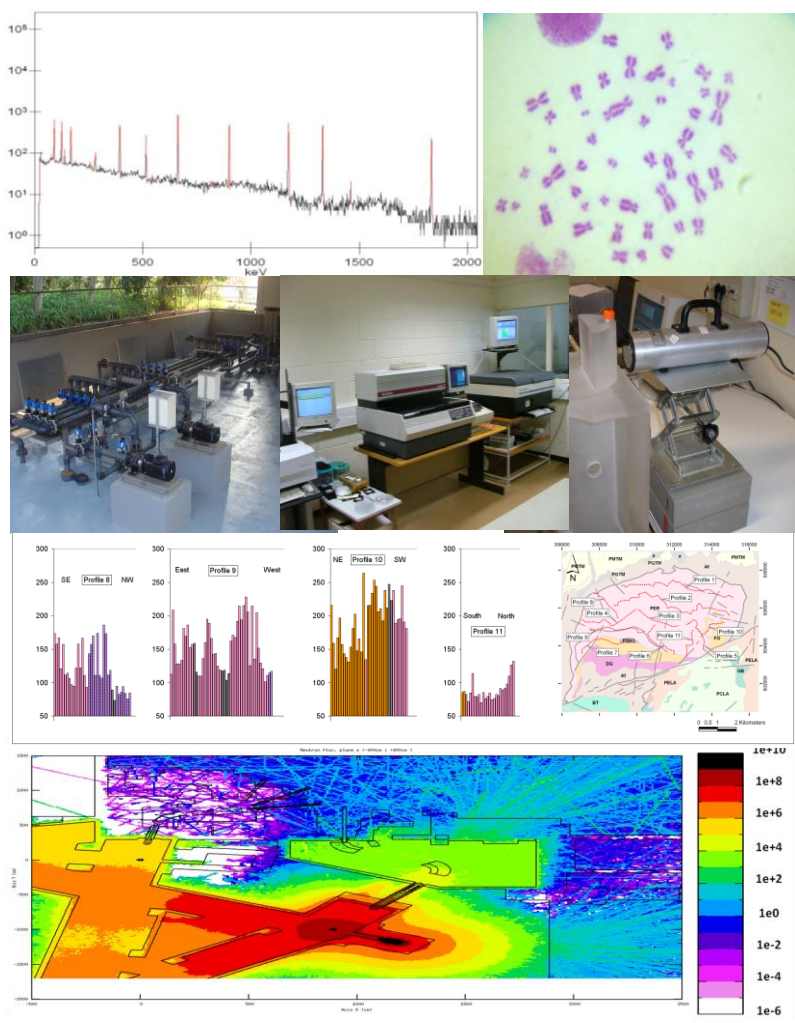


Radiological Protection and Safety Unit



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Pedro Vaz

During the first three quarters of 2010 a major effort was devoted to the final steps of the preparation for the accreditation by the Portuguese Institute of Accreditation (IPAC) of several radioanalytical, dosimetric and metrology techniques. The financial situation of ITN negatively impacted the efforts to accomplish the accreditation in 2010. The accreditation audits will take place during 2011.

The effort towards the installation of the ICP-MS (“Inductive Coupling Plasma Mass Spectrometry”) purchased at the end of 2009 was pursued and infrastructural works were undertaken. Again, the financial situation of ITN prevented the completion of the installation of the equipment during 2010. It is anticipated that the ICP-MS will become operational during 2011, allowing a simpler, faster and more complete assessment of radionuclides in environmental and biological samples. It is aimed at extending the range of services provided and to improve the preparedness of response of the UPSR in emergency and accidental situations.

As reported in recent years, the persistently increasing scarcity of human resources required to meet the increasingly higher volume of work resulting from the legal obligations and service providing duties as well as from the involvement in research and development projects, is presently seriously limiting and hampering the intervention capacity of the UPSR.

Research and Development activities:

During 2010, research and development activities were conducted at a sustained rhythm with the involvement of researchers, technicians, fellows and collaborators in national and international consortia conducting R&D activities and projects funded by the European Union (in the 6th and 7th Framework Programmes) and by the Portuguese Foundation for Science and Technology (FCT), among others.

Special efforts were undertaken to strengthen the involvement and to consolidate the activities of the UPSR in areas such as Computational Dosimetry, Internal Dosimetry, Biological Dosimetry and Radiobiology. Collaborative links were fostered with hospitals and research centres in topics related to the medical applications of ionizing radiation.

Activities and projects in the field of low dose radiation research were undertaken. ITN joined the MELODI (Multidisciplinary European Low Dose Initiative) platform. Involvement in research activities under the umbrella of several Working Groups of EURADOS and EURAMET was continued.

Technical Services:

The Environmental Radioactivity Group and the Measurement Laboratory conducted the National Environmental Radiological Survey including the monitoring of the areas around the former uranium mining sites and of the *campus* of Sacavém. The Radioprotection and Radioactive Waste Group performed activities associated to the licensing of radioactive sealed sources, the interim storage of radioactive waste, the detection of radioactive substances in scrap metal, the management of radioactive wastes on medical, and industrial facilities, and the verification of the radiological safety of installations, among others. The Dosimetry and Radiobiology Group pursued its technical activities related to the assessment of the safety of radiological installations, mainly in Nuclear Medicine installations and Radiotherapy vaults, in hospitals and clinics throughout the country, as well as to individual and environmental monitoring. The Laboratory of Metrology of Ionising Radiation performed the calibration and metrological verification of equipments. The available irradiation devices were used in support of R&D activities.

Participation in intercomparison exercises:

The UPSR staff involved in environmental radioactivity measurements and in nuclear analytical techniques and methods participated in intercomparison exercises organized by the International Atomic Energy Agency (IAEA), by the European Commission (EC) and other institutions.

Education and Training:

UPSR researchers participated in training courses in Radiological Protection for professionals in the medical and industrial sectors and taught several disciplines in post-graduation and Masters Courses in Radiological Protection and Safety, in several Portuguese universities. A significant number of Master thesis and post-graduation works, supervised by UPSR researchers, was observed. The UPSR participated in the activities of the European platforms and networks namely EUTERP and CHERNE.

Participation in national and international technical and scientific committees:

UPSR researchers acted as Portuguese representatives and assisted national delegates to international Committees, Working Groups and Task Forces whose activities are organized under the auspices of the EU, the IAEA and the OECD/NEA.

Staff

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