



Dr. A.K. Umera Begam M.Sc., M.Phil with SET., Ph.D.

Assistant Professor

Department of Biochemistry,

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CURRICULUM VITAE

PERSONAL PROFILE

- ✓ Name : A.K. Umera Begam
- ✓ Father's Name : A.R. Syed Ahamed Kabeer
- ✓ Date of Birth : 15.01.1976
- ✓ Religion : Islam – Muslim
- ✓ Nationality : Indian
- ✓ Gender : Female
- ✓ Marital Status : Married
- ✓ Spouse Name : Dr. J. Sirajudeen
- ✓ Languages Known : Tamil and English : Can Read, write & speak
Arabic : Can Read
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TEACHING EXPERIENCE

- ✓ Working as an **Assistant Professor** in the Department of Biochemistry, **Holy Cross College** (Autonomous), Tiruchirappalli-2, since **16th June 1999 (25 years)**

AREA OF RESEARCH

- ✓ Phytochemistry and Clinical Pharmacognosy

RESEARCH EXPERIENCE AND GUIDANCE

- ✓ Have applied for Minor Research Project (MRP) under UGC scheme 2015-2016 on Monitoring of nutritional status.
- ✓ Acted as a project guide for B.Sc. and M.Sc. in the Department of Biochemistry, Holy Cross College, since 2005.

RESPONSIBILITIES/POSITIONS HELD

- ✓ Dean of Student Affairs (2024 till date)
- ✓ Head of the Department (2007-2010 and 2014-2018, 2021-2023)
- ✓ Chair Person for BOS
- ✓ Alumnae Co-ordinator of the college (2018 - 2021)
- ✓ Vice president of the Staff Club (2018-2019)
- ✓ Acting as core committee member of Internal Quality Assurance Cell (till date) and Alumnae Association of the college (2014-2018)
- ✓ Have organized International, National seminars and State level seminars and also been committee member for many symposia and conferences
- ✓ Had actively involved in the formulation of various proposals by the college to various agencies
- ✓ Core Committee Member of NAAC (during 2nd, 3rd and 4th Cycles)
- ✓ Centre for Academia and Industry Interface CAII.(2017)
- ✓ Centre for Research and Publication(CRP) – 2018 – till date
- ✓ Member of KAUSHAL project proposal preparation team

Papers published

2021-2022

1. Biodegradation and Bioremediation of Polymer by Microbial Assisted Novel Process. Journal of Zoological Investigations. Web of S Vol 8, Special Issue, 28-38(2022). ISSN 2454-3055.

2. Hptlc Finger Print Profile and Evaluation of invitro Antioxidant and Anti-Microbial Activity from the Rhizome of Zingiber officinale. Academia and Society Volume 6 Number 1 &2, eISSN: 2393-9419, 56-

2019-2020

3. Amelioration of acetaminophen- induced hepatotoxicity using Solanum torvum SW. Fruit extract in Wistar rats” Asian Journal of Pharmaceutical and clinical research Vol 13 Issue 1 January 2020 ISSN: 2455-3891 Impact factor: 0.655

4. In-vitro antimicrobial activity of Crotalaria verrucosa medicinal plant, Asian Journal of Research in Chemistry and Pharmaceutical Sciences, 7(2), **2019**: 508-513. ISSN: 2349 – 7106

5. Free Radical Scavenging Action of *Solanum torvum* fruit extracts using *in vitro* antioxidant methods, *International Journal of Scientific Research and Development*, Vol. 3 (9): **2015**: 1113-1117.(Impact Factor: 2.39)

6. Phytochemical evaluation of different solvent extracts of a traditional medicinal plant, *World Journal of Pharmaceutical Research*, Vol. 4(3), **2015**: 793-801 (Impact Factor 5.045)

7. Antibacterial activity of a traditional medicinal plant against pathogenic microorganisms causing urinary tract infection, *World Journal of Pharmacy and Pharmaceutical Sciences*, **Vol. 3(7)**, 2014: 1116-1126. (Impact Factor 2.786).

8. Effect of some Indian traditional plants on few common pathogens. *Advances in Applied Science Research*, 2010, 1 (3): 205-211

Books/Chapters/Proceedings

2024-2025

Accepted

1. **Book Chapter** On: Pangenomic assisted breeding of biotic stress resilient crops in plant pangenomes, **Science Direct**.

Book Chapters in Book Titled: Medicinal Plant Molecular Biology and Biotechnology: From Metabolomics and Functional Genomics Toward Precision Breeding, **CRC Press/Taylor & Francis Group, LLC**.

2. Genetic engineering of medicinal plants for enhanced secondary metabolite production

3. Molecular marker-assisted breeding in medicinal plants for enhanced secondary metabolite production

4. Enhanced secondary metabolite production by genome editing in medicinal plants
Molecular marker-assisted breeding in medicinal and plants for enhanced secondary metabolites production, CRC Press, Taylor and Francis.

