

Health and Environment Research Areas at C2TN

Thursday, 23 September 2021 14:40 (30 minutes)

The research activities at C2TN's Health and Environment areas are represented in 2 of the 3 Thematic Strands of the centre. In this seminar we will present the activities performed under the Radiopharmaceutical Sciences and Health Physics (RSHP) thematic area as well as the research in the Earth Systems, Radioactivity and Cultural Heritage (ESRCH) area.

In the RSHP area the scientific program is focused on Radiopharmaceutical Sciences, Radiation Protection and Dosimetry, and on the Biological Effects of Ionizing Radiation and Metrology, in order to contribute to the following major topics: a) design and preclinical evaluation of radiopharmaceuticals for a better management of cancer and neurodegenerative diseases with personalized diagnosis and/or treatments; b) quantification of the risks associated to low dose and protracted radiation exposures and c) assessment of the doses and risks due to the exposure to ionizing radiation of the patients and medical staff, to improve the Quality and Safety of health care.

In the ESRCH thematic area the scientific program takes into consideration the key expertise of C2TN in nuclear techniques, natural sciences and environmental radioactivity, radioactive waste management, actinides, lanthanides and other chemical elements behavior, application of ionizing radiation, radionuclides and stable isotopes to Geosciences, Environment and Cultural Heritage. The research and development activities comprise: (i) identification of major driving factors controlling the Earth surface composition; (ii) environmental radioactivity and radioecology; (iii) radioactive waste management; (iv) characterization of critical and strategic mineral raw materials; (v) identification of pollutant sources in groundwater and superficial water systems; (vi) interaction of ionizing radiation with matter; (vii) identification and quantification of emission sources contribution to air pollution; and (viii) Cultural Heritage –characterization and contribution to the establishment of conservation strategies.

Scientific Area

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