

6th Euro Virology Congress and Expo

March 10-12, 2016 Madrid, Spain

Molecular characterization of some *Streptomyces flavovirens* actinophages

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Three lytic actinophages specific for *Streptomyces flavovirens* were isolated from Egyptian soil and submitted in the *Streptomyces* phages database in names Sf1, Sf2 and Sf3 respectively. Phage isolates Sf1, Sf2 and Sf3 produced clear circular single plaques of 2, 1 and 3 mm in diameters, respectively. AFLP had been carried out to distinguish between the three isolates. Twenty seven selective primer pairs had been tested which are a combination of four IRDye-800 labeled EcoRI primers with seven MseI primers. Ten successful primer combinations generated a total of 462 fragments sizes ranging from 82 to 1021 bp long. Three hundred sixty eight fragments were polymorphic (79.7%) and 94 fragments were monomorphic. Principal coordinates analysis was performed to detect the patterns of relationship and isolates were plotted on first three dimensions which 240 (51.9%) fragments were unique (isolation specific). In order to assess the discriminatory power of ten primer combinations used, a variety of marker attributes like polymorphism information content (PIC), marker index (MI) and resolving power (RP) values were calculated. Genotyping data obtained for all 368 polymorphic fragments were used to group the isolates analyzed using the UPGMA-phenogram and principal component analysis (PCA). The UPGMA-phenogram grouped the isolates into two groups the first represent the isolate Sf3 and the second group represent the other two isolates. Isolates Sf1 and Sf3 were send for the whole genome sequencing service.

Biography

Eman Mokhtar Marei has completed her PhD from Ain Shams University, Faculty of Agriculture, Department of Microbiology (Virology) and Postdoctoral studies from Ain Shams University & Institute of Silviculture and Institute of Water Quality Control at The Technische Universitat Munchen. She is an Assistant Professor in Microbiology Department of Ain Shams University. She has published 7 papers in reputed journals (international & national journals) and 5 papers under publishing.

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