

# 11<sup>TH</sup> WORLD DRUG DELIVERY SUMMIT

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## Physicochemical properties and *in vitro* cytotoxicity evaluation of polymer-drug conjugates for combination therapy

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Polymer-drug conjugates are potential therapeutics suitable for combination therapy for the treatment of selected diseases that are characterized by drug resistance such as cancer, malaria etc. In this study, different polymer-drug conjugates containing either anticancer or antimalarial drugs were prepared. The physicochemical properties of the conjugates were evaluated. The scanning electron microscopy images of the conjugates revealed a combination of spherical, interwoven and strip shaped morphologies. *In vitro* drug release revealed sustained mechanism and the cytotoxic effects of the conjugates was selective when compared to the free drugs. The results obtained suggest that the design of the conjugates influences their biological activity and hence, are potential therapeutics for combination therapy.

### Biography

Blessing Aderibigbe research is focused on the design of polymer-based drug delivery for combination therapy. She has years of experience in research and teaching in education institutions. She is currently a Senior Lecturer in the Department of Chemistry, University of Fort Hare, South Africa.

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