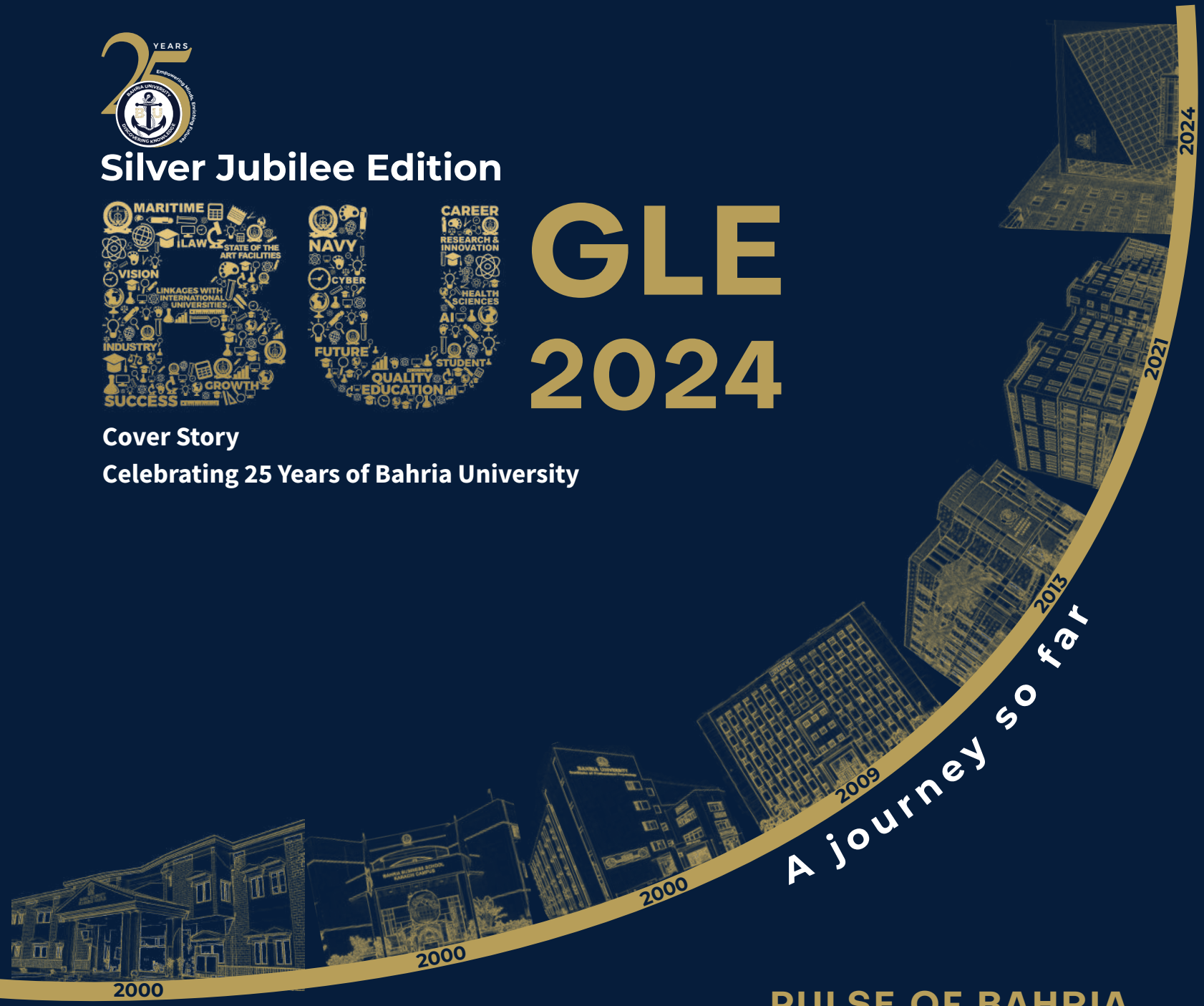
Silver Jubilee Edition

GLE 2024

Cover Story

Celebrating 25 Years of Bahria University



PULSE OF BAHRIA

CONTENTS

Celebrating 25 Years of Bahria University

Bahria University, founded in 2000, celebrates 25 years of shaping Pakistan's educational landscape. It has grown from two initial campuses in Islamabad and Karachi to include key additions like the Health Sciences Campus in Karachi (2009), Lahore Campus (2013), and a cutting-edge Engineering and Sciences facility in Islamabad (2021). In 2024, the university further expanded with a new Health Sciences Campus in Islamabad...continue reading at **page 14**

داستانِ بصریه

LOUD & PROUD

Syed Waqas Waheed:
A Leader in E-Commerce and Account Management

How has Syed Waqas Waheed leveraged his Bahria University education to excel in the fast-paced world of e-commerce?

