

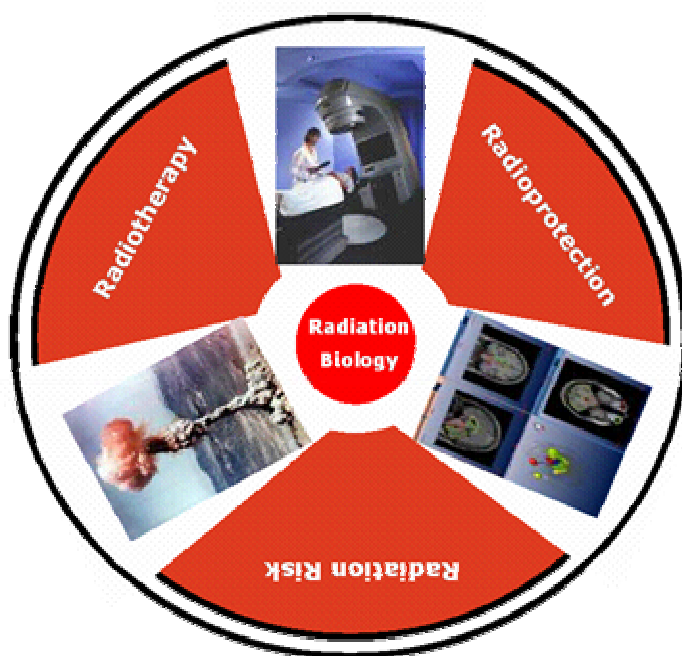


# **RADIATION SCIENCE TODAY**

*A Quarterly eNewsletter*

*published by*

**INDIAN SOCIETY FOR RADIATION BIOLOGY**



**Email:** [isrb\\_enewsletter@yahoo.co.in](mailto:isrb_enewsletter@yahoo.co.in)

**Web page:** [www.freewebs.com/isrbenewsletter/](http://www.freewebs.com/isrbenewsletter/)

July-September

Issue: 3

Year: 2008

# **Radiation Science Today**

July-September, 2008 **Issue: 3, Year: 2008**

## **CONTENTS**

### **Editorial**

- 1. News and views**
- 2. Letters from the Readers**
- 3. Forthcoming Conference and Workshop of ISRB**
- 4. Upcoming Meetings/Workshops**
- 5. Awards and Honors to ISRB Members**
- 6. Career Forum**
- 7. Article of the Issue**
- 8. Open Access Articles**
- 9. Useful Links**
- 10. Important Journals**
- 11. Recent Books**
- 12. Contents of Indian Journal of Radiation Research**
- 13. Notice Board**

### **Editorial Board**

**Executive Council (2007-09), Indian Society for Radiation Biology**

## **EDITORIAL**

### **Low Dose Debate**

Like other genotoxicants, radiation is also known to induce cancer above certain doses. Major low dose exposure conditions arise from high natural background areas, occupational radiation exposure to nuclear workers, to passengers and crew members while long flight durations, to astronauts during space travel, diagnostic radiology and undesired low dose exposure while delivering high doses during cancer radiotherapy. The low dose from different conditions varies in terms of dose rates and whether the dose is purely of one type or mixed with low and high LET radiation. Hence, the low dose radiation exposure conditions may be categorized: one, low dose radiation exposure from natural sources, which are beyond our control and relatively very protracted; two, exposure from various man made radiation sources to public / nuclear workers and diagnostic / therapeutic radiology. Even if, low dose radiation exposure are unavoidable to mankind, in both the conditions; the perception to public and debate amongst radiation biologists are different. In case of natural background radiation, we compromise to live with it taking some preventive measures, if possible. Moreover, the permissible dose limits in case of man made radiation sources are regulated very strictly by national/international agencies keeping in mind the concept of As Low As Reasonably Achievable (ALARA).

It has been a matter of intense discussion from recent literature that low dose exposure by X-rays and especially computed tomography (CT) scans can increase the risk of cancer incidence. In this context, it may be important to remember that in diagnostic radiology, a typical dose to the lung from a conventional chest X-ray could range from about 0.01 mGy to 0.15 mGy, while the doses to an organ examined with a conventional CT may vary from 10 mGy to 20 mGy, or even may be as high as 80 mGy for CT of coronary angiography. According to one viewpoint, the radiation exposure during CT scans is quite substantial to be reasoned behind more cancer risk in certain population<sup>1-3</sup>. However, another school contradicts- 'CT scans may decrease the cancer risk<sup>4-5</sup>'. The former thought is based on results available from A-bomb survivors, where the low dose risk calculation is mainly based on extrapolation using Linear No Threshold (LNT) model i.e. similar to high doses, the unit increase in radiation risk is valid even at

lowest doses. In the contrary, the later believes that LNT model is not valid for risk associated with low doses, and instead of linearity, a 'J' shaped curve persists for low dose regimen. In this range of radiation, biological processes like repair and adaptive response govern the cellular response of radiation, which do not follow LNT model. It is true that both developed as well developing countries, there is tremendous increase in use of X-rays and CT scans to diagnose many infectious and non-infectious diseases, which has not only saved millions of lives but also helped to develop rationale based therapeutic approaches for many ailments. There is no doubt that like any other genotoxic agent, radiation also has harmful effect, if delivered mindlessly. Somehow, low dose radiation effects have not been projected in the way it should have been. Especially, LNT model of radiation risk creates a radiation phobia in the mind of public. Indeed, more results needed to be gathered at low dose ranges based on direct epidemiological studies on human population and suitable experimental models. Moreover, there is a need for rethinking that manifestation of biological consequences after radiation exposure involves many complex processes than simple physical interaction of radiation with living system merely as matter. These perceptions should get reasonable consideration while evaluating risk of low dose radiation exposure.

It is onus to radiation biologists to provide balanced, evidence based information to public, news media and medical community without hiding any fact related to low dose radiation exposure issues. Hypothesis, if any, should be evaluated very stringently, before bringing to the literature. I personally believe that application / handling of radiation should be within safe limits, but the risk associated with low doses might be very less than the risk an individual may encounter in day-to-day activities.

