



# Kristu Jayanti College

AUTONOMOUS Bengaluru

Reaccredited 'A' Grade by NAAC | Affiliated to Bengaluru North University

## **RESEARCH CENTRE IN BIOTECHNOLOGY**

Kristu Jayanti College, founded in 1999, strives to fulfill its mission to provide educational opportunities to all aspiring youth to excel in life by developing academic excellence, fostering values, creating civic responsibility and building global competencies in a dynamic environment. Kristu Jayanti College affiliated to Bengaluru North University, became an autonomous institution from the academic year 2013-14. The college assiduously frames its forward looking academic curriculum, adopting innovative teaching and evaluation methods. The Department of Life Sciences was started in the year 2002, with the aim of providing comprehensive inputs to aspiring students in the field of Life Sciences. The Department offers the B.Sc. programme in Biotechnology, Microbiology, Biochemistry and Genetics. M.Sc. programs are offered in Biotechnology and Microbiology. The status of the Biotechnology Research Centre has been granted to the Department by the Bengaluru North University. The Department strives to serve the students by enhancing their scientific temperament with the commitment of the faculty members to educational excellence, a well-equipped high tech laboratory and also 3 research laboratories. The Department is committed to enabling the students by augmenting their knowledge in various emerging fields of Life Sciences. In the year, 2020, the Department was sanctioned support under the strengthening component of DBT- Star College Scheme, by the Department of Biotechnology, Ministry of Science and Technology, Government of India

### **Research Centre in Biotechnology**

The Department of Life Sciences was endowed the status of a Research Centre in Biotechnology of the Bangalore University during January 2011. A state-of-the-art research complex is set up in the college to facilitate research and to carry out major research projects and to pursue Ph.D studies. The facility features laboratories with full scale research in Plant Tissue Culture, Animal Cell Culture, Microbiology and Phyto-chemistry. Central Instrumentation facility is a special feature of the Research complex. Collaborative projects have been carried out by the department in association with industries / research labs. Post graduate students of the

department are involved in minor research projects and are efficiently guided by the faculty members. The primary objective of a research center is to enable progressive interaction between the faculty, research scholars, students, and industry experts to enhance research opportunities, academic excellence, real-world problem solving, knowledge creation and dissemination. The Research Center aims at providing quality higher education on par with global standards. The Center constantly strives to adopt innovative methods to improve the quality of higher education that it offers. .

### **Research Facilities:**

#### **CENTRAL INSTRUMENTATION- FACILITIES**



**HIGH SPEED ULTRA CENTRIFUGE**



**BACTERIAL INCUBATOR**



**COD INCUBATOR**



**ORBITAL SHAKER**



**THERMO CYCLER**



**DEEP FREEZER & REFRIGRATOR**



**LAMINAR AIR FLOW HOOD**



**BIOSAFETY CABINET**



**INVERTED MICROSCOPE**



**ROTATORY EVAPORATOR**



**DOUBLE DISTILLATION UNIT**



**CYROPRESERVATION TANK**

**Areas of Research:**

1. Plant Biotechnology
2. Phytochemical Studies
3. Environmental Biotechnology
4. Agricultural Biotechnology
5. Molecular Biology
6. Nano technology
7. Microbial technology
8. Animal Biotechnology
9. Microbiology
10. Biofilm technology
11. Plant Microbe interaction
12. Food analysis
13. Biodegradation
14. Soil Microbiology
15. Bioinformatics

**Research Promotion Activities:**

**1. Research Colloquium**

The Department of Life Sciences has collaborative projects in association with industries / research labs. Both Undergraduate and Postgraduate students of the Department are involved in minor research projects in diverse areas of Microbiology, Biotechnology, Biochemistry and Genetics, efficiently guided by the faculty members of the Department. This optimum learning environment combined with the rigorous and hands on training help students realize their true potential, to develop their intellectual, academic and entrepreneurial skills. The Research Colloquium was conducted exclusively for our PG students and helped in knowledge sharing and vetting of research ideas to panel members which included Faculty members, Alumni and PG Students in their field of expertise.

## **2. Research Empowerment Seminar**

The Research Empowerment Seminar is regularly conducted for the Postgraduate students of M. Sc. Biotechnology and Microbiology of the Life Sciences Department to enhance their knowledge, skills, vocabulary and to increase their confidence. Topics were chosen by the individual students according to their choice of interest and they were also given an option to show case their project literature and paper presentation. The seminar was started in the academic session of the third semester and few students were also given the option to present their findings through the online platform because of the pandemic. The online platform Seminar/Webinar was an interactive session where almost 10 students presented the topic of their choice with each presentation taking approximately 10 minutes where 8 minutes was given for the briefing of the topic and 2 minutes for the audience to ask questions (if any) and to discuss the topic further. The seminar was conducted every Saturday with the enthusiasm of the students and was fuelled by their curiosity to learn more about various topics.