BU's International Chapter head for Oman, Syed Waqas Waheed, graduated from Bahria University in 2014 with an MBA. He currently serves as the Team Lead of Account Management at Talabat in Salalah, Oman. With over 11 years of diverse experience, he has honed his skills in Sales and Marketing, Business Development, Key Account Management, and more.

Waqas's career includes prominent positions at organizations like Foodpanda Pakistan, Uber Pakistan, and Intensive Health Services. His extensive experience has refined his leadership, analytical, and problem-solving skills, enabling him to thrive in dynamic environments.

Waqas credits his success to the solid foundation provided by his education at Bahria University:

"The university equipped me with the skills to navigate the complexities of the business world."

Ms. Maryam Umer:
Quality Engineering Manager
Booking.com, London

How does Maryam's childhood fascination with technology lead to a global career in quality engineering?

Maryam's journey began with a Commodore 64, sparking an early curiosity about computers. In 2000, she enrolled at Bahria University, Islamabad, earning her BS degree in 2004. With over 17 years of experience, she now works as a Quality Engineering Manager at Booking.com in London, where she leads teams and focuses on sustainable delivery practices.

Her career started as a QA test engineer in the finance and mobile sectors before transitioning to eCommerce, where she contributed to online restaurant and travel services.

Maryam believes in fostering strong team dynamics and creating roles that provide engineers with a sense of purpose.

In addition to her professional work, Maryam is an international speaker passionate about mentoring and coaching. She actively advocates for building diverse teams and speaks at schools and universities, inspiring young people to explore the creative opportunities within the tech industry.

Nabeel Ahmed:
From Bahria University to Global IT Leader

How did Nabeel Ahmed leverage his Bahria University experience to excel in the global IT industry?

Nabeel Ahmed, a Software Engineering graduate from Bahria University (2007-2011), exemplifies the transformative power of education and ambition. While at university, he served as the official webmaster, significantly enhancing the institution's and various student clubs' online presence. As chairperson of the Bahraini Association of Computer Students and Professionals (BACSAP), Nabeel's leadership fostered a vibrant campus culture.

Since graduation, he has excelled in the international IT arena, working in Pakistan, UAE, Qatar, New Zealand, and Australia. Currently, as a Solutions Architect at DWS, he specializes in Low-Code/No-Code development and leads impactful projects.

"Nabeel's adventurous spirit shines through in his passion for extreme sports and marathon running, showcasing a well-rounded character that continues to inspire."

SKY IS NOT THE LIMIT

Ali Haider Baloch: Cinematographer Shaping Pakistan's Visual Storytelling

How did Ali Haider Baloch's experience at Bahria University Karachi lead him to the forefront of Pakistan's film and commercial industry?

Ali Haider Baloch (Batch 2014-2018) graduated from Bahria University's Media Studies program and quickly made his mark in Pakistan's media industry. Starting as a camera operator in the drama industry, he soon transitioned to the commercial sector, working with brands such as Toyota, Pepsi, and Kia Pakistan. His breakthrough came with notable projects like Coke Studio, where his work as a cinematographer gained recognition.

Ali continues to excel, with his latest work on the feature film "Rawalpindi Express" garnering widespread acclaim.

"As an engaged alumnus, he has returned to Bahria University to guide aspiring media students through workshops and discussions, inspiring them with his journey from student to industry leader."

JOURNEY TO SUCCESS

Ayesha Shahid Kayani:
Finance Intern at Four Seasons Hotels Doha

What motivated your transition from academia to a role at Four Seasons Hotels, and how has your experience shaped your career aspirations?

Ayesha Shahid Kayani, a proud alumna of Bahria University, graduated with a Master's in Management Science in 2021. Currently interning in the finance department at Four Seasons Hotels Doha, she has gained valuable experience in financial analysis, reporting, and budgeting. Ayesha previously served as a lecturer at the University of Gujrat, where she developed crucial leadership and communication skills.

