

Monthly Newsletter of P.G. Department of Botany, Korambayil Ahamed Haji Memorial Unity Women's College, Manjeri - 676122
(Affiliated to University of Calicut, NAAC Re-accredited with B++ Grade, Estd - 1991)

International Conference on Advances in Plant Science (APS 2024)

Organised by Department of Botany in association with Kerala State Higher Education Council

The PG Department of Botany at KAHM Unity Women's College, Manjeri, in collaboration with the Kerala State Higher Education Council, successfully organised the International Conference on Advances in Plant Science (APS 2024) on 25th October 2024. The conference, held in the college's seminar hall from 9.00 am to 5.00 pm, was well-attended by students, research scholars, and faculty members from various institutions. The event commenced with a registration session, followed by an inauguration featuring a welcome address by Dr. P. Faseela, the conference convenor, and Assistant Professor of Botany. Prof. Muhammed Basheer Ummathur, Principal of KAHM Unity Women's College, delivered the presidential address and officially inaugurated the conference. Felicitations were extended by Dr. A. Usman, HOD, Department of Botany, Dr. A.K. Shahina Mol, IQAC coordinator and Mr. Adam Thanari, who represented the college's NTS.



Dr. Jason C. White

The conference highlighted the contributions of two eminent speakers. Dr. Jason C. White, Director of the Connecticut Agricultural Experiment Station (CAES), USA, delivered the Erudite Lecture titled "Nano-enabled Agriculture: A Path to Global Food Security in a Changing Climate." In his presentation, Dr. White discussed the potential of nanotechnology in agriculture, particularly for pesticide management and food security, and emphasized the significance of nanotoxicology in sustainable agriculture. His talk brought international insights into current agricultural practices, setting a promising tone for future research avenues. The Erudite lecture concluded with a vote of thanks by M. Hasna, a fifth-semester B.Sc. Botany student.



Overall, APS 2024 served as a valuable platform for knowledge sharing and collaboration among botanists, researchers, and students. The successful organization of the conference, insightful presentations, and active participation from attendees reflect the commitment of KAHM Unity Women's College to advancing scientific knowledge and research in the field of plant science.



The afternoon sessions featured oral presentations by students, research scholars, and faculty members, which took place in the seminar hall under the guidance of Dr. Akhila Sen and Dr. Syed Hamid Thangal, Assistant Professor, Department of Zoology, KAHM Unity Women's College, Manjeri. The 15 presentations covered topics, including Phytochemical Analysis, Climate Change and Crop Productivity, and Plant Ecophysiology, with researchers presenting new findings and innovative approaches. Simultaneously, a poster presentation session took place in the college auditorium, where 19 presenters shared their research work under similar themes. Dr. Akhila Sen and Dr. Shamsheera K.O. evaluated the poster presentations, fostering a spirit of academic inquiry among the participants.



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Ayiasha Febin P.N.
PG 1st Semester Botany

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Sudheesha K.
Assistant Professor Adhoc

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Floral Art - Bouquet Boutique

On October 17, 2024, the PG Department of Botany at Korambayil Ahmed Haji Memorial Unity Women's College in Manjeri organized an engaging hands-on training workshop titled "Floral Art." This workshop focused on bouquet making and aimed to enhance the practical skills of first-semester B.Sc. Botany students. The event was held in the department's botany lab and attracted an enthusiastic participation of 47 students, who were eager to learn and explore the artistic side of botany through floral design. The workshop featured Nazmin Banu C.V. assistant professor department of botany, as the keynote speaker and resource person. Her expertise in the field provided valuable insights into the techniques and principles of floral arrangement. Dr. Faseela P., assistant professor in the department, also contributed to the workshop, offering guidance and support throughout the session. Together, they facilitated a comprehensive learning experience, helping students understand the aesthetic and biological aspects of flower arrangement. Coordinated by Nazmin Banu alongside class representatives Fathima N. and Fahma T., the workshop successfully fostered collaboration and creativity among students. Participants engaged in hands-on activities, learning to create beautiful flower bouquets while developing teamwork skills. This event not only allowed students to express their creativity but also reinforced their understanding of plant materials and their applications in art. Overall, the workshop was a meaningful addition to the academic experience of the first-semester B.Sc. Botany students, blending practical skills with artistic expression.



