



JOURNAL OF PHARMACOLOGICAL SCIENCES AND EXPERIMENTAL THERAPEUTICS

(Official Journal of the Nigerian Society for Pharmacological Sciences and Experimental Therapeutics)



WELCOME ADDRESS

President, Nigerian Society of Pharmacology and Experimental Therapeutics (NISPET)

It is with immense pride and deep gratitude that I welcome you to the maiden edition of the Journal of Pharmacological Sciences and Experimental Therapeutics (JOPSET), the official publication of the Nigerian Society of Pharmacology and Experimental Therapeutics (NISPET). This is an exciting landmark achievement in the journey of our Society.

This inaugural publication marks a significant milestone in our collective pursuit of advancing pharmacological sciences and experimental therapeutics, both within Nigeria and across the global scientific community. As a Society committed to excellence, innovation, and academic rigor, we recognized the urgent need for a dedicated platform to showcase the wealth of research, insight, and innovation emerging from our members and collaborators.

The Journal is not just a scholarly publication—it is a symbol of our Society's growing influence and a testament to the dedication of our researchers across all fields of Pharmacology, Toxicology, Pharmaceutical and other related basic medical and clinical sciences, as well as array of educators, and students. It will serve as a credible, peer-reviewed outlet for original research, systematic reviews, case reports, and critical commentary in all areas of pharmacology and therapeutics, with particular relevance to global populations and contexts.

We envision this Journal as a catalyst for scientific discourse, interdisciplinary collaboration, and evidence-based advancement in pharmacological practices. It also underscores our commitment to promoting indigenous research that addresses local health challenges while contributing meaningfully to the global knowledge base.

I wish to express my sincere appreciation to the Editorial Board, reviewers, contributors, and the Publication Committee for their tireless efforts in bringing this vision to fruition. Your scholarly rigor, editorial diligence, and unwavering commitment to quality have laid a strong foundation for what we believe will become one of the leading journals in our field.

To our readers, we encourage you to engage deeply with the content of this edition. Let it inspire new ideas, stimulate critical thinking, and provoke meaningful discussions that will shape the future of pharmacology and experimental therapeutics.

On behalf of the Executive Council and the entire NISPET membership, I warmly welcome you to this historic first edition. May it be the beginning of a new chapter of excellence, impact, and global relevance for our Society.

Thank you.

Omoniyi K. Yemitan, Ph.D. M.App.Sc., P.G.D.A.M.
President,
Nigerian Society of Pharmacology and Experimental Therapeutics (NISPET)



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EDITORIAL

The Journal is the official organ of the Nigerian Society for Pharmacological Sciences and Experimental Therapeutics (NISPET). The society is a scientific organization with a mission to further the growth of Pharmacology and Experimental Therapeutics in Nigeria. The Journal of Pharmacological Sciences and Experimental Therapeutics is a peer-reviewed Journal designed to meet the continuing educational needs of Pharmacologists and related disciplines in Nigeria, Africa and the international medical communities. The *Journal* is a Biomedical Science Journal that is expected to give a leading international coverage of all aspects of experimental and translational Pharmacology. The Journal publishes original research, authoritative reviews, mini-reviews, systematic reviews, meta-analysis, case reports, short communication, and letters to the Editor. Commentaries and Editorials are invited by the Editor on articles published in the Journal. Letters to the Editor are acceptable if they relate to comments on a paper recently published in the Journal OR relate to current issues pertinent to the field of Pharmacology.

I am pleased that the inaugural edition of the journal is being published during this **3rd Scientific Conference and Annual General Meeting of the tagged “UNN 2025”**. The conference theme- *Biodiversity, Traditional Medicine, and Pharmacology: Bridging Indigenous Knowledge with Modern Science*. The Journal of Pharmacological Sciences and Experimental Therapeutics is expected to be published a minimum of twice a year.

This current maiden issue consists of Original research papers (15) and Review (3) authored by researchers.

The editorial members would like to express its gratitude to all the authors and reviewers who have contributed to and supported the journal in achieving this noble objective. Please enjoy JPSET Volume 1 (1), September/October issue 2025, and stay up to date on journal news by visiting the website.

