

# Radiation Environment and Medicine

## Instructions for Authors

Revised 29 May 2023

The journal welcomes original papers that contribute to the progress in radiation environment and medicine. Submissions from all countries are invited.

Only manuscripts written in clear, concise English will be accepted for review. Authors who are not native English speakers should note that only manuscripts checked and edited by a native English speaker with sufficient scientific knowledge will be accepted.

### I. Aims and Scope

The Radiation Environment and Medicine (REM) is an international peer-reviewed journal published in print and online (open access) semiannually by the Hiroasaki University Press. The REM publishes high-quality scientific articles on all aspects related to radiation environment and medicine. These include epidemiological study, biological effect, dose assessment, education, radiochemical analysis, radiation nursing, health physics, radiation measurement, and clinical activities, but not limited to them. Experimental and theoretical reports are also accepted.

In 2010, Hiroasaki University initiated a program, the "Educational Program for Professionals in Radiation Emergency Medicine". To contribute to progress in radiation emergency medicine worldwide, Hiroasaki University determined to publish an academic journal. Then since 2012, Hiroasaki University has issued Radiation Emergency Medicine. And in view of the current situation, the editorial board elected to change the journal name to Radiation Environment and Medicine. Since 2016, it has been issued as the continuation of Radiation Emergency Medicine.

### II. Ethical Standards for Publication

All of the work presented in submitted manuscripts must be free of duplicate publication and scientific misconducts.

Author(s) submitting to the REM shall ensure that the submitted manuscript has not been published or presented elsewhere in part or in entirety and is not under consideration by another journal.

The author(s) shall ensure that the submitted manuscript does not contain fabrication, falsification, and plagiarism.

The Editors-in-Chief reserve a right to reject manuscripts and withdraw publications which do not meet the ethical standards for publication.

### III. How to Submit

Please send the manuscript to the following address in mail attachment. E-mail: [rem@hirosaki-u.ac.jp](mailto:rem@hirosaki-u.ac.jp)

In addition, download a submission form, fill it out and send it to us with your manuscript.

<http://crss.hirosaki-u.ac.jp/rem/instructions-for-authors.html>

### IV. Types of Manuscript

The Journal publishes Reviews, Regular Articles, Notes and Others.

1. Reviews: Describing the research results of the author.

2. Regular Articles: The manuscript being submitted must consist of original research performed by the authors and the research must include new information that is of significance.

3. Notes: Papers containing new facts and important data derived from incomplete or partial studies may be suitable as a Note including case reports. In general, a Note should not exceed 2,000 words (approximately 4 printed pages).

4. Others

### V. Manuscript Preparation

#### 1. Manuscript

The text, figures, and tables should be submitted as three separate files. Please type manuscripts double-space with 12-point size for Word files. Please type the page number on every page. All files should have a page setup for 210 mm × 279 mm sized paper when printed. Tables can be displayed horizontally if necessary.

(1) Title Page (Page 1) State categories of articles and fields (choose from epidemiology, biological effect, dose assessment, education, radiochemical analysis, radiation nursing, health physics, radiation measurement, or clinical activities). State the title of the article, name of author (full name), affiliated organization, and address (postal code). Place an asterisk (\*) on the right shoulder of the name of the corresponding author. State the name of the corresponding, affiliated organization and address, telephone number, fax number, and e-mail address at the lower left.

(2) Abstract, Keywords, and Highlight (Page 2) Provide an abstract (within 200 words), keywords (3-6 words), and highlight (a single sentence). A graphical abstract representing the work can be also submitted. It shall meet the requirements for figures (see **3. Figures** below).

(3) Main Text (Page 3) Write in the order of text, acknowledgements, and references. Enter the serial numbers for any structural formulae, figures, and tables. Print double space with a 25mm margin in all directions on A4 size paper (generally 23 lines/page), with page numbers entered in the middle of the bottom of the page and serial line numbers on the left side of the page.

#### 2. Tables

Tables should be numbered consecutively with Arabic numerals. The proportions of the printed page should be considered in designing the table. Footnotes to tables should be identified with superscript lowercase italic letters, *a*, *b*, etc., and placed at the bottom of the page containing the table.

### 3. Figures

Figures may be submitted in the following formats: Adobe Illustrator, PDF, Microsoft PowerPoint, TIFF, and JPEG sized less than 10 megabytes. Most graphics programs have the option to save figures in one or more of these formats. Please note that pasting figures created in another format into any of these programs will result in poor quality figures that will not be acceptable. We may ask for higher resolution photographs and/or figures for printing.

