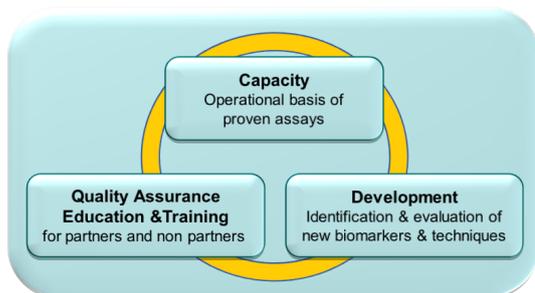


Analytical platforms

RENEB

A network for emergency preparedness and scientific research

RENEB is a European Biodosimetry Network, able to perform large scale rapid biodosimetric dose estimation. Specialized to handle a large number of samples, RENEB contributes to radiological emergency preparedness and large scale research projects. The network infrastructure is based on reliable assays and techniques combined with high performance standards. To enhance the effectiveness of the network, RENEB is linked to global emergency preparedness and response systems as well as to the European radiation research area.



The network was initiated in January 2012 with 23 partners from 16 European countries with the support of the EC (EURATOM FP7, GA 295513). At this time the focus was on emergency preparedness with the aim to significantly increase dose reconstruction capacities in case of large-scale radiological scenarios. Individual dose estimation based on biological samples and/or inert personalized devices has been optimized to support the rapid categorization of many victims according to the received dose. Communication and cross-border collaboration was standardized and cooperation with national and international emergency and preparedness organizations such as IAEA and WHO were initiated.

The value of RENEB to support topics also outside emergency preparedness is now evident. With established strategies to guarantee consistent performance between the partner laboratories, the network has the ability and capacity to contribute to large scale research projects with the analysis of exposure biomarkers. This includes studies on the effects of low doses, group related radiation sensitivity, contribution to non-cancer diseases, and epidemiological studies where sampling and handling of bioprobes is included. RENEB also drives the development and evaluation of new exposure markers with special view to their applicability for addressing acute or protracted exposures as well as exposures dating back years or decades.

As such, RENEB as an analysis platform is of special interest for the Emergency Preparedness Platform NERIS by adding preparedness in the field of individual dose estimation. Moreover it benefits MELODI and EURADOS by providing capacity for radiation research and specialized biomarker development. Concerning the latter, the radiological Platform ALLIANCE will also profit from RENEB. Last but not least, RENEB provides intercomparisons, specialized courses and seminars open also to laboratories outside the network, thus being of relevance for E&T in the CONCERT-EJP.



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RENEB was never meant to be a “time limited or closed club” and strategies were developed to identify “candidates” and integrate them as solid partners. Currently, RENEB comprises 22 partners and 7 candidates from 17 European countries. 16 have already signed a MoU, and thus form the nucleus of a unique growing infrastructure, combining high quality standards in the application and validation of biomarkers and maintenance and advancement of scientific and technical competence.

RENEB Consortium: BfS* Germany, BIR Germany, CEA France, ENEA Italy, HMGU Germany, ICHTJ Poland, INSP* Romania, IRSN France, ISS Italy, IST* Portugal, LAFE* Spain, NCRRP* Bulgaria, NCSR Greece, OKK-OSSKI Hungary, NRPA* Norway, PHE* United Kingdom, SERMAS* Spain, STUK Finland, SU-CRPR* Sweden, UAB* Spain, UGent* Belgium, UNITUS* Italy

RENEB candidate: AMVRC* Italy, DIT* Ireland, FZ Jülich Germany, INFN Italy, RPC* Lithuania, SCK•CEN* Belgium, US Spain

*MoU signed

ID Card:

Analytical platform type: biodosimetry, markers of exposure, retrospective dosimetry on biological and inert samples

Main techniques proposed: panel of cytogenetic assays, gene expression assay, gamma H2AX assay, EPR/OSL dosimetry

Capacity: emergency situation: up to 1000 samples per week, depending on assay; research: up to 500 samples per week for several weeks, depending on assay;

Delay to start: Emergency situation: immediately, no delay; Research: dependent on the project

Intercomparison exercise options: possible for all network assays and techniques

Training options: possible for all network assays and techniques

Access: Emergency situation: regulated by national authorities; Research: selection by members

Internet link: <http://reneb.eu>

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Related to: Emergency preparedness: NERIS, Research: EURADOS, MELODI, ALLIANCE, medical associations



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