ABSTRACT

Cancer is a deadly disease in the world, the cause is a cell cell that divides itself uncontrollably. In its development these cancer cells can spread to other body parts by entering the bloodstream or lymphatic system so that it can cause death. This happens as a result of what happens to genes. Gene expression monitoring is one of the most fundamental in genetics, ie to measure non-protein mRNAs, because the order of mRNAs hybridizes with complementary RNA and DNA. Microarray is a technology that can store thousands of genes that are taken in several human cells at once. Microarray data tend to have very large dimensions, so to model the data dimension reduction is required by using Haar Wavelet to improve the accuracy of Flechter Reeves Modified Back Propagation (MBP) conversation. MBP is a modification of Back Propagation Standard (BP) with Conjugate Gradient Fletcher Reeves algorithm to speed up the training process. From the test results, Wavelet Haar and *Backpropagation Flechter Reeves with line search golden section search has the highest equation of all schemes in Leukemia Cancer data type with 88.9% accuracy.*

Keywords: Cancer, Microarray,Wavelet Haar, Modified Back Propagation Flechter Reeves.