Despite facing societal pressures to secure a job aligned with her aspirations, Ayesha persevered and was awarded a silver medal during her MS program, bringing immense pride to her family. Motivated by continuous growth, she aims to excel within the hospitality industry.

"Ayesha encourages fellow graduates to embrace challenges, pursue lifelong learning, and maintain a healthy work-life balance while striving for success."

THE IMPACT MAKER

Ammarah Batool:
Child Behavior and OPAL Lead, Islington Council London

In what ways did the Institute of Professional Psychology (IPP) support Ammarah Batool in developing the resilience and skills necessary for her role as a mental health practitioner?

Ammarah Batool started her journey in the field of mental health at the Institute of Professional Psychology (IPP), where she grew up with a passion for working as a mental health practitioner. The IPP equipped her with the essential knowledge and skills that helped her get to her current position. Ammarah Batool believes that IPP has helped her grow resilient, motivated, and courageous to support people with mental health issues. The unconditional support from the IPP teachers and the thoughtfulness of the support staff encouraged her to be someone who can make a difference.

After completing her BS from the IPP, Ammarah Batool pursued her educational journey at the University of Oxford, where she completed six different certifications in clinical psychology. She then received a Master of Science in Child and Adolescent Mental Health from the London Metropolitan University, England.

Ammarah Batool is working with Islington Council London as a 'Behavior and OPAL Lead, Designated Safeguarding Lead, and Equality & Diversity Lead.' She also provides her services to the Pakistani community via the Centre of Inclusive Care (CIC) as a Mental Health Holistic Care officer and via Therapause as one of their Panel Therapists.

"Ammarah Batool believes that the IPP has played a major part in polishing her skills to become what she is today."

THE IMPACT MAKER

Dr. Faiza Hashim Soomro: A Beacon of Resilience in Surgery

How has Dr. Faiza Hashim Soomro's journey from Bahria University to becoming a leader in hepatopancreatic biliary surgery exemplified dedication and resilience in the medical field?

Dr. Faiza Hashim Soomro, a pioneering Bahria University Health Sciences graduate, is making significant strides in hepatopancreatic biliary surgery and liver transplantation. She completed her initial training at FGPC Polyclinic and Shifa International Hospital, where she demonstrated outstanding leadership.

Pursuing advanced training in the UK through an International Training Fellowship with The Dudley Group NHS Foundation Trust, Faiza faced health challenges, including a neuroendocrine tumor, yet remained committed to her field. Currently a Specialty Trainee in Yorkshire & Humber and an Honorary Lecturer at the University of Dundee, she actively engages in research and mentoring.

"Faiza's dedication to equality, diversity, and inclusion in medicine makes her a role model for aspiring medical professionals."

ستاروں سے آگے

Bahria University demonstrates its commitment to inclusive, high-quality education through a dedicated scholarship program, awarding **deserving students Rs. 291 million in 2023-2024**. By bridging financial gaps, fostering academic achievement, and empowering personal growth, this initiative transforms lives, cultivates a diverse workforce, and contributes to a brighter societal future, shaping leaders and inspiring innovation. This impactful program enriches students' lives and enhances their employability and societal contribution. The university itself funds a significant portion of the funding, and this investment underscores Bahria's dedication to nurturing talent and promoting social mobility. By empowering minds, Bahria University fosters a ripple effect of positive change, extending beyond campus boundaries.

