

CURRICULUM VITAE

A. PERSONAL DATA

1. **Names in Full:** AKINOLA, Adeniran Oluwadamilare
2. **Place and Date of Birth:** Araromi-Obu, Ondo State, 23rd March, 1970
3. **Details of Contact address:** (a). E-mail address (es) aakinola@unimed.edu.ng;
talk2niran@yahoo.com
(b). 08035169098
4. **Nationality:** Nigerian
5. **State of Origin:** Ondo
6. **Senatorial District** Ondo South
7. **Local Govt. Area:** Odigbo
8. **Permanent Home Address:** 11, Moferere Street, Araromi-Obu, Ondo State.
9. **Marital Status:** Married
10. **Number & Ages of Children:** None
11. **Next of Kin:** Mr. Akinola Adeloye Solomon
12. **Details of Contact Address of Next of Kin:** (a) 08034848640
13. **Date of Assumption of Duty:** 11th January, 2016
14. **Rank/status on First Appointment:** Lecturer II
15. **Present Status:** Senior Lecturer
16. **Date of Last Promotion:** 1st October, 2022
17. **Present Salary, Grade Level and Step:** CONNUASS 05/03
18. **Date of Confirmation of Appointment:** 11th January, 2019
19. **Faculty/Directorate:** Basic Medical Sciences

20. Department/Unit: Physiology

21. https://scholar.google.com/citations?view_op=list_works&hl=en&user=WMhMXxMAAAAJ

B. Educational Background

1. Higher Educational Institutions Attended with dates:

University of Ibadan, Ibadan Oyo State	-	2010-2018
University of Ibadan, Ibadan Oyo State	-	2007 – 2009
University of Ilorin, Kwara State	-	2000 – 2003
Ewutuntun Grammar School, Mafoluku, Oshodi, Lagos	-	1995
Araromi Obu Community Grammar School, Araromi Obu-		1981 – 1986
Local Authority Primary, Araromi Obu, Ondo State.	-	1975 - 1981

2. Academic/Professional Qualifications and Distinctions Obtained with Dates:

Ph.D. Physiology	2018
M.Sc. Physiology	2009
B.Sc. Physiology	2003
SSCE	1995

3. Other Distinctions and Awards with Dates:

(a) Award of Excellence, Student Physiological Association of Nigeria, Igbinedion University, Okada	2014
(b) Araromi Rubber Estate Post-Graduate Scholarship Award, Araromi-Obu, Ondo State	2008

C. Work Experience with Dates:

1. Previous Work Experience Outside the University System with Dates:

Complete Child Development College, GRA, Awule, Akure, Ondo State.

January 2006-September 2007: April 2010-March, 2011

Post Held: Science Teacher

Duties: Teaching of Basic Science, Chemistry and Biology

2. Previous Work Experience in Other Universities

University of Medical Sciences, Ondo City, Ondo State

Period: 1st October, 2022 – Date

Status: Senior Lecturer

Duties: Teaching of Physiology Courses

University of Medical Sciences, Ondo City, Ondo State

Period: September, 2019 – September, 2022

Status: Lecturer I

Duties: Teaching of Physiology Courses

University of Medical Sciences, Ondo City, Ondo State

Period: January 2016 – September 2019

Status: Lecturer II

Duties: Teaching of Physiology Courses

Igbinedion University, Okada, Edo State.

Period: October 2014-December 2015

Status: Lecturer II

Duties: Teaching of Physiology Courses

Igbinedion University, Okada, Edo State.