With the exception of some chemical structures, all illustrations are to be considered as figures, and each graph, drawing or photograph should be numbered in sequence with Arabic numerals. Figures should be designed to fit the proportions of the printed page within single column (85 mm) or double columns (175 mm) width.

If a figure contains more than one panel, each panel (A, B, etc.) should be labeled within the panel, sans-serif fonts should be used in figure itself. The same fonts should be used in the text and legends. A double-spaced listing of the figure legends should be provided in the text file.

(1) Graphs and other line drawings must be of a sufficient quality for reproduction. High-resolution (at least 600 dpi for line art) digital files should be submitted. All lines, including those used for curve fitting, should be at least 1 point in weight. The drawings should be sharp and should show a high contrast. Symbols used to identify points within a graph should be large enough that they will be easily distinguishable when the figure is reduced.

(2) Halftone and color photographs should be of sufficient quality to permit accurate reproduction. High-resolution (at least 400 dpi for halftones or color images) digital files should be submitted. The best results will be obtained if authors match the contrast and density of all figures appearing on a single plate. Magnification scales on photographs should be indicated by means of bars (–). The printed and electronic versions of the journal will contain the same versions of the figures (i.e. either black and white or color in both places).

### 4. Abbreviated words

Abbreviations should be spelled out the first time they are used and the abbreviated form inserted in brackets immediately afterwards, and then the abbreviations used thereafter. Abbreviations that can be used without definition include the following:

ATP (adenosine 5'-triphosphate), cAMP (adenosine 3', 5'-cyclic monophosphate), CD (cluster of differentiation), cDNA (complementary DNA), DNA (deoxyribonucleic acid), ED50 (50% effective dose), HPLC (high-pressure liquid chromatography, high-performance liquid chromatography), IC50 (inhibitory concentration, 50%), LD50 (50% lethal dose), mRNA (messenger RNA), MS (mass spectrum), RNA (ribonucleic acid), rRNA (ribosomal RNA), tRNA (transfer RNA), UV (ultraviolet), AED (Aerodynamic Equivalent Diameter), AM (Arithmetic Mean), AMAD (Activity Median Aerodynamic Diameter), AMD (Activity Median Diameter), AMTD (Activity Median Thermodynamic Diameter), ATD (Alpha Track Detector), Bq (Becquerel), BEIR (Biological Effects of Ionizing Radiation), BSS (Basic Safety Standard), Ci (Curie), CI (Confidence Interval), CMD (Count Median

Diameter), DCF (Dose Conversion Factor), EEC (Equilibrium-Equivalent Concentration (Bq/m<sup>3</sup>)), EERC (Equilibrium-Equivalent Radon Concentration (Bq/m<sup>3</sup>)), EETC (Equilibrium-Equivalent Thoron Concentration (Bq/m<sup>3</sup>)), EPA (The United States Environmental Protection Agency), Gy (Gray), GM (Geometric Mean), HRT (Human Respiratory Tract), IAEA (International Atomic Energy Agency), ICRP (International Commission on Radiological Protection), ICRU (International Commission on Radiation Units and Measurements), IEC (International Electrotechnical Commission), ISO (International Organization for Standardization), LET (Linear Energy Transfer), LLD (Low Limit of Detection), LSC (Liquid Scintillation Counters), LUDEP (Lung Dose Evaluation Program), MCA (Multi Channel Analyzer), MDA (Minimal Detectable Activity), MMD (Mass Median Diameter), OR (Odds Ratio), PADC (Poly Allyl Diglycol Carbonate), PAEC (Potential Alpha Energy Concentration (J/m<sup>3</sup>)), RDPs (Radon Decay Products), REL (Restricted Energy Loss), Sv (Sievert), SD (Standard Deviation), SRIM (Stopping and Range of Ions in Matter), SSNTDS (Solid State Nuclear Track Detectors), UNSCEAR (United Nations Scientific Committee on the Effects of Atomic Radiation), WHO (World Health Organization), WL (Working Level), WLM (Working Level Month), ALARA (As Low As Reasonably Achievable), WL (Working Level), WLM (Working Level Month), ALARA (As Low As Reasonably Achievable), ALI (Annual Limit on Intake), ATM (Ataxia Telangiectasia Mutated), CT (Computed Tomography), CBR T (Convergent Beam Radiotherapy), Dq (Quasi-threshold Dose), DSB (Double-strand Breaks), EGF (Epidermal Growth Factor), FISH (Fluorescent In Situ Hybridization), FSD (Focus Surface Distance), GVHD (Graft Versus Host Disease), HVL (Half-Value Layer), IRMA (immunoradiometric assay), LD (Lethal Dose), LNT (Linear Non-Threshold), LQ (Linear-Quadratic), MRI (Magnetic Resonance Imaging), NHEJ (Nonhomologous End Joining), NMR (Nuclear Magnetic Resonance), OER (Oxygen Enhancement Ratio), PCR (Polymerase Chain Reaction), PET (Positron Emission [computed] Tomography), QOL (Quality Of Life), RIA (Radioimmunoassay), ROS (Reactive Oxygen Species), SLD (Sub-Lethal Damage), SLDR (Sub-Lethal Damage Repair), SPECT (Single Photon Emission Computed Tomography), SSB (Single Strand Break), TBI (Total Body Irradiation), TDF (Time, Dose and Fractionation), TER (Thermal Enhancement Ratio), TGF (Transforming Growth Factor), TLD (Thermoluminescent Dosimeter), VEGF (Vascular Endothelial Growth Factor)