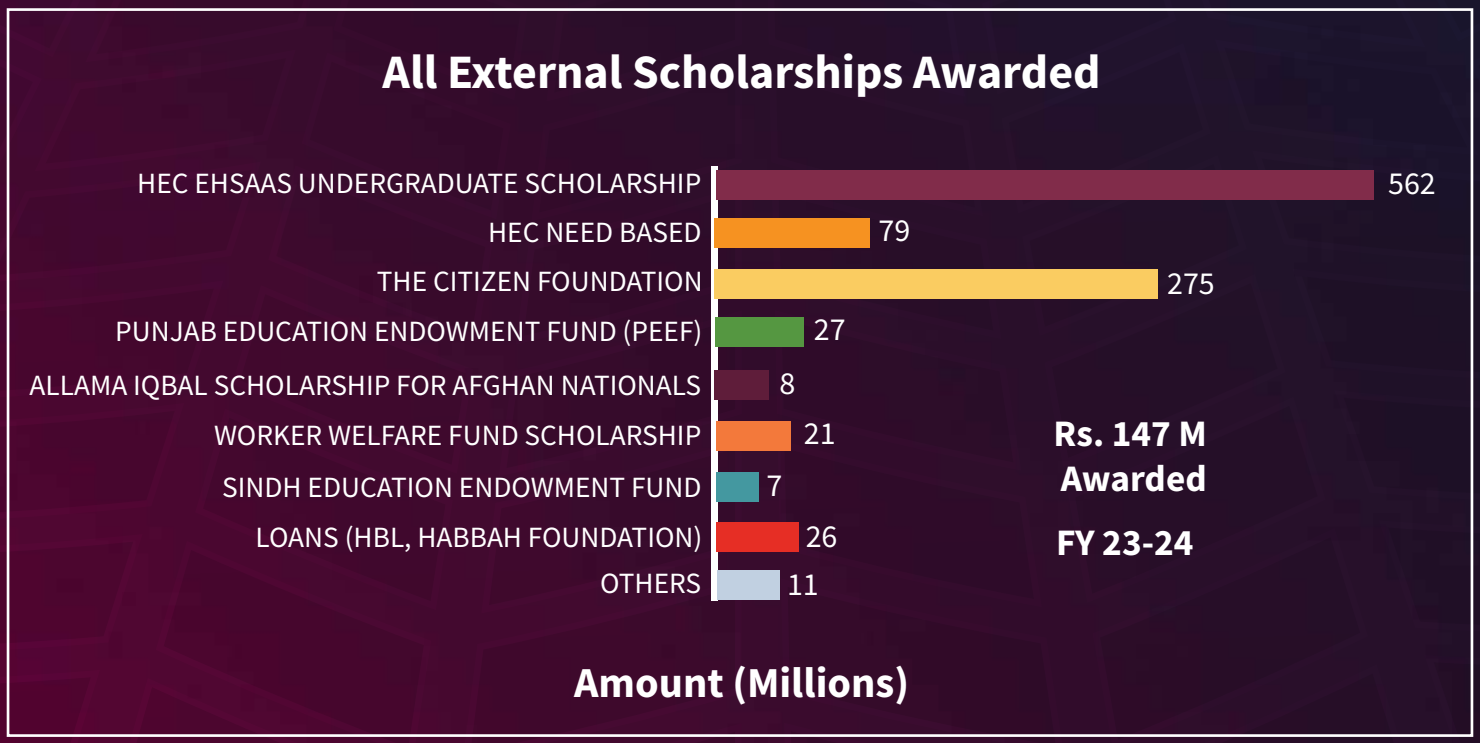
BU Sponsored Scholarships

Bahria University has proudly awarded 3,440 students across all BU campuses(nationwide), and the BU treasury dispensed Rs. 143 Million. Our flagships programs for providing scholarships are listed as follows:

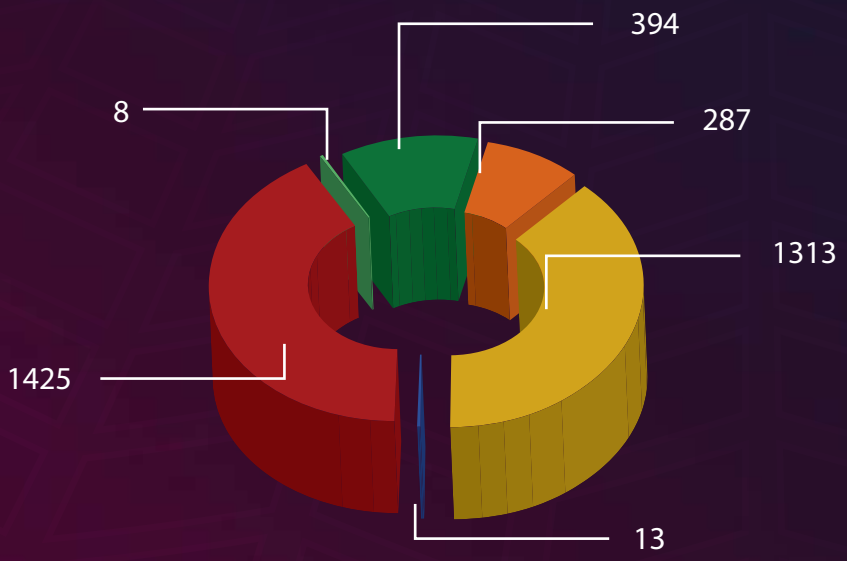
- Advance Merit Scholarship
- Merit Scholarship
- Fee Concessions
- Financial Assistance Scholarship
- Naval Shuhda Waiver

