



SRI RAMACHANDRA
FACULTY OF
BIOMEDICAL SCIENCES AND TECHNOLOGY



UNDER THE AEGIS OF
SOCIETY FOR RADIATION RESEARCH (SRR) - INDIA

3rd INTERNATIONAL SCHOOL ON RADIATION RESEARCH

(ISRR - 2023)

22nd & 23rd
SEPTEMBER, 2023

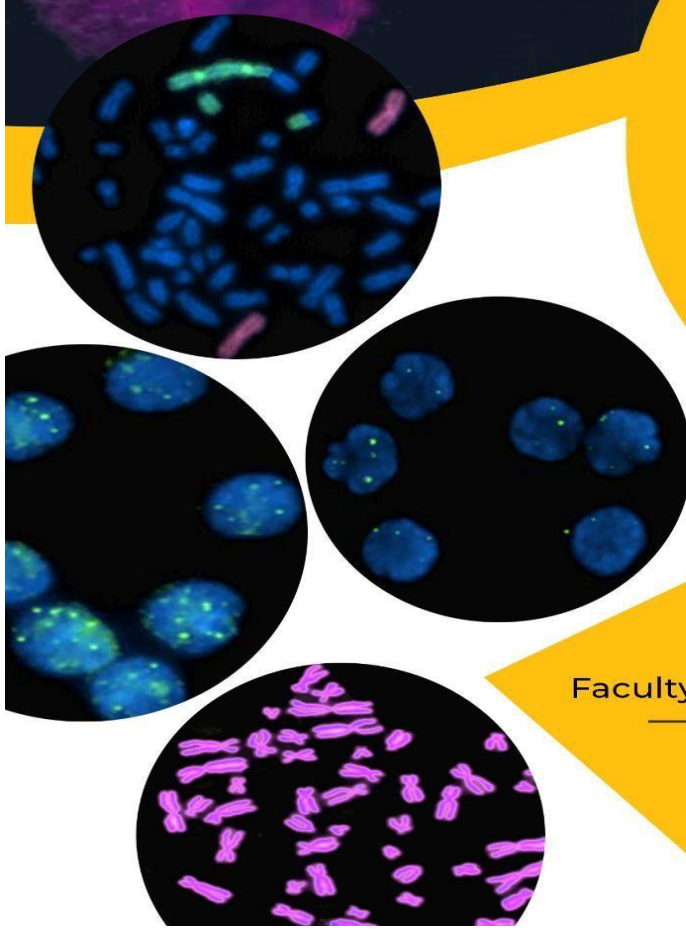
BIOMARKERS IN RADIATION RESEARCH:

FROM RADIATION
EXPOSURE TO
COUNTERMEASURES

Organised by
Department of Human Genetics
Faculty of Biomedical Sciences & Technology



SRI RAMACHANDRA
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Category - I Deemed to be University) Porur, Chennai



Report of third International School on Radiation Research-2023 (ISRR-2023): Biomarkers in Radiation Research: From Radiation Exposure to Countermeasures

The third International School on Radiation Research-2023 (ISRR-2023): “**Biomarkers in Radiation Research: From Radiation Exposure to Countermeasures**”, was organized by the Department of Human Genetics, Faculty of Biomedical Sciences & Technology, Sri Ramachandra Institute of Higher Education and Research, Chennai, India. The school was conducted between 22nd and 23rd Sep 2023; the events consisted of eight sessions, a combination of invited lecturers and demonstrations followed by hands on selected steps in the practical component by national and international eminent in the domain area as resource faculty.

