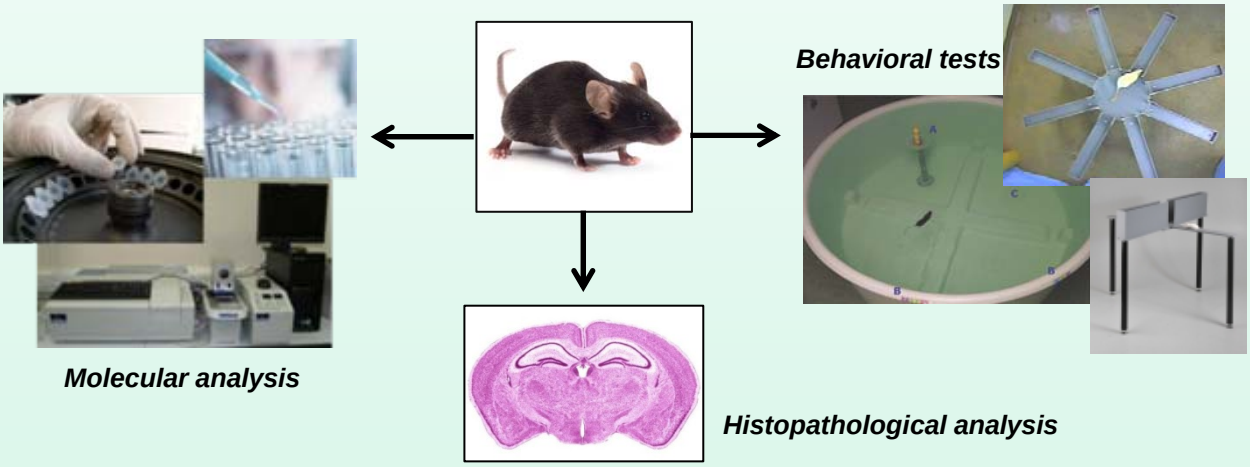
CEREBRAD

Cognitive and Cerebrovascular Effects Induced by Low Dose Ionising Radiation

Research team: Victoria Linares, Montse Bellés, Daisy Lafuente and José L. Domingo

Goals

- **To evaluate neurocognitive consequences which can be caused by low-dose radiation in persons exposed during and after the Chernobyl accident.**
- **To study behavioral and neurotoxicological effects of low-dose internal/external ionising radiation (Cs-137), as well as the combined actions of radiation with other enviromental pollulants, during prenatal and postnatal brain development.**
- **To evaluate aging effects in prenatal and postnatal irradiated mice.**
- **To study the effects of internal radiation on brain vascularization, oxygenation, blood-brain barrier (BBB) integrity, as well as the intracellular redox state and redox-controlled signalling cascades.**



Expected Results

- **Identify the lowest doses of radiation which can contribute to or induce reduced cognitive function and the consequences of internal versus external exposures.**
- **Increased risk in the elders to have a cerebrovascular disease after childhood exposure.**
- **Identify the molecular pathways and regulatory networks underlying the effects of low-dose irradiation in the Central Nervous System.**

Financial Support: Commission of the European Communities