Period: March 2011-October 2014

Status: Assistant Lecturer

Duties: Teaching of Physiology Courses

3. Courses Taught Within the Current Academic Session

2022/2023 Academic Session

PHS 211 – Introduction to Physiology

PHS 315 - Autonomic Nervous System

PHS 225- Cardiovascular Physiology

PHS 321- Animal Experimentation

1. Graduate Student Supervision Within Current Session: NIL

2. Current Undergraduate Supervision: Four students

2023/2024 Academic Session

PHS 211 – Introduction to Physiology

PHS 311 – Renal Physiology

PHS 411 – Comparative Physiology

PHS 814 - Renal Physiology

PHS 826 – Autonomic Nervous System

2024/2025 Academic Session

PHS 312- Endocrinology and Reproductive Physiology

PHS 412 – Cardiopulmonary Physiology

PHS 413 – Environmental Physiology

PHS 814 - Renal Physiology

PHS 826 – Autonomic Nervous System

1. Graduate Student Supervision Within Current Session: 1

2. Current Undergraduate Supervision: NIL

D. Membership of Professional Bodies:

Physiological Society UK	-	2019
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E. Publications:

1. Thesis / Dissertation:

- i. Akinola A.O. (2018) Amelioration of cadmium-induced reproductive toxicity in male Wistar rats using methanol extract of *Carpolobia lutea* G. Don root, palmitic acid and nonanoic acid. Ph.D. Thesis, University of Ibadan.
- ii. Akinola, A. (2009). Reproductive activities of female albino rats treated with *Quassin*, a bioactive triterpenoid from stem bark of *Quassia amara*. M.Sc. Dissertation, University of Ibadan.
- iii. Akinola, A. (2003). Effects of acute Vitamin C and E ingestion on cardiovascular responses to head-up tilt or cold pressor test in healthy men. B.Sc. Project, University of Ilorin.

2. Books and Monographs: NIL

3. Contribution to Books: NIL

4. Published Journals Articles

- i. Raji, Y., **Akinola, A.**, Oyeyipo, I.P. and Femi – Akinlosotu, O. (2010). Reproductive activities of female albino rats treated with *Quassin* , a bioactive triterpenoid from stem bark extract of *Quassia amara*. *Nigerian Journal of Physiological Society*. 25 (2): 95-102.
- ii. Josiah, S.J., Nwangwu, S.C.O., Akintola, A.A., Usunobun, U., Oyefule, F.S., Ajeigbe, O.K. and **Akinola, A.** (2012). Protective role of ethanol extract of *Vernonia amygdalina* against potassium bromate-induced tissue damage in wistar rats. *Pakistan Journal of Nutrition* . 11 (1): 54- 57.
- iii. Oyeyemi, W.A., Shittu, S.T., Kolawole, T.A., Ubanecheand, P. and **Akinola, A.** (2015). Protective effects of vitamin E on nicotine-induced reproductive toxicity in male rats. *Nigerian Journal of Basic and Applied Science*. 23 (1): 7-13.
- iv. Dayo Rotimi Omotoso, **Adeniran Oluwadamilare Akinola**, Ooreoluwa Daramola (2019). Possible stimulatory role of CTLA-4 gene in antidiabetic activity of ethanolic