**B. N. Pandey**  
**Editor**

### **References**

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3. Brenner DJ , Hall EJ, New England Journal of Medicine 357 (2007) 2277-84
4. Scott BR et al, Journal of American Physicians and Surgeons, 13 (2008) 8-11
5. Scott BR (Presentation) [www.ddponline.org/scott07.pdf](http://www.ddponline.org/scott07.pdf)

## 1. NEWS AND VIEWS

### *Radiation and Cancer Biology*

- **Radiation Therapy: Sensitizing Stem Cells**

Differential response of radiation to proliferating medulloblastoma cells to cause apoptosis, while it causes cell cycle arrest in cancer stem cells. Use of small molecule inhibitors could result in radio-sensitization. Read the full story on following link

<http://www.signaling-gateway.org/update/updates/200804/nrc2358.html>

- **Nano-particle to cancer therapy**

Application of nanoparticle in cancer therapy could not only decrease the side effects of anti-cancer agents but they would also make more effective delivery of drug to tumor site.

<http://sciencenow.sciencemag.org/cgi/content/full/2008/708/1>

- **Biomarker method validation in anticancer drug development**

In anti-cancer drug development validation of biomarkers has become end point in clinics. This article from British Journal of Pharmacology discuss about current thinking of biomarker validation.

<http://www.nature.com/bjp/journal/v153/n4/abs/0707441a.html>

- **Cellphone radiation affects cells in living humans**

It is been debate whether radiation from cellphone cause harmful effects to human being. However, recent results suggest that mobile phone radiation affects expression of proteins. Read following link

<http://www.newscientist.com/channel/health/mg19726443.800?DCMP=NLC-nletter&nsref=mg19726443.800>

also read an open access article from BMC Genomics

<http://www.biomedcentral.com/1471-2164/9/77>

## ***Nuclear Technology & Safety***

- **Indo-US nuclear deal**

Since recent few months Indo-US nuclear deal has been in news highlights and intense political debate. A lot has been said in pro and cons of deal. The eNewsletter provides links to read some article related to this issue:

<http://www.nature.com/news/2008/080723/full/news.2008.973.html>

[http://sify.com/news/nuclear\\_deal/index.php](http://sify.com/news/nuclear_deal/index.php)

- **Nuclear super-fuel gets too hot to handle**

Whether it is economic and easy to use spent fuel and derive more energy.

<http://technology.newscientist.com/channel/tech/mg19826514.200?DCMP=NLC-nletter&nsref=mg19826514.200>

- **Japanese nuclear plant in quake risk**

<http://www.nature.com/news/2008/080604/full/453704a.html>

- **Could nuclear warheads go off 'like popcorn'?**

The safety issue of nuclear warheads

<http://technology.newscientist.com/article.ns?id=mg19826625.000>

- **Pakistan finds two radioactive containers**

<http://www.nature.com/news/2008/080716/full/454258b.html>

## *Science and Society*

- **The next big climate challenge**

It is big challenge to predict the climate changes. However, supercomputers may play a role, which need governments to work together required to formulate some policy. Read the Editorial from Nature on the subject:

<http://www.nature.com/nature/journal/v453/n7193/full/453257a.html>

- **Impacts of climate warming on terrestrial animals**

Effect of anthropogenic climate changes on organisms is often predicted to increase with latitude. It also depends on physiological sensitivity of organism. Read the full open access article on

<http://www.pnas.org/cgi/content/abstract/105/18/6668?etoc&eaf>

- **Open access publication and developing world**

Is open access policy helping the developing world?

<http://www.nature.com/nature/journal/v453/n7194/full/453450c.html>

- **Are the electronic publications narrowing citations?**

As journals become available electronically, scientists and scholars have more articles at their fingertips but cite relatively fewer, and these tend to be more recent.

<http://www.sciencemag.org/cgi/content/abstract/321/5887/395>

- **Negative results**

The non-reproducible results need explanation, what went wrong in experiments. Read editorial on this issue

<http://www.nature.com/nature/journal/v453/n7193/full/453258b.html>

- **Is Mars OK for life?**

<http://sciencenow.sciencemag.org/cgi/content/full/2008/626/2>

## 2. LETTERS FROM THE READERS

- I wish you all the good luck in raising the standard of the society. I appreciate the efforts of the editorial board for publishing Newsletter for keeping the members update with the various activities in the field of Radiation Biology. Good luck and keep it up for al time to come.  
-**Dr A. B. Prasad**, Professor Emeritus, Centre for Bioinformatics, Jerath Compound, Hinoo, Ranchi, Jharkhand
- Congratulations & thank you for the news letter  
-**Dr. (Mrs.) A. G. Jagtap**, Asst. Prof. in Phramacology, Bombay College of Pharmacy, Mumbai
- Accept my congratulations for the ISRB eNewsletter. It's quite informative and contains the websites for detail. I wish all the best and hope this is brought out regularly.  
- **Dr. Arun Chougule**, Associate Professor Radiation Physics & RSO In-charge Telemedicine, SMS Medical College & Hospital, Jaipur
- I just received the news letter. Thanks. I find that it has very useful information for all interested in Radiation Research. I appreciate your efforts.  
- **Dr. A.T. Natarajan**, Leiden University Medical Centre, Leiden, The Netherlands
- Thank you very much for taking this initiative. This will indeed help the radiation biology workers. Some more information about the research work going on in India would be quite helpful. Looking forward for the next issue.  
- **Dr. Ashu Bhan Tiku**, Assistant Professor, Radiation Biology Laboratory, School of Life Sciences, Jawaharlal Nehru University, New Delhi
- Thank you very much for sending eNewsletter of ISRB. I have gone through this. You have done a very good job.  
-**Dr. Dilip Bhattacharjee**, Ex-Senior Scientist, Radiation Biology and Health Sciences, Division, BARC, Mumbai
- I have gone through the electronic version of ISRB news letter. It is an excellent Job.  
- **Dr. Ganesh Chandra Jagetia**, Professor and Head, Department of Zoology, Mizoram University, Aizwal



- Let me congratulate the team for this effort. It is heartening that ISRB is actively engaging itself in scientific and academic activities. My very personal appreciation for the efforts. It is hoped that ISRB members would actively contribute in the eNewsletter and improve in future.

