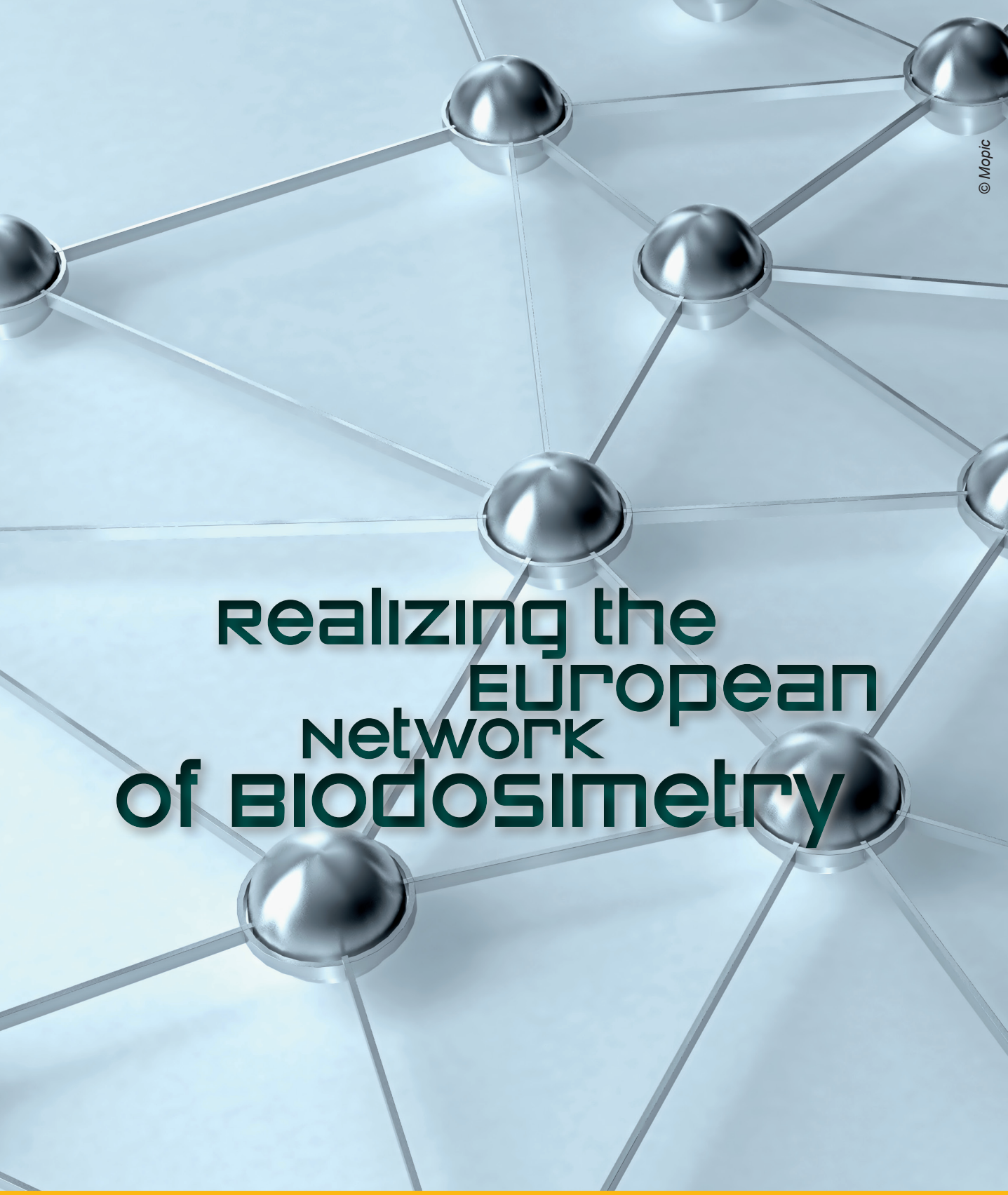

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Realizing the European Network of Biodosimetry