- extracts of *Allium sativum* (Garlic) using rat model. *J Med Allied Sci*, 9 (2) : 90 - 95
- v. Omotoso D. R., Ajeigbe K. O., Owonikoko W. M., Okwuonu U. C., **Akinola A. O.**, Daramola O. O., Adagboyin O. and Bienonwu E. O. (2019): Role of mucous cell and p53 protein in gastroprotective activity of methanolic extracts of *Ageratum conyzoides* Linn in rats. *African Journal of Biotechnology*. 18 (27): 640-646.
 - vi. Dayo Rotimi Omotoso, **Adeniran Oluwadamilare Akinola**, Ooreoluwapo Ololade Daramola (2019). Immunoexpression of cell proliferation (Ki-67) and tumor suppressor (p53) proteins in hepatic tissue exposed to aqueous extracts of *Ageratum conyzoides* Linn using rat model. *Annals of Medical and Biomedical Sciences*. 5 (1): 8-12
 - vii. Dayo Rotimi Omotoso, **Adeniran Oluwadamilare Akinola**, Ooreoluwa Daramola, Victor Uwagbor and Chiwuenyim Onyewotu. (2019). Assessment of gastroprotective activity of leaf extracts of *Ageratum conyzoides* Linn. using pyloric-ligation method in animal model. *International Journal of Biomedical Research*. 10(07): e5214
 - viii. Oyeyemi A.Wahab, Anyanwu C. Princely, **Akinola A. Oluwadamilare**, Daramola O. Oore-oluwapo, Alli O. Blessing, Ehiaghe F. Alfred. (2019): Clomiphene citrate ameliorated lead acetate-induced reproductive toxicity in male Wistar rats. *JBRA Assisted Reproduction*. 23(4):336-343.
 - ix. Oyeyemi Wahab Adekunle, Daramola Oore-oluwapo Ololade, **Akinola Adeniran Oluwadamilare**, Idris Adeoye Oyewole, Aikpitanyi Ikponmwosa. (2020). Hepatic and reproductive toxicity of sub-chronic exposure to dichlorvos and lead acetate on male Wistar rats. *Asian Pacific Journal of Reproduction*. 9(6): 283-290
 - x. **Akinola A.O.**, Oyeyemi A.W., Daramola,O.O. Raji Y. (2020). Effects of the methanol root extract of *Carpolobia lutea* on sperm indices, acrosome reaction, and sperm DNA integrity in cadmium-induced reproductive toxicity in male Wistar rats. *JBRA Assisted Reproduction*. 24(4):454-465.

- xi. **Akinola A.O.**, Oyeyemi A.W., Raji Y. (2021). *Carpolobia lutea* Root Extract Improved Steroidogenic Activity in Male Wistar Rats Exposed to Cadmium. *Niger. J. Physiol. Sci.* 36:181 – 187
- xii. Wahab Adekunle Oyeyemi, **Adeniran Oluwadamilare Akinola**, Oore-oluwapo Ololade Daramola, Ikponmwosa Aikpitanyi, Opeyemi Tosin Durotoluwa, Precious-Gift Olohigbe Alele, Iyesogie Osaretin Ogieriakhi and Tseye Daisy Okoro. (2022). Vitamin E and quercetin attenuated the reproductive toxicity mediated by lead acetate in male Wistar. *Bulletin of the National Research Centre.* 46 (22): 1-10.
- xiii. **Akinola, A.O.**, Oyeyemi, W.A., Omotoso, D.R., Daramola, O.O. and Raji, Y. (2022). Protective role of methanol extract of *Carpolobia lutea* root against cadmium-induced changes in biochemical and antioxidant indices in liver of male Wistar rats. *Ife Journal of Science.*, 24 (1): 59-72.
- xiv. Victor Emojevwe, Eze Kingsley Nwangwa, Alexander Obidike Naiho, Mega Obukohwo Oyovwi, Osarugue Igiehon, Eunice Ogunwole, Margaret Sope Makinde-Taylor, Oluwadamilola Ayodele Ayotomide, **Adeniran Oluwadamilare Akinola**, Prince Tesi Edesiri, Bright Onome Oghenetega, Simon Irikefe Ovuakporaye. (2022). Therapeutic efficacy of N-acetylcystine and Zinc sulfate against DEPH-induced testicular oxido-nitrergic stress in male Wistar rats. *Andrologia.*, <https://doi.org/10.1111/and.14508>: 1-13.
- xv. Daramola O.O., Oyeyemi W.A., **Akinola A.O.** and Raji Y. (2022). Haematoprotective and Hepatoprotective Effects of Methanolic Leaf Extract of *Parquetina nigrescens* on Arsenic trioxide-induced Toxicity in Male Wistar Rats. *Niger. J. Physiol. Sci.* 37: 235 – 246.
- xvi. **Adeniran Oluwadamilare Akinola**, Dayo Rotimi Omotoso, Adekunle Wahab Oyeyemi, Ooreoluwa Ololade Daramola, Victor Emojevwe. (2023). α -Tocopherol Mitigates Adverse Effects of Potassium Bromate on Hematological Parameters and Markers of Hepatic Function in Rat Model. *J Morphol Sci*; 40:89-94.

