

10th International Conference & Exhibition onPHARMACEUTICS &
NOVEL DRUG DELIVERY SYSTEMS

March 13-15, 2017 London, UK

Characterization of complex polysaccharide with potent anticancer activity and mechanism of action on triple negative breast cancer**Chrow Khurshid and David Pye**
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Marine biology is an exceptional rich source of many biological and chemical active compounds; they have important values in pharmaceutical industry, nutrition, cosmetic and medical fields as alternative source for the treatment of many diseases. Almost each class reveals individually unique structure from other kinds or species. Approximately 24% from opisthobranch molluscs has been isolated, with focusing on invertebrate phyla that have soft bodies, researchers reported of almost 10% increase in new found compounds per year. In this project, identification of novel structure of GAG polysaccharide and tumor regulatory sequences within GAG chains extracted from an invertebrate belonging to mollusc family is addressed, this involved the examination of their activity as anticancer bioactive compounds, following by structure elucidation using enzymatic degradation and structural analysis of the sulphated oligosaccharide chains. This process produced complex mixtures of GAG derived oligosaccharides which can be evaluated to identify the minimal binding sequences required for anticancer activity. Variety of cancer cell lines including triple negative breast cancer cell lines are used as *in vitro* model to identify the anti-cancer activity of GAG-derived oligosaccharides. Understanding the cellular mechanism by which GAG-derived causes apoptosis in breast cancer is exclusively examined by advanced proteomics LC-MS/MS technologies and pathway analysis.

Biography

Chrow Khurshid completed her Master's Degree in Biochemistry. She is pursuing her PhD in Biomedical and Cancer Research department at school of Environment and Life Science University of Salford Manchester. She has experiences in Biochemistry, Biomedical and Cell Culture labs.

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