

Three-Days National Workshop on

**HUMAN CELL CULTURE PRIMER DESIGN
AND
RT-PCR TECHNIQUES**

21 - 23 February 2025

**HCCP
2025**

Organized by

**DEPARTMENT OF BIOCHEMISTRY &
BIOTECHNOLOGY**

[DST-FIST & UGC-SAP SPONSORED]

Key Highlights:

- Hands-on Training: Participants will receive detailed instruction in Human Cell Culture, from setup to maintenance and experimentation.
- Primer Design: Learn the essential principles and methods for designing primers for RT-PCR experiments.
- RT-PCR: Explore the fundamentals of Real-Time Polymerase Chain Reaction (RT-PCR), focusing on its application in gene expression studies.
- Data Interpretation: Gain insights into analyzing and interpreting data for scientific research and publication.

Who Should Attend?

- Students (Undergraduate & Postgraduate)
- Research Scholars
- Faculty and Academic Professionals
- Industry Professionals interested in molecular biology techniques

Facilitators:

This workshop will be conducted by the **Department of Biochemistry & Biotechnology, Annamalai University, and Technovix Life Science**, renowned experts with extensive experience in molecular biology, cell culture, and gene expression studies.

Workshop Modules:

Day 1: Human Cell Culture Techniques

- Cell culture basics: handling and maintenance
- Sterility protocols and medium preparation
- Cryo-storage, thawing, and Sub-culturing
- Preparation of cells for MTT, MMP, ROS, DAPI, and AO/EtBr Staining,

Day 2: Primer Design and RNA Isolation for RT-PCR

- Understanding gene sequences and target selection
- Designing primers with available online tools
- Troubleshooting primer design for accuracy and efficiency
- Isolation of RNA from cell culture
- Treatment of cells for MTT, MMP, ROS, DAPI, and AO/EtBr Staining,

Day 3: RT-PCR for Gene Expression Analysis

- Master Mix Preparation
- Performing real-time PCR experiments
- Quantifying gene expression
- Analyzing and interpreting results
- Results of cells MTT, MMP, ROS, DAPI, and AO/EtBr Staining,

Contact Information:

- WhatsApp : +91 90801 14270, +91 93455 20058.
- Email : hccpau2025@gmail.com, suraj_cks@yahoo.co.in
sureshrajakantham@gmail.com

Workshop Fee:

- Students: ₹2000
- Research Scholars: ₹3000
- Academicians/Industry Professionals: ₹5000

Mode of Payment :

The registration fee shall be paid through Demand Draft (DD)/electronic transfer. The DD should be drawn in favor of "The Registrar, Annamalai University," payable at Annamalai Nagar/Chidambaram, Tamil Nadu.

Account Details:

- Account Name: The Registrar, Annamalai University
- Account Number: 621201159623
- Bank: ICICI Bank, Annamalai Nagar
- IFSC Code: ICIC0006212

Date & Venue:

- Date : 21 to 23 February 2025
- Venue : Cell Culture Lab, Department of Biochemistry & Biotechnology, Annamalai University

Registration Details:

- Limited seats were available! You can register early to secure your spot.
- Last Date for Registration: January 31, 2025

REGISTRATION FORM

Name Prof/Dr/Mr/Ms.....

Designation:

Address:.....

.....

.....

.....

Tel. No (What'sApp) :.....

E-mail Id:

Certificate:

All participants will receive a certificate of participation upon completing the workshop.