*-Prof. K.P. Mishra, Former Head, Radiation Biology and Health Sciences Division, Bhabha Atomic Research Center, Mumbai, Director, United Research Center (URC), Allahabad, Principal, United Institute of Technology, Allahabad*

- My congratulations for whatever you are doing and the responsibility accepted.

*-Prof. P. N. Srivastava, Professor Emeritus JNU, Delhi*

- Thanks for the information for interesting activity.

*-Dr. Srinivas Pentyala, SARAS Coordinator, Director of Translational Research, Stony Brook University Medical Center, Stony Brook, NY, USA*

- I am happy to receive the ISRB e-newsletter, Radiation Science Today. In terms of current trends, and access to and use of modern communication technology, it is a right thing to do. I congratulate the team for this and wish you all success in the future. I do hope you will keep it up. I am sure you and your team will leave no stone unturned in progressively making the e-newsletter more useful to members of ISRB and other interested readers. In my considered opinion, increasing the scientific content of the e-newsletter, creating recurring features, sections, scientific cartoons/humor column, achievements of members of ISRB, etc. are some measures that should help you achieve the goal.

*- Prof. R. N. Sharan, Radiation & Molecular Biology Unit, Department of Biochemistry, North-Eastern Hill University, Shillong*

- I am receiving the newsletter. It is very nice compilation and good information.

*- Prof. Sambasiva Rao, Department of Biotechnology, Acharya Nagarjuna University, Nagarjuna*

- Thank you for sending ISRB eNewsletter. This is very useful for me and my laboratory.

*-Dr. Anup Dwivedi, Gorakhpur University, Gorakhpur*

### 3. UPCOMING CONFERENCE & WORKSHOP OF ISRB

#### ICRB 2008

The Organizing Committee of ISRB 2008 invites you to participate in International Conference of Radiation Biology and Translational Research in Radiation Oncology, Nov. 10-12, 2008, Jaipur, near Delhi, India. The Conference would provide unique opportunity to participants for scientific presentations and interaction with eminent scientists from India and abroad. In addition, Jaipur, also known as '**Pink City**', is famous for its historical monuments, traditional culture, and one of the most attractive tourist sites in India.

#### Major Topics:

##### Radiation Biology

- Interaction of Radiation with biological systems
- Molecular basis of radiation induced apoptosis
- Radiation induced genomic instability
- Use of genomic and proteomic technologies in radiation biology
- Cytogenetic and molecular markers of radiation damage
- Radiation protection and modification of radiation injuries
- Bystander effects of radiation
- Radiation and human environment
- Radiation effects on population and risk assessment
- Nutraceuticals and anti-oxidants in radiation medicine
- Adaptive response by low dose and low dose rates
- Ayurvedic research for radiation protection
- Models of Radiation bio-dosimeter and biological monitoring
- Biology of non ionizing radiation
- Radiation protection and safety regulations
- Novel alternative radiation modalities
- Biological hazards of radiation terrorism
- Industry / Academic collaborations- The ins and outs
- Radiation biology teaching - current status & future prospects

##### Translational Radiation Oncology

- New data for cancer risk assessment
- Imaging for radiation therapy and cancer biology
- Targeting tumor hypoxia for therapeutic gain
- Molecular image-guided radiotherapy
- How to translate molecular targeting into radiotherapy?

- Oxidative radicals as signaling agents
- Tumor micro environment, immunity and radiation
- Tumor metabolism and metastases
- Cancer initiating stem cells and radiation resistance
- Radiation-induced signal transduction pathways
- Influence of the tumor vasculature on response to therapy
- Angiogenesis and gene expression
- Brachy therapy
- Role of biomarkers / molecular markers in the management of radiation therapy
- Nanotechnology in radiation oncology
- Chemotherapy and radiation therapy
- Chemoprevention in cancer management
- Radiation Oncology & Cancer biotechnology
- New radio therapy approaches & treatment protocols
- Traditional medicine in the management of Cancer
- Emerging trends in Radiation Oncology
- X-rays/CT/MRI
- Image processing , data analysis & visualization

**Abstract submission deadlines:** August 31, 2008

**Awards:**

**Indian Society for radiation Biology (ISRB)** has the following awards. The application may be sent to Convener, **ICRB-2008** on the address of Conference Secretariat. Details of award is available on [www.icrb2008.org](http://www.icrb2008.org)

- **Life time Achievement Award** : 1
- **M. R. Raju Award** : 1
- **Young Scientists Award** : 3
- **Poster Award** : 5

Present a good poster/oral presentation at the ISRB Meeting and you might be one of the award winners! For details log on [www.icrb2008.org](http://www.icrb2008.org)

**Contact Person:**

**Dr. P.K. Goyal, The Convener**

Radiation & Cancer Biology Laboratory

Department of Zoology, University of Rajasthan, Jaipur (INDIA)

**Tel :** [+91-141-2651199](tel:+91-141-2651199), [98291-34133](tel:+91-141-9829134133)

**Email :** [pkgoyal2002@rediffmail.com](mailto:pkgoyal2002@rediffmail.com); [info@icrb2008.org](mailto:info@icrb2008.org)

For more details, abstract submission, registration and time to time update about the Conference visit Conference Web page: [www.icrb2008.org](http://www.icrb2008.org)

## ***Pre-Conference Satellite Workshop on Bystander effect***

### **International Workshop on Radiation-induced Bystander Effects & their Implications in Cancer Research**

**November 9, 2008, Jaipur, India**

The pre-conference satellite meeting of “**International Conference on Radiation Biology and Translational Research in Radiation Oncology**” will be held in Jaipur on Nov. 9, 2008 as **International Workshop on Radiation-induced Bystander Effects & their Implications in Cancer Research**.

This workshop will discuss the possible role of non-targeted effects of radiation in the clinics. The heavy reliance of modern medicine on CT scans, MRI and other diagnostic imaging techniques means that patients are being exposed to much more medical radiation than in previous times. Modern radiotherapy treatment planning also results in low doses to greater volumes of normal tissue than was usual in the past. Coupled with these changed practices, there has been a major paradigm shift in radiobiology. Low dose exposures are now considered to lead to fundamentally different effects to the well known DNA damage related high dose effects. Non targeted effects including bystander effects, genomic instability, adaptive responses and low dose hypersensitivity predominated at low doses but we know very little about the complex mechanisms which underlie the final expression of low dose radiation effects.

