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Projekt ERASMUS+ KAI, CLIL metoda



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

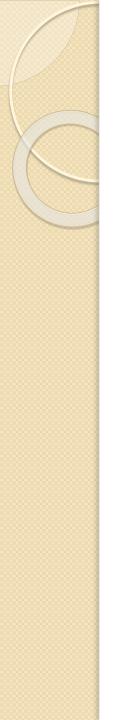
- Drugs
- Pesticides
- Substances hazardous to health from food
- Another chemical material

Types of mutations

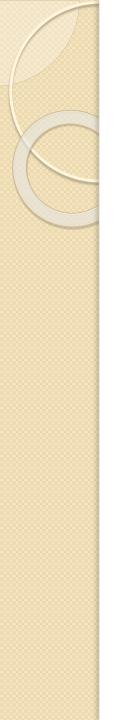
- Gene
- Chromosomal
- Change of genome



- Deletion
 - I. Original state
 - A T
 - C G
 - <u>G C</u>
 - T A
 - 2. State after mutation
 - A T
 - C G
 - T A



- Insertion
 - I. Original state
 - A T
 - C G
 - G C
 - 2. State after mutation
 - A T
 - <u>T A</u>
 - C G
 - G C



Inversion

- I. Original state
 - <u>C G</u>
 - G C
 - T A
- 2. State after mutation

• T – A



- Substitution
 - I. Original state
 - <u>A T</u>
 - C G
 - G C
 - 2. State after mutation

- C G
- G C



References

- Úvod do studia genetiky, Prof.Ing.Václav Řehout, CSc. a kolektiv
- Biologie pro gymnázia, Jelínek J., Zicháček V.
- http://alexandriasgenesis.com/frameshiftmutation-definition-example.html