Kind regards,

Prof. Moses A. Akanmu,
B.Pharm, MSc (Ife); PhD (Tokyo), M.Phil. (Stellenbosch) FNAPharm., FWASP
Editor-in-Chief



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Welcome to NISPET

Nigerian Society for Pharmacological Sciences and Experimental Therapeutics (NISPET) is a scientific organization with a mission to further the growth of pharmacology and experimental therapeutics in Nigeria. It aims to facilitate personal interaction among investigators in the field. The Society was founded in 2019 during the global COVID-19 pandemic. The Society gained its full legal registration with the Corporate Affairs Commission (CAC) of the Federal Republic of Nigeria on June 21st, 2021. The Society is a unifier of both basic and clinical Pharmacologists in Nigeria, with 100 members, out of which 57 are financial members. NISPET is a member of the West African Society of Pharmacology (WASP) and largely contributes to her database and the work of its Scientific activity in Nigeria. The Society had its 1st scientific conference in September 2023 with the theme: “Enhancing Pharmacological Sciences Deliverables in Nigeria Within the Context of Global Best Practices” at the University of Lagos, Lagos, Lagos State.

The Society has the specific mission to promote the advancement of pharmacology, support teaching and research, and drive the drug discovery and development process in Nigeria. The Society creates forums to present and exchange ideas on the science of pharmacology and its application, as well as set, improve, and maintain the highest professional and ethical standards among its members and other practitioners of the science of Pharmacology in Nigeria. It is also set to advance the knowledge for developing young Scientists in basic and clinical pharmacology sciences by supporting and providing suitable career pathways through a peer-reviewed journal: *Journal of Pharmacological Sciences and Experimental Therapeutics*, an open-access journal owned by the Society. The Society welcomes applications for membership from all Nigerians worldwide with complimentary benefits and recognition to support their career path in the field of pharmacology.

General Specific Objectives

The Society has the specific mission to:

1. promote the advancement of Pharmacology and drive the process of drug discovery and development in Nigeria.
2. foster, promote, encourage, develop and support teaching and research in all aspects of Pharmacology.
3. create forums to present and exchange ideas on the science of Pharmacology and its application for advancing humanity.
4. set, improve and maintain the highest professional and ethical standards among its members and other practitioners of the science of Pharmacology.
5. set and advance the knowledge for developing young scientists in basic and clinical sciences of Pharmacology by supporting and providing suitable mechanisms for training programmes in Pharmacology.
6. create a medium for community outreach and interactions to emphasize and promote the science of Pharmacology, its relevance and application to the advancement of society and its well-being.
7. do all that is possible to break the barriers that hinder the effective utilization of knowledge of Pharmacology and associated resources.
8. cooperate, collaborate and facilitate links with the West African Society for Pharmacology (WASP) and other Pharmacological societies and industries within and outside Africa.
9. relate with and advise relevant government agencies on policies and best practices of Pharmacology education regarding teaching and translational research for improved health care delivery in Nigeria.
10. promote and advance the profession of Pharmacology in the national healthcare system.
11. liaise with the government and local authorities in the event of emergencies, epidemics and other health-related needs.
12. advance, promote and strengthen the Society's objectives by publishing relevant books, journals, newsletters, etc., for circulation among its members, practitioners of Pharmacology and other interested individuals and corporate bodies nationally and internationally.

A) The Executive

The business of the Society is conducted by the Executive Committee of the Society consisting of:

- i. President: Omoniyi Kayode Yemitan (Lagos State University, Lagos, Nigeria)
- ii. Secretary General: Dr Ben-Azu Benneth (Delta State University, Abraka, Delta State, Nigeria)
- iii. Treasurer: Prof Abidemi James Akindele (University of Lagos, Lagos State, Nigeria)
- iv. Financial Secretary:
- v. Editor:

- vi. Deputy Editor:
- vii. International Liaison Officer:
- viii. Public Relation Officer:

B) Board of Trustees

- i. Chair: Prof Olufunmilayo Adeyemi (University of Lagos, Lagos State, Nigeria)
- ii. Secretary: Prof Peter Akah (University of Nigeria, Enugu, Enugu State, Nigeria)
- iii. Member: Prof Ezekiel O. Iwalewa (University of Ibadan, Ibadan, Oyo State, Nigeria)
- iv. Member: Prof Abraham Owunari (University of Port Harcourt, Port Harcourt, Rivers State, Nigeria)
- v. Member: Prof Karniyus Gamaniel (National Institute for *Pharmaceutical Research* and Development, Abuja, Federal Capital Territory, Nigeria)

Membership

The Society membership consist of regular, honorary, associate, corporate and student members. The acceptance of membership is deemed to imply an agreement to be bound by all the regulations of the Society from time to time.

