BioZesta
A Quarterly Newsletter of Biocon Academy

VOLUME 5 - ISSUE 1 | MARCH 2022

WHAT'S INSIDE

Biocon Academy
Adding Value, Enhancing Skills

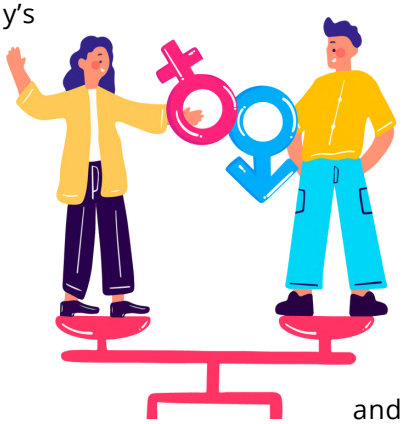
MESSAGE FROM OUR PROGRAM DEAN

BREAKING THE BIAS OF GENDER, LOCATION & DISABILITY

On the 8th of March 2022, we all celebrated International Women's Day where everyone spoke about breaking the gender bias and encouraged women to continue supporting other women. Even we, at Biocon Academy, contributed to spreading the awareness in line with this year's theme.

When we speak about gender bias, conscious or not, it is important to challenge the bias when we see it happening and not just recognize it. An inclusive culture is what fosters encouragement and curiosity in a workplace where women thrive, and the starting point for cultivating this balance and ensuring female candidates are given equal opportunities starts with the company's recruitment and hiring practices.

While the biotech industry has come a long way witnessing multi folds growth, a recent report by Mercer India shows that out of the 49.5 million-strong pharma workforce only 11 percent of it is represented by females. Gender equality remains a persistent challenge within the biotechnology and pharmaceutical industry.



At Biocon Academy, we receive a lot of applications from female candidates for our various certificate programs, but we still witness a number of companies hesitating to recruit female candidates. During our placement drives, we often receive requests from companies to schedule interviews first for the boys and then, for the girls. This is the bias we, at Biocon Academy, strive hard to break every single day.

We have been taking up various measures to ensure all the students irrespective of their gender are given equal opportunities to attend interviews during our placement drives. We have been able to understand that the hesitation comes from the fear concerning a future decision a female employee might take with respect to her marriage and then relocation, etc. Companies are also of the opinion that female candidates are still not ready for the night shifts. But in reality, the girls are raring to get into such opportunities. And that's not it. In the last 8 years, we have seen a lot of instances where few companies even prefer students who are geographically closer to the company's location – may be from the same city or state. This is yet again another bias that we strive hard to break in every placement drive.

Since Biocon Academy's inception, we have been witnessing another type of bias, i.e., the disability bias, where companies tend to offer certain jobs to people without any disabilities irrespective of their skillsets. At Biocon Academy, we consistently monitor such biased requests from companies and ensure that all students are provided with equal opportunities and students from various regions across the country and from various income groups are given opportunities to gain the right skillsets to help them become industry experts. We have even had many new mothers joining our certificate programs with aspirations to make a comeback into the industry or start their careers afresh.

Biocon Academy is fully committed to breaking the bias of gender, location, and disability in the biotech industry and providing equal opportunities to students based on their skills. I can proudly say that all our students, be it boys or girls, have been successfully placed across leading pharma companies in India.

BIOSCIENCES BATCH 20'S VISIT TO BIOZEEN AND BIOCON ACADEMY PREMISES

*by **Sai Priyanka**,*
Student, Biocon KGI Certificate Program in Biosciences - Batch 20

Online learning has become a new normal for students, and Biosciences Batch 20 was no exception to the same. However, with the vaccinations, decreasing number of cases, and a sense of normalcy returning, we had all crossed our fingers to be able to visit Biocon Academy when our course started in October 2021 and was overjoyed when we finally had the opportunity for offline visits for a period of one month.

