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MESSAGE FROM OUR PROGRAM DEAN

## THE PANDEMIC - A GUIDE TO YOUR NEW YEAR'S RESOLUTIONS?



As we bid adieu to 2022, we reflect on the year that's past- hardships, success, and all. When we think about the past few years, it's almost impossible not to think about the COVID-19 Pandemic and its effect on all our lives. While there's no denying the negative effects it had on all our lives, there are also some positive lessons we learned during this time that are often overlooked.

So as we get ready to welcome the new year and think about the resolutions we want to make, let's try to put a spin on the COVID narrative and see if we can actually learn something from our time in the pandemic.

### **Environmental Change:**

One of the most noticeable changes that took place during the pandemic was the visible positive effect on the environment. Clear skies and chirping birds replaced the pollution and noise from loud vehicles stacked up on roads. Now of course we don't want to go back to a lockdown state, but why not try some simpler ways to help mother nature? Try using a carpool to work for instance, or maybe rent a Yulu. Even if all of us did it just once a week, it would certainly make a noticeable difference.

**Mental Health Awareness:** Another change that was bought about by the pandemic was a new focus on mental health. Being shut in with just ourselves showed many of us that we needed to prioritize our

mental health and during the pandemic scores of people took to meditation, yoga, art, reading, and other therapeutic things that could help them slow down and gain peace of mind. In our fast-paced lives, we often forget to take a moment for ourselves to just breathe. So this new year, why not make a resolution for yourself? Even something as small as 10 minutes of meditation a day could go a long way in boosting your mental wellness.

**The importance of community:** The pandemic bought people around the world together like never before. People from all walks of life came together

to help each other and it's safe to say that most of us wouldn't have made it out with our sanity if it weren't for our loved ones. So this new year why not pledge to do one kind thing for someone every day, or reach out to an old friend to check in on them? After all, one small act of kindness goes a long way.

**Hygiene, hygiene, and hygiene!** Last but not least, the most obvious lesson from the pandemic-hygiene matters! The pandemic may have receded but that doesn't mean our good habits have to. So keep washing your hands and stay clean and healthy this new year!

So as we embrace the new year, let's try and take away some valuable lessons from the year past and celebrate the fact that we've come out stronger, better, and more resilient than ever! Here's wishing all of you a Happy New Year! Let's make some resolutions we can keep, shall we?



# THE STORY OF MOLECULAR DIAGNOSTICS



by **Dr. Prabhakar Kulkarni**  
CEO, Co-Founder, NeoDx  
Biotech Labs Pvt Ltd

The COVID-19 Pandemic has dramatically changed life and businesses, particularly in the healthcare industry, where Accurate and Early diagnosis became the necessity of the hour, culminating in the optimization of diagnostic methods in clinical settings.

What is 'diagnosis'? The act of exactly determining what the illness or cause of the problem is. Understanding the symptoms of diseases and disorders is important to make a diagnosis, but it needs years of practice and experience.

But even after that terrible mistakes can happen. But this isn't insurmountable when we understand that differentiating the cause is not just possibly based on symptoms.

A correct diagnosis can increase the efficacy of therapies and help the infected patient avoid long-term problems. Patients who go undiagnosed may unintentionally spread the illness to others.

Clinical laboratory analysis is crucial to the provision of high-quality healthcare. To identify, treat, manage, and track a patient's illness, a doctor or other clinician may order lab tests. Clinical lab testing is thought to be a significant factor in about 70% of medical decisions.

Molecular detection, identification, and typing of microorganisms—also known as their molecular fingerprinting—have increasingly moved from the academic world to the regular diagnostic laboratory. Over the past ten years, molecular techniques have been applied more frequently to increase the clinical laboratory's sensitivity, specificity, and turnaround time.

It's high time the world needs to move from conventional laboratory diagnostics to early and accurate diagnostics which cannot be achieved by traditional laboratory diagnostics.

