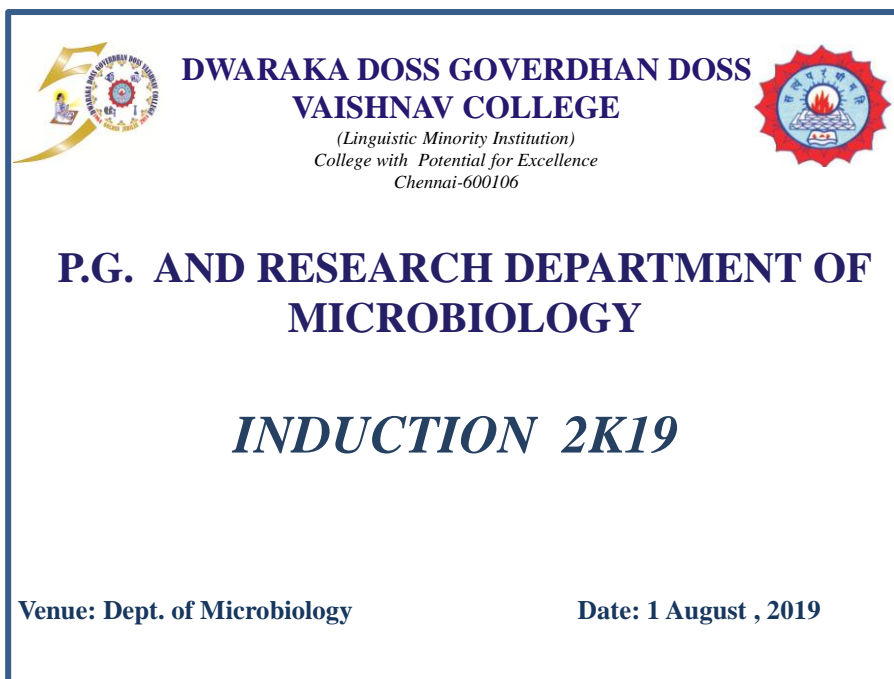


## Invitation:



**Name of the Event:** Induction program 2K19

**Date:** 01.08.2019

**Venue:** Department of Microbiology

**Organizers:** Dr.P.Vidya

**Resource persons:** Dr. S. Sasikala, Associate Professor (Head, Department of Microbiology), Presidency College & Dr. V. Gopikrishnan (Scientist C), JPR Research Park, Centre for drug Discovery & Development, Sathyabama Institute of Science & Technology.

**No. of staff participants:** 8

**No. of student participants:** 50

### **Detailed report of the program:**

The PG and Research Department of Microbiology, D.G. Vaishnav College, conducted an Induction program on 31st July – 02 August, 2019. On 31st July Dr. P.Vidya (Head of the Department) gave a brief introduction about the facilities available in the department and a PowerPoint presentation about the department. After the presentation, the students are asked to attend the National Policy Educational Program.

Two Guest Lectures were organized by the department on 1st August, 2019 for the betterment of the students. Dr. S. Sasikala, Associate Professor (Head, Department of Microbiology), Presidency College, gave lectures on biological research and opportunities and Dr. V. Gopikrishnan (Scientist C), Sathyabama Institute of Science & Technology gave lectures on Scope of microbiology & Opening in Industries.

The session was started by 10.00 AM. The aim of the program was to impart deep knowledge about Microbiology and their career opportunities through interaction with the invited speakers who have commendable expertise and experience in the field.

Dr. S. Sasikala spoke about the career objective and scope in the field of Microbiology. She gave a motivational speech to the students in choosing their exact career after completing their PG program. She also explained about the Scholarship and fellowship program offered in India and Foreign countries for their PhD and Research.

After that the session was followed Dr.V.Gopikrishnan, he started his lecture with a brief introduction about the basic Microbiology and the importance of Microbiology in various fields. He shared his Research experience on Actinomycetes. His current research focuses on the extremophilic Actinomycetes, which was funded by DST-SERB. He shared information on the emerging topics of research and enlightened with scope in Microbiology. He encouraged students to take up entrepreneurship in Microbiology and discussed about various exams like CSIR, NET, SLET for research and academia.