- i. Regular members are those who actively engage in research connected with Pharmacology or in teaching Pharmacology and agree in writing to become members. Such persons are eligible for election as Regular members upon nomination by two Regular members, who must be financially up to date in paying their annual dues to the Society. If elected, such persons pay the registration fee and, regularly thereafter, the annual membership fee (10,000 NGN) as decided by the Society occasionally.
- ii. Honorary members include persons of distinction in science who have contributed to the advancement of Pharmacology. They are eligible for election as honorary members upon nomination by the Executive Committee. Honorary members have the rights of Regular members, excluding voting. We have 2 members in this category.
- iii. Associate members consist of normally non-pharmacologists who are actively engaged in research connected with pharmacology or in teaching pharmacology and agree in writing to become members. Such persons are eligible for election as associate members upon nomination by the Executive Committee. Associate members have all the rights of regular members except that they shall not be entitled to receive notices of or attend meetings of the Society other than the scientific meetings and do not have the right to vote. When elected, such persons pay the registration fee and, regularly thereafter, the annual membership fee (15,000 NGN) as decided by the Society occasionally.
- iv. Corporate members include corporate entities that have shown demonstrable interest in advancing pharmacological sciences and/or the results of pharmacological research in Nigeria. Such entities are eligible for election as corporate members upon nomination by the Executive Committee. Corporate members have all the rights of Regular members except that they are not entitled to receive notices of or attend meetings of the Society other than the scientific meetings and shall not have the right to vote. When elected, such entity is expected to pay the registration fee and, regularly thereafter, the annual membership fee (50 000 NGN) as decided by the Society occasionally. At the moment, we have two corporate members.
- v. Student members are graduate students currently admitted to higher studies in any area connected with pharmacology and are residents of Nigeria. Such persons shall be eligible for election as student members upon nomination by one regular member who is financially up to date in paying his/her annual dues to the Society. If elected, such persons are not expected to pay the registration and annual membership fees. Student members have all the rights of regular members except that they shall not be entitled to receive notices of or attend meetings of the Society other than the scientific meetings and do not have the right to vote.

New members (regular, associate, and corporate) are given provisional membership upon their election until they have attended two annual conferences of the Society, whereby their membership is confirmed. If at any time the Executive Committee is of the opinion that the interests of the Society require the expulsion of a member, the Executive Committee shall present the matter to the Annual General Meeting. The meeting will afford the member whose expulsion is proposed to defend himself/herself or to be represented by another member nominated by him/her who may speak on his/her behalf. A vote on the Executive Committee's motion for expulsion shall be taken by ballot. If not less than two-thirds of the votes cast are in favour of the expulsion of the member in question, he/she will thereupon cease to be a member of the Society and will not be entitled to the refund of any fee paid by him/her or any part thereof.

Contact Details:

Email: pharm.nispet@gmail.com

Phone number: +23430881152; +2347038461901



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LIST OF REVIEWERS OF THE FIRST MAIDEN EDITION OF THE JOURNAL OF PHARMACOLOGICAL SCIENCES AND EXPERIMENTAL THERAPEUTICS

