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Dr. Huzaifa Umar is an accomplished researcher and academician with expertise in bioengineering aspects of natural product and their potential applications in cancer treatment. His areas of research include Cancer Biology, Nanotechnology, Drug delivery, Biochemistry, Microbiology and Artificial Intelligence in Biomedicine. He obtained his B.Sc. in Biochemistry with high honours from Bayero University, Kano, Nigeria, M.Sc. and PhD in Bioengineering from Cyprus International University Nicosia. He previously worked as a research assistant, lecturer and researcher at Cyprus International University, and he is currently serving as a faculty member at the Operational Research Centre in Healthcare, Near East University via Mersin 10, Turkey. His commitment to scholarly excellence and pursuit of knowledge is reflected in his extensive publication records. He has authored numerous peer-reviewed articles and conference papers, which have been published in prestigious journals within the field.

**ACADEMIC
CURRICULUM VITAE**

1. Name - Surname: Huzaifa Umar

2. Title: Dr.

3. Educational Background:

Degree	Department/Program	University	Year
Bachelor's	Biochemistry	Bayero University Kano	2012
Master's	Bioengineering	Cyprus International University Nicosia	2016
PhD	Bioengineering	Cyprus International University Nicosia	2019

4. Master's / PhD Thesis

4.1. Master's Thesis Title and Thesis Advisor(s): Anti-metastatic activity of *Albizia lebbbeck* stem bark extract against MDA-MB 231 and MCF- breast cancer cell.

Assoc. Prof. Dr. Nahit RIZANER

4.2. PhD Thesis /Medical Specialty Thesis Title and Advisor(s): *In vitro* antioxidant, antimicrobial and antimetastatic activity of *Albizia lebbbeck* stem bark extracts and zinc oxide nanoparticles synthesized using the plant aqueous extract on breast cancer cell models.

Assoc. Prof. Dr. Nahit RIZANER

5. Academic Titles:

Date of Assistant Professorship:

Date of Associate Proferssorship:

Date of Professorship:

6. Supervised Master's and PhD Theses:

6.1. Master's Theses

6.2. PhD Theses

7. Publications

7.1. Articles Published in International Peer-Reviewed Journals (SCI,SSCI, AHCI, ESCI, Scopus)

- **Umar, H.**, Aliyu, M.R., Usman, A.G. *et al.* Prediction of cell migration potential on human breast cancer cells treated with *Albizia lebbbeck* ethanolic extract using extreme machine learning. *Sci Rep* **13**, 22242 (2023). <https://doi.org/10.1038/s41598-023-49363-z>.
- Huzaifa Umar, Maryam Rabiou Aliyu (2023). Moringa oleifera-mediated iron oxide nanoparticles, characterization and their anti-proliferative potential on MDA-MB 231 human breast cancer cells. *Pak. J. Pharm. Sci.*, Vol.36, No.6, November 2023, pp.1875-1883. doi.org/10.36721/PJPS.2023.36.6.SP.1875-1883.1.
- M. Farooq, I. Khan, G.M. Ismail, **H. Umar**, H. Ahmad (2023). Comparative analysis of the plane couette flow of couple stress fluid under the influence of magnetohydrodynamics. *East Eur. J. Phys.* **1** (0-16). <https://doi.org/10.26565/2312-4334-2024-1-00>.
- **Umar, H.** (2023). Morphological Changes Caused by Synthesized Zinc Oxide Nanoparticles in MDA-MB 231 Cells and Prediction with Multi-Linear Regression: <http://www.doi.org/10.26538/tjnpr/v7i12.36>. *Tropical Journal of Natural Product Research (TJNPR)*, **7**(12), 5616–5622. Retrieved from <https://tjnpr.org/index.php/home/article/view/3206>.
- **Huzaifa Umar**, Maryam Rabiou Aliyu and Dilber Uzun Ozsahin (2023). Iron Oxide Nanoparticles Synthesized using *Mentha piperita* Extract and Evaluation of its Antibacterial and Antimigratory Potential on Highly Metastatic Human Breast Cells. *NanoWorld J.* **9**(4): 144-151.
- Khan, S. U., Khan, A., Ullah, A., Ahmad, S., Awwad, F. A., Ismail, E. A. A., Maitama, S., **Umar, H.**, & Ahmad, H. (2023). Solving nth-order Integro-differential Equations by Novel Generalized Hybrid Transform. *European Journal of Pure and Applied Mathematics*, **16**(3), 1940–1955. <https://doi.org/10.29020/nybg.ejpam.v16i3.4840>.
- **Huzaifa Umar**, Abdullahi Garba Usman, Maryam Rabiou Aliyu, Dilber Uzun Ozsahin (2023). Phytofabrication of Zinc Oxide Nanoparticles using Cyprus *Mentha Piperita* and Evaluation of its Anticancer and Antimicrobial Activity. *Eur. Chem. Bull.* **12** (6), 7632 – 7638. doi: [10.48047/ecb/2023.12.si6.678](https://doi.org/10.48047/ecb/2023.12.si6.678).
- **Umar, H.**, Rizaner, N., Usman, A. G., Aliyu, M. R., Adun, H., Ghali, U. M., ... & Abba, S. I. (2023). Prediction of Cell Migration in MDA-MB 231 and MCF-7 Human Breast Cancer Cells Treated with Albizia Lebbeck Methanolic Extract Using Multilinear Regression and Artificial Intelligence-Based Models. *Pharmaceuticals*, **16**(6), 858. doi: [10.3390/ph16060858](https://doi.org/10.3390/ph16060858).
- **Huzaifa Umar**, Doga Kavaz, Amina Lawan Abubakar, Maryam Rabiou Aliyu, and Nahit Rizaner (2022). Synthesis of Zinc Oxide Nanoparticles using *Ficus thonningii* Aqueous Extract and Evaluation of its Anti-oxidant and Anti-Microbial Activities. *Bulgarian Chemical Communications*, **4** (3): 277-282. DOI: [10.34049/bcc.54.3.F011](https://doi.org/10.34049/bcc.54.3.F011).
- Kavaz D., **Huzaifa U.**, Aliyu MR. (2022). Green Synthesized Metallic Oxide Nanomaterials for Diverse Applications. *J NanoWorld J* **8**(1): 19-27.
- A.L. Abubakar, **H. Umar**, R.D. Yunusa, M.M. Alhaji, A.A. Abdullahi and M.U. Usaini. Biochemical changes caused by Zinc Oxide Nanoparticles synthesized using *Ficus thonningii* extract in induced diabetic Wistar Albino Rats. *IJSEM*, **9** (10) 2456 -1304.
- Humphrey A., Doga K., Mustafa D., Ifeoluwa W., **Huzaifa U.** (2021). An experimental investigation of thermal conductivity and dynamic viscosity of Al₂O₃-ZnO-Fe₃O₄ ternary hybrid nanofluid and development of novel regression model. *Powder Technology*, PTEC16852; 0032-5910(21)00832-9.

