Education & Training in the MELODI platform

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DoReMi

- FP7-funded “Network of Excellence” 2010-2015
- E&T work-package to provide and coordinate high-level training for research scientists and a career structure that will attract and retain top-level graduates within the research discipline
- What has happened in 6 years?
DoReMi initiatives

- Defining the problem and the solutions: creation of an “Integrated Training and Education Network” (ITEN)
- Addressing the need for a European MSc in radiobiology as an entry point for students
- Focussed 1-3 week courses provided by DoReMi partners
- DoReMi E&T Forum
- Sustainability – what to do after DoReMi
Where is the ITEN?

- The concept was based on the idea of a “virtual institute”
- It was to be a coordinating hub that would construct courses and programmes out of existing E&T activities
- The possibility was considered (briefly) that it could become an independent legal entity, possibly even a spin-off enterprise
- But – after much discussion – the idea did not bear fruit:
  - The work of the ITEN was done by WP7
  - Existing activities were difficult to coordinate
  - In the end the ITEN did not materialise (but it exists virtually)
New MSc course at Technische Universität München

- Fully Bologna Compliant
- No tuition fees
- Two years full time
- Covers all areas of radiation biology research
- Starting now!
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DoReMi courses

• 5 series 2011-2015
• Free to students. 39 courses. ~500 students.
• Topics covered:
  – Human radiation genetics
  – Molecular radiation carcinogenesis
  – Radiation epidemiology and radioecology
  – Cellular effects of low doses and low dose-rates with focus on DNA damage and stress response
  – Interdisciplinary radiation research focussing on radiation protection
  – Modelling radiation effects from initial physical events
  – Non-cancer effects of low dose radiation
  – Environmental Radiobiology
  – Inter-individual responses to low dose ionizing radiation: from damage formation to biomarkers
  – Data interpretation and uncertainty analysis
The DoReMi E&T Forum
Held in conjunction with the annual MELODI W/S

The purpose of the forum was:

- Networking function; to get the key individuals from the key institutions together
- Define the E&T needs of the low-dose research community
- Discuss and resolve practical problems of access and mutual recognition
- Review current activities - invited presentations, open discussions
- Propose/discuss new E&T initiatives - course modules, summer schools etc. to be incorporated in networked programmes
- Compare notes with other platforms
Sustainability

- E&T is a “public good” and needs funding support; commercial user-pays is not appropriate
- Continuing E&T needs managing/organising and funding
- DoReMi was instrumental in formation of the MELODI E&T Working Group as a continuing body to take responsibility for promoting E&T.
- E&T WG was given the task of producing a strategy for management and funding.
MELODI E&T WG

- Formally set up by MELODI Board of Directors February 2014
- First meeting April 2014
- Membership:

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<tr>
<td>University of Pavia</td>
<td>Italy</td>
<td>Andrea Ottolenghi (Chair) Vere Smyth (Secretary)</td>
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<td>Helmholtz-München</td>
<td>Germany</td>
<td>Michael Atkinson (Vice Chair)</td>
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<td>SCK•CEN</td>
<td>Belgium</td>
<td>Michèle Coeck</td>
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<td>URV</td>
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<td>NRIRR</td>
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<td>Nina Chobanova</td>
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<td>IST/ITN</td>
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<td>Pedro Vaz</td>
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<tr>
<td>Stockholm University</td>
<td>Sweden</td>
<td>Andrzej Wojcik</td>
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E&T WG tasks

1. Preparation of E&T section in MELODI SRA

There should be an actively managed programme of workshops, seminars, summer schools, etc. which is integrated into the design and funding structure of all research

- Support for students and young scientists
  - Travel grants, promotion of career opportunities

- Promotion of E&T for dissemination and knowledge management
  - Up to 5% of the project budget should be committed to providing workshops or training courses dedicated to the presentation of new science/technology which is being used or developed in the project.

- Coordination and collaboration of E&T providers
  - Continuing dialogue with other platforms
E&T WG tasks cont.

2. Develop a MELODI Strategic Agenda for E&T

- **Contents:**
  1. Introduction: the importance of E&T to underpin research
  2. Definition of the scope of the E&T promoted by MELODI
  3. Clarification of the specific needs for education and training activities
  4. Strategies for integrating/coordinating existing courses
  5. Strategies for funding
  6. Road map.
Introduction: the importance of E&T to underpin research

• The incidence of harmful effects from low doses can be obscured by the noise in natural occurrence rates

• To obtain reliable risk estimates requires studies over many years, even decades, employing a wide range of scientific disciplines.

• This requires management to ensure continuity of expertise and cross-fertilisation of all the necessary disciplines.

• Stewardship of the necessary resources of knowledge, skills, and expertise that calls for a strategic programme of education and training specifically designed to ensure:
  – A continuing influx of new top-level students into the needed scientific areas
  – Maintenance and development of the research expertise
  – Penetration of inter-disciplinary “silos”
Definition of the scope of the E&T promoted by MELODI

1. Should MELODI E&T be for “home consumption” or for “export”?  
   (Mainly the former, but the latter may be strategically beneficial)

2. What should the balance be between E&T for development of expertise of researchers, and knowledge management/dissemination?  
   (Mainly the former, but the latter may be strategically beneficial)

3. Should MELODI E&T concentrate on entry level or include life-long learning?  
   (Mainly the former, but the latter may be strategically beneficial)
Clarification of the specific needs for education and training activities

- Initial draft is all inclusive; priorities will be developed during consultation:
  - Summer/winter schools
  - Short courses
  - Seminars
  - Refresher courses at meetings
  - Active integration of E&T and research
  - Website to promote E&T opportunities
  - Grants, prizes, scholarships
  - Etc.
Strategies for integrating/coordinating existing courses

• Mechanisms that facilitate integration
  – Internationally recognised points systems
  – Courses with modular structure that allow taking of individual modules
  – Courses that recognise modules from other providers

• Promote collaboration among research and E&T institutions
  – Multi-disciplinary and multi-platform collaborations
  – Promotion of university involvement

• International multi platform/discipline E&T colloquia and fora
  – Share concerns/experience/problems
  – Raise awareness of what is available
  – Facilitate networking
Strategies for funding

• Stakeholder support
  – Nuclear industry, radiopharmaceutical industry, NORM-related industries,
  – Security-related stakeholders (RN threats)
  – RN Emergency/accidents (Civil Protection, First responders, etc.)