- xvii. **Adeniran O. Akinola**, Dayo R. Omotoso, Adekunle W. Oyeyemi, and Oore-oluwapo O. Daramola. (2023). Ameliorative activity of α -tocopherol against potassium bromate-induced reproductive functional and morphological impairments in male rats. *Asia-Pacific Journal of Science and Technology.*, 29 (1): 1-7.
- xviii. Oyeyemi WA, **Akinola AO**, Daramola OO, Raji Y. (2024). Antiapoptotic, Antioxidant, and Anti-Inflammatory Activities of *Sida corymbosa* Leaf Methanol Extract Ameliorate Lead Acetate-Induced Testicular Functions Alteration in Wistar Rats. *Trop J Nat Prod Res.*; 8 (5): 7301-7308. <https://doi.org/10.26538/tjnpr/v8i5.36>
- xix. Victor Oghenekparobo Emojevwe, Mega Obukohwo Oyovwi, Kayode Ezekiel Adewole, Peggy Ejiro Ohwin, **Adeniran Oluwadamilare Akinola**, Alexander Obidike Naiho, Eze Kingsley Nwangwa, Victor Omo-Idonije, Motunrayo Lade-Ige, Benneth Ben-Azu. (2024). N-acetylcysteine and zinc sulphate abate di-2-ethylhexyl phthalate-mediated reproductive dysfunction in rats: Focus on oxidative and sex hormone receptors mechanisms. *Asian Pacific Journal of Reproduction.*, 13(5): 228-240. doi: 10.4103/apjr.apjr_4_24.
- xx. Oluwafunmbi Ebenezer Ogunmiluyi, Alexander Obidike Naiho, Victor Oghenekparobo Emojevwe, Tolulope Samuel Oladele, Kayode Adedoyin Adebisi, Jacob Adewale Siyanbade, and **Adeniran Oluwadamilare Akinola**. (2024). Zinc or/and Vitamin E Supplementation Mitigates Oxidative Stress, Neuroinflammation, Neurochemical Changes and Behavioural Deficits in Male Wistar Rats Exposed to Bonny Light Crude Oil. *Journal of Toxicology.*, 2024 (9317271): 1-14 <https://doi.org/10.1155/jt/9317271>
- xxi. **Adeniran O. Akinola**, Wahab A. Oyeyemi, Dayo R. Omotoso, Oore-Oluwapo O. Daramola, Victor O. Emojevwe, Eunice Ogunwole, Blessing A. Adetula, Oluwatobiloba D. Adeleke. (2025). Cadmium-Induced Adverse Alteration of Reproductive Parameters and Testicular Histoarchitecture of Wistar Rats: Protective Role of Palmitic Acid. *Annals Of Health And Allied Sciences.*, 1 (1): 17-24.
- xxii. Daramola O.O., Oyeyemi W.A., **Akinola A.O.** and Raji Y. (2025). Antioxidant properties of *Parquetina nigrescens*, methanol leaf extract ameliorates arsenic-