Empowering Education: Bahria University's Scholarship Program

Bahria University is proud to announce its successful partnerships with esteemed external agencies, awarding 994 scholarships worth Rs. 147 Million through collaborations with renowned entities like the Higher Education Commission (HEC), The Citizens Foundation, PTCL, Worker Welfare Fund, NESCOM, Punjab, Balochistan, KPK, and Sindh Education Endowment Fund, etc. Bahria University is forever committed to providing students with invaluable opportunities to excel. The university's drive to foster a culture of academic excellence, accessibility, and connectivity with its partners is unwavering and ever-growing.



No. of Internal Scholarships



Internal Scholarships

Rs. 143 M Awarded

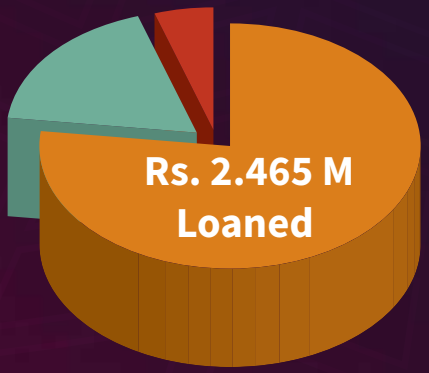
FY 23-24

- Advance Merit Scholarship
- Merit Scholarship
- BU Qarz e Hasna
- Financial Assistance Scholarship
- Naval Shuhda Waiver
- Fee Concessions

Expanding Opportunities

Bahria University prioritizes financial accessibility, providing students with extensive funding options. In FY 2023 -24, the University disbursed zero-interest study loans totaling **Rs. 2.4 Million** and, through its innovative BU Sponsors program, secured **Rs. 5 Million in sponsorships** from generous benefactors. The university leveraged strategic partnerships and alumni networking to support 55 deserving students, thereby empowering academic excellence and transforming lives.

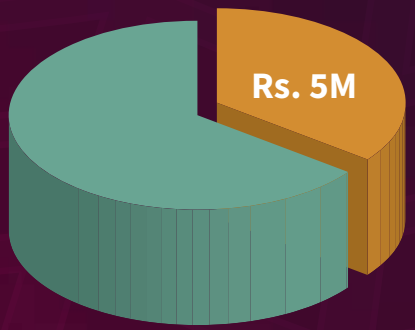
Financial Assistance



No. of Loans
FY 23-24

- BU STUDENT STUDY LOAN
- HABBAH EDUCATIONAL TRUST (INTEREST FREE LOAN)
- HBL MICROFINANCEE BANK

BU Sponsor A Student



- NO. OF STUDENTS SPONSORED 55

Celebrating 25 Years of Bahria University

Bahria University, founded in 2000, celebrates 25 years of shaping Pakistan's educational landscape. It has grown from two initial campuses in Islamabad and Karachi to include key additions like the Health Sciences Campus in Karachi (2009), Lahore Campus (2013), and a cutting-edge Engineering and Sciences facility in Islamabad (2021). In 2024, the university further expanded with a new Health Sciences Campus in Islamabad.

BU's partnership with the Pakistan Navy and its exclusive STZA-approved Maritime Science and Technology Park highlight its leadership in maritime education. The university remains committed to research, innovation, and academic excellence, preparing future leaders and contributing to Pakistan's growth.

"The next 25 years will see Bahria University continue to innovate, expand, and uphold its mission of national service and educational excellence."