• EC funding through RTD projects
  – CONCERT
  – H2020

• National funding?
• Individual funding?
Current status

• First draft nearly complete

• (No road-map yet!)

• To be posted on the MELODI website and open for comments

• Many of the recommendations have been implemented in the CONCERT EJP
E&T in CONCERT

- CONCERT is a European Joint Programme (EJP) set up under Euratom H2020
- Began June 2015, runs for 5 years
- Main tasks are setting priorities for calls in radiation protection research and integration activities, in all areas covered by:
  - MELODI
  - Alliance
  - NERIS
  - ERADOS
  - Medical associations
  - Social sciences and humanities
CONCERT Workpackage 7: Education and training

Approximately €180k is available per year

Grants will be co-funded 30-70% (approx.); co-funding claimed in kind from staff time (partners only at the moment)

Aims of the WP:

• Providing support for students and young post-doctoral researchers by offering grants for training and travel, and working for greater transferability of prerequisites and modules among the EU states

• Promoting the provision of training courses, workshops and seminars within the RTD Programme;

• Organisation and sponsorship of targeted initiatives, courses, seminars, etc.

• Coordination and collaboration with all research platforms and the wider industry and regulatory interests

• Encouraging the integration of junior scientists into the European radiation risk research community.
**Task 7.1 – Attracting and retaining students and junior scientists into the Radiation Protection research fields** *Task leader: Andzej Wojcik, SU*

**Subtask 7.1.1. Grants to junior scientists to attend conferences and training courses**

**General organisation of the programme**
Support can be given for participation in a conference, a course or for an exchange visit to a laboratory. It is suggested to set up 4 application deadlines per year: 31 March, 30 June, 31 September and 31 December. After each deadline a max total sum of 2500€ will be paid out to the top applicants. The maximal level of support per applicant is 625€.

**Who is eligible?**
Researchers or PhD students working in the broad field of radiation research including biology, chemistry, physics and medicine. The support is not paid to BSc or MSc students. An eligible person must be affiliated to an institution within the European Union or an associated country as governed by Article 7 of the Horizon 2020 Regulation.
The support is only granted:
• To scientists who are not older than 35 years.
• For trips outside the country of residence.
• To cover travel expenses, lodging and conference fees. A budget must be included in an application.
• Once to a person, meaning that a person cannot apply for support twice.
• For a trip that will take place within 6 months after the application deadline.

An announcement of the CONCERT young investigator travel support programme will be sent to all CONCERT members and posted on webpages of CONCERT, ERRS, EURADOS, MELODI, DOREMI, NERIS, STAR, RENEB etc.
Task 7.2: Education and training as an essential part of dissemination and knowledge management within CONCERT  

Task leader: Geza Safrany

Education and training is an essential part of all activities within CONCERT. Proposals shall include a plan for integration of education and training into the research programme, with a description of the proposed activities. This must also give details of collaboration or involvement with academic departments, and of intended PhD thesis work, MSc project work, teaching seminars, ad hoc courses on the topics of the proposal, etc., where possible. The plan will be assessed as an essential part of the impact statement and will be considered within the evaluation procedure.
Task 7.3: Targeted E&T initiatives
*Task leader: Andrea Ottolenghi, UniPv*

- An annual call will be made for institutions to organise short courses (up to 3 weeks length), summer schools, or teaching seminars on topics of relevance to research into radiation protection.

- Call topics will be determined in consultation with the participating Platforms and other stakeholders (Task 7.4) and WP6 (Infrastructures).

- Initiatives under this task would include all aspects of the scientific research areas underpinning radiation protection and emergency and recovery management.

- An announcement and application templates have been issued for the first series, closing date for submissions 10 December 2015.
Task 7.4: Coordination and collaboration on E&T policy and strategy  Task leader: Michèle Coeck, SCK-CEN

- Development of the website by SCK-CEN as a major means of interacting with stake-holders through:
  - Publication of discussion documents
  - Calls for comments
- Maintain a mailing list of interested parties and stake-holders; news alerts.
- Organise a meeting in conjunction with MELODI 2016
- Collaboration with other projects
  - ANNETTE
  - Proposal for NFRP 12: (Support for careers in the nuclear field) in Euratom WP 16-17.
**Task 7.5:** European integration of junior scientist career development  
*Task leader: Mike Atkinson, HMGU*

- **Subtask 7.5.1** Initiate and encourage interaction between CONCERT, the platforms and the EURAYS association of junior radiation research scientists.

- **Subtask 7.5.2** Establish a cross-border network of mentoring for junior scientists based on a selection and mentor-mentee matching Programme.

- **Subtask 7.5.3** Conduct career days for junior scientists during CONCERT meetings, to include meetings with senior scientists, job fair, career advice and networking.

- **Subtask 7.5.4** Hold “Meet the Professor” lunches during international conferences held in Europe (including the IRPA, ERR, ICRR, MELODI and DoReMi meetings), to allow junior scientists contact with leaders in the community from academia and stakeholders, regulators and policy makers.

- **Subtask 7.5.5** Establish the NEWS network to facilitate dialogue between junior faculty members in new and established member states.
Thank you!