RENEB
Realising the European Network of Biodosimetry

BULLETIN

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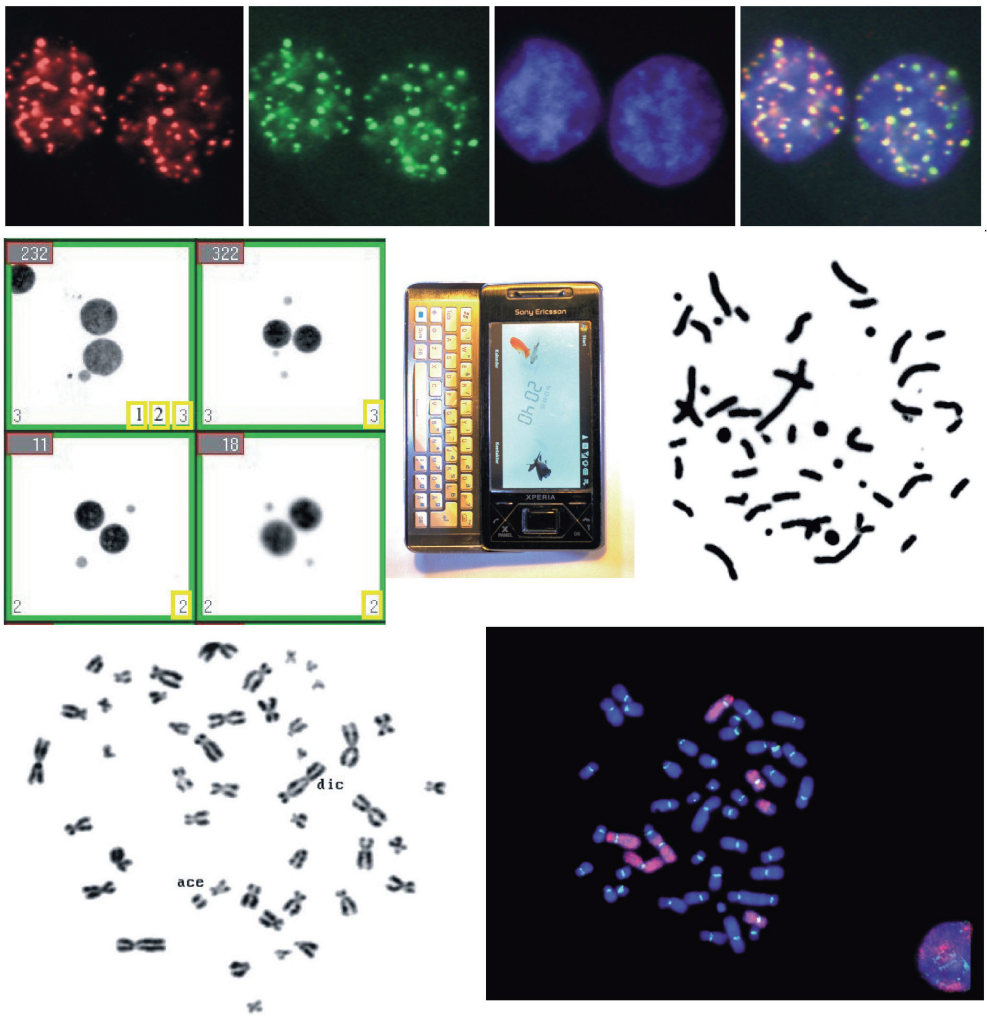
www.reneb.eu

COOPERATION

what is RENEB?



Biodosimetry methods: Upper row: Gamma H2AX assay image; Middle row, from left to right: Automatic Micronucleus assay image, Mobile phone used for ElectronParamagnetic Resonance and Optically Stimulated Luminescence assays, Premature Chromosome Condensations Assay image; Bottom row, from left to right: Dicentric assay and FISH assay images.
Images were provided by RENEB partners.

Realizing the **E**uropean **Ne**twork of **B**iodosimetry (RENEB) is a project that has the aim to establish sustainable network in biodosimetry in Europe. Such a network will significantly improve dose assessment capacity.

Provision of rapid, comprehensive and standardised methodology will improve the emergency response in Europe in case of a large-scale radiological event. The established network can become a part of EU radiation emergency management.

23 organisations, representing experienced laboratories and organisations from 16 European Union countries, are participating in RENEB. They were identified by the previous European activity – TENEB (Towards a European Network of Excellence in Biological Dosimetry), a project funded by EURATOM.

To ensure the sustainability of the network an agenda for transforming RENEB into a legal organisation will be prepared.