On 2nd August, 2019 students were interacted with their seniors and alumni of the Microbiology department.

**Outcome of the program:** Students were imparted with wide knowledge and best opportunities in the Microbiology field.

### Photos:





## ONE DAY INDUSTRIAL VISIT TO DILIGENCEBIO

The PG and Research Department of Microbiology, D.G. Vaishnav College, students of II<sup>st</sup> year M.Sc., visited **DiligenceBio** research organization on **July 25, 2019**. The aim of the visit was to impart knowledge on “**Animal handling and cell culture techniques**” through **interactions** with researchers who have commendable expertise and experience.



**Syed Ahmed** (QC Manager) gave a brief introduction about their research organization and various samples processed over there. Samples were received from various agricultural areas and pharmaceutical industries for toxicological studies. Students were divided into groups and visited various divisions of the research organization like Animal house and cell culture laboratory. **In-vitro and In-vivo techniques** were demonstrated to the students, which were used for the toxicology analysis of the sample.



In-vivo session was headed by **Mr. Kanadasan** who gave brief explanation on bedding and storage room of the animals. Rat, Rabbit, Mice and Guinea pig are the animals that were used by them for toxicology studies of pharmaceutical products. The oral administration of samples on animals was demonstrated and the other methods explained by faculty members. Two students from each batch were given the opportunity to handle the animals (Mice, Rabbit & Rat).



In-vitro session was headed by **Ms. Vidhya** who filled the students with in-depth knowledge about the instruments used in the cell culture laboratory. Both primary and secondary cell culturing methods were clearly explained and demonstrated. Tryphan blue staining which is used for identifying cell viability before subculturing the cell line was demonstrated. Genotoxicity and cytotoxicity tests were explained and the session was ended with a presentation on “Cell Culture”.

**Name of the Event:** Guest Lecture on “**Biofilm formation and quorum sensing**”

**Date:** 12.10.2019

**Venue:** Department of Microbiology Laboratory

**Organizers:** Dr.A.Mageswari

**Resource persons:** **Mr. Karthick** (Alumni)

**No. of staff participants:** 7

**No. of student participants:** 50

**Detailed report of the program:**

The PG and Research Department of Microbiology, D.G. Vaishnav College, conducted a Guest Lecture on 12<sup>th</sup> October, 2019. The program began on a welcome address by the Head of the Department, Dr. P.Vidya, followed an AV was played about the journey and development of DGVC.

The session was started by 10.00 AM. The aim of the program was to impart knowledge on the “Biofilm formation and quorum sensing”. Our Alumni **Mr. Karthick**, working as a General Manager in **Colgate Palmolive, USA** gave an excellent talk about Biofilm formation in teeth and their interaction. His research works mainly focuses on the biofilm formation and the microbes association in the formation. He has applied so many patents in the biofilm.

Students have interacted with the guest about the research and carrier path. His views and experience in the field motivated the younger buds to blossom. He encouraged students to take up entrepreneurship in Microbiology and discussed about various exams like CSIR, NET, SLET for research and academia. The session was ended up at 12pm.

**Outcome of the program:** Our Guest motivated the younger ones to come up in their life. He gave many tips to make a career path for the future microbiologist.

**Photos:**



**Invitation:**

**DWARAKA DOSS GOVERDHAN DOSS**  
**VAISHNAV COLLEGE**  
*(Linguistic Minority Institution)*  
*College with potential for excellence*



*The Management, Principal, Staff and Students of*  
**P.G. and Research Department of Microbiology**  
*take pleasure in inviting you for the*

***National Level Workshop***  
*on*

***MICROSCOPY AND PHOTOMICROGRAPHY***  
*funded by*

***Tamil Nadu State Council for Science and Technology***  
*to be held at 9.00 am on 21 January 2020*  
*at*  
***Gyan Darshan Hall***

***Prof. Elanchezhiyan Manickam***  
*Professor, & Head*  
*Dept of Microbiology*  
*Dr.ALM PG IBMS, University of Madras*

