

International Conference and Expo on Chemistry and Chemical Science

October 19th 2022 | Webinar

Production and structural modification of a Mycotoxin for usage as a drug

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Abstract

The Council of Scientific and Industrial Research (CSIR) has conducted intensive research on the occurrence and control of some mycotoxins. CSIR has researched ergot alkaloids such as Meleagrin-I, Epoxyagroclavine-I, Elymoclavine, dimer clavinet epoxyagroclavine-tartrate, chemoclavine, agroclavine-I, and agroclavine. The CSIR produced Ergot alkaloids as standards that were supplied to research institutions and agricultural sectors. The production of standards involved growth of the fungal strains to demonstrate production of the alkaloids, and these were isolated, and purified to prepare the standards. In addition to the production of standards, further research has been done to modify the structures of the alkaloids to prepare antigens and drugs to combat contamination of food and feed commodities, as well as the occurrence of dreadful diseases.

The structure manipulation involved the deactivation of the mycotoxin to remove toxicity and then screening to evaluate various therapeutic properties. The Ergot alkaloids were purified from *Penicillium* strains, which were then derivatized and used in in-vitro assays to evaluate their anti-inflammatory, anti-bacterial, and anti-cancer properties.

Biography

Jeremiah Senabe is currently working as a Senior researcher at Council for Scientific and Industrial Research (CSIR), Advanced Agriculture and Food Cluster, South Africa. He completed his PH.D in Food Science at University of Johannesburg. He has completed his research in BioChemistry and Science

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