

## REPROLAM WEBINAR

### BASES FOR INTERNAL OCCUPATIONAL DOSIMETRY AND CURRENT CHALLENGES IN THE LATIN AMERICAN AND CARIBBEAN REGION

April 22- 1:00 p.m. Brasilia (GTM - 3h)



In this webinar, referents in the area of internal dosimetry will discuss the evaluation and control of specific internal exposure for workers. Internal occupational exposure occurs when radioactive material enters the body during work, either via inhalation, ingestion, through whole skin or wounds. The practices in which these incorporation risks may occur are those that involve the handling of unsealed sources of radiation, such as in radioisotope production and nuclear medicine. In these practices, considerable activities of radioactive materials in the form of dust, gas or volatile liquids are handled, which may necessitate the individual control of Occupationally Exposed Personnel (OEP) through a monitoring program based on routine measurements in the body or excreta. In particular, the control of internal exposure from the handling of radiopharmaceuticals in nuclear medicine services (NMS), such as I-131, presents several challenges.

Although the **IAEA** recommends that the implementation of a program for the control of internal exposure of this group of workers should be considered, it is a fact that in the world there are not enough qualified laboratories available to offer the service of internal dosimetry to all workers of the SMNs; on the other hand, the periodicity required to control the OEP in the SMNs also represents a logistical problem.

To overcome these difficulties, it is proposed to control these workers in situ with the measurement instruments available in the SMNs. This webinar presents, in particular, the experience of several countries in the individual control of the internal exposure of the OEP in the NMS and the strategies implemented to overcome the challenges.

Panelists:



**Gladys López Bejerano**  
President of the Agency  
for Nuclear Energy and  
Advanced Technologies -  
Cuba



**Dayana Ramos Machado**  
Technical manager of the  
Internal Dosimetry  
Laboratory - CPHR- Cuba



**Mariella Terán**  
Coordinator of the Internal  
Dosimetry Lab of the  
Nuclear Medicine Center  
of the University Hospital -  
Uruguay



**Erik Mora Ramírez**  
Head of the CICANUM  
PET / CT Cyclotron  
Laboratory - Costa Rica



**Nancy Puerta Yepes**  
Head of the Department of  
Internal Dosimetry of the  
ARN - Argentina

Link : [meet.google.com/rdf-khyd-not](https://meet.google.com/rdf-khyd-not)

## REPROLAM VIRTUAL COURSE\_OPEN ENROLLMENT

### VIRTUAL COURSE OF TRAINING IN THE APPLICATION OF DIFFERENT CYTOGENETIC TESTS IN SCENARIOS OF OCCUPATIONAL OVEREXPOSURE

May 20 and 21, 2021\_11: 00 a 13: 00Hs\_Argentina



The objective of this course is to provide participants with the theoretical concepts of the different cytogenetic assays (biodosimeters) and biomarkers and their applicability for dosimetric reconstruction in cases of medical and industrial occupational overexposure.

#### TOPICS

**Thursday 20/05 from 11.00 to 13.30** we will address the theoretical concepts:

- Introductory concepts of radiobiology
- Cytogenetic assays (biodosimeters)
- Other biomarkers of overexposure

**Friday 05/21 from 11:00 a.m. to 1:30 p.m.** we will focus on the practical part and application of the theoretical concepts exposed on 05/20:

- Case study: Overexposure to ionizing radiation in the medical and industrial field
- Contribution of biological dosimetry to the evaluation of the risk projection of radiation induced cancer. Probability of causation

The course is aimed at members of the **REPROLAM** working groups in the areas of Biological Dosimetry and End Users, and has 50 vacancies available.

#### Teachers:

- Marina Di Giorgio*
- Analía Radl*
- Julieta Rearte*

For registrations: [https://docs.google.com/forms/d/e/1FAIpQLScynmVm-iIF3DiNzXoxV-VRPwhJzswWsOApI4UcNejDxUfRavA/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLScynmVm-iIF3DiNzXoxV-VRPwhJzswWsOApI4UcNejDxUfRavA/viewform?usp=sf_link)

## WEBINAR

### Retrospective dosimetry techniques for internal exposures to ionizing radiation and its applications.

Friday, April 23, 2021 at 9:00 a.m. M.

Brasilia (GMT -3: 00)



Individual doses arising from internal exposures cannot be determined directly. They are inferred from measured quantities, such as body activity content, excretion rates, or the concentration of radioactive material in the air. Incorporated radionuclides generally deposit non-homogeneously in the body and continue to act as sources of radiation until they are physically broken down or eliminated from the body. The fact that body irradiation is spatially heterogeneous, potentially prolonged over long periods, and variable in time makes cases of internal exposures particularly problematic for EPR and biological dosimetry methods compared to external exposures. The webinar will initially offer specific information on internal dosimetry methods, the most common cytogenetic techniques used in biological dosimetry and EPR dosimetry applied to tooth enamel. Some real case scenarios will be presented, for which dose estimates obtained from bioassay data, as well as biological dosimetry and / or EPR, are compared and critically analyzed. Most of the time, internal exposures are accompanied by external exposures, which makes interpretation of the results very difficult.

