

Origins of variation: summary of different mutation types

| Mutation type | Origin/cause | Potential effects and fitness consequences |
|-----------------------------------------------------------------------|--------------|--------------------------------------------|
| Point mutation in protein coding regions of the genome: nonsynonymous | | |
| Point mutation in protein coding regions of the genome: synonymous | | |
| Point mutation in protein coding regions of the genome: indel | | |
| Point mutation in non-coding regions of the genome: junk | | |
| Point mutation in non-coding regions of the genome: cis-regulatory | | |
| Gene duplication | | |
| Chromosomal inversion | | |
| Partial or whole genome duplication | | |