**ABSTRACT**

The main goal of this research work is to enhance the security of Patient's medical data. During the transmission, the data is concealed with ECG signal. The ECG signal of the human being vary from one person to person. Like other Biometric traits, ECG cannot be imitated and duplicated. Encryption is one of the best techniques that guarantees the security of sensitive information. This technique not only grants the information's security but also authentication. secret sub keeping system security. digital signature, and etc. Therefore, the purpose of adopting encryption techniques is to ensure the information's integrity and confidentiality, that prevents information from tampering, forgery and counterfeiting. The encryption method used in this work will encrypt the secret data into unreadable form by creating the information inaccessible to any hacker having a random method. In this paper, Haar Wavelet Transformation is used to decompose an ECG signal to different frequency sub-bands. RSA algorithm is used to encrypt the patient information with the help of key pairs. Arnold cat map technique is used to scramble the encrypted data for more security of information. And for embedding, Singular Value Decomposition (SVD) is used for effective transformation with high security. The proposed algorithm is evaluated based on MSE, PSNR, AD, NCC, MD, NAE, BER and accuracy. The experimental results prove that the performance obtained using proposed techniques give better results than the existing techniques.