### 5. Units

The following units should be used: Length (m, cm, mm,  $\mu$ m, nm, Å), mass (kg, g, mg,  $\mu$ g, ng, pg, mol, mmol), mass (kg, g, mg, g, ng, pg, mol, mmol), volume (l, ml,  $\mu$ l), time (s, min, h, d), temperature ( $^{\circ}$ C, K), radiation (Bq, cpm, Gy, Sv), concentration (M, mM, mol/l, mmol/l, mg/ml,  $\mu$ g/ml, %, % (v/v), % (w/v), ppm, ppb)

### 6. Naming Convention

The naming convention with compounds should follow rules established by IUPAC. However, naming conventions of indexes of Chemical Abstracts and Ring Index can also be used.

## 7. References

This journal uses "Vancouver" style, as outlined in the ICMJE sample references. [https://www.nlm.nih.gov/bsd/uniform\\_requirements.html](https://www.nlm.nih.gov/bsd/uniform_requirements.html)

References should be serially numbered in order of appearance (one number assigned to each quoted reference) and indicated in superscript Arabic numerals with right parentheses at the right shoulder of the text. They should be arranged in order of the number and the list provided at the end of the article as References.

Typical reference styles:

1. Mameli A, Greco F, Fidanio A, Fusco V, Cilla S, D'Onofrio G, *et al.* CR-39-detector-based thermal neutron flux measurements in the photo neutron project. *Nucl Instrum Methods.* 2008;266:16:3656–60.
2. Chen CY, Yang KC, Pan LK. Bubble technique for evaluating effective dose of diagnostic x-rays: a feasibility study. *J Radiat Res.* 2009;50(5):449–56.
3. Furusawa Y. Advantages for the use of heavy ion irradiation on cancer cells at radiotherapy. In: Tsujii H, Ban S, editors. *Toward the Tailor-made Radiotherapy.*, Tokyo: Jitsugyou-Kouhou-Sha; 2003. p. 85–90.
4. Horsman MR and Overgaard J. The oxygen effects and tumor microenvironment. In: Steel GG editor. *Basic Clinical Radiobiology.* 3rd ed. London: Hodder; 2002. p. 158–68.
5. IAEA. Biological weighting of absorbed dose: The specific issue of RBE in ion beam therapy. In: *Relative Biological Effectiveness in Ion Beam Therapy.* Vienna: International Atomic Energy Agency; 2008. TRS 461:p.8–25.
6. ICRP. 1990 Recommendations of the International Commission on Radiological Protection, ICRP Publication 60. Ann ICRP 21. Oxford: Pergamon Press; 1991.
7. Abood S. Quality improvement initiative in nursing homes: the ANA acts in an advisory role. *Am J Nurs.* 2002 Jun [cited 2002 Aug 12];102(6):[about 1 p.]. Available from: <http://www.nursingworld.org/AJN/2002/june/Wawatch.htmArticle>
8. Cancer-Pain.org [Internet]. New York: Association of Cancer Online Resources, Inc.; c2000-01 [updated 2002 May 16; cited 2002 Jul 9]. Available from: <http://www.cancer-pain.org/>.

## VI. Nucleic-Acid Base Sequences

New nucleic-acid base sequences should be registered with the databanks of DDBJ, GenBank, or EMBL. If your article is to be posted ensure the accession number is provided to the REM Editorial Board. Sequence information must be disclosed when an article is published. The accession number needs to be described in a footnote of the article.