The workshop will start with reviews of the phenomenology and mechanisms followed by thoughtful presentations from imaging and therapy clinicians and scientists who will indicate where these mechanisms might impact therapeutic outcome. The workshop will then consider major questions in the field such as the factors which determine whether non-targeted effects lead to adaptive responses or genomic instability and will attempt to suggest research programmes which could resolve some of these issues.

It will bring together the various disciplines, including Radiation physics, chemistry & biology, that collectively comprise the field of radiation damage to DNA. The Programme is comprised of oral presentations & poster session, and time for open discussion. The goals of this meeting are to stimulate interdisciplinary thinking and synergistic interaction between the participants and to foster the long-term development this research area by encouraging participation of young investigators and their interaction with senior scientists. **The number of participants is**

limited to 150 so that participants are able to enjoy opportunities for intimate interactions and informal discussions.

**Registration:**

- A token of Registration (Fee up to) 31<sup>st</sup> August, 2008 Rs. 300/-
- After 31<sup>st</sup> August, 2008 Rs. 500/-

Registration & accommodation form along with Fee should be sent to:

**Dr. P.K. Goyal, Convener, ICRB 2008**  
**Radiation & Cancer Biology Laboratory**  
**Department of Zoology, University of Rajasthan**  
**Jaipur – 302 004 (India) Tel. : 0091 141 – 2651199, 929134133**  
**E mail : [info@icrb2008.org](mailto:info@icrb2008.org), [pkgoyal2002@rediffmail.com](mailto:pkgoyal2002@rediffmail.com),**  
**Fax : 0091 141 2656273**

## 4. UPCOMING MEETINGS/ WORKSHOPS

- **Biodose 2008** at Dartmouth on September 7-10, 2008. This conference will cover the broad field of biodosimetry and current status of dosimetry to deal with radiation terrorism. It also will cover the estimation of dose for understanding long term effects of radiation.

<http://www.BioDose2008.org>

- **Radiation Research Society** 54th Annual Meeting (September 21– 24, 2008) in Boston, USA. For details see:  
[http://www.radres.org/ECOMradres/timssnet/common/tnt\\_frontpage.cfm](http://www.radres.org/ECOMradres/timssnet/common/tnt_frontpage.cfm)
- The **12<sup>th</sup> International Congress of International Radiation Protection Association (IRPA)** to be held in Buenos Aires, October 19-24, 2008. For details login to: [www.irpa.net](http://www.irpa.net)
- **In conjunction with the Israel Cancer Association Translational Cancer Medicine 2008: Bridging the Lab and the Clinic in Cancer Medicine**, November 3 – 6, 2008, Jerusalem, Israel; **Abstract Submission Deadline:** September 2, 2008, For more information, please visit:  
<http://www.aacr.org/page13863.aspx>
- **International Conference on Radiation Biology and Translational Research in Radiation Oncology**, in collaboration with 9th Biennial Meeting of the Indian Society for Radiation Biology (ISRB), Nov. 10-12, 2008, Jaipur, India

<http://www.icrb2008.org/>

- **International Conference on Medical Physics – 2008 (ACMP-2008) & 29th Annual Conference of Association of Medical Physicists of India, "Advanced Technology of Radiation Medicine and Medical Physics Practice",** Bhabha Atomic Research Centre, Mumbai, India, November 26 - 29, 2008, Multipurpose Hall, BARC Training School Hostel & Guest House, Anushaktinagar, Mumbai - 400094, India, **Contact Person:** Dr. S. D. Sharma, Organizing Secretary

**Email:** sdsharma\_barac@rediffmail.com; sdsbarc@gmail.com

**Web:** [www.icmp2008.com](http://www.icmp2008.com)

- **7th LOWRAD International Conference** "The Effects of Low Doses of Ionizing Radiation in Biological Systems: New Perspectives on Human Exposure"; Lisbon, Portugal November 27 - 29, 2008: Detail information is available at [www.lowrad2008.itn.pt](http://www.lowrad2008.itn.pt)
- **International Conference on Medical Physics, Radiation Protection & Radiobiology, XIV Annual Convention of Northern Chapter of AMPI,** 11-13, February 2009 SMS MEDICAL COLLEGE & HOSPITAL, JAIPUR, INDIA, **Last date of abstract submission:** Nov. 15, 2008, **Contact Person:** Dr. Arun Chougule, Organizing Secretary

**Email:** arunchougule@rediffmail.com, arunchougule11@gmail.com

**Web:** [www.ampi-nc.org](http://www.ampi-nc.org)

- **International Conference on Advances in Free Radical Research: Natural Products, Antioxidants and Radioprotectors & 8<sup>th</sup> Annual Meeting of the Society for Free Radical Research – India,** March 19-21, 2009, C.S.M. Medical University, Lucknow, India. & Era's Lucknow Medical College, Lucknow, India., **Contact Person:** Prof. Abbas Ali Mahdi, Professor, Department of Biochemistry C.S.M. Medical University UP, (Formerly - King George's Medical University), LUCKNOW - 226003, INDIA  
**E-mail:** mahdiaa@rediffmail.com

**Web:** [www.sfrriko2009.com](http://www.sfrriko2009.com)

- **2<sup>nd</sup> Asia Congress of Radiation Research (ACRR-2009),** May 17-20, 2009, COEX, Seoul, Korea organized by Korean Association of Radiation Research, **Deadlines:** Abstract Submission- December 31, 2008, Early Registration- January 31, 2009. **Contact Person:** Yun-Sil Lee, ACRR 2009 Organizing Committee, 215-4 Gongneung-dong, Nowon-ku, Seoul, 139-706, Korea, **Email:** [yslee@kcch.re.kr](mailto:yslee@kcch.re.kr), Tel.: +82-2-970-1325, Fax: +82-2-970-2402

- **14th International Congress for Radiation Research** 2011, August 2011 in Warsaw, Poland.  
[http://www.ptbr.org.pl/icrr2011/icrr2011\\_venue.htm](http://www.ptbr.org.pl/icrr2011/icrr2011_venue.htm)