Inspiring Success: CSIR-UGC NET Orientation Program for PG Students

On 28th October 2024, the PG Department of Botany organized an insightful Alumni Lecture featuring Riya Fathima, an accomplished alumna who has successfully qualified for both the CSIR-UGC JRF and ICAR-AICE JRF. The session, Inspiring Success: CSIR-UGC NET Orientation Program for PG Students, aimed to inspire and guide Botany students on the path toward excelling in competitive examinations.



The program coordinated by Nadiya K.T. and Jumana K. of the Third Semester M.Sc. Botany, who ensured the smooth flow of the event. The lecture proved to be an invaluable experience, inspiring students to pursue their career goals with renewed dedication and confidence.



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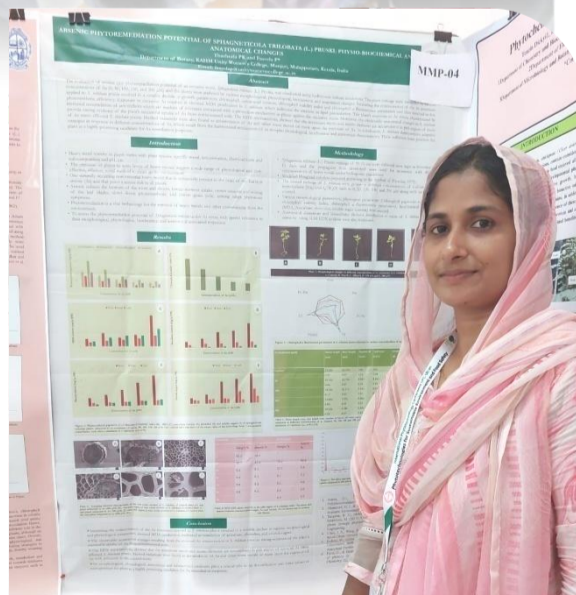
Talk on 'Importance of Mental Health and Common Mental Health Issues Among College Students'

World Mental Health Day 2024

On 9th October 2024, PG Department of Botany marked World Mental Health Day 2024 by hosting a crucial talk titled 'Importance of Mental Health and Common Mental Health Issues Among College Students'. The session featured Ms. Abhirami O.U., a Psychologist from Jeevani and Ms. Amani, Assistant Professor Adhoc from the Department of Psychology, who addressed the growing mental health challenges faced by college students. Dr. Usman A., Head of the Botany Department, inaugurated the event by emphasizing the relevance of mental health awareness in academic settings. Ms. Amani highlighted the need for open discussions on mental well-being, while Ms. Abhirami shared practical strategies for students to maintain mental health and cope with common issues. The event coordinated by Deepa P., Assistant Professor Adhoc, PG Department of Botany and Sana V., Fifth Semester B.Sc. Botany, ran smoothly and concluded with a heartfelt vote of thanks from Fathima Khadeeja, a Fifth Semester B.Sc. Botany student. The program provided a supportive platform for students to understand mental health and encouraged them to seek help when necessary, fostering a more informed and compassionate academic community.




Dr. Faseela P. participated and presented a paper entitled 'Arsenic phytoremediation potential of *Sphagneticola trilobata* (L.) Pruski: Physio-biochemical and anatomical changes' under the theme Metal and Metalloids in the International Phytotechnology Conference (IPC-18) on "Phytotechnologies for Sustainable Environment and Food Safety" Organised by Department of Botany, University of Calicut & International Phytotechnology Society from 22/10/24 to 24/10/24.