RENEB is a Coordination Action (CA) project funded within the 7th EU framework EURATOM Fission Programme. The project was launched on January 1st 2012, and it is planned to be carried out until the end of the year 2015. The project is coordinated by the Federal Office for Radiation Protection (BfS), the German Radiation Protection Authority.
More information of the project on the project web-page: ***www.reneb.eu***

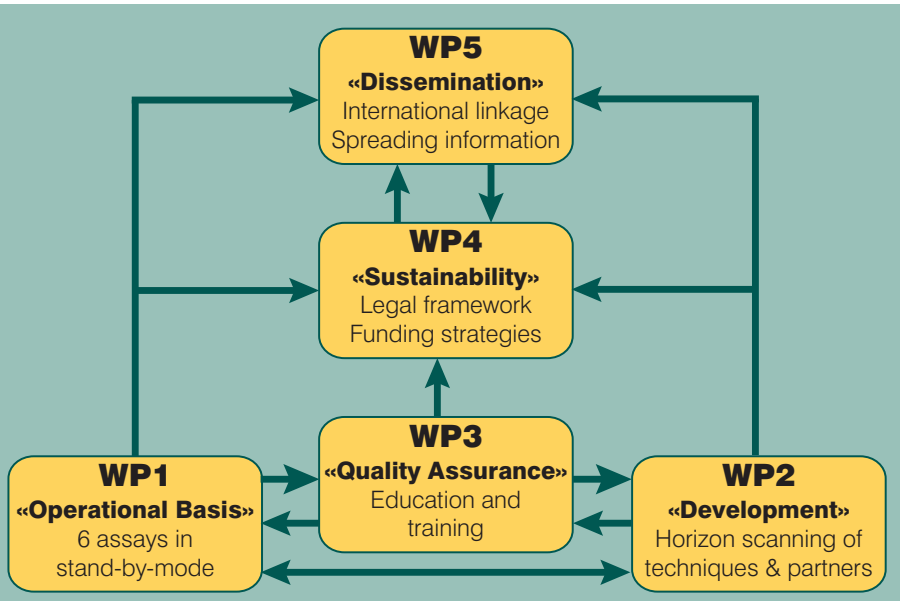
strengths of RENEB

- **Expertise:** RENEB gathers the best European expertise in biodosimetry.
- **Openness:** Laboratories from the old and new EU countries are represented.
- **Competence:** Radiation protection authorities, research and educational organisations participate in RENEB.
- **Experience:** RENEB takes advantage in the experience from the existing Tri-parties agreement on biological dosimetry between France, Germany and UK.
- **QA:** RENEB works on standardising and harmonising of existing methodology and thus guaranties permanent quality assurance.
- **E&T:** Education and Training activities of members and non-members are in focus.
- **Development:** RENEB works not only on existing capacities, but has the aim to include new technologies for dose assessment, when these technologies are adequately developed.
- **Progress:** RENEB opens for new members when the network is established.
- **Integration:** RENEB considers collaboration with, and connections to international and national radiation emergency preparedness and response organisations as vital factors for successful establishment of a sustainable and well-functioning network.

organisation of the project

The project is organised in 6 work packages (WPs). Each work package is subdivided into several tasks.

All RENEB WPs and their tasks are linked. They will complete each other. Close interaction will be especially established between the WP 1, 2 and 3. Tasks of WP 4 and 5 will promote achievements of WP 1-3.



the work packages and their tasks:

WP1: Operational Basis of the Network

- Define and establish the operational basis of the network, based on harmonisation and standardisation of the dicentric assay, FISH assay, micronucleus assay, PCC assay, Gamma-H2AX assay and EPR/OSL assay on personal objects.

WP2: Basis to Develop the Network

- Establish tools to identify new technological developments, showing potential for biological dose estimation in emergency situations.
- Prepare a roadmap to identify, validate and integrate new technologies or methodology.
- Provide a basis to identify, attract, and integrate new network partners and start to recruit new partners.