Research Activities

An Advanced 2-Output Dnn Model For Impulse Noise Mitigation In Noma-Enabled Smart Energy Meters

Dr. Muhammad Hussain, Associate Professor
Department of Software Engineering

The next-generation power grid enables information exchange between consumers and suppliers through advanced metering infrastructure. However, the performance of the smart meter degrades due to Impulse Noise (IN) present in the power system. Besides conventional thresholding techniques, deep learning has been proposed for detecting noise in Non-Orthogonal Multiple Access (NOMA)-enabled smart energy meters. This research introduces a novel Deep Neural Network (DNN) capable of simultaneously detecting and classifying impulse noise as either high or low impulse. Combining the analysis of detected noise and its class has proven more effective in mitigating noise than previously proposed methods. The input feature vector to DNN is chosen based on its characteristics to detect impulse noise and its level in the data. It includes ROAD characteristics, median differences, and probability of impulse arrival. The performance evaluation shows that the Bit Error Rate (BER) of the proposed DNN is lower than the BER of the proposed single output DNN. It is also demonstrated that besides simultaneous detection and mitigation, the second output of the proposed DNN, i.e., classification of IN, validates the first output, IN identification.

The described work addresses the issues faced in conventional mitigation techniques and improves performance through the deep learning method proposed for noise mitigation. The two outputs of the presented DNN in this research study efficiently detect and classify the IN by investigating and incorporating new input features that can predict better thresholds for noise mitigation.

Contributed By Karachi Campus

Visit To North Carolina State University (NCSU), Raleigh, North Carolina, USA

Dr. Salma Hamza, Senior Associate Professor

Department of Earth & Environmental Sciences

Dr. Salma Hamza, former HOD & Senior Associate Professor of Earth & Environmental Sciences (E&ES), BUKC, visited North Carolina State University (NCSU), Raleigh, North Carolina, USA, from 17 to 28 August 2024, as a Co-Principal Investigator of the US Department of State-funded project titled, "Developing the next generation of female environmentalists". This project aims to develop stronger US-Pakistan higher educational ties, particularly in the Climate and associated environmental changes related to the geosciences field. The project focuses on helping to train, prepare, and enable the next generations of Pakistani women to have greater academic and research capacity in climate and environmental studies. During the visit, Dr. Salma participated in workshops and curriculum development meetings. Dr. Salma met the key administrators of the NC Climate Office and highlighted the research contribution of E&ES BUKC regarding climate change. She also discussed the opportunity for future collaboration between BUKC and NCSU in environmental sciences, climate, and remote sensing & GIS.

Contributed By Karachi Campus

Paper Title:
Antioxidant and enzyme inhibitory potentials of phytochemicals isolated from Dioclea reflexa (Hook F.) stem: in-vitro and in-silico studies.

Journal Title:
Pharmacological Research - Natural Products
Volume 3, June 2024 (Impact Factor: 9.1)

Authors:
Abdulkabir Oladele Oladimeji, Solomon Oluwaseun Akinnawo, Damilola Alex Omoboyowa, Mehreen Lateef

Dr. Mehreen Lateef,
Principal, Bahria College of Allied Health Sciences (BUCAHS),
Head of Department, MDRL,
BU Health Sciences Campus, Karachi.

The study aimed to isolate and characterize phytochemicals from the stem extract of D. reflexa and investigate their biochemical activities. Five flavonoids, together with two terpenoids, were isolated. Their structures were identified using 1D and 2D nuclear magnetic resonance (NMR) and mass spectroscopic techniques in combination

with circular dichroism (CD) spectroscopy and comparisons with published data. The in vitro reactive oxygen species scavenging potential of the compounds was investigated. The compounds' lipoxygenase and urease inhibitory potential were tested using in vitro and in silico methods. Compounds 1 and 2 exhibited potent antioxidant activity with lower IC50 values of 38.5 ± 0.25 and 39.5± 0.14 µM, respectively, compared with the standard used (BHA IC50 value = 39.5± 0.14) in the DPPH assay. Compounds 1 and 2 also exhibit good reducing ability and superoxide radical scavenging activity reflected by IC50 values 44.6 ± 0.30 and 48.5 ± 0.16, respectively, compared with BHA (IC50 45.6 ± 0.54). Compounds 2 and 3 showed significant inhibitory effects against urease with IC50 values 26.2 ± 0.29 µM and 36.5 ± 0.37 µM, respectively, while compound 4 with IC50 value 33.3 ± 0.74 µM is the most active against lipoxygenase. All seven compounds showed varying degrees of binding affinity against the targets, with compounds 1–5 having a better docking score than the co-crystalized ligands of lipoxygenase and urease. The density functional theory reveals the replication of the transitional state between the compounds and their respective receptor, and the stability of the compounds was predicted from the energy gap (ELUMO – EHOMO). These compounds are potential drugs against stomach ulcers, inflammation, and oxidative stress-associated diseases. It is also worth mentioning that the complete assignments of NMR data 1 and 2 were reported for the first time in this study.