KAHM UNITY WOMEN'S COLLEGE
MANJERI, MALAPPURAM, 676122

PG DEPARTMENT OF BOTANY
Qualified CSIR NET with JRF



Aiswarya Prathap
AIR 163
M.Sc. Botany 2020-22 Batch





Riya Fathima
AIR 154
M.Sc. Botany 2020-22 Batch



Proudly Congratulating

KAHM UNITY WOMEN'S COLLEGE
Manjeri, Malappuram, 676122

PG DEPARTMENT OF BOTANY
Proudly announcing
Calicut University
MSc Botany 2024-2025
Rank Holders

Shibla Banu K.
MSc Botany
2022-2024 Batch

Jumanath K.C.
MSc Botany
2022-2024 Batch

Congratulations



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LORIDO 2024: Taxonomic Collection Trip to Munnar and Kodaikanal



PG Department of Botany successfully organized a taxonomic collection trip to Munnar and Kodaikanal for the Third semester M.Sc. Botany students from 19th to 21st October 2024. The primary objectives of the trip were to study the rich plant diversity of these regions and to enhance the student's expertise in plant identification. During the trip, students collected plant specimens from various locations as outlined in the syllabus, M.Sc. Botany, University of Calicut, which will be used for the preparation of herbaria. The fieldwork provided hands-on experience in identifying and documenting various plant species, enriching their understanding of taxonomy and plant diversity. The trip coordinated by the faculty members, Deepa P. and Sudheesha K., with the student coordinator, Reeshana, Third semester M.Sc. Botany. It was a valuable learning opportunity, enabling the students to apply theoretical knowledge in a practical setting.



World Food Day Celebration: Nature's Feast



On 18th October 2024, the PG Department of Botany at KAHM Unity Women's College celebrated World Food Day with a lively food fest titled 'Nature's Feast'. Students from both the B.Sc. and M.Sc. Botany programs actively participated in organizing activities focused on sustainable food practices and the diversity of plant-based foods. The event inaugurated by Prof. (Dr.) Muhammed Basheer Ummathur, Principal of the college, alongside distinguished guests, Dr. Abdul Ali O. (Manager), Dr. Shahina Mol A.K. (IQAC Coordinator), Dr. Abdul Salam C.M. (Estate Officer) and Usman A. (Head of the Botany Department). Their presence highlighted the college's commitment to student-led initiatives and experiential learning. The fest featured stalls offering a variety of dishes made from locally sourced plant-based ingredients, promoting sustainability and healthy dietary practices. The event was a testament to the student's dedication and an excellent platform to promote sustainable eating habits. Sudheesha K., Deepa P., Aswathy M. and Fayiza T. expertly coordinated the event, ensuring its success.



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'Craft & Grew'

Hands-on Training Workshop on Plant Cloning Methods

The Postgraduate Department of Botany at KAHM Unity Women's College, Manjeri, in association with Bhoomithrasena and Mathrubhumi SEED Club, organized a hands-on training workshop titled "Craft and Grew" on October 9, 2024. The event aimed to impart knowledge on plant cloning methods, specifically grafting, layering, and budding. The workshop was held at the college auditorium and witnessed enthusiastic participation from 50 Plus-two students from CHMKM Higher Secondary School, Kavanur, and 43 first-semester B.Sc. Botany students from KAHM Unity Women's College.



The workshop's objective was to promote community outreach and extension activities, providing students with practical experience in plant propagation techniques. The event was coordinated by Fathima N., first-sem Botany representative and Dr. Faseela P. Fahma, first-sem B.Sc. Botany, delivered the vote of thanks. The participants gained valuable skills and knowledge, paving the way for future collaborations between the college and local schools.

The workshop commenced with a welcome speech by Dr. Faseela P., Assistant Professor of Botany, followed by an presidential address by Dr. Usman A., Head of the Botany Department. The keynote speaker, Mr. Abdul Azeez P.K., from the Agriculture Research Station, Anakkayam, Malappuram, shared his expertise on plant cloning methods. Mr. Siddiq, Botany teacher at CHMKM HSS, Kavanur, and Ms. Nazmin Banu, Assistant Professor from Department of Botany felicitated the program. After hands-on training at Auditorium, the participants actively engaged in demonstrations and hands-on activities on vegetative propagation techniques in the college's botanical garden.

INTERNATIONAL JOURNAL OF PHYTOREMEDIATION
Taylor & Francis

Elicitors fortifies the plant resilience against metal and metalloids stress
Paramamol Faseela¹, Matthew Veenaa², Akhila Sani³, K. S. Anjitha⁴, K. P. Raj Aswathi⁵, Paliyath Sathya⁶, and Jai T. Pothu⁷

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ABSTRACT
This review addresses plant interactions with heavy metals, emphasizing defense mechanisms and the role of elicitors in enhancing plant resilience. It discusses the role of elicitors in activating defense mechanisms and the role of secondary metabolites in plants under metal stress. It also discusses the role of elicitors in enhancing plant resilience against metal and metalloids stress. It also discusses the role of elicitors in enhancing plant resilience against metal and metalloids stress.

