

# Soliton formation to study the dynamical behaviour of biological evolution model

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## Abstract

This article investigates the fractional Peyrard-Bishop DNA model. The construction of soliton solutions have been successfully obtained by utilizing two versatile analytical methods, namely, the Jacobi elliptic function method and the tanh-coth method. Furthermore, the Painlevé test (P-test) has been employed on the proposed model for investigating integrability. The proposed model is proved to be integrable. Some of the obtained solutions have been examined graphically to study the dynamical behavior.

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