Book Chapter in Book Titled: Stress-resilient crops: Coordinated omics-CRISPR-nanotechnology strategies, **CABI Publishers**, <https://www.cabi.org/>

5. Reprogramming epigenomes by CRISPR-based technology against plant diseases

2015-2016

In vitro embryo culture technique in *Oryza sativa*, Proceeding of Botanicals and phytochemicals the challenges and promise for health care and drug development. B-111. ISBN: 978-93-82323-60-0.

Workshops Attended

1. International workshop on Biochemical & Bioinformatic Techniques, Department of Biochemistry, Srimati Indira Gandhi College, Trichy. 5th September 2017
2. “Electrophoretic Techniques” Department of Biochemistry, St Joseph’s College, Tiruchirappalli.(09.12.2014)
3. One day workshop on “Research Methodology and Opportunities in Traditional medicine research organized by Periyar College of Pharmaceutical Sciences on 9th December 2011.

Papers Presented in International/National Conferences or Seminars

1. Presented-*In vitro* studies on Antioxidant and Anti-inflammatory effect of Casein free dietary formulations in an international conference on Biotechnological Approaches for Global Environmental Problem (ICBAGEP-2024) organized by PG & Research Department of Biotechnology, Jamal Mohamed College(Autonomous) held on 12th February 2024.
2. Presented a paper titled “In vitro anticancer activity of *Gymnema sylvestre* R. Br. against MCF-7 and EAC cell lines” at International conference on Innovation, Research and
3. Networking in Higher Education for a Sustainable Society: Challenges and Channels. 25-27 July 2018.
4. Presented a poster titled “Iron deficiency among adolescents” at International conference on “Innovations and Challenges in Biomedical Sciences and Research” (ICMR Sponsored)held in Holy Cross College, Trichy. 12th -14th December 2017
5. Presented a paper titled “In vitro antioxidant activity of *Solanum torvum* at International conference on Chemical and Environmental Research (ICCER 2017) UGC sponsored held in Jamal Mohamed College, Trichy 27th & 28th July 2016
6. Presented a paper titled “In vitro antioxidant activity of *Solanum torvum* at International conference on Chemical and Environmental Research (ICCER 2017) UGC sponsored held in Jamal Mohamed College, Trichy 27th & 28th July 2016
7. Presented a paper titled “In vitro embryo culture technique in *Oryza sativa*” at National Conference on “Botanicals and Phytochemicals: The challenges and promises for health care and drug development, Rev. Jacob Memorial Christian College, Ambilikkai, 04.02.2016
8. Presented a paper entitled “ Iron: “Fe” male indispensable nutrient – A Review”. in the National Conference on “Advances in the Management and Prevention of Clinical Disorders due to malnutrition. (AMPCM 13), RSGC, Thanjavur during 7th and 8th February 2013.

FDPs Attended

1. Participated in Online **Faculty Development Programme** on CADD and systems biology, sponsored by Theevanam Additives & Nutraceuticals Pvt Ltd, IITM, Research Park, Chennai, Tamilnadu and organized by PG & Research Department of Biotechnology and Bioinformatics, HCC, Trichy held 18th December to 22nd December 2023
2. Participated in One week online **Faculty Development Programme** on Recent Advances in Food Systems organized by Department of Nutrition & Dietetics, Jamal Mohamed College (Autonomous) held on 19th to 24th January 2024.
3. An **FDP**- Overview and Integration of cellular Metabolism, MOOC- Online Course NPTEL-AICTE, Funded by the MoE, Govt of India, New Delhi.-12 weeks July 2023 to Oct 2023.
4. Successfully completed a **one week national FDP organized by UGC-MMTTC**, SGTB Khalsa College, New Delhi, in collaboration with University of Delhi (Department of Anthropology and Skill Enhancement Committee, Acharya Narendra Dev College, DU (Department of Biomedical Science) and Forensic Science Unit, SGTB Khalsa College, University of Delhi and obtained **Grade 'A'** as required for promotion under CAS of UGC. **(22nd April – 30th April 2024)**
5. **Faculty Development Program (FDP):** International Webinar on “Biological Innovations for Resource Management and Sustainable Development”, organized by PG and Research Department of Botany, Jamal Mohamed College (Autonomous), Tiruchirappalli, on 24th to 26th August 2021 under DBT Star College Scheme.
6. **Attended a Short term Course on “Adaptive Design for Learning”** from 4th July to 30th September 2022, organized by Atneo SALT Institute, Philippines.

