4           | 0.234          | 2.1 ± 0.3                 | 5.3 ± 1.4 | 97.4                |
| 13.0 | 196.4 ± 17.3           | 0.215          | 2.0 ± 0.0                 | 5.2 ± 1.4 | 90.5                |
| 13.1 | 210.7 ± 15.6           | 0.257          | 2.4 ± 1.1                 | 5.2 ± 1.4 | 95.0                |
| 13.2 | 213.6 ± 15.7           | 0.229          | 2.4 ± 0.5                 | 5.1 ± 1.5 | 109.2               |
| 13.3 | 201.9 ± 15.0           | 0.215          | 2.5 ± 0.5                 | 5.0 ± 1.5 | 100.1               |
| 13.4 | 197.1 ± 23.9           | 0.227          | 2.2 ± 0.4                 | 5.0 ± 1.6 | 112.1               |
| 13.5 | 208.1 ± 19.9           | 0.245          | 2.4 ± 0.5                 | 5.1 ± 1.4 | 120.5               |
| 13.6 | 206.9 ± 15.5           | 0.266          | 3.2 ± 0.8                 | 5.0 ± 1.5 | 108.9               |
| 13.7 | 194.4 ± 11.7           | 0.225          | 2.4 ± 0.5                 | 5.0 ± 1.5 | 72.5                |
| 13.8 | 185.3 ± 14.3           | 0.236          | 2.4 ± 0.5                 | 5.0 ± 1.6 | 115.4               |
| 13.9 | 193.7 ± 18.5           | 0.248          | 2.5 ± 0.5                 | 5.0 ± 1.5 | 112.0               |
| 14.0 | 188.4 ± 22.2           | 0.261          | 2.7 ± 0.5                 | 5.0 ± 1.5 | 120.4               |

HLB<sub>r</sub> (required hydrophile-lipophile balance); SD (standard deviation).



**Figure S1.** Dynamic Light Scattering (DLS) droplet size distribution of basic and topical nanoemulsion on stability study. (A) Day 0; (B) Day 1; (C) Day 7; (D) Day 15; (E) Day 30; (F) Day 60; (G) Day 90. ●: Basic nanoemulsion; ▲: Topical nanoemulsion.