- Kavaz, D., Abubakar, A.L.m Rizaner, N.; **Umar, H.** (2021). Biosynthesized ZnO Nanoparticles Using *Albizia lebbek* Extract Induced Biochemical and Morphological Alterations in Wistar Rats. *Molecules*, 26(13), 3864; <https://doi.org/10.3390/molecules2613386>.
- Ghali U.M., Usman A.G., Chellube Z.M., Mohamed Alhosen A. D., Kujtesa H., **Huzaifa U**, Abba Sl. (2020). Advanced chromatographic technique for performance simulation of anti-Alzheimer agent: an ensemble machine learning approach. *SN Appl. Sci.* **2**, 1871. <https://doi.org/10.1007/s42452-020-03690-2>.
- **Huzaifa U.**, Kavaz D, Rizaner N. (2019). Biosynthesis of zinc oxide nanoparticles using *Albizia lebbek* stem bark, and evaluation of its antimicrobial, antioxidant, and cytotoxic activities on human breast cancer cell lines. *International Journal of Nanomedicine*. 14: 87-100.
- Kavaz Doga; **Umar, Huzaifa**; Shehu Shafiu; (2019). Synthesis, Characterization, Antimicrobial and Anti-Metastatic Activity of Silver Nanoparticles Synthesized from *Ficus ingens* Leaf. *Artificial Cells, Nanomedicine and Biotechnology*. 46(sup3): S1193-S1203. doi: 10.1080/21691401.2018.1536060.
- Doga Kavaz, Tariro Zimuto, **Huzaifa Umar** (2019). Biosynthesis of Gold Nanoparticles using *Scytosiphon lomentaria* (Brown algae) and *Spyridia filamentosa* (Red algae) from Kyrenia Region and Evaluation of their Antimicrobial and Antioxidant Activity. *Hacettepe Journal of Biology and Chemistry*. 47 (4), 367-381.
- Doga K, Surayya M L, **Huzaifa U.** (2015). Antimicrobial Activity of Silver Nanoparticles Synthesized Via Green Chemistry. *Российский академический журнал*, 34 (4) 36 – 44.

7.2. Articles Published in Other International Peer-Reviewed Journals

- Maryam, I., **Huzaifa, U.**, Hindatu, H., Zubaida, S. (2015). Nanoencapsulation of essential oils with enhanced antimicrobial activity: A new way of combating antimicrobial Resistance. *Journal of Pharmacognosy and Phytochemistry*, 4(3): 165-170.
- Usman,S., S., Uba, A.I., Yunusa, I., Sadiq, Y., and **Huzaifa, U.** (2015). S-nitrosylation in Sporadic Parkinson Disease and Cancer (Brain and Thyroid) Prevention. *Annals of Experimental Biology*. Vol. 3 Number 1: 13-19. (ISSN: 2348-1935).
- **Huzaifa Umar**, Olatunde Ahmed, Dikwa Mohammad A. and Obidola Shakirdeen M. (2014). Toxicological Evaluation of Aqueous Extract of *Khaya senegalensis* stem bark on liver function indices in albino rats. *Int. Pure App. Biosci.* 2 (4): 203-209. (ISSN: 2320-7051).
- TS Imam, FG Aliyu, **Huzaifa U.** (2003). Preliminary Phytochemical Screening, Elemental and Proximate Composition of Two Varieties of *Cyperus esculentus* (Tiger Nut). *Nigerian Journal of Basic and Applied Sciences*. 21 (4): 247-251.
- **Huzaifa, U.**, Labaran, I., and Bello, A.B., (2013) Effect of Oral Administration of Aqueous Garlic (*Allium sativum*) Extract on Liver Fuction on Rats. *Techno Science Africana Journal*. Vol. 8 Number 2 June, 2013: 113-115.
- Yunusa, I., Minjibir, A.B., Ahmad, I.M., Amina, L., **Huzaifa, U.**, Abdulkadir, R.S., Nafisa, K., and Ezeanyi L., (2014). Low Body Mass Index Does Not Correlate with Hepatitis B Surface Antigen Infection in Female Adolescent. *British Journal of Applied Science and Technology*. 4 (8): 1230-1237.
- Yunusa, I., Ahmad, I.M., Adegbusi, H.S., Abdulkadir R.S., **Huzaifa U.** and Kabara H.T., (2013) Sports/Energy Drinks Consumption Among Young Athletes in Kano, Nigeria. *Bayero Journal of Pure and Applied Sciences*. Vol. 6 Number 2 December, 2013: 1-5

- **Huzaifa, U.**, Labaran, I., Bello, A.B. and Olatunde A., (2014). Phytochemical Screening of Aqueous Extract of Garlic (*Allium sativum*) bulbs. *Rep Opinion* 2014;6(8):1-4]. (ISSN: 1553-9873).

