



Mutation

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What is mutation

- Mutation is a natural process that changes a DNA sequence
- Thanks to mutation, we all have some new variations that were not present in the DNA of our parents

Mutant or mutation

- People often use a term „mutant“
- Mutation isn't always bad- it generates new variations that can give an individual a survival advantage
- Mutation gives rise to variations that are neither good nor bad, only different

Origin of mutation

- Induced mutations on the molecular level can be caused by:
 - Chemicals
 - Radiation

Chemicals

- Drugs
- Pesticides
- Substances hazardous to health from food
- Another chemical material

Types of mutations

- Gene
- Chromosomal
- Change of genome

Gene's mutations

- Deletion

1. Original state

- A – T
- C – G
- G – C
- T – A

2. State after mutation

- A – T
- C – G
- T – A

Gene's mutations

- Insertion

1. Original state

- A – T
- C – G
- G – C

2. State after mutation

- A – T
- T – A
- C – G
- G – C

Gene's mutations

- Inversion

1. Original state

- C – G
- G – C
- T – A

2. State after mutation

- G – C
- G – C
- T – A

Gene's mutations

- Substitution

1. Original state

- A – T
- C – G
- G – C

2. State after mutation

- G – C
- C – G
- G – C

References

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