

**Dr. JOHNSON CHRISTDAS E** M.Sc., Ph.D

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Assistant Professor

Department of Microbiology

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**STATEMENT OF PURPOSE:**

Aspiring to learn and will thrive with best endeavors to accomplish the assigned task.

**EDUCATIONAL QUALIFICATIONS:**

<b>LEVEL</b>	<b>INSTITUTION</b>	<b>MARKS (%)</b>	<b>Year of Passing</b>
Ph.D	Madurai Kamaraj University, Madurai	-	2018
M.Sc Biotechnology	Bishop Heber College, Trichy	80.62	2008
BSc.zoology (Spl. Biotechnology)	The American College, Madurai	74.2	2006
HSC-TN Board	St. Britto Higher Secondary School, Madurai	87.6	2003
SSLC	St. Britto Higher Secondary School, Madurai	95	2001

**WORK PROFILE:**

- Employed as Assistant Professor, Department of Microbiology, The American College, Madurai from July 2018 till date.
- Engaged as Project Fellow in a UGC funded project entitled “**Development of IgG-Fc-HIVgp41-HumanC3d fusion protein for immunological studies in mouse models**” from July 2011- January 2014, under the principal investigation of Dr. Shakila, Associate Professor and Head of the Department of Molecular Microbiology, School of Biotechnology, Madurai Kamaraj University, Madurai.

- Employed as Associate Research Officer at the Department of Clinical Virology, Christian Medical College, Vellore and actively involved in diagnosis of viral Hepatitis from October 2008 to June 2011.

## **Doctoral Research**

The Doctoral Research was started in November 2012 with the title “**Development and Characterization of Vaccine Candidates for HIV**”. The extensive investigation on the history of vaccine research conveyed the evolutionary competence of the HIV virus. The vaccine candidates that were suggested in the last decades were computationally investigated for conservation. Attempts were made to express clone and purify the Honey bee toxin that was reported to have anti-HIV property. The antiviral nature of the obtained recombinant clone was tested in mouse models by estimating the response of the innate antiretroviral elements of the immune system by Real Time PCR.

Preliminary attempts were made for metabolic engineering of the plant *Bacopa monnieri* (Brahmi), for enhancing the content of saponin which is an established immunomodulator. *Agrobacterium* mediated transformation of the plant for expression of the honey bee toxin and the Cardamom Mosaic Virus coat protein was done. A preliminary attempt towards the production of Cardamom Mosaic Virus Like Particle in the plant, that can be engineered to display the HIV antigens that confers candidature for a successful vaccine. Also it was hypothesized to result in an altered metabolism that results in the enhanced production of saponin. These preliminary attempts of expressing the toxin and the viral coat protein can also be used to explore the immune response of the plants against Viral infection.

## **M.Sc DISSERTATION:**

“**The Importance of Quality Control of Animals in Bio-Medical Research**”, at National Centre for Cell Science (NCCS), Pune-comprised of

- Screening the laboratory animals for specific pathogens by ELISA
- Screening for the presence of pathogenic bacteria in laboratory mice colonies and individually ventilated caging systems
- Retro-orbital bleeding and tail-cutting for blood sampling, injection techniques
- Basic Techniques involved in the generation of transgenic mice (Micromanipulator needle preparation, Super-ovulation of mice by hormonal induction, Collection of ova for micro-injection, Vasectomy in mice)
- Inbreeding and maintenance of transgenic lines of mice in (immune-suppressed) mice in individually ventilated caging systems (IVC)
- Genotyping by PCR

## **Conferences and Workshops participated/ presented**

1. National Seminar on Current Developments in Hottest areas in Biological science (UGC sponsored), Bharathidasan University, Tiruchirappalli-24.
2. National Seminar on Thrust Areas in Biotechnology, (Bishop Heber College), Tiruchirappalli.
3. National Seminar on Emerging Trends in Life Sciences, (UGC sponsored), Bishop Heber College, Tiruchirappalli.
4. MICROCON 2010, (Indian Association of Medical Microbiologists), Swabhumi, Kolkata, West Bengal.
5. HIV Science 2014, International Science Symposium on HIV and Infectious Diseases, at YRG Care Chennai.
6. SCICOM organized by the WELLCOME-DBT India alliance for enhancing scientific communication skills.
7. Asia Plant Science Conference 2014, Lumbini, Nepal.
8. SUTB42016. Sustainable Utilization of Tropical Plant Biomass 2016. Tamil Nadu Agricultural University
9. One day Workshop on Proteomics at the Aravind Medical Research Foundation

## **AREAS OF SPECIALISATION:**

- Virology
- Transgenic Technology
- Molecular Cloning and rDNA technology
- Bioinformatics