## **3. Project Orientation**

Department of Life Sciences PG organized an Orientation Programme on Research Guidelines for the Research Projects of the IV Semester M.Sc. students. The programme detailed a systematic step-by-step guidance of project report writing and submission. The main objective of this Orientation Programme is to equip students with the basic guidelines, format and procedure required to write and prepare the project report. The resource person guided the students on the sequence in which the project report should be arranged and bound as follows:

- Front Pages: Title Page, Certificate, Declaration, Acknowledgement, Table of Contents
- Index or Abbreviations
- Chapter I - Introduction
- Chapter II – Review of Literatures and Research Design: Methods of Data Collection, Area of study, Period of study etc.
- Chapter III – Industry and Company Profile
- Chapter IV – Analysis and Interpretations
- Chapter V – Findings, Suggestions and Conclusions

End Pages: Bibliography & Appendix – Questionnaire or Interview schedule

The participants of this orientation programme were equipped with the use and applicability of research concepts, tools and techniques for the preparation of both academic and empirical research projects. The participants have felt that this orientation Programme provided them the insights and knowledge required for the preparation of project reports.

#### 4. Research Publications: Annexure

##### Research Projects

Title	Principal Investigator/ Co-Investigator	Funding agency	Duration (start to end dates)	Amount sanctioned	Status (Completed/ ongoing/applied )
Synthesis of Carbon materials	Dr. Elcey CD	Bodi Niketan Trust	June	1 Lakh	Ongoing
Biochemical properties of Polyphenol oxidase(PPO) and Phenolic compounds from <i>invitro</i> culture of <i>Solanum melongena</i>	Dr. S. Vijayanand	Bodi Niketan Trust	June	1 Lakh	Ongoing
Herbal based formulation for treating Melanoma Hyperpigmentation using human cell lines	Dr. Calistus Jude	VGST, Bengaluru	June	10 Lakhs	Ongoing
Amelioration of Farm Land Soil of Narayanapura Village, North Bangalore through Technology Transfer From Lab to Field	Dr. Elcey CD Dr. Hanumanthappa Dr. Sivagamasundari	Bodhi Niketan Trust	August 2020	5000	Completed
<u>Water</u> Quality Analysis of Bore Well <u>Water</u> in	Dr. Sonia Angeline Mrs. Priya Jossan	Bodhi Niketan	August 2020	5000	Completed

North Bangalore	Dr.S.Vijayanand	Trust			
Study on the prevalence of <i>Diabetes mellitus</i> and its associated risk factors among the women population of Bangalore	Dr. Shweta Sharma Dr. Sangeetha Menon Dr. Manikandan Kathirvel	Bodhi Niketan Trust	August 2020	5000	Completed

### Contact Details

#### Dr.Vijay Anand

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**BENGALURU NORTH UNIVERSITY**  
SRI DEVRAJ URS EXTENSION, TAMAKA, KOLAR – 563 103

No.Aca.III/A1/RC/KJC/2020-21/1284

Date: 29-09-2020

**NOTIFICATION**

*Sub: Renewal of Kristu Jayanthi College (Autonomous), Bangalore-077 as a Research Centre for purpose of Ph.D. Programme of Bengaluru North University.*

*Ref 1. Expert Committee report dated: 21.01.2020*

*2. Resolution of the Academic Council at its meeting held on 17.08.2020.*

*3. Resolution of the Syndicate at its meeting held on 04.09.2020*

*4. Vice-Chancellor approval dated: 25.09.2020*

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*Pursuant to the resolution of the Syndicate at its meeting held on 04.09.2020 and in exercise of the powers conferred under Section 66 of the KSU Act 2000, the Bengaluru North University hereby accords provisional Renewal to Kristu Jayanthi College (Autonomous), Bangalore-077 as Research Centre for conducting research leading to Ph.D. programme in Biotechnology from the year 2019-20 to 2021-22( Three Academic Years)subject to the following conditions:*

- 1. The Centre should follow the Regulations Governing Doctoral Degree Programme of the Bengaluru North University and Carry out the Ph.D. Programme as per the regulations as modified from time to time.*
- 2. A Research Advisory Committee (RAC) should be set up with the Chairperson of concerned P.G. Department of the University. The Committee should meet twice a year, preferably in May and November, so that progress reports of research students are scrutinized and forwarded through the committee.*
- 3. The observation/conditions as laid down by the Expert Committee of the Bengaluru North University in their report have to be fulfilled, a compliance this regard shall be sent to the University within 15 days of the receipt of this notification*
- 4. The Centre should submit an undertaking in the enclosed proforma within 15 days of the receipt of this notification*
- 5. The Centre will have to pay the prescribed annual affiliation and other fees (for Ph.D. programme) to the Bengaluru North University and seek renewal of recognition once in three years.*
- 6. Guest Temporary faculty of the Department are not eligible to guide students*

**BY ORDER**

**REGISTRAR**

Registrar

Bengaluru North University  
Tataka, Kolar-Karnataka-563 103.

**TO**

*The Principal,  
Kristu Jayanthi College (Autonomous),  
K Narayanapur, Kothnur P.O, KR Puram  
Bangalore-077*

*Copy to:*

- 1. Personal Section to Vice-Chancellor, Bengaluru North University, Kolar-563 103*
- 2. Registrar (Ev) Bengaluru North University, Kolar-563 103*
- 3. Finance Officer, Bengaluru North University, Kolar-563 103*
- 4. Office copy*



## **Contact Details**

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