7.3. Papers Presented at International Scientific Conferences and Published in Conference Proceedings

- **Huzaifa Umar**, Mubarak Auwal, Zubaida Said Ameen, Maryam Rabiou Aliyu and Dilber Uzun Ozsahin. Groundwater Quality Assessment Based on Physicochemical and Microbiological Parameters Using Advanced Artificial Intelligence Models. 3rd International Conference of Water Problems in Mediterranean Countries (WPMC-2023). 14-16 December 2023, Lefkoşa, Turkish Republic of Northern Cyprus.
- **Huzaifa Umar**, Maryam Rabiou Aliyu. Biomethane Gas Production from Anaerobic Co-Digestion of Wheat Bran and Livestock Manure. 3rd International Conference of Water Problems in Mediterranean Countries (WPMC-2023). 14-16 December 2023, Lefkoşa, Turkish Republic of Northern Cyprus.
- **H. Umar**, MR Aliyu (2023). Green Synthesis of Zinc Oxide Nanoparticles Using Hibiscus moscheutos Extract and Evaluation of its Antioxidant Activity- AS-Proceedings, 2023
- **Huzaifa Umar** and Maryam Rabiou Aliyu (2023). *Moringa Oliefera*-mediated Iron Oxide Nanoparticles, Characterization and their Anti-proliferative Potential on Highly and Weakly Metastatic Human Breast Cancer Cells. Online Conference on "Advanced Nano Drug Delivery Systems" (NANO D2S-2023)-Proceedings.
- **Huzaifa Umar**, Abdullahi Garba Usman, Maryam Rabiou, Dilber Uzun Ozsahin (2022). Phytofabrication of zinc oxide nanoparticles using aqueous extract *Mentha piperita* and evaluation of its antimicrobial and anticancer activity. World Congress on Green Chemistry and Green Engineering (WCGCGE-23). Al-Khobarm Saudi Arabia.
- M. A. Sadiq, N. Rizaner, **H. Umar**, I. U. Abulfathi and A. B. Makama (2022). Synthesis of Hibiscus-*moscheutos* Leaves Extracts Biofunctionalized Nanoemulsion Lotion and its characterization. 5th Annual National Engineering Conference School of Engineering Technology Federal Polytechnic Nasarawa, Nigeria.
- Huzaifa Umar, Doga Kavaz, Amina Lawan Abubakar, Maryam Rabiou Aliyu, and Nahit Rizaner. Synthesis of Zinc Oxide Nanoparticles using *Ficus thonningii* Aqueous Extract and Evaluation of its Anti-oxidant and Anti-Microbial Activities. 8th ICNTC 2022, Famagusta, TRNC.
- A.L. Abubakar, **H. Umar**, R.D. Yunusa, M.M. Alhaji, A.A. Abdullahi and M.U. Usaini. Biochemical changes caused by Zinc Oxide Nanoparticles synthesized using *Ficus thonningii* extract in induced diabetic Wistar Albino Rats. ICNSMDAIME-22, Chicago, USA.
- **Huzaifa U**, Hatice E, Nahit Rizaner (2020). Comparative studies on phytochemical composition, anti-oxidant and anti-microbial activities of *Albizia lebbek* stem bark polar and non-polar extracts. WOCMAPVI 2019, Famagusta, North Cyprus.
- Doga K, Amina L. A, Nahit R, **Huzaifa U**. Biochemical and Morphological Changes Caused by Zinc Oxide Nanoparticles Synthesized using Albizia lebbek Stem Bark Extract in Rats. WOCMAPVI 2019, Famagusta, North Cyprus.
- **Huzaifa U**, Kavaz D, Rizaner N. (2019). Biosynthesis of zinc oxide nanoparticles using *Albizia lebbek* stem bark and evaluation of its antimicrobial, antioxidant, and cytotoxic activities on human breast cancer cell lines. IC2NAM 2018, Istanbul, Turkey.
- **Huzaifa U**, and Rizaner N, (2018). Anti-metastatic activity of Albizia lebbek stem bark extract against breast cancer cell lines. 2nd International Conference on Cancer Biology, Therapeutics and Drug Discovery and Delivery; and 10th Annual Congress on Biomarkers, Clinical Research and Therapeutics. Los Angeles, USA.

