

19th Global Chemistry, Chromatography & Spectrometry Conference

March 20-21, 2019 | New York, USA

POSTER PRESENTATIONS

CHEMICAL SCIENCES JOURNAL 2019, VOLUME 10 | DOI:10.4172/2150-3494-C1-033

Structural investigation by tandem mass spectrometry analysis of a heterogeneous mixture of lipid an isolated from the lipopolysaccharide of *Aeromonas hydrophila* SJ-55Ra

Mervt Almostafa
King Faisal University, KSA

Bacteria are well known to cause many serious human and animal diseases. There are various numbers of bacterial species associated with fish diseases which lead to the loss in both, marine and freshwater of farmed fish. Lipid A as a part of lipopolysaccharide (LPS) is located in the outer membrane and often is the basis to distinguish and classify the bacteria. The electrospray

ionization mass spectrometry (ESI-MS) and low-energy collision-induced dissociation tandem mass spectrometry analysis (CID-MS/MS) of a mixture of lipid as isolated from the rough LPS of the mutant wild strain of the gram-negative bacteria *Aeromonas hydrophila* (SJ-55Ra, resistant) grown in the presence of phages. The interaction between the phages and the gram-negative bacteria regulates host specificity and the heterogeneity of the lipid A. Preliminary analysis of the lipid as the mixture was conducted by ESI-MS in the negative ion mode and the spectrum obtained suggested that the lipid A SJ-55a was composed of a heterogeneous mixture of different lipid A molecules. ESI-MS analysis suggested that this lipid A mixture contained eight

molecular disaccharide anions and three monosaccharide anions. This series of lipid was asymmetrically substituted with ((R)-14:0(3-OH)) fatty acids located at O-3 and N-2 and with branched fatty acids: (C14:0(3-(R)-O-C14:0)) and (C12:0(3-(R)-O-(14:0)) at the O-3' and N-2' positions.

Biography

Mervt Almostafa got her chance to improve herself through a scholarship from the KSA government to do her graduate studies in Canada which she believed was a turning point in her life. She was able to study, work, and meet different people with different opinion. Her research creates new pathways for improving healthcare spicily in bacterial infection. She believes that using the antibodies may not be the right choice, and the bacterial infection can be cured by using natural way such as bacteriophages. Therefore, she utilizes mass spectrometry techniques to characterize the chemical structure of the bacteria. She believed that using various mass spectrometry techniques will allow us to have clear and quick results.

malmostafa@kfu.edu.sa