



Comparison between different populations of Nile Puffer Fish (*Tetraodon lineatus*) species from Lake Nasser, Aswan, Egypt using RAPD PCR.

Medhat H. Hashem<sup>1\*</sup>, Ahmed khalid<sup>1</sup>, Ibrahim E. Mousa<sup>2</sup>

<sup>1-</sup> Animal biotechnology Department, Genetic Engineering and Biotechnology Institute (GEBRI), University of Sadat City, 22857, Egypt.

<sup>2-</sup> Environmental Biotechnology Department, Genetic Engineering and Biotechnology Institute (GEBRI), University of Sadat City, 22857, Egypt.

**Abstract**

Fish and fishery products is an important Seafood source that having high protein, long chained unsaturated fatty acids (mono and poly); besides, poor in saturated fatty acids and cholesterol. The study of the Nile Puffer Fish (*Tetraodon lineatus*) from Lake Nasser, Aswan, Egypt is still at a very early stage. Recently, the Nile puffer fish was considered a significant issue in Lake Nasser as they have flourished to the detriment of more valuable species, they destroy fishing nets, and they also attack the well-known economic species (e.g. Nile Tilapia) that are caught by fishing nets which severely affect their value. On the other hand, it was stated that, generally, puffer fish might be considered nutritious food due to its content of good amount of oil, protein, minerals. Therefore, an innovative approach is needed to change the negative impact of the puffer fish population on Lake Nasser's fisheries to novel products that utilize it as a potential resource of nutrition and income. A total of 20 Nile Puffer fish samples were collected using commercial nets from Lake Nasser, Aswan, Egypt (10 fish samples from Khor El Ramla, North Lake and 10 samples from Tushka East, South Lake). The total average of nucleotides composition percent of North Lake samples was 25.80%, 31.45%, 24.75% and 18.00% for T, C, A and G, respectively. While, the total average of nucleotides composition percent of South Lake samples was 25.96%, 31.62%, 24.31% and 18.11% for T, C, A and G, respectively. Finally, the present phylogenetic results for Nile Puffer fish in Lake Nasser, together with other African freshwater group, matched with the monophyletic origin of African freshwater Puffer fishes.

**Key words:** Nile Puffer Fish; nucleotides composition ; Lake Nasser, Aswan, Egypt