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Identifying DNA fine features using complementary symmetry relationship

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Due to the natural complementary properties in DNA sequences based on double helix pair exploring longer DNA pieces and its reverse fragment in complementary symmetry with a distance play an important role in modern genetic analysis. In this talk, the substring complementary string matching technique is used to detect and analyze the structure of DNA motif. We focused on the relationship between fragment and its reverse fragment in complementary symmetry and the possible structure of palindromic sequences, hairpin prediction. Statistical measurements are used to process some selected human genome data and all possible corresponding fragments are identified. We convert the identified data into visualized figures to illustrate the visible analysis results of quantities of complex DNA sequences as extracted information.

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Plant diversity as a key resource for sustainable development in Egypt

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The present paper will focus on the different habitats and associated plant diversity of Egypt. The major habitats were namely: Salt marshes, swampy habitats, mangroves, sand dunes, mountains, desert wadies. The most dominant plants grow each habitat were: Halophytes, reeds and rushes, mangal vegetation, psammophytes and xerophytes, respectively. The various studies carried out on representative species of the reed and mangrove swamps vegetation types in Egypt throw light on their ecological characteristics and proved their economic values as natural renewable raw materials for essential industries e.g. drug, oil, fodder, fibers etc. Afforestation of *Avicennia marina* has been successfully conducted along the Red Sea coast. Conservation, management and proper utilization of these plants could play an important role in the sustainable development of the coastal areas for the welfare of the Egyptian people. Threats to plant diversity were habitat loss and degradation, introduction of alien species, over exploitation, pollution and disease and finally climate change will be discussed.

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