5. Edited and Refereed Conference Proceedings

Title	Where Read	Date
<p>(i.) Adeniran Oluwadamilare Akinola^{a,*}, Adekunle Wahab Oyeyemi^b, Dayo Rotimi Omotoso^c, Oore-Oluwapo Ololade Daramola^d, Victor Emojevwe^a, Eunice Ogunwole^a, Miracle Michael Aremu^a, Olalekan Blessing Oladipupo^a, Adesewa Grace Abegunde^a, Osaigbovo Benedicta Osazuwa^a</p> <p>Ameliorative activities of clomiphene citrate on cadmium-induced reproductive functions and morphological impairments in male Wistar rats. (https://doi.org/10.70019/ahas.v1i1.40)</p>	3-Day Int'l Conference and Symposiums at the FBMS, UNIMED, Ondo State, Nigeria.	4 th – 6 th June, 2025
<p>(ii) Emojevwe, Victor Oghenekparobo¹, Ogunmiluyi, Ebenezer¹, Ogunwole, Eunice¹, Akinola, Adeniran Oluwadamilare¹, Oyovwi, Mega obukohwo²</p> <p>Ciprofloxacin-induced reproductive toxicity: Disruption of hormones, steroidogenesis and receptor binding pathways – <i>In vivo</i> and <i>In silico</i> evidence. (https://doi.org/10.70019/ahas.v1i1.40)</p>	3-Day Int'l Conference and Symposiums at the FBMS, UNIMED, Ondo State, Nigeria.	4 th – 6 th June, 2025
<p>(iii) Adeniran Oluwadamilare Akinola^{1*}, Wahab Adekunle Oyeyemi², Dayo Rotimi Omotoso³, Oore-Oluwapo Ololade Daramola⁴, Victor Oghenekparobo Emojevwe¹, Eunice Ogunwole¹, Oluwafunmito Queenesther Adegoke¹, Eniola Hephzibah Ayeni¹, Toluwani Elizabeth Oladele¹</p> <p>Hepatic and Reproductive Toxicity of Sub-Chronic Exposure to Dichlorvos and Cadmium on Male Wistar rats. (https://journals.unimed.edu.ng/index.php/ahas/article/view/35)</p>	Department of Physiology, FBMS, UNIMED, Ondo Conference.	February, 2025 2 nd -4 th July, 2024.
<p>(iv) Victor Emojevwe¹, Alexander Obidike Naiho¹, Adeniran Oluwadamilare Akinola¹, Victor Oluwadamilola Ajayi¹, Mega Obukohwo Oyovwi, Oluwafunmbi Ebenezer Ogunmiluyi¹, Onoriode Andrew Udi, Eunice Ogunwole¹, Ifedolapo Beatrice Jolayemi¹, Daniel Oluwasegun Arokun¹, Ifedayo Victory Omole¹, Evelyn Akingbade¹</p> <p>N-Hexane Extract of <i>Parkia Biglobosa</i> Seeds Effectively Protected against Ciprofloxacin-Induced Testicular Dysfunction in Rats via Inhibition of</p>	(Northumbria University, UK), Proc Physiology in Focus., Physiol Soc 59, PCA027	2024

Oxido-Inflammation and Apoptotic Pathways. https://static.physoc.org/app/uploads/2024/06/24084608/Physiology-in-Focus-2024-Abstracts-Poster-Communications.pdf		
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6. Article (s) Accepted for Publication:

- i. NIL

7. Manuscript (s) Submitted for Publication:

- i. Reproductive potential of selenium and multivariate analysis in aluminium sulphate-treated prepubertal male Wistar rats. Nigerian Journal of Biochemistry and Molecular Biology., 2025

8. Creative Work - NIL

9. Technical Reports - NIL

10. Papers and Work in Progress: Hepatic and Reproductive Toxicity of Sub-Chronic Exposure to Dichlorvos and Cadmium on Male Wistar Rats

F. Professional Accomplishment: - NIL

G. Conferences, Seminars and Workshops Attended With Dates

H. CONFERENCES ATTENDED WITH DATES:

3-Day International Conference and Symposiums at the Faculty of Basic Medical Sciences, University of Medical Sciences, Ondo City, Nigeria June, 2025

Paper Presented: (i.)Ameliorative activities of clomiphene citrate on cadmium-induced reproductive functions and morphological impairments in male Wistar rats. (<https://doi.org/10.70019/ahas.v1i1.40>)

(ii) Ciprofloxacin-induced reproductive toxicity: Disruption of hormones, steroidogenesis and receptor binding pathways – *In vivo* and *In silico* evidence. (<https://doi.org/10.70019/ahas.v1i1.40>)

2-Day Physiology Conference at the Department of Physiology, University of Medical Sciences, Ondo City, Ondo State, Nigeria. February, 2025.

