Fitch-Margoliash method ?The Fitch-Margoliash method groups people based on their genetic distance by using a weighted least squares algorithm. To account for the higher inaccuracy in calculating distances between distantly related sequences, the tree-building strategy gives greater weight to tightly linked sequences. According to the distance linearity requirement, the anticipated value of the sum of two branch distances must be equal to the expected value of the two branch length sums. But the distance ?.has to be changed when the branch rates start to change at different speeds