*have kindly consented to be the Chief Guest and*  
*will deliver the inaugural address*

**Dr. P. Vidya**  
*Head , Dept. of Microbiology*

**Dr. R. Ganesan**  
*Principal*

**Shri. Ashok Kumar Mundhra**  
*Secretary*

***My college My pride***

**Name of the Event:** Microscopy & Photomicrography workshop

**Date:** 21.01.2020

**Venue:** Gyan Darshan Hall

**Organizers:** Dr. B. Kirthiga



**Resource persons:** Dr. Anand Anbarasu (VIT University), S. Venktraaman (Naturalist & Macrophotographer) & Dr. D. Uthra (D.G.Vaishnav College)

**No. of staff participants:** 10

**No. of student participants:** 142

**Detailed report of the program:**

The workshop on “*Microscopy and Photomicrography*” was organized PG and Research Department of Microbiology, DG Vaishnav College on **January 21, 2020**. The workshop had participants from various arts and science colleges. The level of participants included faculty, research scholars and students of both under graduation and post-graduation. The aim of this workshop is to impart a wide knowledge about different kinds of microscope, handling of microscope, and photography of microscopic images.

The workshop began with auspicious prayer song by I. M.Sc., student Mr. Keshava Krishna G. **Dr. P. Vidya**, Head of the department welcomed the guests and participants. Dr. B. Kirthiga, Asst. Professor, Department of Microbiology introduced the theme of the Workshop emphasizing the importance of photomicrography and its vital role in research.

Dr. R. Srikanth, Dean - Academic Administration felicitated the guest and speakers and delivered the presidential address. The Inaugural Address was delivered by **Prof. Elanchezhian Manickam**, Professor, & Head Dept of Microbiology Dr. ALM PG IBMS, University of Madras, Chennai insisted the current trends and importance of photomicrography.

**Technical session 1** was handled by **Dr. Anand Anbarasu**, Professor, School of biosciences & Technology, VIT University, Vellore on the basics of light microscopy, which are important for a clear understanding of the related technologies and applications and in general a prerequisite for accurate data evaluation. The lecture also includes advanced techniques such as super-resolution microscopy and digital microscopes, stereo, digital, pocket and scanning probe microscopes.

**Technical session II** was handled by **Shri. S. Venkatraman “Poochi Venkat”** Consultant, Naturalist & Macrophotographer elucidated the photography of microscopic images. The lecture includes proper optical, mechanical and electronic connections among the different devices, preparation of still pictures, & videos with microscope and current techniques used with digital imaging by the professional.

**Technical session II** was handled by **Dr. D. Uthra**, Head, Department of Physics, D.G.Vaishnav College and her team on developing Foldscope –The session was included as a part of the "frugal science" movement which aims to make cheap and easy tools available for scientific use in the developing world.

The course materials of the workshop containing the brief note of different types of microscope and their principle handling and their recent developments was distributed during workshop and mailed to their respective mail id.

Nearly 93 students from 11 Colleges participated in the event. Thus, this workshop imparted a wide knowledge on various aspects of Photomicrography and also explored the wonder world of Foldscopy with which they can do wonders in their area of study.

**Outcome of the program:** Participants will learn to focus and adjust the microscope. They will be able to attach camera to microscope and capture the microscopic image with clarity. Also learnt to use foldscope, an ultra-affordable field microscope.

**Photos:**



**ONE DAY WORKSHOP  
ON  
BIOFERTILIZER & ORGANIC FARMING**

**Name of the Event:** Workshop on “Biofertilizer & Organic farming”

**Date:** 21.02.2020

**Venue:** Farm Guru, Attur Village, Karnodai

**Organizers:** Dr.S.Vijayalakshmi & Dr.Radhika Jevanand

**Resource persons:** Mr. Sai and Mr. Veeraraghavan

**No. of staff participants:** 6

**No. of student participants:** 49

**Detailed report of the program:**

The PG and Research Department of Microbiology, D.G.Vaishnav College, participated a one-day workshop on *21 February, 2020* at Farm guru Agritech Center, Attur village, Karnodai, Solavaram, Chennai. The program began on an auspicious note with lighting of kuthuvilakku by the Head of the Department, Dr. P.Vidya, followed by a welcome address and an AV was played by Mr.Veeraraghavan (senior organizer). He expressed about the journey and development of the farm garden for the past ten years and gave a brief introduction of the daily activities and compost making with **Bio-fertilizer**.

