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## Fish species identification and biodiversification in Enugu metropolis river by DNA barcoding

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Fish is a proteinous animal which plays a vital role in the protection and prevention of human diseases. DNA barcoding which uses the 50 region of the mitochondrial cytochrome c oxidase subunit as the target gene was implored as an efficient tool in the identification of fish species in the Enugu Metropolis River (Nike Lake and Abakpa River). 10-20mg fish tissue sample of 18 species were extracted for DNA using Promega kit. The polymerase chain reaction (PCR) was used to amplify short sequences of mitochondrial DNA, which were denatured and analysed by polyacrylamide gel electrophoresis (native PAGE), for detection of single strand conformation. Polymorphism species specific muscle alignment patterns of DNA bands were obtained for *Chrischthys* sp, *Parachinna* sp, *Ctenopoma* sp, *Tilapia* sp and for a number of *Clarias* species. Out of the 18 fish species, only 15 fish samples were analysed using their genomic make-up, 4 out of the 15 samples (*Parachinna obscura* -2) (*Clarias* sp -2) did not show statistical significant evidence of spatial genetic differentiation in their nucleotides despite the enormous geographical distance separating populations. The morphological studies on this fish species have shown that these lines of evidence are taxonomically important and also partial differences in genomic nucleotide base pairs when noticed. This difference is the polymorphism, which is the key to flagging new specie in a particular genus can be attributed to environmental changes and diversity.

### Biography

Chioma Nwakanma has completed her Ph.D at the age of 30 years from University of Port Harcourt, Nigeria. She is a Lecturer in the College of Natural Resources and Environmental Management. She has published more than 17 papers in reputed journals and has Professional affiliations both local and International.

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