SCAN TO REGISTER

About the University

In the early 1920s Rajah Sir S. R. M. Annamalai Chettiar founded Sri Minakshi College, Sri Minakshi Tamil College and Sri Minakshi Sanskrit College at Chidambaram. In 1928, Rajah Sir S. R. M. Annamalai Chettiar agreed with the local Government to handover the above said institution for establishing a University. Thus, on 01.01.1929 Annamalai University was established as per Annamalai University Act 1928 (Tamil Nadu Act 1 of 1929). One of the most significant developments is the enactment of the Annamalai University Act, 2013 (Tamil Nadu Act 20 of 2013), which came into force from September 25, 2013. Annamalai University is accredited with 'A' Grade by NAAC in 2014. "The NIRF-2020" by the Ministry of Human Resource Development (MHRD) has ranked the University in the band 101 - 150 in the overall category as well as the University Category. In the Pharmacy Category the ranking is 12th in India. In the Medical Category the ranking is 35th. "The Times Higher Education World University Ranking - 2021" has ranked Annamalai University in 1000+ for Overall category. In the Subject Category Ranking, 2021, the University is ranked 601+ for Clinical & Health Subjects, in the band of 801-1000 for Engineering, 801+ for Life Sciences and 1000+ in the Physical Sciences Subjects. "The QS World University Ranking - 2021" has ranked Annamalai University in the band of 301-350 in Asia Ranking, and 39 in India Ranking. "The CWTS Leiden Ranking 2019", on scientific impact of universities and on universities' involvement in scientific collaboration & scientific performance, has ranked the University at 23rd based on the number of publications and 7th based on the proportion of publications that, compared with other publications in the same field and in the same year, belong to the top 10% most frequently cited. Among the top 212 ranked institutions for Higher Education in India the "SCImago Institutional Ranking (2019)" has ranked Annamalai University as 9th in Tamil Nadu and 29th in India. Annamalai University is one of the largest unitary, teaching, and residential Universities in Southern Asia comprising of 10 Faculties and 49 departments of study. This University has played a pivotal role in providing access to higher education to thousands of youth cutting across the social spectrum, especially from economically and socially disadvantaged classes. In this respect, this University's service to the nation is tremendous.

About the Department

The Department of Biochemistry began its independent journey in the 1994-1995 academic years, originating in 1988 as a division within the Department of Chemistry under the University Grants Commission, New Delhi. Committed to excellence in teaching and research, the department launched a 5-year Integrated M.Sc. Biotechnology program in 2002 and was renamed the Department of Biochemistry and Biotechnology. In 2009, it introduced a 2-year M.Sc. Biotechnology program, responding to the dynamic demands of the field. Supported by UGC-SAP and DST-FIST, the department is led by distinguished professors and has made significant contributions to Cancer Biology, Diabetes Mellitus, Neurobiology, and Cardiovascular Biology. The curriculum, based on TANSCHÉ recommendations, integrates recent developments in Biochemistry and Biotechnology, preparing students for academic and competitive success. The department boasts internationally acclaimed alumni, whose groundbreaking research and leadership underscore its dedication to excellence, inspiring future biochemists and biotechnologists.

Workshop Overview:

This Three-Day national-level hands-on Workshop is designed to provide an in-depth, practical understanding of cutting-edge techniques used in Human Cell Culture, Primer Design, RNA Isolation, and RT-PCR for gene expression analysis. Through expert-led sessions and real-world applications, participants will gain hands-on experience in Cell Culture and molecular biology techniques, essential for biomedical research.



Travel and Accommodation:

Annamalai University is located in Annamalainagar, approximately 2 km from Chidambaram. Chidambaram is about 260 km south of Chennai and is well connected by road and rail. Nearby attractions include Pichavaram, a mangrove forest, and Pondicherry, a popular tourist destination located 70 km away. Requests for accommodation must be sent in advance. Research scholars will be accommodated in the university hostels, while faculty accommodation will be arranged at the University Guest House upon request at a nominal cost.

Organizing Committee

Patron	: Prof. Dr. T. Arutselvi, Vice-Chancellor Convener Committee Member, Annamalai University
Vice Patron	: Prof. Dr. M. Prakash, Registrar (i/c), Annamalai University
President	: Prof. Dr. S. Sriram, Dean, Faculty of Science, Annamalai University
Chairman	: Dr. S. Manoharan, Professor & Head, Department of Biochemistry & Biotechnology, Annamalai University
Conveners	: Dr. K. Suresh, Associate Professor, Dr. B. Raja, Associate Professor,
Organizing Secretary	: Dr. S. Sivabalan, Assistant Professor,
Joint Secretary	: Dr. L. Vennila, Assistant Professor, Dr. M. Shenbagam, Assistant Professor
Members	: Dr. P. Stanely Mainzen Prince, Associate Professor, Dr. E. Balamurugan, Associate Professor, Dr. N. Rajendra Prasad, Professor, Dr. S. Mirumalini, Associate Professor, Dr. P. Pugalendhi, Assistant Professor, Dr. P. Selvaraj, Assistant Professor, Dr. T. Manivasagam, Assistant Professor, Dr. N. Vijayakumar, Assistant Professor, Dr. V. Vinothkumar, Assistant Professor, Dr. C. Sankaranarayanan, Assistant Professor, Mrs. E. Mehala, Programmer, Department of Biochemistry & Biotechnology, Annamalai University