KEYWORDS
Heavy metal stress, metalloids stress, plant defense mechanisms, secondary metabolites, phytochemicals, phytochemical signaling

Introduction
Rapid industrial growth has led to an increase in the production and environmental discharge of heavy metals (HMs) and metalloids. Over the past decade, industrialization has accelerated, contributing to the rise in HM and metalloids pollution. Both natural processes and human activities, such as the weathering of soil minerals, the use of treated water, sewage sludge, fertilizers, and various industrial practices, release large amounts of toxic compounds into the atmosphere (Zhang et al. 2024). The adaptation of these plants to abiotic challenges can be better understood by looking at the hyperaccumulation of metals and metalloids in plant tissues. Although trace metals and metalloids were always present in the crust of the Earth, human activities like mining, irrigation, and the use of fertilizers and pesticides have increased their concentrations in soil (Yang et al. 2023). Plants absorb both required and non-essential elements from this range of metal and metalloids. While essential trace metals such as zinc (Zn), copper (Cu), iron (Fe) and

Dr. Faseela P. published a review paper entitled "Elicitors fortifies the plant resilience against metal and metalloids stress" in the International Journal of Phytoremediation, Taylor & Francis (IF-3.4).

ബഷീർ കുമാരൻ

അന്താരാഷ്ട്ര സസ്യ ശാസ്ത്ര സമ്മേളനം

മഞ്ചേരി | കെ എ എച്ച് എം യൂണിവേഴ്സി കോളേജിൽ അന്താരാഷ്ട്ര സസ്യ ശാസ്ത്ര സമ്മേളനം നടത്തി. യൂ എസിലെ കണക്ടിക്കറ്റ് യൂണിവേഴ്സിയിൽ നിന്നും ഡോ. ഷൈലി സി വൈറ്റ് മുഖ്യപ്രബന്ധം അവതരിപ്പിച്ചു. കാലാവസ്ഥ വ്യതിയാനം കാരണമുള്ള മേഖലയിൽ ഉണ്ടാകുന്ന പ്രശ്നങ്ങളെ കുറിച്ചും അവയുടെ പരിഹാരങ്ങളെ കുറിച്ചും ചർച്ച നടന്നു. ഹരിത വിപ്ലവത്തിന് ശേഷം ഇന്നത്തെ കാർഷിക മേഖല നേരിടുന്ന പ്രധാന വെല്ലുവിളിയായ ഉൽപാദനക്ഷമതയിലെ കുറവ് തികഞ്ഞാൽ നാനോ കാണ

ങ്ങൾക്കൊരുമെന്ന് അദ്ദേഹം സമർത്ഥിച്ചു. വിവിധ പരിസ്ഥിതി ഘടകങ്ങൾ ചെടികളിൽ ചെലുത്തുന്ന സമ്മർദ്ദങ്ങളെ അതിജീവിക്കുന്നതിൽ സീഡ് പ്രൈമിംഗിന്റെ പങ്കിനെ കുറിച്ച് കോതമംഗലം മാർ അതാനിയസ് കോളേജ് അസി. പ്രൊഫ. ഡോ. അഖില സെൻ സംവദിച്ചു. പ്രിൻസിപ്പൽ പ്രൊഫ. മുഹമ്മദ് ബഷീർ ഉമ്മത്തൂർ ഉദ്ദേശാടനം നിർവഹിച്ചു. ഡോ. എ ഉസ്മാൻ, ഡോ. പി ഫസീല, ഡോ. ഷാഹിന മോൾ, ആരോഗ്യം, എം ഹസ്ന സംസാരിച്ചു. വിവിധ കോളേജുകളിൽ നിന്നുള്ള ഗവേഷകരും വിദ്യാർത്ഥികളും പ്രബന്ധങ്ങൾ അവതരിപ്പിച്ചു.



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