The session was started by 9.00 AM. The aim of the program was to experience the importance of organic farming and to know the efforts of farmers hard work in Agriculture. All the students were taught the role of soil and its preparation for farming by actively involved in practicing ploughing the soil followed by sowing seeds.

After lunch, the session started with new technology in agriculture. Mr Sai (Proprietor) of Farm guru garden explained and demonstrated the modern instrument usage in organic farming. Students actively participated in the preparation, mixing and packaging of vermicomposting. The students did the practice of planting paddy seedling and green house plantation.

**Outcome of the program:** Students got motivation in Organic Farming and they provided their experience to make a career path for the future entrepreneur.



**Photos:**





**Name of the Event:** Herbal Gardening

**Date:** 26.0.2020

**Venue:** Ganga Block

**Organizers:** All Faculty members

**No. of staff participants:** 8

**No. of student participants:** 50

**Detailed report of the program:**

The PG and Research Department of Microbiology, D.G. Vaishnav College, along with principal inaugurated an Herbal garden on 26<sup>th</sup> February 2020. The objective of the program was to provide young students an opportunity to be familiar with the use of medicinal plants such that indigenous knowledge is also passed onto younger generation. Dr. R. Ganesan (Principal) began the garden by planting an herb, followed by Dr. P. Vidya (Head of the Department, Microbiology).

Student of M.Sc., Applied Microbiology bought some many herbs to plant in the garden. Each student planted his or her herb one by one in the garden. Planting local herbs in the open space available within the college complex contributes toward beautification of the college. Managing open space also allows students to experience firsthand the process of planting and tending a garden as well as the medicinal values of the planted herbs.

Medicinal herbs planted in the garden such as Holy Basil (Tulsi), Karpuravalli, Ginger, Chinese chastetree (Nochi), Aloe Vera, Goose berry plant (Nellikai), Nilavembu, Neem, Insulin plant, Thuthuvalai, Keezhanelli, pirandai, Adhatoda.

**Outcome of the program:** Students were enriched with the knowledge and benefits of medicinal plants, as well as they learned to know about gardening and their maintenance.

**Photos:**



Planting saplings during gardening program



Students jointly plant saplings

**Name of the Event:** Guest Lecture on “Recent Trends in Research”

**Date:** 06.03.2020

**Venue:** Department of Microbiology - Library

**Organizers:** Dr.A.Mageswari

**Resource persons:** Dr. V. Gopikrishnan (Alumni)

**No. of staff participants:** 7

**No. of student participants:** 49

**Detailed report of the program:**

The PG and Research Department of Microbiology, D.G. Vaishnav College had organised a Guest Lecture on **6<sup>th</sup> March, 2020** for the students to develop an insight on the trending research topics. The eminent speaker of the day, Our Alumni **Dr. V. Gopikrishnan**, working as a Scientist in **Sathyabama Institute of Science & Technology, JPR Park, Chennai** had explained the various research topics, listing out the prospects and scope of it in the current market.

The speaker started by highlighting the factors, including cost effectiveness, making use of cheaper/simpler raw materials, uniqueness and scalability that should be majorly considered while we understanding research. He also described how the students could make the research inclined on these factors with many examples. As well as, he further added that these factors would make the research eligible for government fund raising.

A couple of research ideas were discussed to take up in the next academic year project. Firstly, he gave a detailed explanation about the microorganisms that producing colour (Biopigments). These pigments can be extremely effective when used as a colouring agent in the food and textile industry. While comparing to the artificial colours, biopigments are extensively used in the current food industry. These pigments are harmless and healthier.

Secondly, he emphasized research on the Extremophiles, organisms that grow only in extreme environmental conditions. Enzymes produced by these organisms can be used in the treatment of some incurable diseases. This would be widely useful in the medical industry. Finally, he illustrated how microorganisms can be used to degrade the growing mass of e-waste in today's world, which is a greater hazard to the environment.