1. Dr. G. O. Afolayan, Department of Pharmacology, Therapeutics & Toxicology, Faculty of Basic Medical Sciences, College of Medicine, University of Lagos, Lagos, Nigeria
2. Dr. Ben-Azu Benneth, Department of Pharmacology, Faculty of Basic Medical Sciences Delta State University, Abraka, Delta State, Nigeria
3. Dr. Godswill J. Udom, Department of Pharmacology and Toxicology, Federal University Oye-Ekiti, Nigeria
4. Dr. I. O. Ishola, Department of Pharmacology, Therapeutics & Toxicology, Faculty of Basic Medical Sciences, College of Medicine, University of Lagos, Lagos, Nigeria
5. Prof. A. O. Aderibigbe, Department of Pharmacology and Therapeutics, Faculty of Basic Medical Sciences, College of Medicine, University of Ibadan, Ibadan, Nigeria
6. Prof. Peter Akah, Department of Pharmacology and Toxicology, Faculty of Pharmaceutical Sciences, University of Nigeria, Nsukka, Nigeria.
7. Prof. Abidemi J. Akindele, Department of Pharmacology, Therapeutics & Toxicology, Faculty of Basic Medical Sciences, College of Medicine, University of Lagos, Lagos,
8. Prof. (Mrs.) N. O. Omisore, Department of Pharmacology, Faculty of Pharmacy, Obafemi Awolowo University, Ile-Ife, Nigeria.
9. Prof. K. A. Oshikoya, Department of Pharmacology, Therapeutics and Toxicology, Lagos State University College of Medicine, Ikeja, Lagos, Nigeria
10. Prof. O. J. Owolabi, Department of Pharmacology and Toxicology, Faculty of Pharmacy, University of Benin, Benin-City, Edo State, Nigeria
11. Prof. O. K. Yemitan, Department of Pharmacology, Therapeutics and Toxicology, Lagos State University, College of Medicine, Ikeja, Lagos, Nigeria.
12. Dr. Lateef A. Akinpelu, Department of Pharmacology & Toxicology, Faculty of Pharmaceutical Sciences, University of Ilorin, Ilorin, Kwara State, Nigeria
13. Dr. Fatima I. Hassan, Department of Pharmacology and Therapeutics, Faculty of Pharmaceutical Sciences, Ahmadu Bello University, Zaria, Kaduna State, Nigeria
14. Dr. O. I. Adeyemi, Department of Pharmacology, Faculty of Pharmacy, Obafemi Awolowo University, Ile-Ife, Nigeria
15. Dr. O. M. Daniyan, Department of Pharmacology, Faculty of Pharmacy, Obafemi Awolowo University, Ile-Ife, Nigeria
16. Dr. Oladoja Farouk Adedeji, Department of Pharmacology and Toxicology, Faculty of Pharmacy, Olabisi Onabanjo University, Ago-Iwoye, Ogun state, Nigeria
17. Prof. Yerima Musa, Department of Pharmacology & Therapeutics, University of Abuja, Abuja, Nigeria
18. Prof. S. B. Anafi, Department of Pharmacology and Therapeutics, Faculty of Pharmaceutical Sciences, Ahmadu Bello University, Zaria, Kaduna State, Nigeria
19. Dr. O. O. Afolayan, Department of Anatomy, Faculty of Basic Medical Sciences, College of Medicine, University of Lagos, Lagos, Nigeria



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EXECUTIVE OFFICER OF THE SOCIETY

1. President: Omoniyi Kayode Yemitan
Department of Pharmacology and Therapeutics, Faculty of Basic Medical Sciences, Lagos State University, Lagos, Nigeria
Contacts: Phone number: +2348023056011, Email: omoniyi.yemitan@lasucom.edu.ng
2. Secretary: Dr Ben-Azu Benneth
Delta of Pharmacology, Faculty of Basic Medical Sciences, College of Medicine, Delta State University, Abraka, Delta State, Nigeria.
Contacts: Phone number: +23430881152, Email: bben-azu@delsu.edu.ng
3. Treasurer: Prof Abidemi James Akindele
Department of Pharmacology, Therapeutics, and Toxicology, Faculty of Basic Medical Sciences, College of Medicine, University of Lagos, Lagos State, Nigeria.
Contacts: Phone number: +2348062359726, Email: jakindele@unilag.edu.ng
4. Financial Secretary: Prof Anafi Sherifat Bola
Department of Pharmacology and Therapeutics, Faculty of Pharmaceutical Sciences, Ahmadu Bello University, Zaria, Kaduna State, Nigeria Phone number: +2348039183849
Email: sherifatbolaanafi@gmail.com

EDITORIAL TEAM

1. Prof. Moses A. Akanmu (Editor)
Department of Pharmacology, Faculty of Pharmacy, Obafemi Awolowo University, Ile-Ife, Osun State
Contacts: Phone number: +2348035958466, Email: maoakanmu@yahoo.com
2. Prof. Adeola Kola Mustapha (Deputy Editor)
Department of Pharmaceutics and Industrial Pharmacy, Faculty of Pharmaceutical Sciences, University of Ilorin, Ilorin, Kwara State
Contacts: Phone number: +2348055002244, Email: kolamustapha.at@unilorin.edu.ng
3. Dr. Ismail Ishola (Associate Professor & Production Editor)
Department of Pharmacology, Therapeutics and Toxicology, Faculty of Basic Medical Sciences, College of Medicine, University of Lagos, Lagos, Lagos State. (Production Editor)
Contacts: Phone number: +2348033018908, Email: ishola@unilag.edu.ng, ishola.ismail@gmail.com
4. Prof. Kazeem A. Oshikoya (Associate Editor)
Department of Pharmacology, Therapeutics and Toxicology, Lagos State University, College of Medicine, Ikeja, Lagos.
Contacts: Phone number: +2348124820196, Email: kazeemoshikoya@ymail.com
5. Dr. Fatima I. Hassan (Associate Editor)
Department of Pharmacology and Therapeutics, Faculty of Pharmaceutical Sciences, Ahmadu Bello University, Zaria Ahmadu Bello University, Zaria
Contacts: Phone number: +2348034657833, Email: pharm.fatee@yahoo.com
6. Dr. Collins A. Onyeto (Associate Editor)
Department of Pharmacology and Toxicology, Faculty of Pharmaceutical Sciences, University of Nigeria, Nsukka, Nigeria.
Contacts: Phone number: +2348034004221, Email: collins.onyeto@unn.edu.ng
7. Dr. Godswill J. Udom (Associate Editor)
Department of Pharmacology and Toxicology, Federal University Oye-Ekiti & Kampala International University, Western Campus, Ishaka, Uganda.
Contacts: Phone number: +2347038736219, Email: udomgodswill@gmail.com

