

Synthesis and Pharmacological Evaluation of *N*-(2-Bromo ethyl) Phthalimide-Based Hybrid Compounds

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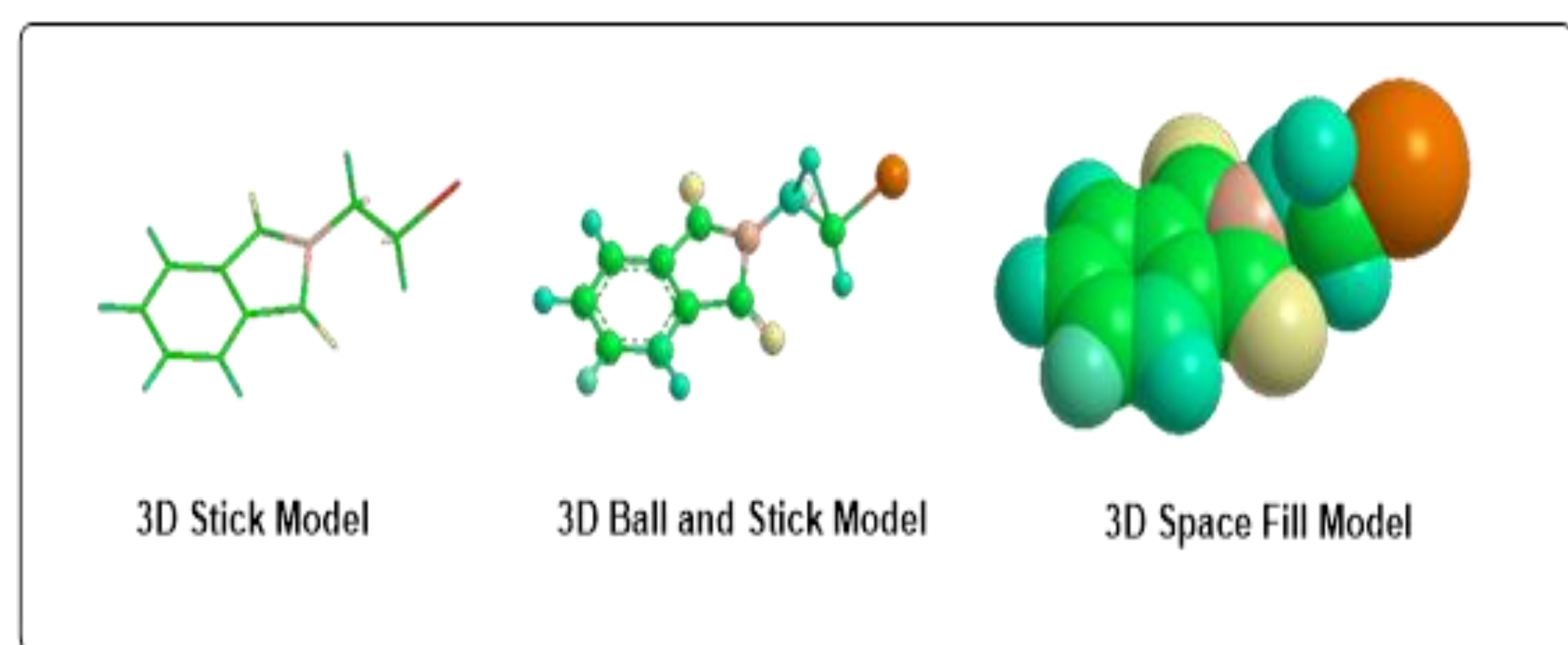
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INTRODUCTION & AIM