## FEATURED PRESENTERS

- Antonella Testa

*ENEA, Italy, Principal Investigator*

- Augusto Giussani

*German Federal Office for Radiation Protection (BfS), Head of Section "Biokinetics of external and internal dosimetry"*

- María Antonia López

*CIEMAT, Spain, Senior Researcher*

To register: [https://www.bigmarker.com/sckcen/Retrospective-dosimetry-techniques-for-internal-exposures-to-ionising-radiation-and-their-applications?show\\_live\\_page=true](https://www.bigmarker.com/sckcen/Retrospective-dosimetry-techniques-for-internal-exposures-to-ionising-radiation-and-their-applications?show_live_page=true)

## Responses to questions following the CCRI Webinar

### “ISO 4037:2019 What is new and why?”

#### 18 March 2021

The following questions are reproduced verbatim from those posed at the end of the **CCRI** webinar presented on 18th March 2021 by **Dr Oliver Hupe**. The answers provided should be viewed as the best efforts by a scientific expert to answer the questions. These are not the formal responses of the **ISO TC85 SC2** Working Group, neither are they the official position of the **PTB**, they are a personal interpretation of both the questions asked and the ISO 4037:2019 standard and should be received in that sense. The **CCRI** and the **BIPM** are working with the **IAEA** to provide more knowledge transfer activities to support the introduction of the standard.

You can see the full document with the questions and answers at the following link: [http://www.reprolam.com/wp-content/uploads/2021/03/Questions-and-Answers-to-CCRI-Webinar\\_2021\\_03\\_18\\_V1.pdf](http://www.reprolam.com/wp-content/uploads/2021/03/Questions-and-Answers-to-CCRI-Webinar_2021_03_18_V1.pdf)

## FEATURED EVENT



### **7th Joint Congress 23SEFM | SEPR 18: "Radiation and humanity: Much more than technology" ONLINE 2021\_tariff event May 31 - June 4, 2021**

We present the **7th Joint Congress of the Spanish Society of Medical Physics and the Spanish Society for Radiological Protection** that will take place online from May 31 to June 4, 2021.

This national and international congress has a significant participation of experts, professionals, researchers, professors and authorities related to Medical Physics and ionizing radiation in medicine, industry, science and the academic world. Entities such as the International Atomic Energy Agency (IAEA), the World Health Organization (WHO) and the Pan American Health Organization (PAHO) participate in the Congress.

Under this modality, it has been thought that all Latin American professionals may find it very interesting to participate in this edition, due to the convenience of being able to view the content in a wide space of time, to be able to network with professionals from Spain and others. countries, as well as with commercial exhibitors. The very affordable fees are aimed at reaching as many professionals as possible.

In addition, it is also intended to encourage the participation of professionals from around the world and for this reason a special free access to all plenary sessions has been enabled in their original language and live during the days of the Congress (from May 31 to June 4 ). In addition, these sessions will remain accessible for later viewing in English (translated or subtitled) on the Congress platform from June 7 to July 5.

You can consult the **PRESENTATION DOSSIER** here:[https://congresosefmsepr.es/wp-content/uploads/2106\\_-DOSSIER\\_PRESENTACION\\_7-CONGRES-CONJUNTO-SSEFM-SEPR-ONLINE-2021-version-web.pdf](https://congresosefmsepr.es/wp-content/uploads/2106_-DOSSIER_PRESENTACION_7-CONGRES-CONJUNTO-SSEFM-SEPR-ONLINE-2021-version-web.pdf)

#### **Pre-congress, Update and Pre-symposium courses for technicians:**

The Courses, Pre-congress, Update and Pre-symposium of technicians, will be available for viewing on the platform from May 17. Your discussion sessions will be:

***Pre-congress: May 28 in the morning***

***Update: June 1, 2 and 3 at 1 hour***

***Technical pre-symposium: May 27 in the afternoon***

Enrollment in these Pre-congress, Update and Pre-symposium courses for technicians implies that you must have paid one of the fees for the Congress / Symposium. The course fee cannot be selected individually, nor is it compatible with the discounted fee and the Plenary Sessions fee.

## PRE-CONGRESS COURSES

- Artificial intelligence / machine learning
- Reconstruction and quantification in Nuclear Medicine
- Radiobiology
- Internal dosimetry

All 4 courses for only € 25 (along with a Congress fee)

[See schedules](#)

## UPDATE COURSES

- What is the quality of a radiotherapy treatment plan? Dose distribution, robustness and complexity
  - Advanced MRI for biological image-guided adaptive radiotherapy
  - External and internal contamination in the sanitary environment
  - SGRT
  - Development of new imaging and radiation detection systems
  - Options for NORM Waste management through conventional methods
  - Exposure to radon gas in homes and jobs
- All 7 courses for only € 10 (along with a Congress fee)

[See schedules](#)

## TECHNICIANS PRE-SYMPOSIUM COURSES

- Planning methods for advanced techniques
- Quality control of RX equipment: Basis for conducting tests What do we observe in each test?

The 2 courses for only € 25 (along with a Technician Symposium fee)

[See schedules](#)

For more information about the event, go to: <https://congresosefmsepr.es/>

**Very happy Easter, is the wish of the REPROLAM directive committee**