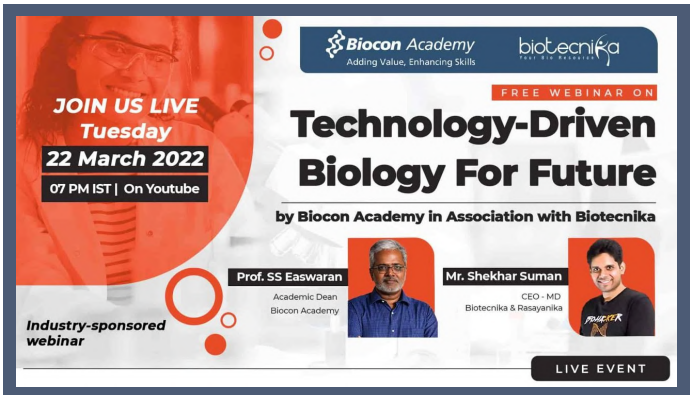
The first time we met each other in person was at BiOZEEN for the hands-on lab scale and pilot scale fermentation training. We spent one-week learning to handle 5L and 40L fermenters. The trainers meticulously explained the concepts of fermentation and trained us in handling both fermenters. This was also where we understood the application of the knowledge gained from our KGI classes so far. Between Day 1 and Day 6 of the training, there was a clear difference between our capabilities as well as confidence in being able to handle the fermenters, since we went from feeling a little bewildered by looking at a number of pipes and valves to knowing what each of them exactly stood for, the sequence of operating them and running experiments.

The week after the training at BiOZEEN, we began 2022 with in-person classes at Biocon Academy premises. The team welcomed us and we interacted with Bindu Ma'am, sharing our experiences and excitement over being to meet each other and attend classes at the Academy. Every day for the next 3 weeks, we met at 8 am for KGI classes as well as sessions taken by Easwaran Sir and Ram Sir. Module 2 was soon in full swing and so were the visits to the pantry to grab a coffee. We also had soft skills sessions and group activities where we had plenty of fun bouncing ideas off each other and making presentations together, interspersed with multilingual jokes and hearty laughs. The cultural day was celebrated at the end of our first week, which portrayed an extraordinary melting pot of cultures from across the country. We shared our creative work with each other – art, photography, music and played plenty of games. The last-minute practice for a ramp walk and spontaneous talent show entries only made the day more memorable, aside from countless selfies and group pictures.

Afternoons were spent at Biocon Park, visiting the R&D department in the first week followed by the QC departments at Biocon Park as well as Biocon Campus. The visits were thoroughly enriching, with enthusiastic SMEs who guided us through the lab facilities where cutting-edge work happens day in and day out. There was never a dull moment as we incessantly asked questions and delved into the nitty-gritty of equipment and concepts with them.

Another highlight of our offline visit was the in-person guest lecture on AMBR15 from Sartorius Stedim Biotech. The team from Sartorius brought the AMBR15 setup to the academy premises and interacted with us on its working and uses. Clearly, one consistent sentiment that echoed throughout our time at the academy was pure fascination. To be able to have a front seat view of the latest technologies in use today, only left us more inspired to envision future technologies as we would progress in our careers.

Before we knew it (and like every one of our seniors has always warned us), our time together was coming to an end. One look at the schedule would've made you believe it was ridiculous, given how jam-packed it was with activities and visits. But perhaps for Batch 20, that was what made it all too memorable. The assignments kept growing in number as usual but having each other's backs helped us all get through the challenges together. It would be safe to say we'd made the most of the opportunities presented to us in our short visit before we packed our bags and headed back home, much more enriched versions of ourselves than ever before.



We organized a webinar in association with Biotecnika where our Academic Dean SS Easwaran spoke about what to expect in biotechnology in the next 25 years! You can watch the recording of the live webinar here.

100%

We love breaking our own records.

It's a perfect 100% once again. We are thrilled to see all our Biosciences Batch 20 students getting placed during the first 2.5 hours of the placement day! Wishing all our students a rewarding and successful career.

Biocon · Biocon Biologics · Dr.Reddy's · FARCAST BIOSCIENCES · KEMWELL Keeping You Competitive · Syngene · ThermoFisher SCIENTIFIC

This is what a few of our Biosciences Batch 20 students had to say after achieving a 100% placement record in the first 2.5 hours!