Paper Presented: (i) Hepatic and Reproductive Toxicity of Sub-Chronic Exposure to Dichlorvos and Cadmium on Male Wistar rats. (<https://journals.unimed.edu.ng/index.php/ahas/article/view/35>)

(Northumbria University, UK), Proc Physiology in Focus., Physiol Soc 59, PCA027, 2024.

Paper Presented: (i) N-Hexane Extract of *Parkia Biglobosa* Seeds Effectively Protected against Ciprofloxacin-Induced Testicular Dysfunction in Rats via Inhibition of Oxido-Inflammation and Apoptotic Pathways.

Cadmium-Induced Changes in Reproductive Activities of Male Wistar Rats: Protective Role of Palmitic Acid, AO Akinola, AW Oyeyemi... - ACTA ..., 2022 - ... ST, HOBOKEN 07030-5774, NJ USA

UNIMED Research Day 2022 – “Academic Independence and Career Progression”, 22nd February, 2022.

Papers Presented: (i) Cadmium-induced changes in reproductive activities of male Wistar rats: Protective role of Palmitic acid.

7th International Congress of the African Association of Physiological Sciences and 36th Physiological Society of Nigeria Scientific Conference at Wellcome Centre Hotel, 70, International Airport Road, Ikeja, Lagos (2016).

Papers Presented: (i) Cadmium-induced changes in reproductive activities of male Wistar rats: Protective role of *Carpolobia lutea*.

(ii) Effects of *Carpolobia lutea* on Cadmium-induced reproductive toxicity in male Wistar rats.

33rd Annual Scientific Conference of Physiological Society of Nigeria (PSn) at University of Ibadan (2013).

Paper Presented: Protective effects of vitamin E on nicotine- induced reproductive toxicity in male rats.

30th Annual Scientific Conference of Physiological Society of Nigeria (PSn) at Lagos State University, Lagos State (2010).

Paper Presented: Reproductive activities of female albino rats treated with quassin, a bioactive triterpenoid from stem bark Extract of *Quassia amara*.

WORKSHOPS AND SEMINARS ATTENDED

1-Day Library Research Workshop at the E-Library Section of the UNIMED Library, University of Medical Sciences, Ondo City, June 22, 2022.

1-Day Physiology Outreach tagged “Physiology: The bedrock of Preventive Healthcare” at the Department of Physiology, University of Medical Sciences, Ondo City, June 10, 2022.

1-Day Training Workshop in Basic Molecular Techniques at the Department of Physiology, University of Medical Sciences, Ondo City, June 1, 2022

2-Day Grantsmanship workshop (Series 2) on Developing a Research Proposal and Budget organized by UNIMED Centre for Research and Development (CORD), November 29-30, 2021.

3-Day Compulsory training workshop for academic staff on Teaching and Learning in Higher Education aimed at improving the Pedagogical Teaching Skills of all Academic Staff at University of Medical Sciences, Ondo City, Nov. 16-18, 2021.

5-Day Advanced Digital Appreciation Programme For Tertiary Institutions Statistical Package for Social Sciences, Organized by International Centre for Information and Communications Technology Studies and Nigerian Communications Commission at University of Medical Sciences, Ondo City, Nov. 20-24, 2017).

2-Day Workshop on Pedagogy and Integrated Medical and Dental Curriculum at University of Medical Sciences, Ondo City 6th-7th July, 2017.

5-Day Advanced Digital Appreciation Programme For Tertiary Institutions, Organized by International Centre for Information and Communications Technology Studies and Nigerian Communications Commission at University of Medical Sciences, Ondo City, 28th Nov-2nd Dec. 2016).

3-Day Short Course in Master Grant Proposal Writing and Financial Management in Tertiary Institutions at University of Medical Sciences, Ondo City, 22nd-24th August, 2016.