Seminars/Conferences Attended

1. Participated in International Conference on Emerging Trends in Microbial Technology (ICETMT-2024) organized by PG & Research Department of Microbiology, Jamal Mohamed College (Autonomous), Tiruchirappalli, held on 24th January 2024
2. Participated in International symposium on Progress, Advancements and Research
3. Knowledge in Biotechnology, organized by PG & Research Department of
4. Biotechnology, Bishop Heber College (Autonomous), Trichy. on 23rd February 2023.
5. International conference on cancer inferno and its prevention strategies, (ICCIPS - 2019) organized by Periyar EVR College, Tiruchirappalli on 22nd February 2019
6. Two days National Seminar on “Best Practices of top NAAC accredited Institutions (BP2019), organized by Annamalai University, Chidambaram and NAAC, Bangalore during 30th and 31st January 2019.
7. International colloquia on “Bionanomaterials and Bionanotechnology” (ICBB’ 18) organized by St. Joseph’s College, Trichy on 8th February 2018.
8. International conference on “Chemistry of Biomolecules – Current Trends and Future Perspectives” (ICCBCTFP-2016) Sponsor-UGC, DBT, DST organized by Holy Cross College, Trichy on 27.07.2017 & 28.07.2017.
9. National seminar on “Clinical Research”, organized by St. Joseph’s College on 21.01.2015.

10. Science Academies' Lecture workshop on "Recent trends in biology and biotechnology" organized by Department of Biotechnology, Jamal Mohamed College, Trichy from 29th to 31st January 2014.
11. National level Seminar on "Recent Advances in Biomedical Research on Infectious and Non-Infectious Diseases" during 13th and 14th October 2011, held at Department of Biomedical Science, Bharathidasan University, Tiruchirappalli.

Distinguished Positions Held

- **Member of Selection Committee** for post of Young Professional - I (One post) under the Institute in-house project entitled "Biochemical dissection of fruit ripening-related phenomena and components and exploring nutraceutical applications of bioactives of banana" at National Research Centre for Banana, Trichy. **(29.5.2024)**
- Acted as External auditor for Academic audit for the NAAC, Research Department of Biochemistry 11th December 2023, Rabiammal Ahamed Maideen college for women, Tiruvarur
- Trainer for a "Training Programme on Evaluation and Assessment using Revised Blooms Taxonomy" for Biochemistry Staff in Holy Cross College, Trichy, held on 28th November 2019.
- Acted as Chair Person for a session on oral presentation in the International conference on Innovation, Research and Networking in Higher Education for a Sustainable Society: Challenges and Channels. 25-27 July 2018.
- Gave an invited talk on the topic "Ootachathu Unavu" for NSS students organized jointly by Bharathidasan University and Holy Cross College, Trichy on 25th November 2017.
- Organized a workshop for Non Teaching staff (Lab assistants) of science departments on the topic "Laboratory Safety Measures and Precautions" in the biochemistry laboratory on 14th October 2017.
- Invited talk on "The importance of Bio-chemistry and its career opportunities" to 11th and 12th Standard student as part of STEM project at CREA Matric Higher Secondary School on 17th August 2017.
- Served as External Expert in the Interview Panel at St. Joseph's College, Tiruchirappalli. in the Department of Biochemistry on 27. 04.2017
- Acted as Judge for poster presentation in the International conference on "Chemistry of Biomolecules – current trends and future perspectives" (ICCBCTFP-2016) organized by Holy Cross College, Tiruchirappalli and School of Biological Science, Madurai Kamaraj University on 27th and 28th July 2016.
- Invited talk on "Chemistry of Biomolecules" for the CHEMSTAR CLUB activity in the department of chemistry, Cauvery College for Women, Tiruchirappalli on 15th February 2016.
- Acted as Judge for the "CHEM EXPO" – chemistry exhibition at Holy Cross College, Tiruchirappalli.

- Acted as Judge for English Elocution Competition in National Library Week celebration - Organized by Department of Library Science, Holy Cross College on 30th November 2023.
- Acted as Judge for the event “Just A Minute” at Bioutsav’24, an Intercollegiate meet held on 30th August, by Watson & Crick Club of PG & Research Department of Biotechnology and Bioinformatics, Holy Cross College, Trichy.
- Acted as Judge for the event Hand Painting on the theme “Indigenous Knowledge to Conserve Wildlife and Sustain Nature” held on 20th September 2024 in FESTOTLE’24, Wild Life Week Celebration, in the PG and Research Department of Zoology, Holy Cross College, Trichy.
- Acted as Judge for Intercollegiate debate on “GMO vs Organic: Which Path holds the key to sustainable agriculture? organized by Linnaeus Club of Botany. Holy Cross College, Trichy on 19th September 2024
- Acted as Judge for poster presentation on “ Sustainable solutions for E-Waste Management” organized by Department of B.Voc. Software Development, Holy Cross College on 26.9.2024

Members in Various Bodies

1. Member of Board of Studies for Biochemistry, St. Joseph’s College, Tiruchirappalli.
2. Member of Question Paper Scrutiny Board for Biochemistry, Srimad Andavan Arts and Science College, Tiruchirappalli.
3. Chief Examiner for UG Valuation, Bharathidasan University, Tiruchirappalli till date.
4. Examiner for M.Phil Dissertation evaluation, Bharathiar University, 2011.
5. External Audit Member, Raabiyammal College, Tiruvarur.