

## Accepted Manuscript

Title: Preparation, characterization and *in vitro* biological evaluation of (1:2) phenoxodiol- $\beta$ -cyclodextrin complex

Authors: Yee M.H. Eugene, James M. Hook, Mohan M. Bhadbhade, Orazio Vittorio, Rhiannon P. Kuchel, Miriam B. Brandl, Richard D. Tilley, David StC Black, Naresh Kumar



PII: S0144-8617(17)30211-4  
DOI: <http://dx.doi.org/doi:10.1016/j.carbpol.2017.02.081>  
Reference: CARP 12060

To appear in:

Received date: 13-12-2016  
Revised date: 6-2-2017  
Accepted date: 20-2-2017

Please cite this article as: Eugene, Yee MH., Hook, James M., Bhadbhade, Mohan M., Vittorio, Orazio., Kuchel, Rhiannon P., Brandl, Miriam B., Tilley, Richard D., Black, David StC., & Kumar, Naresh., Preparation, characterization and *in vitro* biological evaluation of (1:2) phenoxodiol- $\beta$ -cyclodextrin complex. *Carbohydrate Polymers* <http://dx.doi.org/10.1016/j.carbpol.2017.02.081>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## Preparation, characterization and *in vitro* biological evaluation of (1:2) phenoxodiol- $\beta$ -cyclodextrin complex

Yee M. H. Eugene<sup>a</sup>, James M. Hook<sup>a</sup>, Mohan M. Bhadbhade<sup>b</sup>, Orazio Vittorio<sup>c,d</sup>, Rhiannon P. Kuchel<sup>b</sup>, Miriam B. Brandl<sup>c,d</sup>, Richard D. Tilley<sup>a,b</sup>, David StC Black<sup>a</sup>, Naresh Kumar<sup>a\*</sup>.

<sup>a</sup> School of Chemistry, The University of New South Wales, Sydney, NSW 2052, Australia

<sup>b</sup> Mark Wainwright Analytical Centre, The University of New South Wales, UNSW, Sydney, Australia.

<sup>c</sup> Children's Cancer Institute Australia, Lowy Cancer Research Centre, The University of New South Wales, Sydney, Australia.

<sup>d</sup> ARC Centre of Excellence in Convergent Bio-Nano Science and Technology, Australian Centre for NanoMedicine, The University of New South Wales, NSW, Sydney, Australia

\*Corresponding author. Tel.: +61 2 9385 4698; fax: +61 2 9385 6141.

E-mail address: [n.kumar@unsw.edu.au](mailto:n.kumar@unsw.edu.au) (N. Kumar).

### Highlights

- Characterization of a 1:2 stoichiometry phenoxodiol- $\beta$ -cyclodextrin complex
- The best 'ship-in-a-bottle' case of guest- $\beta$ -cyclodextrin complex crystal structure
- Increased aqueous solubility of phenoxodiol by 9 times
- Improved anti-proliferative activity against cancer cells and decreased toxicity against normal cells

Download English Version:

<https://daneshyari.com/en/article/5156979>

Download Persian Version:

<https://daneshyari.com/article/5156979>

[Daneshyari.com](https://daneshyari.com)