Poster ID: 4082900

The anticancer activity of miriplatin-loaded micelles in 3D multicellular spheroids and in an orthotopic xenograft lung cancer model

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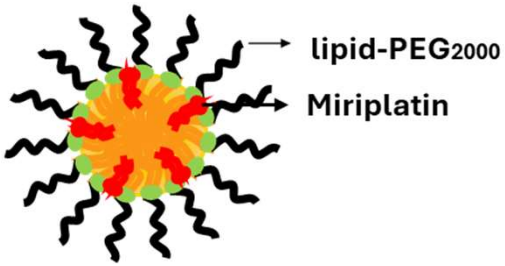
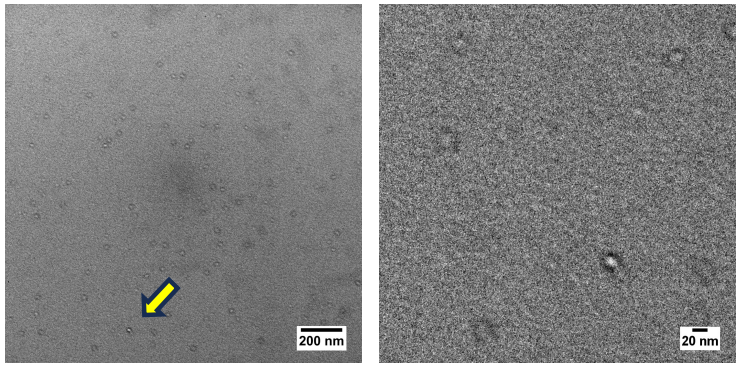
Miriplatin-loaded micelles



Aims:

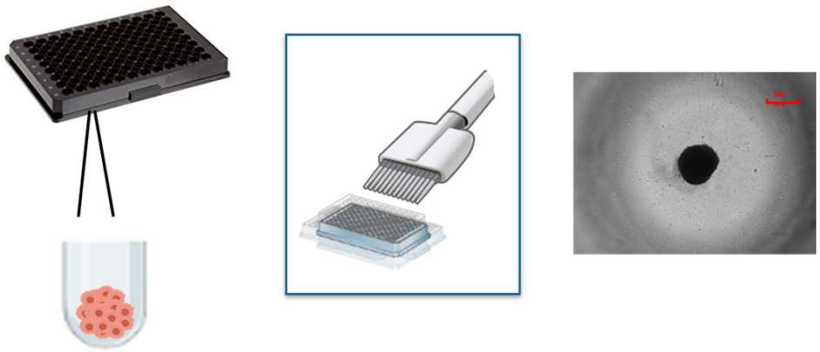
- Characterize the physiochemical properties of nano formulations.
- Evaluate the biological activity of nano formulations on 3D cellular model and orthotopic animal model.



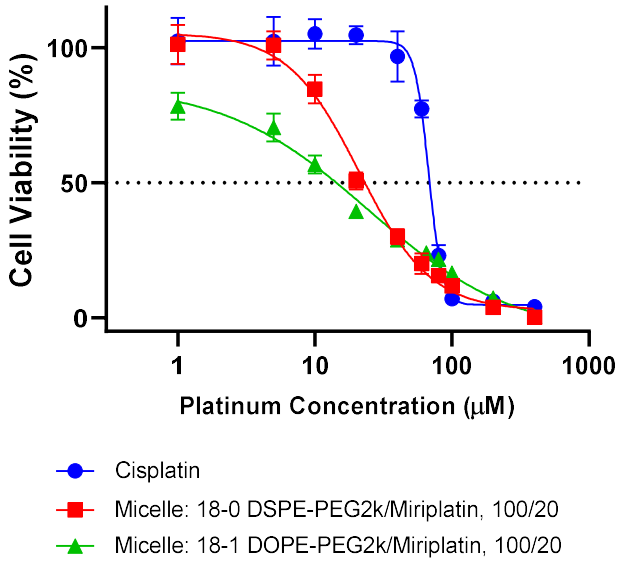
Lipid-PEG$_{2000}$ conjugates (20 mM)	Miriplatin (mM)	Size (Z-average, nm)	PDI	Total platinum recovery by ICP-MS (%)
18:0 DSPE-PEG$_{2000}$	4	15.05 ± 0.80	0.208 ± 0.052	81.61% ± 0.68%
18:1 DOPE-PEG$_{2000}$	4	14.73 ± 1.40	0.243 ± 0.114	84.86% ± 0.43%

Anticancer activity of miriplatin-loaded micelles

In 3D multicellular spheroids

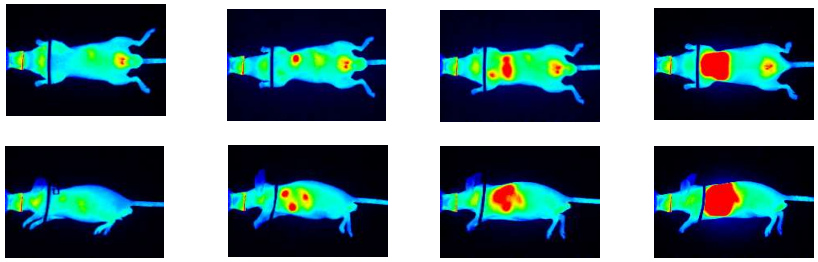


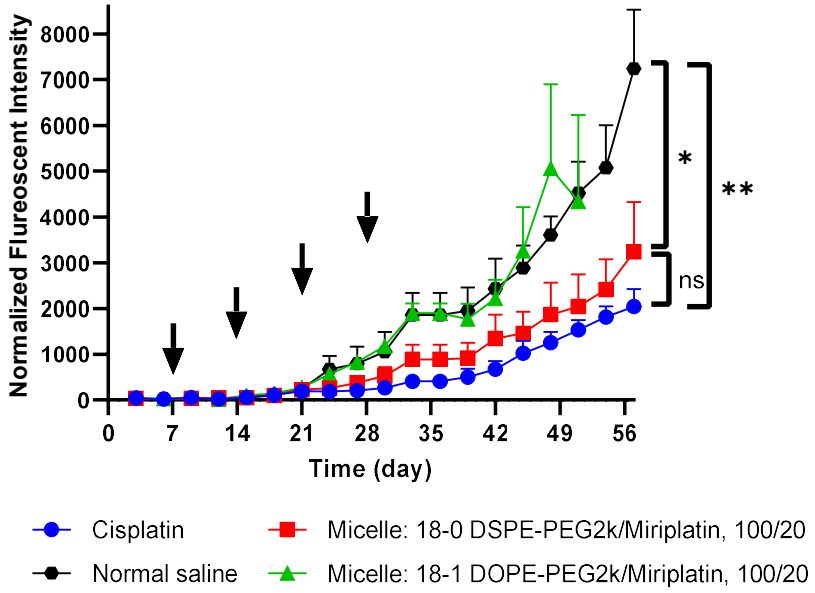
Platinum-based free drug/formulations	IC50 (μM)
Cisplatin	67.62 ± 1.09
Micelle: 18:0 DSPE-PEG2k/Miriplatin, 100/20	24.84 ± 3.38 ****
Micelle: 18:1 DOPE-PEG2k/Miriplatin, 100/20	21.05 ± 1.32 ****



Anticancer activity of miriplatin-loaded micelles

In an orthotopic xenograft lung cancer model





Acknowledgment

- **Guo lab members**
- **University of the Pacific Faculty Seed and Bridge Grant**
- **Ruiqi Huang (UC Davis) for TEM imaging**
- **Austin Cole (UC Davis) for ICP-MS operation**

References:

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