It's important to give a thought to diagnosing drug resistance, and genetic disorders, not just infectious diseases such as cancer. Drug resistance can be detected using special laboratory tests which test the bacteria for sensitivity to the drugs or detect resistance patterns.

BioMarker (By-oh-Mar-ker), also known as a signature molecule and a molecular marker, is a biological molecule present in tissues, body fluids, or blood as a sign of a condition, disease, or a normal or pathological process.

An organism's own DNA fingerprint, or pattern, can be detected if you know the bases' sequence. Sequencing is the process of establishing the order of bases. An organism's genome's base order can be determined in one step via a laboratory approach called whole genome sequencing. A thorough test called genome sequencing, sometimes known as whole genome sequencing, can find almost every DNA variation in a genome.

More accurately and individually than ever before, diseases may now be predicted, identified, and treated because of genomics, the study of genes. Three billion base pairs of DNA make up the whole human genome, which is uniquely structured to give us our basic anatomy and unique traits like height and hair color.

The diagnosis and treatment of numerous infectious diseases can benefit from the use of nucleic acid amplification and detection techniques developed in the last ten years. The polymerase chain reaction is the technique that is most frequently utilized (PCR). Directly from clinical specimens, PCR techniques can quickly and accurately identify the presence of fastidious and slow-growing microorganisms such as Chlamydia, mycoplasmas, mycobacteria, herpesviruses, and enteroviruses.





The accurate detection of infectious disease agents by clinical laboratories using this molecular technique shortens the time to diagnose many pathogens. The molecular testing Ecosystem involves scientists, technicians, clinicians, equipment, reagents, software, and much more.

Covid-19 has paved the way for awareness of molecular biology like never before. It also has accelerated the research orientation in the field as well as acceptance by the general public. We have witnessed this reality in India.

When the virus brought the world to its knees and all the doors were shut, including hospital doors, other than emergencies. NeoDx has begun its journey with hopes of doing healthcare service to society.

"NeoDx is in the frontline fight against the pandemic & resource constraints in the country — our way of giving back to the community."

**-Dr.Prabhakar Kulkarni (CEO-NeoDx)**

**NeoDx Biotech Labs** is a Bengaluru-based startup harnessing Advanced Bioinformatics to develop In-vitro Diagnostic and point-of-care Assays targeting the pathosis that concern the Indian healthcare market. Our Research and Development facility is incubated at Bangalore Bioinnovation center (Karnataka Govt. supported ).

Recognitions and Awards:

1. Best Startup-against COVID-19
2. Start-up India Seed fund-Blood donor screening kit

In our Research and Development facility and innovation center, we perform Multi-target gene assays, extraction-free, Ultrafast protocol, and quantitative assays. The production unit and capacity have a state of art .mfg facility.

We are putting in efforts to serve the community and add value to the molecular diagnostics ecosystem. NeoDx is working towards "Make in India for the world".

“



**Siddarth Venkatt**  
Biosciences Batch 22

The Biocon KGI certificate program had a serious impact on me as an individual both on a personal and professional level. The expertise I have gained here concerning my presentation skills and confidence has helped me evolve as a professional person. The functional visit sessions conducted by the academy were truly enlightening, as I witnessed the biotech industry in real-time across different departments; and this knowledge is something one cannot find in any book or lecture. The project-based learning system helped me hone my teamwork abilities and understand myself better. I found the KGI courses to be highly valuable in terms of the industry-specific knowledge I gained from them. The KGI faculty were very interactive and encouraged a lot of class participation. Overall, I would like to say that my time here was well spent, I have made friends and grown as an individual. I am grateful to the academy, and I would wholeheartedly recommend this program to those who seek to understand the biotech industry.

# BIOSCIENCES BATCH 23 LAUNCH

Here are some snaps from the successful launch of the Biocon KGI Certificate Program in Biosciences Batch 23. Dr. Arun S Chandavarkar, Board Member, Biocon Biologics launched the batch and addressed the gathering. The keynote address was delivered by Dr. Sheldon M. Schuster, President, KGI, California while the SMEs from Biocon Group and our alumni from the previous batches underlined some major aspects of the program.



