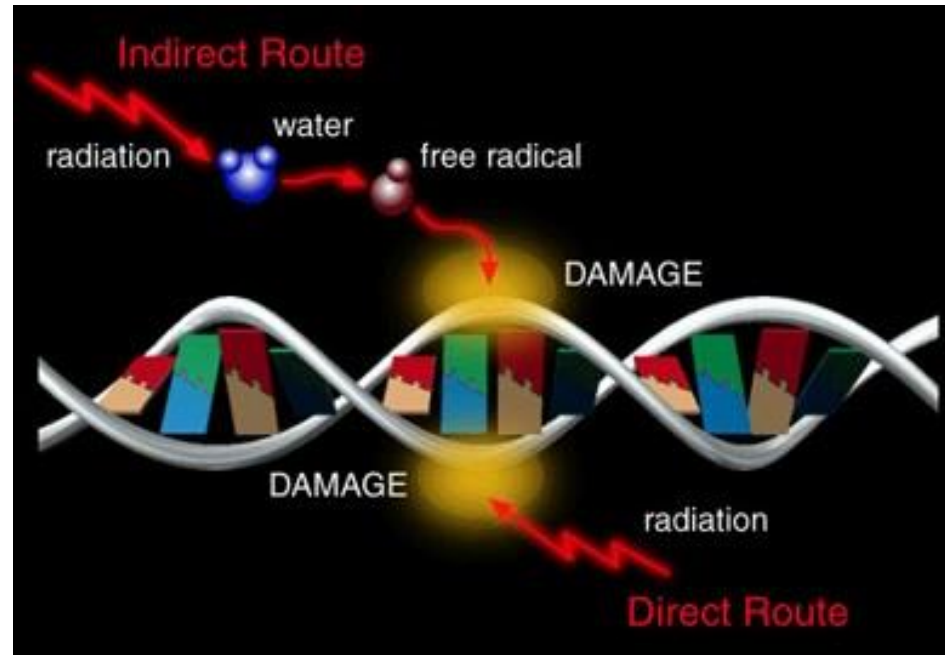
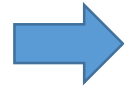


# “Correlating micro and nanodosimetry with initial biological damage”

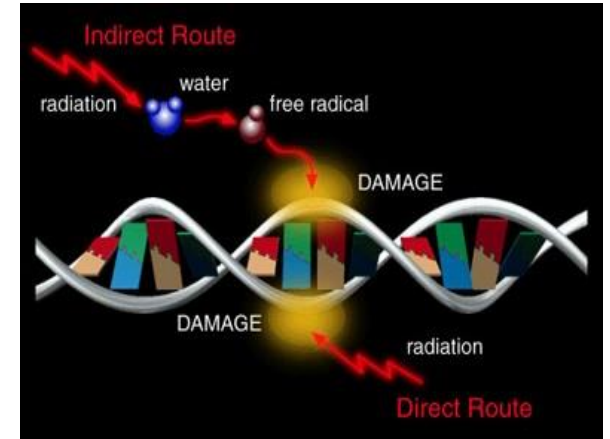


**Eurados areas of activity:**

- Individual monitoring for external and internal exposure
- Retrospective dosimetry
- Environmental radiation monitoring
- Diagnostic and interventional radiology
- Nuclear medicine
- Radiation therapy
- **Computational dosimetry (WG6)**

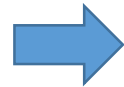


**WG6. Task 2 micro- and nanodosimetry.**

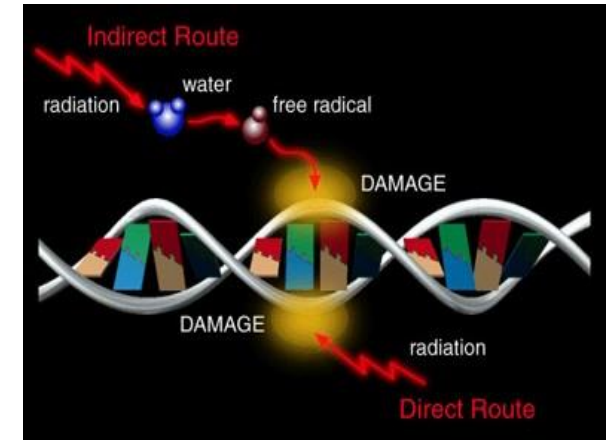


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**WG6. Task 2 micro- and nanodosimetry.**



**Objective:** Carry on joint activities with the aim of improving our knowledge on the relation between nanometric characteristics of the energy deposition by different radiation qualities and their consequences in terms of biological effect.

- ✓ **Computational simulations** are used in most of our activities using different **Monte Carlo Codes Track Structure (MCTS)** in order to benchmark micro and nanodosimetric results.
- ✓ **Experimental data** (whenever this is possible) are needed :
  - to validate the simulations
  - In the **research of measurable quantities** that can be integrated in the **dosimetric quantity system** improve the consideration of this correlation

**Presentations of the Webinar:**

1. **Dr. Hans Rabus (PTB, WG6 Chair): «Relation between experimental nanodosimetry and radiobiological effects »**
2. **Dr. Yann Perrot (IRSN): « Mechanistic simulation of early radio-induced DNA damage using MCTS codes : Example of the Geant4-DNA tool »**
3. **Dr. Giorgio Baiocco (Pavia University, T6.2 Deputy): “A micro- and nanodosimetry-based computational approach to characterize the effectiveness of a mixed radiation field “**

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**Please:**

Questions at the end of the presentations

please use the **public chat to write your questions**

**Enjoy the seminar!**