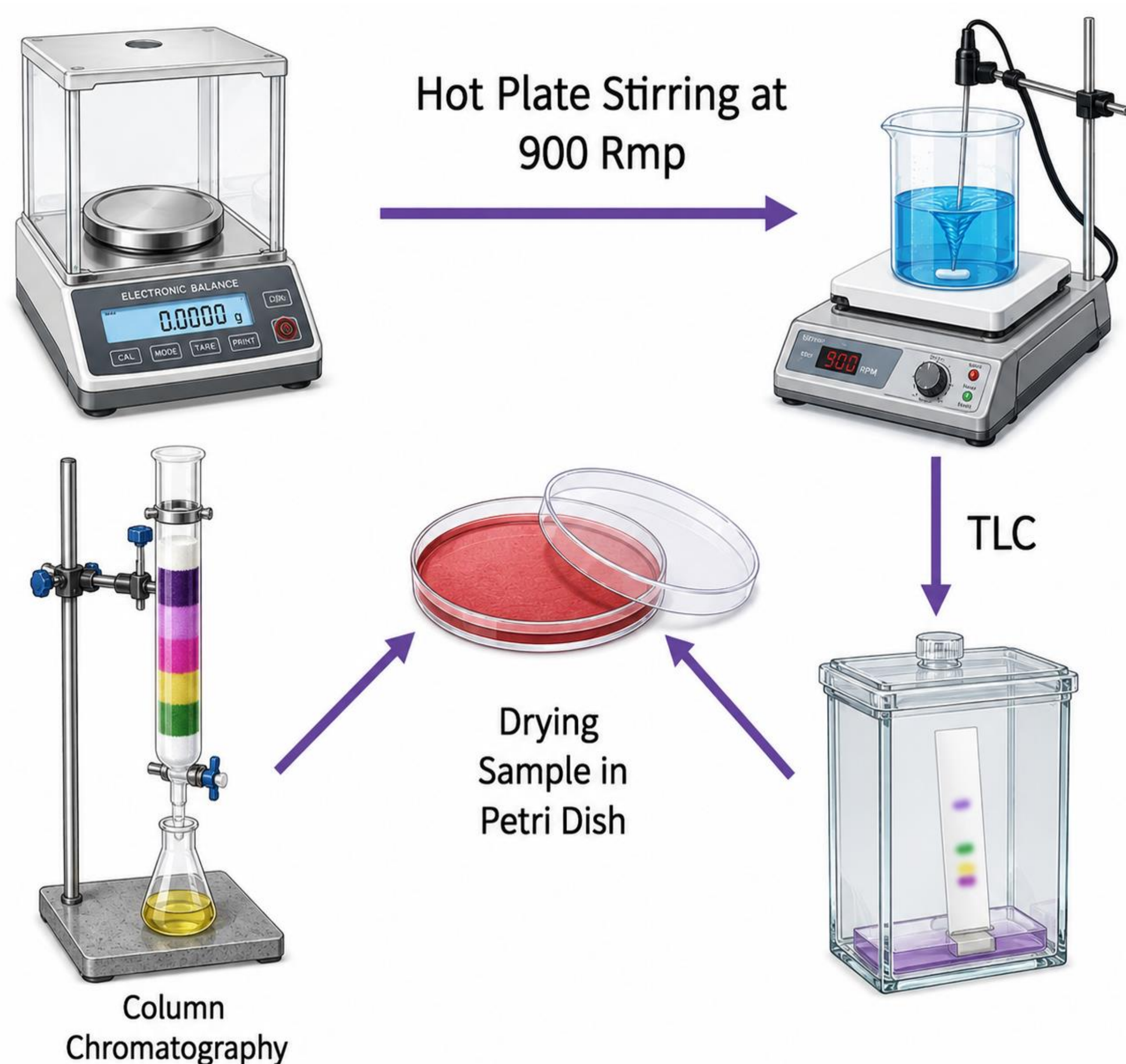
The synthesis of effective cancer drug continues to be a significant challenge in pharmaceutical science. The aim of this study was the synthesis of novel Phthalimide Ester Hybrids derived from *N*-(2-Bromoethyl) Phthalimide.