**Important Notice:** Are you organizing any Workshop/Meeting related to Radiation Research or in related research areas? You can add the announcement of event to this eNewsletter **free of cost!!** The announcement would reach to ISRB Community as well many more in India and abroad. The details of announcement may be communicated to: [isrb\\_enewsletter@yahoo.co.in](mailto:isrb_enewsletter@yahoo.co.in)

## 5. AWARDS/HONORS TO ISRB MEMBERS

***Congratulations to the Members of Indian Society for Radiation Biology for their prestigious Awards and Honors!!  
May God bless all of you many more in future!!***

Name of the ISRB Member	Affiliation	Award/Honors	Year/Period
Prof. A. B. Prasad	Professor Emeritus, Centre for Bioinformatics, Jerath Compound, Hinoo, Ranchi, Jharkhand	<b>President</b> , Environmental Mutagen Society of India  <b>Member</b> , Executive Council, Association of Asian Environmental Mutagen Society	2006-08  Current
Dr. B. N. Pandey	Radiation Biology and Health Sciences Division, B.A.R.C., Mumbai	<b>Member</b> , Podcast Committee, <i>Radiation Research</i> Journal, Radiation Research Society, USA	2007
Dr. H. D. Sarma	Radiation Biology and Health Sciences Division, B.A.R.C., Mumbai	<b>Fellow</b> , National Academy of Veterinary Sciences	2007
Prof. Jean Cadet	Laboratoire "Lésions des Acides Nucléiques", SCIB-UMR-E n°3/CEA/UJF) Institut Nanosciences et Cryogénie, CEA/Grenoble, F-38054 Grenoble Cedex 9, France Department of Nuclear Medicine and Health Science, University of Sherbrooke, Sherbrooke, Quebec, Canada J1H 5N4	<b>'Prix Charles Dhéré'</b> in Chemical Biology  <b>'Médaille Berthelot'</b> in Chemistry  by French Academy of Sciences	2007

Prof. K. P. Mishra	Adjunct Professor, Mumbai University, Mumbai, Director, United Research Center & Principal, United Institute of Technology, Allahabad, Ex-Head, Radiation Biology and Health Sciences Division, BARC, Mumbai	<b>Honorary Professorship,</b> Medical Academy of Semipalatinsk, Kazakhstan in recognition of contributions to advancement of knowledge through research in radiation biology	2007
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## 6. CAREER FORUM

### *Positions and Fellowships*

- Post doctoral Fellowship

<http://www.nature.com//naturejobs/science/jobs/53406>

- Postdoctoral position in immunology

<http://www.nature.com/naturejobs/science/jobs/61323>

- Postdoctoral Fellowship in Stem Cell Biology

<http://www.nature.com//naturejobs/science/jobs/56183>

- Postdoctoral Fellow - Cell Signalling

<http://www.nature.com//naturejobs/science/jobs/63000>

- Postdoctoral Fellowships for Training in Cancer Research

International Agency for Research on Cancer  
Fellowships for junior scientists working in medical or allied sciences and,  
who wish to pursue their career in cancer research

<http://www.iarc.fr/ENG/Fellowships/postdoc.php>



## *Grants and Awards*

- Looking for **Grants, Funds, Fellowships** related to **Radiation Research**, visit the Radiation Research Web page or following link  
[http://www.radres.org/ECOMradres/timssnet/common/tnt\\_JobsFundingandFellowships.cfm](http://www.radres.org/ECOMradres/timssnet/common/tnt_JobsFundingandFellowships.cfm)
- **Pre- and Post Doctoral Fellowships from NIH**  
<http://grants.nih.gov/training/extramural.htm>
- **AACR-Gertrude B. Elion Cancer Research Award**  
<http://www.aacr.org/default.aspx?p=3859>
- **AACR Career Development Awards**  
<http://www.aacr.org/default.aspx?p=3858>
- **AACR seeks nominations of outstanding scientists for prestigious Landon-AACR Prizes for Basic & Translational Cancer Research.**  
Call for nominations now open through August 25, 2008  
For information, visit <http://www.aacr.org/page13893.aspx>

## *Articles related to career issues*

- **The postdoc interview**  
Consider asking these questions during your next postdoc interview.  
<http://www.nature.com/naturejobs/2008/080515/full/nj7193-424b.html>
- **Postdoc competencies**  
<http://www.nature.com/naturejobs/2008/080626/full/nj7199-1282b.html>

## *Important Web Sites*

- **AACR Research Fellowships**  
<http://www.aacr.org/default.aspx?p=3860>
- **GrantsNet** is resource to find funds for training in the sciences and undergraduate science education. Through the support of **HHMI** and **AAAS**, this service is completely free.

[http://www.grantsnet.org/start.cfm?session\\_id=844615](http://www.grantsnet.org/start.cfm?session_id=844615)

- **Naturejobs** the career magazine from Nature with the hottest science jobs and details of career related issues.

<http://www.nature.com/naturejobs/index.html>

- **Post Doc Jobs**, a site providing opportunities about Post Doc Jobs. It is a platform to bring students, Professionals and Research Institutes together.

<http://www.postdocjobs.com/>

- **Science's Next Wave** is a weekly online publication that covers scientific training, career development, and the science job market. *Next Wave* is published by *SCIENCE* magazine and the American Association for the Advancement of Science.

<http://nextwave.sciencemag.org/?CFID=789744&CFTOKEN=78870222>

**Important Notice:** If you have any vacancy in your laboratory/Institute, you can advertise the post through this eNewsletter. In addition, any award in these fields may be also announced. **It is absolutely free!!** The advertisement would reach to Members of ISRB and many more, who may be interested about the vacancy. The details of vacancy may be communicated to:  
[isrb\\_enewsletter@yahoo.co.in](mailto:isrb_enewsletter@yahoo.co.in).

## 7. ARTICLES OF THE ISSUE

- **Smac/DIABLO enhances the therapeutic potential of chemotherapeutic drugs and irradiation, and sensitizes TRAIL-resistant breast cancer cells**

Mitochondria driven factors determine radio-sensitization of breast cancer cells. Read the full open access article from *Molecular Cancer* on following link

<http://www.molecular-cancer.com/content/7/1/60>

- **Estrogen enhanced cell-cell signalling in breast cancer cells exposed to targeted irradiation**

Bystander response in irradiated breast cancer cells and its dependence on estrogen receptors has been shown in an article published in *BMC Cancer*. Read the full open access link following

<http://www.biomedcentral.com/1471-2407/8/184/abstract>

## 8. OPEN ACCESS ARTICLES

- **Development of RNAi as a therapeutic strategy**

Open access articles on RNAi in basic issues and therapeutic applications

<http://www.nature.com/mt/webfocus/rnai/index.html>

- **Cell Signaling Articles**

Cell Research presents a series of reviews on signal transduction in the context of stem cell self-renewal and differentiation, cancer and other human diseases.