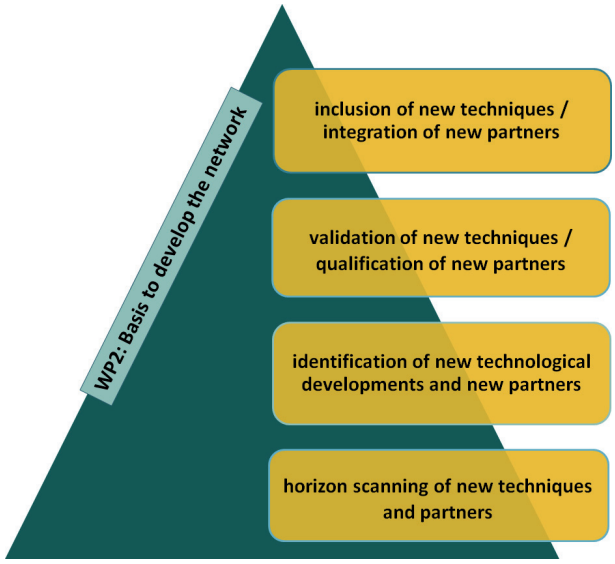
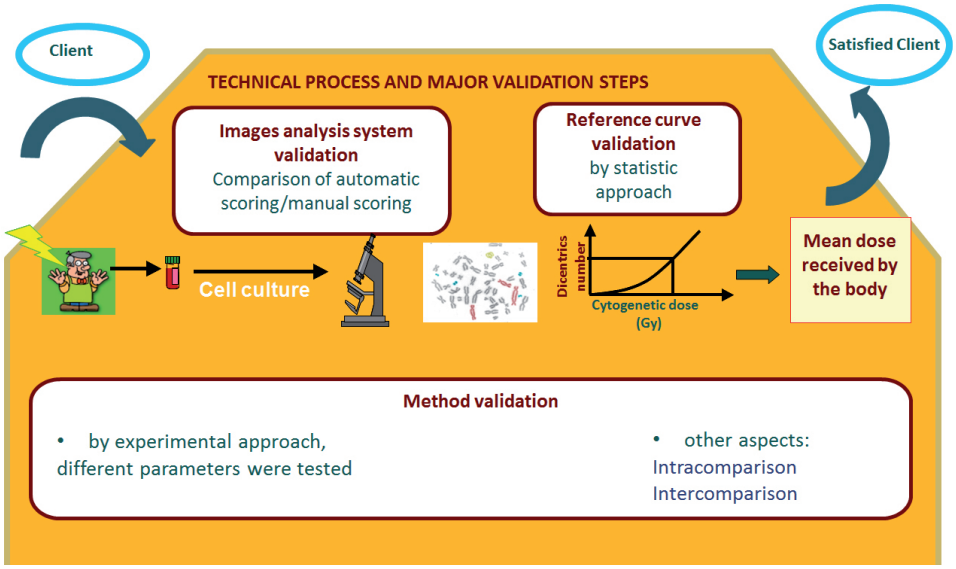


Figure: HMGU



Quality Assurance & Quality Management Program: Technical validations. Figure: IRSN

WP3: Education, Training and Quality

- Harmonise biodosimetry procedures to be applied within the network.
- Develop regular training exercises and requirements of international standards.
- Develop and establish an education & training programme for both members and non-members of the network.
- Develop a long-term training programme for the network.
- Set up a quality assurance and management (QA&QM) programme within the consortium.
- Connect the RENEB training programme to European training courses and international organisations performing training.

WP4: Establishing the Organisational Structure

- Set up the hierarchical, communicational and logistical infrastructure to establish an operational biodosimetry network in Europe.
- Link the network to national responders and disaster management units.
- Provide a long-term funding strategy for the network by connecting RENEB capabilities to the European research area and by establishing links to public health organisations.
- Establish a legal framework for the network with an appropriate agenda.

WP5: Dissemination of Knowledge

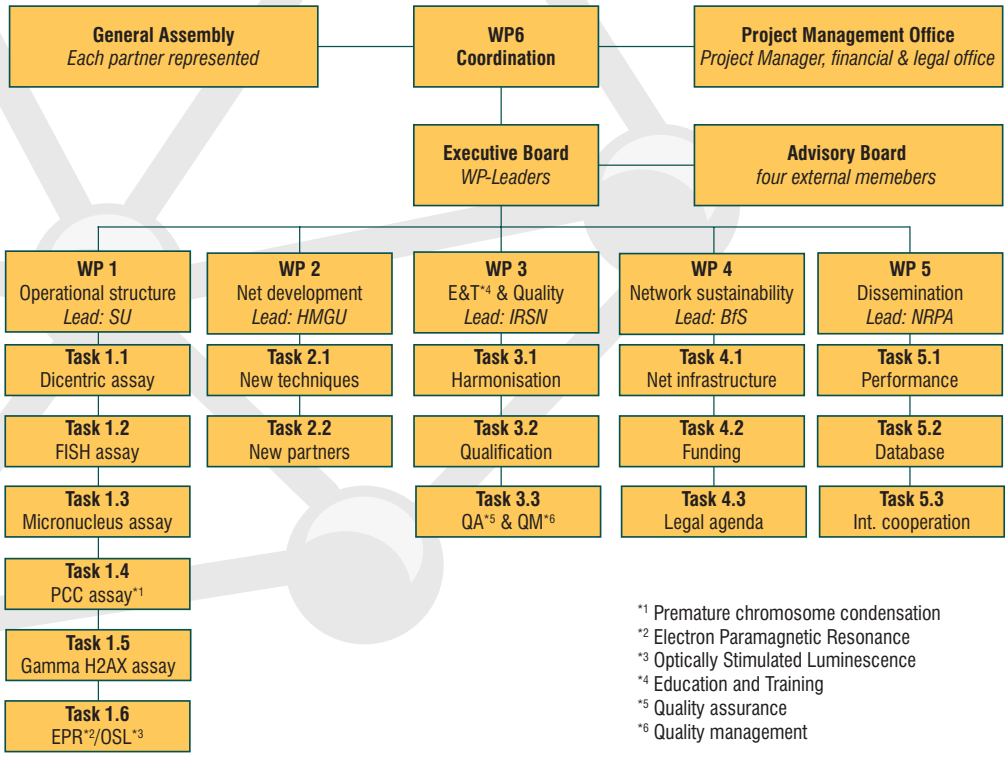
- Disseminate and promote network activities.
- Establish and maintain RENEB web pages with public and restricted access.
- Create an internal database for education, training and quality purpose.
- Maintain the sustainability of the network by establishing strong links and cooperation with European and international organisations, European Union agencies and national bodies involved in emergency preparedness and response. Lobby for sustainability of RENEB.