## Here's an opportunity to learn from the best!

**An international curriculum and unique training model to prepare students for the industry**

**ADMISSIONS OPEN**

**Biocon KGI Certificate Program in Biosciences**

Batch XXIV

Be a part of this 'best-in-class' program and get on the path to become industry-ready!

**APPLY NOW**





## UPDATES

# US FDA VISIT TO BIOCON ACADEMY

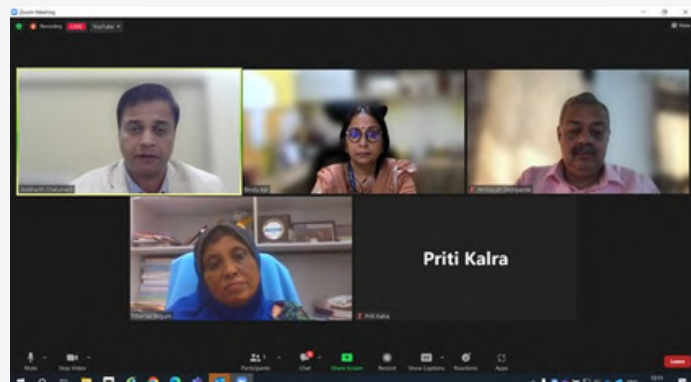
The US FDA team visited Biocon Academy campus, Interacted with Academy staff and students and delivered a talk on Biosimilars. They were impressed with the facilities and student's knowledge.



Biocon Academy faculty and students have obtained complimentary access to select United States Pharmacopeia (USP) publications, including the USP-NF and the General chapters, through the USP Academic Connection program. This will help the students to understand how the chapters are organized and how to access monographs.

## EDUTECH INDIA

Our Program Dean, Bindu Ajit, delivered a speech on the topic "Preparing Graduates for the Future of Work and the Skills-Based Economy" at the EDUTECH India 2022 Conference.



Biocon Academy weekend certification program on  
**INTRODUCTION TO RAPID MICROBIOLOGY METHODS**

### Speaker



**Dr. Girish Mahajan, Ph.D**  
Senior Vice President - Microbiology Division  
HiMedia Laboratories Private Limited

**4th February 2023**  
**9.30 AM - 11.30 AM**  
on **zoom**

[CLICK TO REGISTER](#)

Exclusively for Biocon Academy Alumni

## FACULTY BLOGS

### BIOLOGICS PROCESS DEVELOPMENT AND BIOMANUFACTURING TRAINING AT SARTORIUS

**Author: Dr. Ramgopal Rao S,**  
*Senior Academic Manager, Biocon Academy*

Recently the students of 22nd batch of "Biocon KGI certificate program in Biosciences" visited "Sartorius Application Center" in Bangalore for a 1-day training on biologics process development and biomanufacturing. this newly established center at Sartorius provides a collaboration area for biopharmaceutical and pharmaceutical professionals to explore process solutions and get awareness of advanced industry-specific techniques from in-house technical experts.



**CONTINUE READING**

Meet

**NABEEL C T**

Nabeel is the newest member of our team who has joined as a Communication Specialist. He will be handling all the communications related to Biocon Academy along with managing the social media platform and Biocon academy website.



**NEW TEAM MEMBER**



### Introducing **BIOCON ACADEMY ALUMNI PORTAL** BETA

Join this dedicated digital platform for Biocon Academy alumni to connect and engage with fellow alumni and students.

***Why Join the Alumni Portal?***

Job Postings | Knowledge Hub | Upskilling

**CLICK HERE** →

## KEEP UP WITH BIOCON ACADEMY

For suggestions and feedback, please write to us at [educonnect@bioconacademy.com](mailto:educonnect@bioconacademy.com)

Know more about us: [www.bioconacademy.com](http://www.bioconacademy.com)