[http://www.nature.com/cr/focus/cell\\_signaling\\_review.html](http://www.nature.com/cr/focus/cell_signaling_review.html)

- **Effect of prolonging radiation delivery time on retention of gamma-H2AX**

Magnitude of DNA damage and its repair in relatively prolonged delivery of radiation dose during Intensity modulated radiation therapy would decide biological response. Read the an open access article from *Radiation Oncology*

<http://www.ro-journal.com/content/3/1/18>

- **Response of pulmonary artery intimal sarcoma to surgery, radiotherapy and chemotherapy: a case report**

*Journal of Medical Case Reports* 2008, 2:217 (25 June 2008)

<http://www.jmedicalcasereports.com/content/2/1/217>

- **Special Reports on cancer by *New Scientist***

<http://www.newscientist.com/channel/health/cancer>

**Note:** Some of the open access articles are only for limited period.

## 9. USEFUL LINKS

- **Radiation Research Podcast**

You can listen, the telephone interviews to author(s) of selected paper published each month from the latest issue of international scientific journal *Radiation Research*, official journal of the Radiation Research Society. In addition, you can also listen, the interviews by eminent scientists in radiation research about the current topics. Log on to

<http://lsmr1.lbl.gov:8080/xwiki/bin/view/Radiation+Research+Society/>

Or Look for Journal Podcast under category 'Journal' and then 'Journal Podcast' on following web page

[http://www.radres.org/ECOMradres/timssnet/common/tnt\\_frontpage.cfm](http://www.radres.org/ECOMradres/timssnet/common/tnt_frontpage.cfm)

Or Look for 'Radiation Research Podcast' in Google Search

- **Radiation Research Society SIT Discussion Board**

Another site, which may attract you to get information related to Scientific Meetings, vacancies and discussion in Radiation Sciences.

<http://www.radres.org/ECOMradres/timssnet/phpBB2/index.php>

- *Science's Next Wave* is a weekly online publication that covers scientific training, career development, and the science job market. *Next Wave* is published by *SCIENCE* magazine and the American Association for the Advancement of Science.

<http://nextwave.sciencemag.org/?CFID=789744&CFTOKEN=78870222>

- **Link to related other Professional / Academic Societies related to Radiation Biology and Oncology**

[http://www.radres.org/ECOMradres/timssnet/common/tnt\\_RelatedSocieties.cfm](http://www.radres.org/ECOMradres/timssnet/common/tnt_RelatedSocieties.cfm)

- **Nuclear India**

A publication by Department of Atomic Energy, Government of India about nuclear energy and various other related issues

<http://www.dae.gov.in/ni/nimain.htm>

## 10. IMPORTANT JOURNALS

- Annals of Oncology  
<http://annonc.oxfordjournals.org/>
- Acta Oncologia  
<http://www.informaworld.com/smpp/title~content=g779470932~db=all>
- BMC Cancer  
<http://www.biomedcentral.com/bmccancer/>
- Cancer Epidemiology Biomarkers & Prevention  
<http://cebp.aacrjournals.org/>
- Cancer Prevention Research  
<http://cancerpreventionresearch.aacrjournals.org/>
- Cancer Research  
<http://cancerres.aacrjournals.org/>
- Cell Growth and Differentiation  
<http://cgd.aacrjournals.org/>
- Clinical Cancer Research  
<http://clincancerres.aacrjournals.org/>
- Clinica Chimica Acta  
[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/506018/description#description](http://www.elsevier.com/wps/find/journaldescription.cws_home/506018/description#description)
- Free Radical Biology and Medicine  
[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/525469/description#description](http://www.elsevier.com/wps/find/journaldescription.cws_home/525469/description#description)

- **Free Radical Research**

<http://www.tandf.co.uk/journals/authors/gfrrauth.asp>

- **Indian Journal of Radiation Research**

For manuscript submission and, subscription and free sample copy of the Journal contact, Editor: Dr K. P. Mishra, Email: [mishra\\_kaushala@rediffmail.com](mailto:mishra_kaushala@rediffmail.com), Assistant Editor: Dr. H. D. Sarma Email: [hdsarma1162@yahoo.com](mailto:hdsarma1162@yahoo.com)

- **International Journal of Radiation Biology**

<http://www.informaworld.com/smpp/title~content=t713697337>

- **International Journal of Radiation Oncology, Biology and Physics**

[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/525471/description#description](http://www.elsevier.com/wps/find/journaldescription.cws_home/525471/description#description)

- **Iranian Journal of Radiation Research**

<http://www.ijrr.com/>

- **Journal of Cancer Research and Therapeutics**

<http://www.cancerjournal.net/>

- **Journal of Radiation Research**

[http://www.journalarchive.jst.go.jp/english/jnltop\\_en.php?cdjournal=jrr1960](http://www.journalarchive.jst.go.jp/english/jnltop_en.php?cdjournal=jrr1960)

- **Molecular Cancer Research**

<http://mcr.aacrjournals.org/>

- **Molecular Cancer Therapeutics**

<http://mct.aacrjournals.org/>

- **Radiation Measurements**

[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/286/description#description](http://www.elsevier.com/wps/find/journaldescription.cws_home/286/description#description)

- Radiation Oncology

<http://www.ro-journal.com/>

- Radiation Physics and Chemistry

[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/331/description#description](http://www.elsevier.com/wps/find/journaldescription.cws_home/331/description#description)

- Radiation Protection Dosimetry

<http://rpd.oxfordjournals.org/>

- Radiation Research

<http://www.rrjournal.org/perlserv/?request=get-archive>

- Radiotherapy and Oncology

[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/506042/description#description](http://www.elsevier.com/wps/find/journaldescription.cws_home/506042/description#description)