Many thanks to Biocon Academy. I really appreciate their tremendous efforts because of which I can stand here. - **Mayur Desai**

I am really delighted to start my career with DRL. This seems to be impossible just 4 months back for me as a fresher. But, I am really grateful and thankful to each and every member of the Biocon Academy team, KGI, and SMEs who made it happen. Thank you so much. - **Abhishek Bhardwaj**

I would like to thank the whole Biocon Academy team for making the placement drive very smooth. They made sure we all have equal opportunities with very reputed companies for different departments in biopharma sector. - **Sai Gayathri**

FOSTERING INNOVATION AND IP CREATION TO MAKE BIOTECHNOLOGY A SUCCESS STORY FOR INDIA

*by **Dr. Ramgopal Rao S***
Academic Manager, Biocon Academy

Is there any technology that has attributed much of its success to inventions, innovations, and the creation of intellectual property rights? Yes, we can confidently say that the advent and success of Biotechnology across the globe were mainly owing to the stellar backing it received from the strong Intellectual Property (IP) protection system. This is because inventors and innovators wouldn't have risked sharing their hard-earned research outcomes to the public or the marketplace without foreseeing the encouragement they received either by way of royalty or incentives and not merely awards. There can be no second thought that most of the inventions and innovations in Biotechnology are the result of years-long research backed by multiple rounds of public-private funding and strong industry-academia collaboration. Let us understand how an invention-innovation-led-ecosystem can create several biotechnology-based success stories to help mankind and the role IP creation/protection can play to sustain and foster this innovation culture.

Biotechnology has carved a niche in serving mankind by offering significant solutions to tackle healthcare, food, and environmental issues. IP protection has played a major role in the expansion of many research-led biotech organizations by way of offering maximum security for inventors and enabling them to focus more on bringing Biotech based solutions with significant commercial implications. Whereas the developed world realized the potential of IP led Biotech revolution in the early eighties, India was not able to catch up till the late 2000s. The Indian Patent Act (1970) had not covered anything much related to Biotechnology inventions and protection systems. India had to modify their IP legislation in a big way and bring several major changes to comply with the TRIPS agreement signed in 1995.

TRIPS required that patents be issued to all modern, inspiring, and industrially relevant products & processes including those obtained from Biotechnology. The amendments brought-in 2002 saw the inclusion of biochemistry, biotechnology, and microbiology processes as potentially patentable inventions.

Though most of the early success for Indian pharma companies came from selling generic drugs, their shift towards developing innovative products came from evolved IP protection regime leading to the advent of the Indian Biotech sector. To address growing local needs and to compete with the global market, Indian scientists along with scientists of Indian origin (who had returned from developed regions with extensive research experience and technology knowhow), steered the wheel of translational research and development thereby bringing the Biotechnology sector to the limelight with novel products and processes and strengthened innovation ecosystem.

This led to a significant increase in the filing of national/international IP by a multitude of Indian companies, research institutions, and start-ups who were now equipped with strong IP as an asset. Although partially skilled, the availability of vast human resources further ignited this pursuit and led to the growth and expansion of Biotechnology led enterprises in India.

Currently, the Indian Biotechnology sector is playing a major role in catering to the local needs as well as supplying medicines, vaccines, diagnostic kits, etc. to the whole world. Although the CAGR of the Indian Biotech Industry has been maintaining its double-digit growth for many years, we are contributing very less to the GDP because of a smaller number of innovative first-in-class products developed locally and not having strong IP rights. This can be addressed if all the stakeholders come together and strengthen in bringing more & more innovative products and solutions backed by strong IP protection.

Students pursuing life sciences, chemistry, and pharmacy education should focus more on real-world projects contributing toward Innovation and value creation but not on reinventing the wheel and marks alone. The outcome of their degrees should have metrics that can measure their skills having weightage to training, publications, instrument handling, research mindset, professional skills, etc. Industries would then be eager to either hire them directly or after taking such a talent pool through industry-oriented short-term training to make them industry-ready.

More and more postgraduates should take up research not just for obtaining a Ph.D. degree but by aligning their research outcome to novel processes, products, and technologies relevant to societal or market demand so that they get visibility with quality publications as major outcomes. Additional criteria in awarding a Ph.D. degree must include relevant metrics that can measure the quality in terms of Innovation/IP creation and thus making them more in demand for Industry/institute hiring.

DBT Initiatives like the creation of BIRAC for startups & SMEs, supporting post-doctoral research programs, and young investigator research grants for translational research are welcome steps in this direction.

