Permutation Test

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The significance of prot_000000000877 to OTU_11

```
log_transform = function(x) {
  constant = min(x[x > 0])/2.
  x = x + constant
  x = x/sum(x)
  log(x)
}

otu_log_mat = t(apply(preprocess_mat(infiles[3]), 1, log_transform))
genus_log_mat = t(apply(preprocess_mat(infiles[2]), 1, log_transform))
family_log_mat = t(apply(preprocess_mat(infiles[1]), 1, log_transform))

mapping_maria = load_data_table('mapping_maria_BL.txt')

dependent = as.factor(mapping_maria$Persistence)
acc_1 = permutation_test(otu_log_mat, dependent, num_permutations = 10)
```

```
## Warning in Ops.factor(y, result$predicted): '-' not meaningful for factors

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```

```
acc_2 = permutation_test(genus_log_mat, dependent, num_permutations = 10)
```

```
## Warning in Ops.factor(y, result$predicted): '-' not meaningful for factors
```

```
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```

```
acc_3 = permutation_test(family_log_mat, dependent, num_permutations = 10)
```

```
## Warning in Ops.factor(y, result$predicted): '-' not meaningful for factors

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## Warning in Ops.factor(y, result$predicted): '-' not meaningful for factors
```

```
print(acc_1)
```

```
##  [1] 0.4090909 0.5454545 0.7272727 0.6818182 0.6363636 0.4090909 0.4545455
##  [8] 0.7272727 0.5000000 0.5909091
```

```r
print(acc_2)
```

```
##  [1] 0.4545455 0.4545455 0.5454545 0.7272727 0.6363636 0.5000000 0.5454545
##  [8] 0.5909091 0.4090909 0.6363636
```

```r
print(acc_3)
```

```
##  [1] 0.4545455 0.4545455 0.4090909 0.5000000 0.4090909 0.5000000 0.5909091
##  [8] 0.4090909 0.6818182 0.5000000
```