Pale-white Crystalline
Organic compound

Alkylated Core Structure



METHODOLOGY & TECHNIQUES



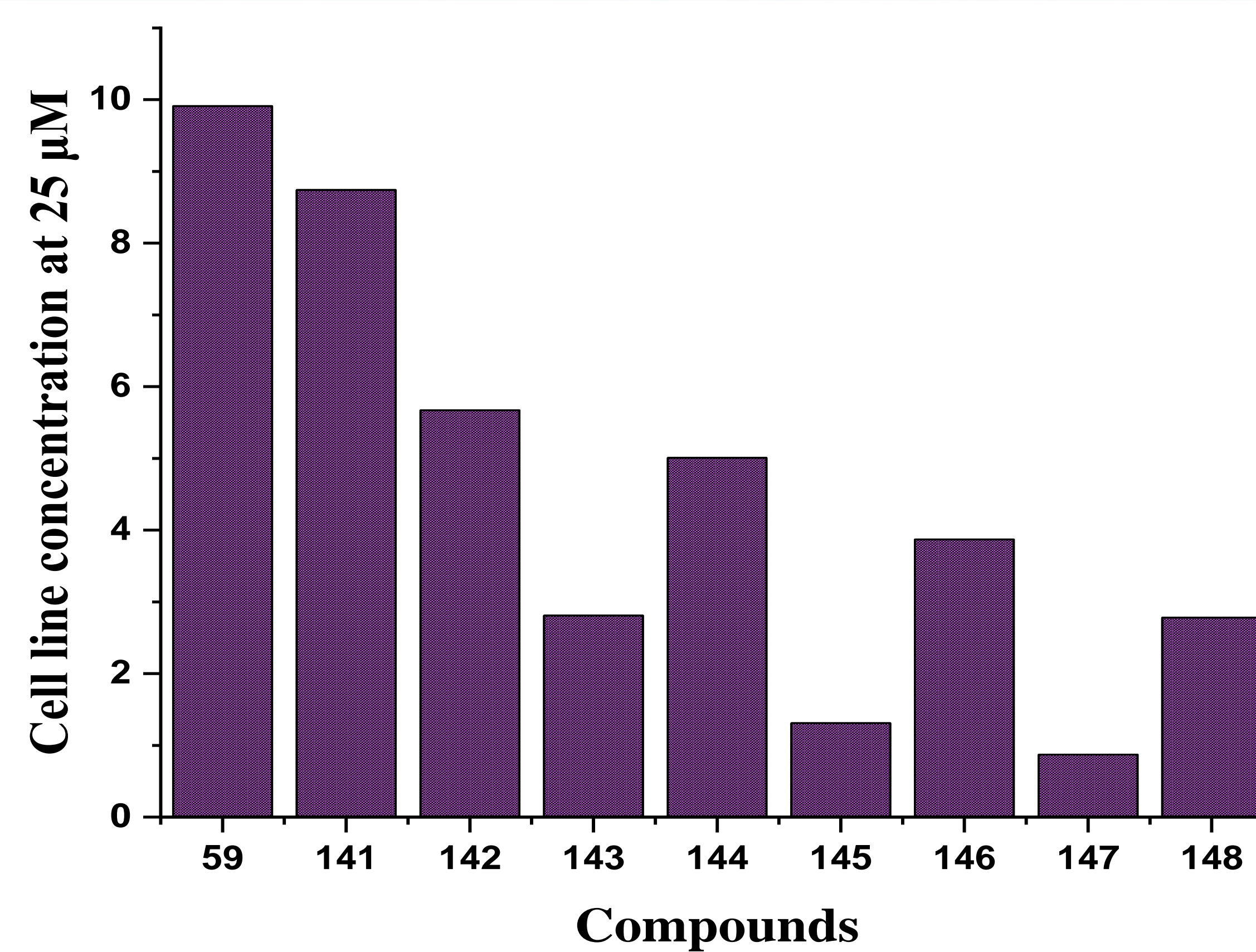
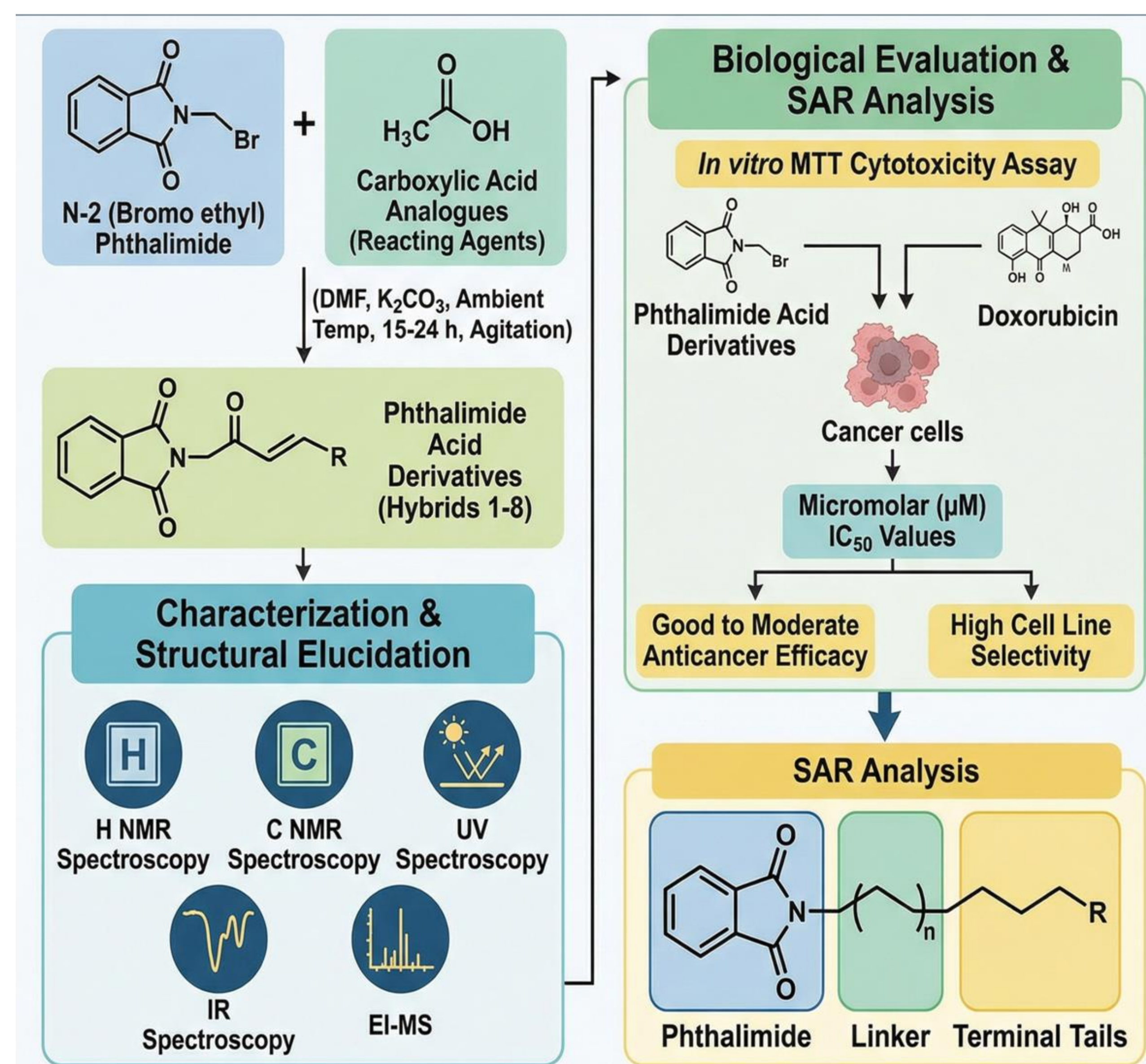
FUTURE WORK

The present work establishes phthalimide ester derivatives as promising molecular hybrids and provides a foundation for the rational design of next-generation anticancer agents.

ACKNOWLEDGEMENT

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RESULTS & DISCUSSION



COMPOUNDS	GI_{50} (μM)	GI_{50}^* (μM)
<i>N</i> -(2-Bromo ethyl) Phthalimide	9.91 ± 0.33	10.01 ± 0.27
Compound (7)	0.92 ± 0.11	0.87 ± 0.31

CONCLUSION

These results demonstrate that among eight hybrids 2-(1,3-dioxoisindolin-2-yl) Ethyl 6-chloronicotinate (7) found to be more active against HCT116 human colon cancer cell line with IC_{50} value of about $0.92 \mu\text{M}$

REFERENCES

Sharma, U., Kumar, P., Kumar, N., & Singh, B. (2010). Recent advances in the chemistry of phthalimide analogues and their therapeutic potential. *Mini reviews in medicinal chemistry*, 10(8), 678-704.