On day -1 (22nd Sep, 2023), the session started with registration followed by Lectures and inauguration and then with demonstrations. **Dr C. Senthilkumar**, Scientific Officer-H & Officer-in-Charge, Southern Regional Regulatory Centre, Atomic Energy Regulatory Board, Chennai, India was the **Chief Guest** and the function was presided over by **Dr. Mahesh Vakamudi**, Pro Vice-Chancellor, SRIHER (DU). Dr. P. Venkatachalam, Professor & Head, Convener of ISRR-2023 extended a warm welcome to the faculty members (Resource person), participants University authorities and administrators. **Dr. Amit Kumar, Secretary, Society for Radiation Research (SRR) India**, highlighted the activities of SRR and ISRR-2023. **Dr. Vijay. K. Singh** Professor, Division of Radioprotectants, Department of Pharmacology & Molecular Therapeutics, F. Edward Hébert School of Medicine, Uniformed Services University of Health Sciences, USA, in his special addresses emphasized the importance of the Biomarkers research in relation to radiation exposures and countermeasures.

The day-1 (**Session-I & II**) lectures were of Introduction to Ionizing radiation, its interaction and measurements (**Prof. S. Panneerselvam, SRIHER, India**), Need and developments of radiation countermeasure strategy and its current scenario (**Prof. Vijay. K. Singh, USUHS, USA**), Rationale incorporation approaches for radioactive actinides (**Dr. Amit, Kumar, BARC, India**), European networking of Biodosimetry labs (**Prof. Elizabeth Ainsbury, PHE, UK**), and national scenario on the networking of biodosimetry labs, DRDO initiatives, and importance of clinical biodosimetry (**Dr**

N.K. Chaudhury), INMAS, India). **Session-III** started by post-lunch. Dr. Hemanth Prasanth Agnigothi (BRNS, India) enlighten the DAE, BRNS activities, funding opportunities to the participants. The participants were graduate students, research scholars and academicians (N=74). They were divided into four groups for demonstrations of Chromosome aberration assay (**Dr. J. Vijayalakshmi, SRIHER, India**) and micronuclei assay (**Dr. G. Tamizh Selvan, NITTE, India**); steps such as culture initiation, harvest, slide preparation and following aberration identification were showed by video, lectures and hands on.

The day-2 (**23rd Sep, 2023, Session-IV & V**) included lectures on Clinical biodosimetry approaches: Biomarker development & validation (**Dr Helen, Turner, CU, USA**), Biomarkers of mixed beam irradiation (Dr Andrzej Wojcik, Stockholm University, Sweden), Ultraviolet radiation (**Dr N. Rajendra Prasad, AU, India**), Cancer clinical radiation therapy (**Dr. Kai Rothkamm, University Medical Center Hamburg-Eppendorf, Germany & Dr B Satish Rao, MAHE, India**), integrated strategy for acute radiation exposures (**Dr. Rajesh Chaurasia, BARC, India**), Planning and dosimetry for cancer radiotherapy (**Prof. T. Hemavathi, SRIHER, India**) and Safe uses of radiation and Radiation Protection (**Dr. M. Senthilkumar, AERB, India**). **Session- VI** continued with the demonstrations of Gamma H2AX assay (**Dr Venkateswarlu Ravvi, SDUAHRE, India**) followed by microscopy analysis of CA, MN and gamma H2AX foci by participants. Finally, the components of reference calibration curve, Dose estimation using the aberration frequency by manual and software (CABAS), were demonstrated (**Dr. Solomon. F.D. Paul, SRIHER, India**). Both the lectures and demonstrations, the participants were enthusiastically involved in discussions, raised clarifications and satisfied with the answers provided by the resource faculty.

The event ended with a valedictory in the presence of resource faculty: participants were given the feedback and appreciated the organizers on the list of topics, facilities, hospitality and infrastructures as well as delivery of the contents. Travel support to seven of the participants were awarded by the Secretary, SRR Dr. Amit Kumar. **Dr Teena Koshy, the Secretary of ISRR-2023**, thanked all the participants, resource faculty and University authorities, administrators and wish a safe return journey, appreciated the efforts made by the students, research scholars and faculty of the department for making the even a successful work.

Glimpse of the events:



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Department of Human Genetics, Sri Ramachandra Institute of Higher Education and Research (DU), Porur, Chennai (22nd & 23rd September, 2023)



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