An Investigation Towards Understanding the Role of CDH1 Gene in Different Types of Breast Cancers

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Research Article

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Abstract

At recent age breast cancer attracts the attention of both the medical and the scientific community for its deadly occurrence throughout the globe as it is considered to be happened due to genetic aberration. Out of several genes expressed, it is found that cadherin 1, type 1 (CDH1) is responsible in several ways to control the metabolic order in human. Very recently it has been shown that deregulation of the function of protein E-cadherin, expressed from CDH1 plays an important role in lobular breast cancer. In order to understand the root cause of this recent claim, we focus on CDH1 gene whether the genetic information translated due to any deviation/alteration/modification in its sequence is related for the occurrence of the several other types of this deadly disease. Towards this end, study of the available genomic sequences of CDH1 gene obtained from the Sanger Database for 79 patients, suffering from various types of breast cancer, clearly emphasizes that alternation/modification in the sequence of the CDH1 gene can be detrimental. This would affect the regular function of the cell which may have a potential role in damaging the different types of breast tissues, causing malfunction and leading to breast cancers.

Full Text

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Figures

Figure 1

Different types of mutations with respect to total data set.

Figure 2

Range of Isoelectric Point(pI) of the Protein Sequences obtained due to traslation of the mutated CDH1. (The green column represents the minimum range and the maroon columns represent maximum range of pI of proteins respectively for each type of breast cancer).

Figure 3

Prediction of biological functionalities changed due to mutations

Supplementary Files

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