Author Guidelines

Journal of Pharmacological Sciences and Experimental Therapeutics (NISPET Journal, ISSN XXXX XXXX) is a peer reviewed and the official Journal of the Nigerian Society for Pharmacological Sciences and Experimental Therapeutics (NISPET). The society is a scientific organization with a mission to further the growth of Pharmacology and Experimental Therapeutics in Nigeria.

Manuscript Submission Guidelines/Preparation

Review Article: Maximum length of manuscripts should be 6000 words (24 pages, double-spaced).

Research Article: 5000 words (18 pages, double-spaced).

Technical notes, Commentaries and Short communications (Cameo): 1,500 words (6 pages, double-spaced).

For other types of presentations, e.g. Letters to the Editor, please contact the Editor (this should be between 300 and 800 words).

Manuscript Format

The preferred format of all manuscripts is MS Word (Font type: Times New Roman, Font size: 12). All Figures, Tables and images must be inserted in the manuscript at the position they should appear when published.

Manuscript Style

Manuscript should be written in English.

Each manuscript should be typed double-spaced on A4 (8.5" × 11") paper size with 1 inch margins. It should be arranged in the following order: Title, Abstract, Keywords (3 to 5), Introduction, Materials and Methods (Methods for Operational Research), Results, Discussion, Conclusion, Acknowledgment, Declaration of Conflict of Interest and References.

First page of manuscript

This should include the title of the article, names of the authors (First name, middle initial and the last name), and their affiliations. The corresponding author must provide the full corresponding address (including telephone and e-mail address) at the bottom of the page.

Second page of manuscript

The **Abstract** (no more than 300 words) should be presented on the second page along with title and keywords (4 to 6). The abstract should be structured into: Background, Objectives, Methods, Results, and Conclusion.

Introduction

An introduction should provide a background to the study (appropriate for an international audience). Related literature, based on the objectives of the study, should be indicated and clearly states the specific objectives of the study at the end of this section. Please ensure that any abbreviations and all symbols used in equations are fully defined. Approximate length is 500 - 1000 words.

Materials and Methods (or Methods)

This section should describe the materials and methods used in sufficient detail to allow the study to be replicated. Please include details of ethical approval in this section. Data analysis methods, including the appropriate statistical analysis performed, should be provided. Approximate length is 500 - 1000 words. Review Articles may not necessarily have a Materials and Methods section.

Results

This section should first summarize all the results in the text before referring to Tables and Figures for details. It is essential to include statistical analyses or other indicators to enable assessment of the variance of replicates of the experiments. Data should not be repeated in Figures and Tables. Approximate length is 1000 - 1500 words.

Discussion

The discussion section should summarize the main findings, interpret the findings, and compare them with previous studies, as well as the contribution made to the field. Indicate unanswered questions/provide direction for future research. This should be followed by a critique of the strengths and limitations of the research, including any policy limitations. Approximate length is 1000 words.

Conclusions

A brief conclusion section should summarize the salient findings of the study based on the study objectives. Authors are strongly advised to emphasize their contribution to the field by their research in this section. Approximate length is 200 words.

Review Articles may be structured along suitable segments of the review. However, Introduction and Conclusion sections are required.

References

References should be typed single-spaced and numbered consecutively in the order in which they are cited in the text following the Vancouver style referencing format. Arabic numerals (**in superscript**), e.g., 1, 3, 5 or 1-4 should be used in citing references in the text.

Index Medicus Style of abbreviations should be used for Journals cited.

For correct abbreviations, visit <http://www.ncbi.nlm.nih.gov/PubMed/jbrowser.html>.

Unpublished work should not be included in the list of references.

