



ATG..... Initiation codon
for Knowledge Society

ATGC (All Time Gap Course) in Biotech
i.e.
Bridge The Gap – Biotech Course for Married Women
Exclusively designed For Women
With Education Gap (before and / or After marriage)
Course coordinator: Devendra Lingojar, Director, ATG LAB

Research Areas: 1. Molecular Microbiology; 2. Plant Molecular Biology; 3. Applied Bioinformatics; 4. Plant virology; 5. PCR diagnostics

Course content for project

Section I: You Are A Student: Basic Theory of each protocol with guidance for further reading from standard text and reference books, soft copies will be provided by guide, How to operate all instruments required for lab (demonstration and individual handling), Calculation of all reagents in project, Reagent preparation, Micropipette handling, Complete Training in desired area of interest available in the lab, Preparing for lecture and CVs for job, How to explain gap in interviews. Balancing positive and negative points

Section II: You Are A Faculty: Training for junior students, lectures to trainee students, guidance for instrumentation as well as protocol preparation, calculation etc.

Section III: You are A Researcher: Collection of references from Pubmed, Review writing, Preparation of protocol, reading troubleshooting and guidelines for failures, Drafting projects for funding.

Section IV: Your own Research Project: (75% credit hours)

A. Bioinformatics softwares and database studies

1. Introduction to NCBI database gene / genome – whole and partial sequences; 2. Sequence selection and edition for studies of interest; 3. Primer designing: manual and by software, Primer order; 4. Working with new set of primers: Calculation and dilution upto picomoles

B. Microbiology and molecular biology

5. Microbiology techniques: Sample collection, Sterilization and disinfection, Media; preparation, Spread plate method, Subculturing by streak plate method, pure culture; preparation, glycerol stock preparation etc; 6. DNA extraction of bacteria by DNAzol method

C. PCR technology:

7. Optimization and standardization of PCR conditions: Primers conc., dNTPs, Taq Polymerase, MgCl₂ etc; 8. Gradient calculation and gradient PCR for standardization of cycling conditions; 9. Scale up PCR (post gradient PCR)

D. DNA sequencing (PCR product direct sequencing)

10. Sample preparation for DNA sequencing studies **Note:** Gene cloning i.e. TA cloning of PCR product and sequencing of cloned PCR product with additional fees) (Applicable only in case of failure of direct PCR product for 5 times).

E. Applied Bioinformatics on available sequence data

11. DNA sequence data interpretation and analysis ; 12. BLAST, BLAST₂, Reverse complement, BLAST tree, Clustal W, Phylogeny by MEGA 4.1

F. Thesis: Preparation of thesis based on data generated in the project,

Duration and fees: Min 4 to Max 12 months Please enquire for fees by email. Send enquiry to atgcinbiotech@gmail.com

Eligibility: Married women with Master degree from recognized university with gap years before and / or after marriage

Deliverable: 1. Complete confidence in the area of completed project before you enter in the job market; 2. First authorship in DNA and protein database of NCBI; Authorship in research paper whenever communicated for journal, Preparation of CV for job, life time reference for CV, Guidance on phone before interview related to area of guidance

For more details, visit our lab, discuss with us, discover your self what you wants to do; Find your interest, and then confirm.....

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