

Short Course On Applications of Bioinformatic
Tools for Crop Improvement and Disease
Diagnostics

17th to 26th September 2012

Central Plantation Crops Research Institute
Kudlu P.O, Kasaragod – 671124

Application Form

Name Sex : M F

Affiliation

Designation

Address

Phone

Cellphone

Fax

Background (Crop Science, Horticulture,
Natural resource management)

Research Interest

Expectations from this training

Place

Date

Signature of the applicant

Forwarded by:

**MANDATE OF BIOINFORMATICS
CENTRES OF CPCRI**

Bioinformatics centre instituted with support of the Department of Biotechnology (DBT) and Agri Bioinformatics Promotion Center supported by Department of Information Technology, Government of India, New Delhi at CPCRI are involved in promotion of bioinformatics with respect to acquisition and management of genetic information for improving research and technology, development of databases and programs and also capacity building in bioinformatics.

**OBJECTIVES OF THE BIOINFORMATICS
CENTRE**

“To develop appropriate bioinformatic tools and databases for improving the research and crop productivity of coconut,arecanut,cocoa and palms, to develop data mining tools for knowledge dissemination in agri-bioinformatics and to collect, collate and disseminate information on the above crops to all concerned.”

APPLICATION SUBMISSION

May be sent through proper channel so as to reach before 30th August 2012. Advance copy may be sent by email, should be followed by duly forwarded hard copy to: The Director, Central Plantation Crops Research Institute, Kudlu, Kasaragod - 671 124, Kerala.

E-mail : rmanimekalaiicar@gmail.com.

Copy to: phytogroups@gmail.com.

Phone : 91-4994-232893.

Fax : 91-4994-232322.

**ICAR Sponsored
Short Course On
Applications of Bioinformatic
Tools for Crop Improvement
and Disease Diagnostics**

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**Central Plantation Crops Research Institute
(Indian Council of Agricultural Research)
Kudlu P.O, Kasaragod - 671124**

INTRODUCTION

Bio-informatics applications and augmenting skills for its implementation in agriculture research and crop improvement is underway at various institutes across India. As a programme to improve the bioinformatics skills we are conducting the short course with the following Objectives:

- ★ To improve the use of sequence databases for crop improvement disease diagnostics etc.
- ★ Familiarization of various software for better application of bioinformatics tools.
- ★ Sensitize scientists with bioinformatics potentiality for bringing up their computing and research analytic acquirments.

COURSE CONTENTS

This short course concentrates on the following domains.

- ★ Databases & sequence analysis
With the advent of sequencing technologies, huge data of biological sequences and their databases are available in public domain.
- ★ Molecular markers for crop improvement
Molecular markers play a crucial role in population genetics, genetic diversity and genome mapping. Molecular markers (SSR, SNP) designed from sequences have proven potential in genetic improvement programs.
- ★ Homology modeling & protein structure prediction
- ★ Metagenomics - microbial communities
- ★ Pathogenomics and diagnostics
With the sequences of many of plant

pathogens available in the public database for analysis, through bioinformatics a better picture of pathogen variability / evolution can be obtained.

COURSE DIRECTOR

Dr George V. Thomas

COURSE CO ORDINATORS

Dr. R. Manimekalai, Dr. M.K. Rajesh

ELIGIBLE PARTICIPANTS

Personnel working not below the rank of Scientist/ Assistant Professors in ICAR / SAUs. Total number of participants limited to 25.

PROGRAM AT A GLANCE

Biological databases and sequence retrieval.
Bioinformatics tools in sequence analysis.
Molecular markers and data analysis.
Homology modelling and structure prediction.
Pathogenomics – Viral and Bacterial genomics.
Microarray data analysis.
PGPRs and metagenomics.
Hands on session on sequence data analysis, protein structure prediction.
PCR, Real - Time PCR.

TRAVEL AND ACCOMMODATION

Accommodation will be provided at CPCRI Guest House on room sharing basis and wholesome meals will be provided. The participants will be paid travel fare to and fro journey by rail/ bus / public transport on production of tickets as per the entitlement restricted to AC II tier train fare.

HOW TO REACH KASARAGOD

Air : The nearest airport is at Mangalore, which is about 65 km away from the institute.

Rail : Kasaragod town has a railway station, which is linked to several important towns in the state as well as other parts of India.

Road: CPCRI is situated on National Highway - 17 about 45 km south of Mangalore, Karnataka and 225 km north of Kozhikode (Calicut), Kerala.

ABOUT CPCRI

CPCRI is a premier national institute under Indian Council of Agricultural Research devoted to research on plantation crops, coconut, arecanut and cocoa and has a long history of over nine and a half decades in coconut research. The institute has a strong bioinformatics wing supported both by DBT & DIT and has made significant contributions with respect to development of bioinformatics tools and databases and capacity building.

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