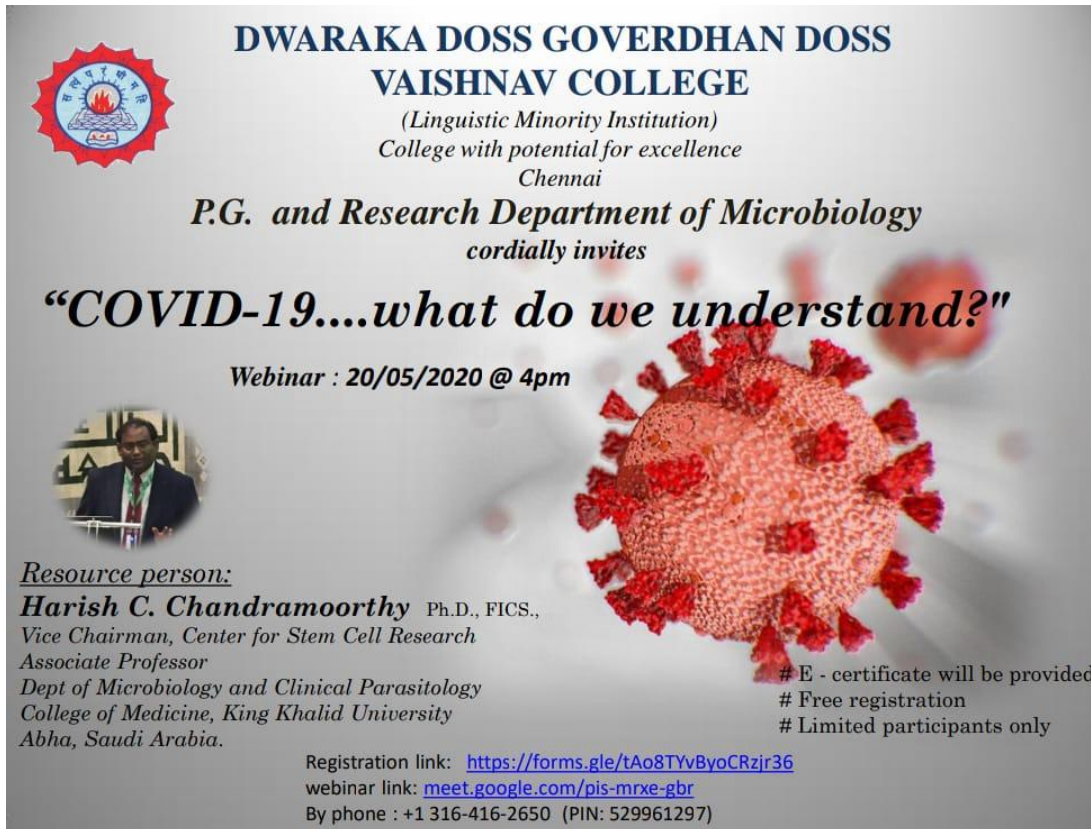
**Outcome of the program:** The session had set a better understanding about research in the minds of the students and had been a greater learning experience.

**Photos:**





## Invitation:



**DWARAKA DOSS GOVERDHAN DOSS**  
**VAISHNAV COLLEGE**  
(Linguistic Minority Institution)  
College with potential for excellence  
Chennai

**P.G. and Research Department of Microbiology**  
cordially invites

**“COVID-19....what do we understand?”**

Webinar : 20/05/2020 @ 4pm

**Resource person:**  
**Harish C. Chandramoorthy** Ph.D., FICS.,  
Vice Chairman, Center for Stem Cell Research  
Associate Professor  
Dept of Microbiology and Clinical Parasitology  
College of Medicine, King Khalid University  
Abha, Saudi Arabia.