WP6: Management

- Address specifically the management of the project. Present the project, manage and coordinate the meetings, report to the commission, monitor the overall performance of the project and disseminate the results.
- Establish the link to the Advisory Board.
- Support the organisation of RENEB workshops and meetings dependent on requirements.

Figure: NRPA

Project organisation chart:



*1 Premature chromosome condensation
*2 Electron Paramagnetic Resonance
*3 Optically Stimulated Luminescence
*4 Education and Training
*5 Quality assurance
*6 Quality management

what happens in the project?

RENEB Kick- off meeting

The Kick-off meeting took place on 23rd -25th January 2012 in Berlin, Germany.
43 participants of the meeting were welcomed by Professor Wolfgang Weiss, Head of Department «Radiation Protection and Health» from BfS. Katerina Ptackova (EU officer for the RENEB project) and RENEB Advisory Committee members Irina Buglova (IEC IAEA) and Zhanat Carr (WHO) presented lectures about expectations to RENEB network.

Photos: BfS

Presentation of the RENEB project on international meetings:

First RCM on Strengthening of Biological Dosimetry in IAEA Member States, 21st-23rd March 2012, IAEA, Vienna

RENEB project Coordinator Ulrike Kulka presented the project on the first Regional Coordination Meeting (RCM) on Strengthening of Biological Dosimetry in IAEA Member States, 21st - 23th March 2012, IAEA, Vienna.

13th International Congress of the International Radiation Protection Association (IRPA) 13th -18th May 2012, Glasgow

The project had been presented during the session Emergency Exposure Situations - Emergency Preparedness and Response.

Questionnaire for new methodologies for biodosimetry and new partners who would like to join the network in the future were developed by work package 2 of RENEB, and can be found on the project web page under News section.

Next RENEB meetings:

* Meeting of RENEB consortium members during the ERRS annual meeting in Italy, on 17th October 2012
* First annual meeting of RENEB in Nice in February 2013

consortium members institutions:

Bundesamt für Strahlenschutz (BfS), Germany	Leiden University Medical Center (LUMC), The Netherlands
Bundeswehr Institut für Radiologie in Verbindung mit der Universtität Ulm (BIR), Germany	National Center for Radiobiology and Radiation Protection (NCRRP), Bulgaria
Commissariat a l´Energie Atomique(CEA), France	National Centre for Scientific Research"Demokritos" (NCSRD), Greece
Agenzia Nazionale per le Nuove Tecnologie, L´Energia e lo Sviluppo Economico Sostenibile (ENEA), Italy	National Research Institute for Radiobiology & Radiohygiene (NRIRR), Hungary
Helmholtz Zentrum München (HMGU), Germany	Norwegian Radiation Protection Authority (NRPA), Norway
Health Protection Agency (HPA), United Kingdom	Radiation and Nuclear Safety Protection (STUK), Finland
Institute of Nuclear Chemistry and Technology (INCT), Poland	Stockholm University (SU), Sweden
Institutul National de Sanatate Publica (INSP), Romania	Universitat Autonoma de Barcelona (UAB), Spain
Institut de Radioprotection et de Sûreté Nucléaire (IRSN), France	Universiteit Gent (UGent), Belgium
Instituto Superiore di Sanità (ISS), Italy	University of Tuscia (UNITUS), Italy
Instituto Tecnologico e Nuclear (ITN) Portugal	Servicio Madrileno de Salud - Hospital General Universitario Gregorio Maranon (HGUGM), Spain
Hospital Universitario y Politécnico La Fe (LAFE), Spain	

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