Workshop on Tetfund National Research Fund Proposal Writing at University of Medical Sciences, Ondo City (2016).

Workshop on scholarly writing at Igbinedion University Okada, Edo State (2015).

1. **Current Research Activities:** We are currently working a study to elucidate the Impact of Probiotic Supplementation on Codeine-Induced Reproductive in Female Wistar Rats

I. Current Relevant Information

1. Services within the Department

- i. Postgraduate Coordinator 2022/2023 Till date

2. Services within the Faculty

- i. Vice-Dean FBMS July 2024-Till date
- ii. Sub-Dean FBMS to PG School
- iii. Cognate representative FNMS to Faculty of Dental Sciences

3. Services within the University -

4. General Secretary, ASUU, University of Medical Sciences, Ondo City, Ondo State (2021 till date).

5. Acting head of Department, 1st August, 2022-July 31, 2023
6. Deputy Director, Laje Campus, University of Medical Sciences, Ondo City, Ondo State. 21st August, 2023-Till date
7. Services outside **UNIMED**:
 - i. General Secretary, Ondo West Life Reformation Multipurpose Cooperative Society, Ondo City, Ondo State.
 - ii. Sunday School Teacher, Gospel Faith Mission International, Life Reformation Centre, Ondo City, Ondo State
 - iii. Adult Departmental Superintendent, Sunday Bible School, Gospel Faith Mission International, Life Reformation Centre, Ondo City, Ondo State

J. Contributions to Knowledge

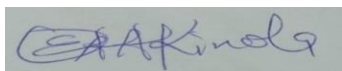
My major area of research interest is neuroendocrinology and reproduction looking at the molecular mechanism of action of natural products and their bioactive compounds on spermatogenesis, steroidogenesis and hypothalamic-pituitary-testicular axis in Male Wistar Rats exposed to environmental toxicants. Several methods including microscopy, immunohistochemistry, polymerase chain reaction, enzyme-linked immunosorbent assay, and sperm analysis were adopted to elucidate the probable mechanism of action of natural products, vitamins, and trace element on environmental toxicants especially heavy metal-induced reproductive, haematology, and hepatic damage using male Wistar rats' model. The contributions to knowledge are:

1. Natural products (*Carpolobia lutea*, *Parquetina nigrescens*, *Sida corymbosa*) serve as possible therapeutic agents in improving male reproductive functions (steroidogenesis and spermatogenesis), hematological and liver functions in heavy metal toxicity via their anti-apoptotic, anti-inflammatory, and antioxidant properties.
2. The Zinc antioxidant properties and modulation of cortisol and triiodothyronine prevents oxidative stress in prepubertal male Wistar rats exposed to high levels of copper and lead in drinking water.

3. Palmitic acid (a bioactive compound) from *Carpolobia lutea* serve as a potential therapeutic agent by exhibiting a protective effect against heavy metal-induced reproductive toxicity.
4. Synthetic antioxidant (vitamin E, quercetin), and drug (Clomid) serve as potential beneficial agents in improving male reproductive functions (steroidogenesis and spermatogenesis), in heavy metal harmfulness via anti-apoptotic, anti-inflammatory, and antioxidant properties.
5. We have demonstrated the protective roles of quercetin and vitamin E in nicotine-induced toxicity on reproductive functions in male rats.
6. The combined therapeutic efficacy of N-acetylcysteine and zinc sulphate against di-(2-ethylhexyl) phthalate-induced testicular oxido-nitrergic stress in male Wistar rats was explored.
7. We also reported that dichlorvos, lead acetate and cadmium exhibited the same hepatic and reproductive toxicity upon sub-chronic exposure to male Wistar rats.
8. Quassin, a bioactive triterpenoid from stem bark extract of *Quassia amara* was reported to have female anti-fertility properties, possibly acting via inhibition of estrogen secretion.

My research into the use of natural products and their bio-active compounds in the treatment of fertility related problems is still ongoing.

Signature:



Date: 04/08/2025