

Non-targeted effects of ionising radiation (NOTE) - an ongoing European Integrated project, 2006-2010

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The general objectives of the NOTE project are: (1) to investigate the mechanisms of non-targeted effects, in particular, bystander effects, genomic instability and adaptive response; (2) to investigate if and how non-targeted effects modulate the cancer risk in the low dose region, and whether they relate to protective or harmful functions; (3) to investigate if ionising radiation can cause non-cancer diseases or beneficial effects at low and intermediate doses; (4) to investigate individual susceptibility and other factors modifying non-targeted responses; (5) to assess the relevance of non-targeted effects for radiation protection and to set the scientific basis for a modern, more realistic, radiation safety system; (6) to contribute to the conceptualisation of a new paradigm in radiation biology that would cover both the classical direct (DNA-targeted) and non-targeted (indirect) effects. The NOTE brings together 19 major European and Canadian groups involved in the discovery, characterisation and mechanistic investigation of non-targeted effects of ionising radiation in cellular, tissue and animal models. The NOTE research activities are organised in six work packages. Four work packages (WPs 2-5) are problem-oriented, focussing on major questions relevant for the scientific basis of the system of radiation protection: WP2 Mechanisms of non-targeted effects, WP3 Non-cancer diseases, WP4 Factors modifying non-targeted responses, WP5 Modelling of non-targeted effects. The integration activities provided by WP6 strengthen the collaboration by supporting the access to infrastructures, mobility and training. WP7 provides dissemination and exploitation activities in the form of workshops and a public website. Managerial activities (WP1) ensure the organisation and structures for decision making, monitoring of progress, knowledge management and efficient flow of information and financing. Coordinator of the NOTE project is Prof. Sisko Salomaa, STUK - Radiation and Nuclear Safety Authority, Helsinki, Finland. The project is supported by the European Commission under the Euratom specific programme for research and training on nuclear energy, 6th Framework Programme. Please visit the project website <http://www.note-ip.org> to obtain more information or contact us by e-mail note@stuk.fi. Progress of the first year of the project will be described.