## 11. RECENT BOOKS

- Development of a Biokinetic Model for Radionuclide-Contaminated Wounds and Procedures for Their Assessment, Dosimetry and Treatment

<http://www.rrjournal.org/perlserv/?request=get-document&doi=10.1667%2F0033-7587%282008%29169%5B605%3ADOABMF%5D2.0.CO%3B2>

- Hand Book of Membrane Separations: Chemical, Pharmaceutical, Food and Biotechnological Applications, CRC Press, Taylor & Francis Group, New York, **Editors:** A.K. Pabby, Syed S. H. Rizvi and A.M. Sastre

**Section I:** Membrane Applications in Chemical and Pharmaceutical Industries and in conservation of natural Resources

**Section II:** Membrane Applications in Biotechnology, Food Processing, Life Sciences and Energy Conservation

**Section III.** Membrane Applications in Industrial waste management (including nuclear), Environmental Engineering and Future Trends in Membrane Science

[http://www.crcpress.com/shopping\\_cart/products/product\\_detail.asp?sku=9549&isbn=9780849395499&parent\\_id=&pc=](http://www.crcpress.com/shopping_cart/products/product_detail.asp?sku=9549&isbn=9780849395499&parent_id=&pc=)

- **Radiobiological Modelling in Radiation Oncology**

Details of book is available at following link

<http://www.informaworld.com/smpp/content~content=a791893135~db=all~order=page>

- **Radiation Oncology Physics: A Handbook for Teachers and Students**

EB Podgorsak (Editor), Publisher: International Atomic Energy Agency  
Publication 2005

<http://www.nature.com/bjc/journal/v98/n5/abs/6604224a.html>

- **SCIENCE AND RELIGION: For a Redefinition of God**

[http://www.sciencemag.org/cgi/content/summary/320/5883/1590?sa\\_campaign=Email/toc/20-June-2008/10.1126/science.1159912&eaf](http://www.sciencemag.org/cgi/content/summary/320/5883/1590?sa_campaign=Email/toc/20-June-2008/10.1126/science.1159912&eaf)



## 12. CONTENTS OF INDIAN JOURNAL OF RADIATION RESEARCH

<b>Indian Journal of Radiation Research (IJRR)</b>		
<b>Volume: 4, No.: 3-4, Year: 2008</b>		
<b>CONTENTS</b>		
<b>S.N.</b>	<b>Title / Author(s)</b>	<b>Page No.</b>
1.	Mapping Tumor Hypoxia Using Magnetically Labeled Cells <i>Anna Bratasz and Periannan Kuppusamy</i>	144-151
2.	Recognising Barriers To Cataract Surgery In Patients Residing Near The Semipalatinsk Nuclear Test Site <i>Yuliya Semenova, Tolebay Rakhypbekov, Zhaxybay Zhumadilov</i>	152-158
3.	Modulatory Influence Of Polybion In Radiation And Cadmium Induced Haematological Changes In The Swiss Mice <i>R. K. Purohit, B.M.Meena, ArunaChakrawarti and K. M.Bhartiya</i>	159-163
4.	Assessment Of Environmental Radiation Status Of Shivapuri Area In Kathmandu Valley (Nepal) <i>N. Neupane, B.R. Shah and L.N. Jha</i>	164-169
5.	Anti-cancer Activity Of Vitamin D: Immuno-modulatory And Anti-proliferative Mechanism <i>Ravi Joshi</i>	170-181
6.	Role Of Radiation Therapy In Head And Neck Cancer -An Experience In National Institute Of Cancer Research And Hospital, Dhaka <i>M. Kamaluddin, Mo. Baki, Anm Lutfe Noor, Amm. Shariful Alam</i>	182-184
7.	Effect Of Antineoplastic Drugs On Transplantable Barcl-95 Tumour Derived From Radiation-induced Thymic Lymphoma <i>H. D. Sarma, P. B. Vidyasagar and K. P. Mishra</i>	185-187
8.	Inhibition Of DNA Repair From Radiation Damage By Hyperthermia Is Mainly Realized Through The Production Of Irreversible Damage <i>Jin Kyu Kim, Ludmila N. Komarova, Su Hyoun Kim, Vladislav G. Petin</i>	188-195

July-September

Issue: 3

Year: 2008

For manuscript submission and, subscription and free sample copy of the Journal contact,  
Editor: Dr K. P. Mishra, Email: [mishra\\_kaushala@rediffmail.com](mailto:mishra_kaushala@rediffmail.com), Assistant Editor: Dr. H. D. Sarma Email: [hdsarma1162@yahoo.com](mailto:hdsarma1162@yahoo.com)

## 13. NOTICE BOARD

- **Update your email and contact address**

Dear Members of ISRB,

The enewsletter would be send to ISRB Members by email only. If your email address is getting changed or you have any other preferred email, please communicate to us as soon as possible on [isrb\\_enewsletter@yahoo.co.in](mailto:isrb_enewsletter@yahoo.co.in). In case, any other ISRB Member, who is not receiving eNewsletter, please intimate us his/her email address.

In addition, if any other friend or colleague is interested to receive the eNewsletter, please let us know his/her email address to be included in our mailing list. The eNewsletter is free to ISRB Members as well as non-Members too. **The subscription of eNewsletter is absolutely free!!!**

In addition, it is frequent problem to communicate with ISRB members due to change in address. If your contact address has been changed please intimate to Secretary, ISRB. This would help us to reach you and communicate, when ever needed.

- **Join ISRB**

**Are you/your colleague/friend working in Radiation Research or related field and still not a Member of Indian Society for Radiation Biology? Join ISRB.**

As Member of ISRB, (a) you would join with scientific community working in Radiation Research and related research areas. (b) You are entitled to participate in Meeting/Workshops of ISRB at reduced Registration Fee (c) Your interaction with Scientists and experts from India and abroad would help in your career.

To be a Member of ISRB, fill the attached application form (in last of eNewsletter) along with Membership fee to Secretary, ISRB. For details, contact Secretary or any of the Office Bearers of ISRB as given below.

The application form can be download from following link  
<http://www.freewebs.com/isrbenewsletter/ISRB%20Membership%20Application%20Form.pdf>

- Awards / Honors to ISRB Members**

Editorial Board 'Radiation Science Today' is pleased to launch a new column "**AWARDS/HONORS to ISRB Members**". We hope the column would make us more aware with each other about our awards/ scientific achievements.