# E - certificate will be provided  
# Free registration  
# Limited participants only

Registration link: <https://forms.gle/tAo8TYvByoCRzjr36>  
webinar link: [meet.google.com/pis-mrxe-gbr](https://meet.google.com/pis-mrxe-gbr)  
By phone : +1 316-416-2650 (PIN: 529961297)

**Name of the Event:** “COVID-19.... What do we understand?”

**Date:** 25.05.2020

**Venue:** Google Meet ([https:// meet.google.com/pis-mrxe-gbr](https://meet.google.com/pis-mrxe-gbr))

**Organizers:** Dr.A.Mageswari & Dr.B.Kirthiga

**Resource persons:** Dr. Harish C. Chandramoorthy

**No. of student participants:** 122

### **Detailed report of the program:**

The PG & Research, Department of Microbiology organized a virtual webinar on “COVID-19.... What do we understand?” The year 2020 would be recorded in history as the time when all aspects of life were far from what would be considered normal. However, despite the ill comings which the year presented, we were undeterred in moving in the right direction and try our best to educate with the facilities available. With isolation and internet based

connectivity becoming the new normal, our faculty strived to make the best of the situation. As a first step this virtual webinar was organized through online mode on 25<sup>th</sup> May 2020 at 4PM through google meet. Dr. P.Vidya, Head of the Department gave a brief introduction about the eminent speaker of the day.

Following the brief introduction session, **Dr. Harish C. Chandramoorthy, Ph.D., FICS.,** Vice Chairman (Center for Stem Cell Research), Associate professor (Dept of Microbiology & Clinical Parasitology), College of Medicine, King Khalid University, Abha, Saudi Arabia, started presenting extremely well about COVID-19. He explained about the background of corona virus, its origin, infectious process and lifecycle of SARS-CoV-2. He extended his presentation with a detailed note of ACE 2 expression in organs & systems, most frequently implicated in COVID-19 complications. Later, he gave extensive description about genome composition of SARS-CoV-2 & mechanism of interferon biosynthesis and their functions. He provoked all the participant minds with In-depth knowledge in relation to mechanism of host innate immune response and coronaviruses antagonism.

**Outcome of the program:** The endeavor of the program was to impart deep knowledge about corona virus and how to safeguard ourselves from the infection. Most of the participant interacted with the invited speaker who has a commendable expertise and experience in the field. The session was ended with a note on the race for corona virus vaccine & current status of drugs under consideration for treatment. Be Safe, Maintain social distancing.

**Photos:**



**COVID -19....what do we understand ?**



20/05/2020

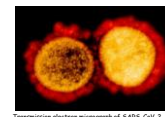
**Harish C Chandramoorthy., Ph.D., F.I.C.S**  
*Vice-Chair, Center for Stem Cell Research*  
*Associate Professor of Immunology*  
*Additional Professor of Virology*  
*Department of Microbiology and Clinical Parasitology*  
*College of Medicine, King Khalid University, Abha, KSA.*

**Background**  
**Coronaviruses**

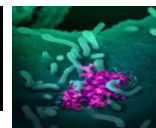
- Family "Coronaviridae"
- Subfamily "Coronavirinae"
- Order "Nidovirales"
- Four genera
- 1. alpha-coronavirus
- 2. beta-coronavirus
- 3. gamma-coronavirus
- 4. delta-coronavirus

**Some examples**

229E (alpha coronavirus), NL63 (alpha coronavirus), SARS-CoV (beta coronavirus), HKU1 (beta coronavirus), OC43 (beta coronavirus) and MERS-CoV (beta coronavirus) can cause infections in humans.  
 Beta coronaviruses - highly pathogenic human viruses like SARS-CoV, MERS-CoV and SARS-CoV-2.



Transmission electron micrograph of SARS-CoV-2 virus particles, isolated from a patient. Image captured and color-enhanced at the NEAD's Collaborative Research Facility (CRF) in Fort Detrick, Maryland. Credit: NEAD/NIH.



This scanning electron micrograph shows a SARS-CoV-2 (crown) spigata (spike) emerging from the surface of a SARS-CoV-2 virus. SARS-CoV-2, also known as COVID-19, is the virus that caused COVID-19. The virus shown was isolated from a patient in the US. Credit: NEAD/NIH.