



Dr. JEAN CLETUS

Good Shepherd Home

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CURRENT POSITION

Teaching Biotechnology, Under Graduate Programme, Indian Institute of Science, Bangalore -560012, India.

EDUCATION AND RESEARCH

Ph.D in BIOTECHNOLOGY entitled “**Molecular characterization of an antifungal wheat chitinase and its heterologous expression in *Escherichia coli* and tobacco**” (2013)

Department of Biotechnology, Pondicherry Central University, Puducherry, India.

DBT- JRF

Junior research fellowship secured through written examination conducted by Department of Biotechnology, Delhi, India.

CSIR, NET- Lectureship, Life sciences,

December 2006 and 2007.

M.Sc. Biotechnology

K.S.R. College of Technology, Namakkal,

Anna University, Tamil Nadu, India.

B Sc. Chemistry

Fatima Mata National College, Kollam

University of Kerala, Kerala, India.

Pree-Degree

Fatima Mata National College

University of Kerala, Kerala, India.

SSLC

M.C.E.M.H.S. Kerala Board, Kerala, India.

Course	Institution	University/ Board	Year of Passing	Percentage
Ph.D, Biotechnology	Pondicherry University	Pondicherry University	2013	
M.Sc. Bio Technology	K.S.R.C.T	Anna University	2006	71%
B. Sc. Chemistry	F.M.N. College	University of Kerala	2003	55%
Pre-Degree	F.M.N. College	University of Kerala	1998	50%
SSLC	M.C.E.M.H.S.	Kerala Board	1996	79%

8 YEARS OF TEACHING EXPERIENCE

- **Currently I work in Under Graduate Programme, Indian Institute of Science, Bangalore -560012, India (4.5 Years)**

My assignments in IISC include teaching and conducting practicals. I handle the practical courses in **Molecular Biology, Physiology Genetics, Neuroscience and Biophysics**. Molecular Biology module includes *in vitro* transcription and translation, experiments in **DNA repair mechanisms** in addition to all basic experiments in Molecular Biology. In physiology, the experiments comprise **Cytotoxicity assay, Metabolic assays and Reactive oxygen assays** in **animal cell cultures, Transfection of animal cell lines and Study of pathogenesis** using animal cell lines. In Genetic module I deal with **Drosophila genetics and cytogenetic** experiments. Biophysics module comprises of study of various proteins using **Circular dichroism, Fluorescent spectroscopy and UV-Vis spectroscopy**.

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- **Teaching experience in Department of Plant Biotechnology, Kerala Agricultural University, Kerala, India. (1.5 years)**

I have 1.5 years of teaching experience at Department of Plant Biotechnology, Kerala Agricultural University. I taught B.Sc- M.Sc integrated Biotechnology students and handled theories and practicals of subjects like **Molecular Biology, Plant Biotechnology, Industrial Biotechnology, Bio processing, Gene therapy, Chemical engineering, Food Biotechnology, Structural and functional genomics, Biodiversity**.

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- **Teaching experience at Department of Botany, Fatima Mata National College, Kollam, Kerala, India. (2 years).**

Two years of experience as full time Guest Lecturer in Department of Botany, Fatima Mata National College, Kollam, Kerala). I taught **Biotechnology and Instrumentation** for Post Graduate students of **Food and dairy Biotechnology**.

ADDITIONAL QUALIFICATION

- **IELTS General (Speaking 8, Writing 6.5, Reading 7.5, Listening 8)**
conducted by **BRITISH COUNCIL** and **CAMBRIDGE** Language Assessment.
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SCIENTIFIC PUBLICATION

- Babita KJ, Gandhi Pragash M, Jean C, Raman G, Sakthivel (2009) Simultaneous phosphate solubilization potential and antifungal activity of new fluorescent pseudomonad strains, *Pseudomonas aeruginosa*, *P. plecoglossicida* and *P. mosselii*. N World J Microbiol Biotechnol 25: 573–581.
 - Balasubramanian V, Divya V, Jean C, Sakthivel N (2012) Plant β -1,3-glucanases: their biological functions and transgenic expression against phytopathogenic fungi. Biotechnol Lett 34:1983–1990.
 - Jean C, Balasubramanian V, Divya V, Sakthivel N (2013) Transgenic expression of plant chitinases to enhance disease resistance. Biotechnol Lett. 35: pp 1719–1732.
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CONFERENCE PROCEEDINGS

- Characterization of wheat chitinase”. (2013) Proceedings paper 34th Annual Meeting of Plant Tissue Culture Association (CFTRI, India) “National symposium on plant tissue culture and biotechnology for food and nutritional security”. pp 60.
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PARTICIPATION

- **Participated in the national symposium on Plant Tissue Culture and Biotechnology for Food and Nutritional Security** held at **CFTRI, India** and delivered a speech on “**Characterization of wheat chitinase and its heterologous expression**”
 - Participated in workshop on **Genome Analysis** conducted by **DBT** in **Osmania University, Hyderabad**.
 - Attended seminar on “**Emerging Trends in Biotechnology**” Department of Biotechnology, Pondicherry Central University, Puducherry- 605014.
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RESEARCH EXPERIENCE

My Ph.D is from Pondicherry Central University, research supported by meritorious fellowship from Department of Biotechnology, India. I worked on the following aspects.

- Expression of wheat chitinase gene in *E. coli* and purification of protein.
- Evaluation of antifungal properties of purified chitinase enzymes against major phytopathogenic fungi like *Bipolaris oryzae*, *Magnaporthe grisea*, *Sarocladium oryzae*, *Macrophomina phaseolina*, *Botrytis cinerea*, *Pestalotia theae*, *Fusarium* sp., *Cylindrocladium scoparium*, *C. floridanum*, *Rhizoctonia solani* and *Sclerotium rolfsii*.
- Expression of chitinase gene in tobacco plant and assessment of its antifungal potential.

I have hands-on experience in various techniques in Molecular Biology and Biotechnology such as **Isolation and purification of DNA, RNA and proteins** from plant, animal and bacterial sources, **SDS-PAGE, Western Blot, PCR techniques, *in vitro* transcription and translation, Protein expression in *E.coli*, Plant tissue culture and plant transformation techniques, Handling of animal cell cultures, Bio assays and transfection technique** in cell lines, experience in **culturing Phytopathogenic fungus**, Experience in handling and maintaining of **Drosophila for genetics and cytogenetic studies**, familiar with **Circular Dichroism and Fluorescent spectroscopy**.

DECLARATION

I hereby declare that all information furnished above is true to the best of my knowledge.

Date: 05.05.2022

Sincerely

Place: Kollam

Jean Cletus