**This column is only for Members of Indian Society for Radiation Biology.** If you are Member of ISRB and received any award or scientific honor, you are requested to send details of same in following format on email address: [isrb\\_enewsletter@yahoo.co.in](mailto:isrb_enewsletter@yahoo.co.in), with **subject line:** Awards/Honors.

To avoid the verification of Membership and any ambiguity from non-ISRB Members, a line of statement is requested that 'I am a Member / Life Member of Indian Society for Radiation Biology'.

Details of award or scientific recognition can be submitted in prescribed format provided below as when received, which would be included in next upcoming issue of the eNewsletter.

Please circulate the announcement to your colleagues and friends, who are Members of ISRB. Please provide complete information to avoid unnecessary delay in publication in eNewsletter.

<b>Name and Present Address of ISRB Member</b>	<b>Affiliation (if any)</b>	<b>Name of Award/Honor</b>	<b>Year/Period</b>

**Statement:** I am Member/Life Member of Indian Society for Radiation Biology.

Name of the ISRB Member:

July-September

**Issue: 3**

**Year: 2008**

- **You can contribute in this eNewsletter**

You can send your contribution, which may be included in this eNewsletter under '**Reader's Column**'

Brief scientific article (maximum 1000 words, if reference needed, in 'International Journal of Radiation Biology' style) may be submitted for publication in eNewsletter. Your article may fall under following subject category: (i) radiation sciences or related research areas; (ii) your opinion on any scientific issue, technique or some general topics; (iii) any major finding or research concept from the archives of radiation sciences. The article should be original. It would be published in eNewsletter after general screening/reviewing of the article by the Editorial Board.

For any further clarification or submission of any article write to Editor on email address: [isrb\\_enewsletter@yahoo.co](mailto:isrb_enewsletter@yahoo.co)

In addition, if you come across any recent journal / books published in radiation and related research areas, please send us the details of the book/journal on our email: [isrb\\_enewsletter@yahoo.co](mailto:isrb_enewsletter@yahoo.co). The details of books/journal would be included in the eNewsletter **free of cost!!!**

- **Coming Soon**

The following new columns are considered to be launched soon in upcoming issues of eNewsletter. Your co-operation and contribution is requested.

**Welcome to New Members of ISRB**

We would like to welcome the new Members joining to ISRB with providing their affiliation, his/her research areas/expertise and recent photograph (if available). Secretary, ISRB is requested to provide their details of new Members joining to ISRB, as and when available.

**From Archives of Radiation Sciences**

During more than century long journey, Radiation Sciences have been engraved by milestone contributions of the researchers in diverse fields, ranging from physics, physiology, chemistry and biology. In future issues, we would like to launch a column '**From Archives of Radiation Sciences**', which would be not only of interest to know / refresh about some of the milestone papers but also pay our regard to our pioneer researchers. If any of you are interested to contribute for this column, please write us.

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(Reg. No. S-19927, dt. May 5, 1989)

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Tel: +91-11-2942418, 2940667 Fax: +91-11-2919509

Web page: [www.icrb2008.org](http://www.icrb2008.org), [www.isrb-india.com](http://www.isrb-india.com)

We hope you will find this Newsletter as a useful resource of information. However, we look forward for your active contribution and valuable comments/ suggestions for improvement of the eNewsletter on [isrb\\_enewsletter@yahoo.co.in](mailto:isrb_enewsletter@yahoo.co.in) or any of the Member of Editorial Board.

You are being sent the eNewsletter since either you are member of Indian Society for Radiation Biology or identified as potential reader of the eNewsletter. If you wish to discontinue receiving the eNewsletter in future write to us: [isrb\\_enewsletter@yahoo.co.in](mailto:isrb_enewsletter@yahoo.co.in).

**Disclaimer:** *Every effort has been taken to provide up-to-date and correct information in the Newsletter. However, readers are advised to check the related source of information.*

Editorial Board

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July-September

**Issue: 3**

**Year: 2008**

**INDIAN SOCIETY FOR RADIATION BIOLOGY**

(Regd. No. 5-19927, dt. May 5, 1989)

H.O.: Institute of Nuclear Medicine &amp; Allied Sciences, Lucknow Road, New Delhi-110 054

[http://www.geocities.com/isrb\\_india/](http://www.geocities.com/isrb_india/)**Application for Membership**

To:

Secretary

Indian Society for Radiation Biology (ISRB)

Department of Medicinal Chemistry, Institute of Medical Sciences

Benaras Hindu University, Varanasi- 221005, India

Dear Sir,

I wish to apply for Life/ Annual/Membership for the Indian Society for Radiation Biology. My particulars are given below:

1. Full Name (Block Letters)

.....

2. Present Position/Title

.....

3. Date of Birth ...

.....

4. Academic qualifications:	<u>Degree</u>	<u>University</u>
<u>Year</u>		

.....

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.....

.....

5. Field of Specialization

.....

6. Research Interest

.....

.....



7. Address: Official:

.....  
.....  
.....

Tel... ..Fax: ..... E-mail

.....

Permanent

.....

8. Registration Fee:      Annual Membership      : Rs. 100.00      Foreign members: US\$ 10  
                                 Life Membership         : Rs 1000.00      Foreign members: US\$ 100

Bank transfer/Draft/Cheque No. ....Date: .....Drawn on Bank. ....

.....in favour of 'Indian Society for Radiation Biology' is enclosed.

Place: ..... Date:..... Signature: .....

Proposed by .....Membership No. and Signature .....

Seconded by ..... Membership No. and Signature .....

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### ***For Use of ISRB Secretariat Only***

Membership No. .... Type of Membership .....

Membership approved/not approved by Executive Council in its meeting held

on.....

Payment received vide ..... on

.....

Secretary/Treasurer: .....

---

### **President, Indian Society for Radiation Biology**

Please mail the Application for Membership along with two recent passport size photographs to:  
Dr Yamini B. Tripathy, Secretary, ISRB, Department of Medicinal Chemistry, Institute of Medical  
Sciences, Benaras Hindu University, Varanasi- 221005, India. E-mail:yaminiok@yahoo.com