## VII. Ethical Standards for Experiments with Human Beings and Animals

If the work involves chemicals, procedures or equipment that have any unusual hazards inherent in their use, the author must clearly identify these in the manuscript. If the work involves the use of animal or human subjects, the author shall ensure that the manuscript contains a statement that all procedures were performed in compliance with relevant laws and institutional guidelines and that the appropriate institutional committee(s)

has approved them. Authors shall include a statement in the manuscript that informed consent was obtained for experimentation with human subjects. The privacy rights of human subjects must always be observed.

The Editors-in-Chief reserve a right to reject manuscripts and withdraw publications which do not meet the ethical standards for experiment with human beings and animals.

## VIII. Conflict of Interest

Authors must indicate whether or not they have a financial relationship with the organization that sponsored the research. This note should be added in a separate section as Disclosure before the reference list. If no conflict exists, authors should state: The authors declare that they have no conflict of interest.

Conflicts of interest are defined as those that, through their potential influence on behavior or content or from perception of such potential influences, could undermine the objectivity integrity or perceived value of a publication. They may include any of the following:

**Funding:** Research support (including salaries, equipment, supplies, reimbursement for attending symposia, and other expenses) by organizations that may gain or lose financially through publication of the paper.

**Employment:** Recent (that is, while engaged in the research project), present or anticipated employment by any organization that may gain or lose financially through publication of the paper.

**Personal financial interests:** Stocks or shares in companies that may gain or lose financially through publication; consultation fees or other forms of remuneration from organizations that may gain or lose financially; patents or patent applications whose value may be affected by publication.

We do not consider diversified mutual funds or investment trusts to constitute a competing financial interest. We will not require authors to state the monetary value of their financial interests.

## IX. Author Contributions

The author is highly recommended to provide an Author Contribution Statement on the section at the end of the manuscript in order to give each of the co-authors a legitimate evaluation.

Please note the following:

- To qualify as the author, it is necessary to meet the conditions below.
  - 1) Significant contributions to research concepts and design; or data acquisition, analysis, interpretation;
  - 2) Writing a draft or revising it for intellectual content; and
  - 3) Final approval of the manuscript to be published. All authors must review and approve of the work before submitting it for publication, at least as it relates to their role in the project.
- Contributions to fundraising, data collection, and research group management alone are not acceptable for authorship.
- The name of the author you designate as the corresponding author will be the primary contact during the review

process and should not be changed.

- The information you provide in the submission system will be used as the reliable source of information when your paper is published.

#### **X. Peer Review**

All the submitted manuscripts are initially screened for their suitability by our assigned Associate Editors and those that appear appropriate for publication in the REM are sent to expert reviewer(s) for evaluation. The Associate Editor assigns two reviewers for Reviews, Regular Articles, and Notes, and one reviewer for Others for a first review. The Associate Editor may be sent to another reviewer for a second review. It is our intention to reach a decision on the disposition of a paper on the basis of no more than two rounds of reviewing. Only for exceptional situations will an additional review be undertaken. Such extended reviews are time-consuming, and should not be used as a mechanism to change an otherwise unacceptable manuscript into an acceptable publication.

The Editor-in-Chief make decisions from recommendation by the Associate Editor based on the review report(s). Primary criteria for the decision are originality, technical quality, scientific importance, suitability for the REM, and appropriate statistical processing as well as overall representation which is readily understandable and interesting for non-experts written in concise English.

If you are requested to correct a manuscript, ensure to resubmit the revised version file and a point-by-point response to review comments to the editor in charge within two months of the date of the manuscript being returned. If you submit after two months have passed, the article will then be treated as a new contribution.

If the decision is made to post the contributed article a file of the manuscript and any tables shall be submitted to the Editorial Board. Proofreading by the author shall only take place once and additions and corrections other than typographical errors are not accepted.

The authors may appeal the Editor's decision to reject a manuscript by making a request to the Editor. The Manager editor will not make direct decisions whether or not a paper should be accepted for publication, but rather will assess whether procedures were followed properly. Additional rounds of review or adjudication would only be called for if proper procedures were not followed.

#### **XI. Publication Fee**

Publication fee is free of charge. There is no fee for submitting and publishing a manuscript.

#### **XII. Copyright Information**

Work submitted for publication must be original, previously unpublished, and not under consideration for publication elsewhere. If previously published figures, tables, or parts of text are to be included, the copyright-holder's permission must have been obtained prior to submission.

The copyright of any articles published in the journal shall belong to Hirosaki University, regardless of its form of publication. Authors will be requested to submit Consent to Copyright Transfer in the prescribed form to Hirosaki University, the REM Editorial Board, as soon as they decide to publish.

All papers accepted for publication in *Radiation Environment and Medicine* will appear simultaneously in the print and online.