Paper Title:
Decreased muscle strength in adjuvant-induced rheumatoid arthritis animal model: A relationship to behavioral assessments

Journal Title:
Heliyon
Volume 10, Issue 1, January 2024 (Impact Factor: 3.4)

Authors:
Maham Ghouri, Mehreen Lateef, Laraib Liaquat, Ahsan Zulfquar, Saima Saleem, Sitwat Zehra

Dr. Mehreen Lateef,
Principal, Bahria College of Allied Health Sciences (BUCAHS),
Head of Department, MDRL,
BU Health Sciences Campus, Karachi.

Dr. Laraib Liaquat,
Assistant Professor, Bahria College of Allied Health Sciences (BUCAHS),
BU Health Sciences Campus, Karachi.

Rheumatoid arthritis (RA) is an autoimmune disorder with unknown etiology—patients suffering from RA face persistent pain due to joint inflammation and tissue destruction. Behavioral phenotyping is an approach to target the role of different behavioral traits associated with disease progression. The study assessed behavioral patterns

related to decreased muscle strength in the adjuvant-induced rheumatoid arthritis animal model. The study was conducted on male Albino Wister rats (n = 30) [Control, Vehicle, and Disease groups]. After ethical approvals were obtained, RA was induced by complete Freund's adjuvant (CFA) intra-dermally base of the tail. The weight of animals, macroscopic analysis of inflammatory signs, and arthritic scores were measured weekly. Grip strength, ganglia-based movement, cataleptic activity, and motor-coordination-related behaviors were assessed among the groups. Radiographs and spleen index assay were performed, followed by data analysis using one-way and two-way ANOVA (Analysis of Variance). A significant decrease in weight and an increase in arthritic scores among the diseased group was observed. Behavioral analyses confirmed that diseased animals had significantly decreased grip strength and increased cataleptic activity with less motor coordination. Radiographic images and spleen index assay confirmed the pattern of RA. Therefore, it can be suggested that developing the disease animal model is an effective approach to identifying the disease progression and associated behavioral changes. Moreover, this prepared laboratory animal model may be utilized for pathway analyses to understand the key role of immune regulators and genetic insight into molecular pathways associated with acute and chronic phases of RA.

Hall of Fame

Pakistani students develop machine that extracts water from air

Our talented students, Ali Jan, Hisham Bin Tabassum, and Syeda Amna Ali, at Bahria University have made a remarkable achievement! They've developed a machine that extracts clean drinking water from the air. This innovative technology is not only cost-effective but also sustainable, providing a solution to water scarcity and improving access to clean water in Pakistan.

Going Global

A World of Difference: My Academic and Cultural Journey

I wanted to share my incredible experience from my exchange semester in Turkey, representing Bahria University. My time at Altinbas University in Istanbul was life-changing, personally and academically.

Stepping into Istanbul, I was instantly immersed in a vibrant culture and a new way of life. Adapting wasn't easy, and I faced my fair share of challenges, but with the amazing support from my new friends, professors, and the staff at Altinbas University, I overcame them. This experience helped me not only grow personally but also professionally.

> "One of the highlights of my exchange was diving deep into the Turkish language and culture. From chatting with locals to joining cultural activities, I profoundly appreciated Turkey's rich history and traditions. This experience not only boosted my language skills but also broadened my worldview."

Academically, the exchange program opened doors to courses I couldn't have taken at my home university. This let me explore new subjects and expand my skills in ways I hadn't imagined. Working alongside students from diverse backgrounds and academic fields enriched my learning and taught me the true value of diversity in education.

My semester at Altinbas University was a journey of growth and discovery that has left an indelible mark on me.

I’m deeply grateful to Bahria University and Altinbas University for this incredible opportunity, and I urge my fellow students to seize the chance to explore the world.

Thank you, Bahria University, for making me part of this amazing journey.

Mr. Muhammad Jibran Basini

MEET OUR TEAM

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25 YEARS

Empowering Minds, Enriching Futures

BAHRIA UNIVERSITY

DISCOVERING KNOWLEDGE

ISLAMABAD
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BUHSCI Naval Anchorage.

LAHORE
BULC Civic Centre
Johar Town.

KARACHI
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