- **Huzaifa U**, Kavaz D, Rizaner N, (2015). Anti-metastatic, anti-proliferative and cytotoxic activities of *Albizia lebbek* stem bark methanolic extracts on MDA-MB 231 and MCF-7 human breast cancer cell lines. IBMEC'18, Lefkosa, North Cyprus.
- **Huzaifa, U.**, Labaran, I., and Bello, A.B., (2013). Effect of Oral Administration of Aqueous Garlic (*Allium sativum*) Extract on Liver Function on Rats. IBMEC'18, Lefkosa, North Cyprus.

7.4. National/international Books or Book Chapters

- **Huzaifa U.**, Maryam I., Kavaz D., Umar Muhammad G., Abdullahi G. U., Nahit R. (2021). Chapter 2 - Nanoencapsulation of nutraceutical and dietary supplements for effective delivery. In Drug Discovery Update, Applications of Nanotechnology in Drug Discovery and Delivery, Elsevier, 2022, Pages 27-44, ISBN 9780128244081, <https://doi.org/10.1016/B978-0-12-824408-1.00001-6>.

7.5. Articles Published in National Peer-Reviewed Journals

8. Art and Design Activities

9. Projects

10. Administrative Responsibilities

11. Memberships in Scientific and Professional Organizations

- Member European Association for Cancer Research [EACR]
- Nigerian Institute of Management [NIM]
- Nigerian Society of Biochemistry and Molecular Biology [NSBMB]
- International Union of Biochemistry and Molecular Biology [IUBMB]
- American Society for Biochemistry and Molecular Biology [ASBMB]

12. Awards

- Certificate of an oral presentation by the World Congress on Green Chemistry and Green Engineering (WCGCGE-23)
- Certificate of an oral presentation by the International Conference on New Trends in Chemistry (8th ICNTC 2022).
- Certificate of an oral presentation by the International Conference on Nanotechnology and Smart Materials, Design Artificial Intelligence, Manufacturing and Engineering (ICNSMDAIME-2022).
- Certificate of Attendance by World Congress on Medicinal Plant and Aromatics (WOCMAPVI 2019).
- Certificate of an oral presentation by the International Society for Engineers and Researchers (IC2NAM 2018).
- Certificate of an oral presentation by Near East University International Biomedical Engineering Congress 2018 (IBMEC'18).

- Certificate of an oral presentation by Near East University International Biomedical Engineering Congress 2015 (IBMEC'15).
- Certificate of attendance by Near East University International Biomedical Engineering Congress 2015 (IBMEC'15).
- Award of Mathematics tutor by Muslim Science Student Association, Bayero University Kano (2009).
- Award of the Most Supportive Student by National Association of Biochemistry Students, Bayero University Kano Chapter (2011).
- Award of Excellence by National Association of Biochemistry Students, Bayero University Kano Chapter (2012).
- Scholarship award by Kano State Government 2013-2014 (15,000 USD).
- Master's degree Scholarship award by Kano State Government 2014-2016(20,000 USD).
- PhD Scholarship award by Cyprus International University 2016-2019.
- Certificate of Attendance for Skill Acquisition and Entrepreneurship Training by National Youth Service Corps (NYSC).
- Certificate of Attendance for Convention/Investiture and Presidential Night by Junior Chamber International Nigeria.
- Certificate of Membership Drug-Free Club Wudil Area Command by National Drug Law Enforcement Agency (N.D.L.E.A).
- Certificate of Merit by Muslim Corpers' Association of Nigeria (MCAN).
- Certificate of Appreciation by National Association of Biochemistry Students (NABS), Kano University of Science and Technology Wudil.

13. Undergraduate and Graduate Courses Taught in the Last Two Years

Academic Year	Semester	Course Name	Weekly Hours		Number of Students
			Theoretical	Practical	
2021 - 2022	Spring	Protein Engineering	3	-	25
	Spring	Introduction to Bioengineering course	2	-	
2022 - 2023	Spring	Information Technology in Industrial Engineering	3	-	5