## **TECHNICAL SKILLS:**

- Extraction and Estimation of Bio-molecules (Nucleic acids and proteins)
- Polymerase Chain Reaction (Nested, Reverse Transcription, Multiplex, Real Time)
- Molecular Cloning into vectors for expression in different systems
- Basic Techniques in the development of transgenic mouse models
- Plant tissue culture and Basics of Transgenic plant development
- DNA sequencing
- Gel Electrophoresis for separation of biomolecules (Agarose and PAGE)

## **INSTRUMENTATION EXPERIENCE:**

- DNA Sequencer (ABI prism 310 genetic analyser)
- Robotic liquid handler for automated nucleic acid extraction (Abbott m2000sp)
- PCR (conventional and quantitative real-time PCR)
- Centrifuges
- Gel Documentation Systems
- Spectrophotometry and Colorimetry

## COMPUTER SKILLS

- Skilled at using software like Bio-edit, EMBOSS, MEGA, Haploview for analyzing the haplotypes, Ms-Excel for genetic and evolutionary analysis,
- Primer designing
- Re-Mapping DNA sequences for cloning strategies
- Computer aided basic statistical methods,

## LIST OF PUBLICATIONS

1. Fletcher GJ, Samuel P, **Christdas J**, Gnanamony M, Ismail AM, Anantharam R, Eapen CE, Chacko MP, Daniel D, Kannangai R and Abraham P, “Association of HLA and TNF polymorphism with the outcome HBV infection in the South Indian Populations”. *Genes and Immunity*, April 2011.
2. **Christdas J**, Sivakumar J, David J, Daniel HDJ, Raghuraman S, Abraham P “Genotypes of Hepatitis C virus in the Indian sub-continent: A decade-long experience from a tertiary care hospital in South India” *IJMM* 2013 , 31(4) 349-353
3. **Christdas, J.**, Manoharan, P., & Harshavardhan, S. (2015). Neutralization function affected by single amino acid replacement in the HIV-1 antibody targets, *Bioinformatics* 11(2).
4. **Christdas, J.**, & Shakila H. (2015). Occurrence of Escape Favoring Mutations in The Targets of 2F5 and 4E10 Antibodies of HIVgp41 : A Metadata Analysis; *J Virol Antivir Res* 4:3. doi:10.4172/2324-8955.1000141(1–6)
5. Pothiaraj G, Ebenezer RS, **Christdas EJ**. Comparative analysis on the effect of seaweed liquid extracts and commercial plant growth regulators on in vitro propagation of *Bacopa monnieri* Comparative analysis on the effect of seaweed liquid extracts and commercial plant growth regulators on in vitro propagation of *Bacopa monnieri*. *Inter J. Research in Biosciences*. Vol. 5 Issue 2, pp. (1-9), April 2016 August:0–9.
6. **Christdas J**. HIV : Current Research Conventional Vaccine to Prevent AIDS – A Paradigm or A Paradox ? A SWOT Analysis. 2016;1(1):1–8.
7. Priyavathi P, Nagesh S, Kavitha VVK, **Christdas J**, Gopal P (2018) Comprehensive Leaf Transcriptome of a Non-model Plant, *Abelmoschus esculentus* for the Functional Genomics Studies. *J Genet Genome Res* 5:036. doi.org/10.23937/2378-3648/1410036.
8. **Christdas J** & Pushpanathan, M. (2020). COVID-19 Prophylaxis: The Desperate Need for Mankind. *Journal of Pure and Applied Microbiology*. 14. 695-698. 10.22207/JPAM.14.SPL1.02.
9. A Laboratory Manual – Practical Workshop on Molecular Techniques in Life Sciences- I- ISBN-978-93-80368-40-5

**PERSONAL DETAILS:**

Name : E. Johnson Christdas  
Gender : Male  
Date of Birth : 30-08-1986  
Father's Name : P. Ebenezer Christdas (LATE)  
Mother's Name : C. Sheila Amirthakumari  
Marital Status : Married  
Spouse's Name : Vanessa. KA.  
(Former Assistant Professor, BBA Dept, Fatima College, Madurai)  
Nationality : Indian  
Permanent Address : 32 C CSM Compound, Arasaradi, Madurai-625016  
Linguistic Skills : English & Tamil (Read, Speak & Write), Hindi (Only to Read)

**DECLARATION:**

I hereby declare that the details furnished are true to the best of my knowledge.

Yours sincerely,

**E. JOHNSON CHRISTDAS**

**REFEREES:****Prof .Priya Abraham,**

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Former Head of the Dept of Clinical Virology  
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**Dr.H.Shakila**

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