Examples

Journal Articles

1. Kavanagh PL, Fasipe TA, Wun T. Sick Cell Disease: A Review. *JAMA*. 2022;5:328(1):57-68. doi: 10.1001/jama.2022.10233
2. Piel FB, Steinberg MH, Rees DC. Sick Cell Disease. *N Engl J Med*. 2017;376(16):1561-1573. doi: 10.1056/NEJMra1510865.
3. Adigwe OP, Onavbavba G, Onoja SO. Impact of Sick Cell Disease on Affected Individuals in Nigeria: A Critical Review. *Int J Gen Med*. 2023;16:3503-3515. doi: 10.2147/IJGM.S410015.

Entire Book:

Malamed SF. Handbook of local anesthesia. 7th ed. St. Louis: Elsevier; 2020.

Chapter of book compiled by an editor with various chapter contributors

1. Meheus AZ. Practical approaches in developing nations. In: Holmes KK, Mardh PA, Sparling PF, Wiesner PF, (eds). Sexually transmitted diseases. 1st ed. New York: McGraw-Hill, 1984. p. 998-1008.
2. Forrest JL, Miller SA. Evidence-based decision making. In: Bowen DM, Pieren JA, editors. Darby and Walsh dental hygiene theory and practice. 5th ed. Maryland Heights: Elsevier; 2020. p. 25-33.

Online or Website References

Marchildon GP, DiMatteo L. Health care cost drivers: the facts [Internet]. Canadian Institute for Health Information; 2011 Oct [Accessed 2015 Jan 15]. Available from:

https://secure.cihi.ca/free_products/health_care_cost_drivers_the_facts_en.pdf

Tables

These should be numbered with Arabic numerals. Each Table should be typed using a table format (i.e., each variable must be typed into a separate cell in the Table) with only horizontal lines above and below the table column headers and at the bottom of the Table (using 1 point for the top and bottom lines and ½ point for any middle line). No vertical lines should be included in any Table. Each Table MUST be inserted at the appropriate position in the text just below where it was referred to the first time. The title should be typed at the top of the Table in the sentence case format, i.e., only the first name should be in capital letters; names should also be in capital letters, as appropriate. Any legend should be typed at the top and bottom of the Table in italics.

Illustrations

Figures should be professionally drawn electronically and inserted in the appropriate position where it was first cited within the text. If photographs of patients are used, either the subjects are not identifiable, or their pictures must be accompanied by a written permission to use the images. Photographs must be clear and sharp. Labels of the Figure MUST be in text form at the bottom and MUST not form part of the image.

Copyright

It is a condition of publication that authors grant the *Nigerian Society for Pharmacological Sciences and Experimental Therapeutics* (NISPET) the exclusive license to publish all articles, including abstracts. Authors retain copyright of their work, which means they may re-use their work for non-commercial purposes without asking permission of the publisher. Authors are responsible for obtaining permission to reproduce copyright material from other sources.

Ethical Matters

Authors using experimental animals and human subjects in their investigation must seek approval from the appropriate Ethical Committee in accordance with “Guide for the Care and Use of Laboratory Animals, 8th Edition” (National Research Council (US) Committee for the Update of the Guide for the Care and Use of Laboratory Animals. Guide for the Care and Use of Laboratory Animals. 8thedition. Washington (DC): National Academies Press (US); 2011. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK54050/> doi: 10.17226/12910) and/or the Declaration of Helsinki

promulgated in 1964 as amended in 2024. The Methods section must include a statement to prove that the investigation was approved and that informed consent was obtained.

Ethics in Publishing

Authors must follow ethical guidelines.

Submission Declaration

When authors submit an article to *Journal of Pharmacological Sciences and Experimental Therapeutics* (NISPET Journal), it is implied that:

- The work described has not been published previously except in the form of a preprint, an abstract, a published lecture, an academic thesis or registered report.
- The article is not under consideration for publication elsewhere.
- The article's publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out.
- If accepted, the article will not be published elsewhere in the same form, in English or in any other language, including electronically, without the written consent of the copyright holder.

The manuscript should be submitted through the journal email: editorinchief@nispetng.org

The financial implication per scientific publication is as follows:

As a member of NISPET, you will be paying **N25,000** only– attach proof of payment of 2025 Annual due.

For members not currently registered in this financial year (and non-member), payment is **N45,000** only.

International authors are to pay \$150

Enquiry

The Editor

Journal of Pharmacological Sciences and Experimental Therapeutics (NISPET Journal)

E-mail: editorinchief@nispetng.org

maoakanmu@yahoo.com

Phone: +2348035958466