It is high time universities and HEIs enhance their contribution with accelerated efforts to create quality human capital, public/private research Institutions and start-ups extend their olive branch to handhold the graduate/postgraduate community towards achieving a bigger leap. Industries should partner with innovation-driven academia, increase their participation in upskilling the talent pool and ultimately hire those skilled professionals. Such collective efforts will not only ensure Indian Biotechnology contributions are clearly visible on the global map but the fruits of its' benefits directly reach everyone.

SHARE TO WIN

Share your experience with Biocon Academy on social media with hashtag #BioconAcademy & the best post gets a chance to win a gift hamper.

We are excited to announce that we have successfully launched the 21st batch of the Biocon KGI Certificate Program in Biosciences which hosted our respected guests Mr. Ganesh Reddy D, Global Head, Biologics Manufacturing, Biocon Biologics, and Dr. Sheldon M Schuster, President, KGI, California.

We also launched the 8th batch of the BITS Biocon Certificate Program in Applied Industrial Microbiology. During the launch, the students were addressed by Mr. Anoop Rajashekar, Associate Vice President, Quality, Biocon Biologics while Dr. Rajiv Tandon, CEO, Executive Education, Birla Institute of Technology and Science, Pilani, delivered the keynote address. Dr. Suman Kapur, Senior Professor, Department of Biological Sciences, BITS Pilani, Hyderabad Campus gave a complete insight into the program and what the students might expect during the 8 week period.

As part of the orientation session, Ms. Seema Ahuja, SVP & Global Head of Communications & Corporate Brand at Biocon Group & Biocon Biologics delivered an insightful session to our AIM Batch 8 and Biosciences Batch 21 students. During the session, she spoke about Biocon's success journey and addressed the students about the initiatives taken up by Biocon and the vision of the Academy.

Biocon Academy
Adding Value, Enhancing Skills

STUDENT BLOGS

THE GLOBAL SPREAD OF ANTIBIOTIC RESISTANCE

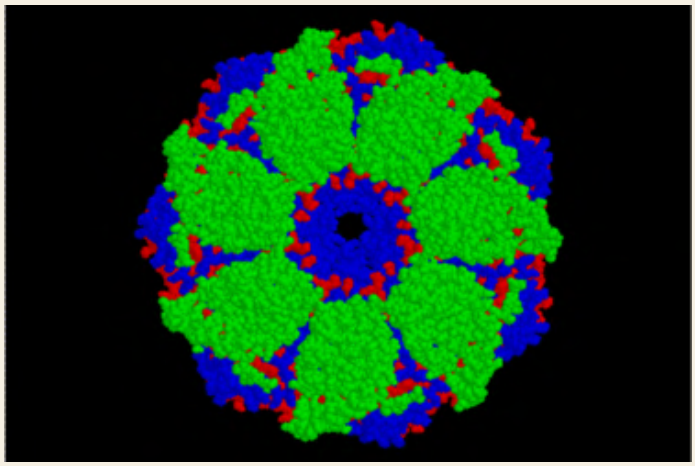
by Ankita Sharma, Batch 20, Biocon KGI Certificate Program in Biosciences

The rise of antibiotic resistance is one of the biggest challenges of modern times, yet there are still large gaps in public understanding of the issue. Many of these bacteria are harmless or even beneficial helping digestion and immunity but there are a few bad apples that can cause harmful infections from minor inconvenience to deadly epidemics. Fortunately, there are some amazing medicines designed to fight bacterial infections.

CONTINUE READING

CHAPERONES IN PROTEIN FOLDING

by Gandhali Vichare, Batch 20, Biocon KGI Certificate Program in Biosciences



Chaperones are a family of proteins having functional similarities which play a vital role in the stabilization of unfolded proteins. This stabilization helps in many processes such as translocation, degradation, and folding. Chaperones protect proteins when they are undergoing the process of folding by shielding them from other proteins that might bind and hamper the process.

CONTINUE READING

Meet

LEENA MARY

NEW TEAM MEMBER

Leena is the **newest member in our team** who has joined us as Assistant Manager, Learning. She will be responsible for imparting professional skills to our students and will be working closely with them offering essential corporate training, that helps students transform, adapt and establish a successful career.

Introducing

BIOCON ACADEMY ALUMNI PORTAL

BETA

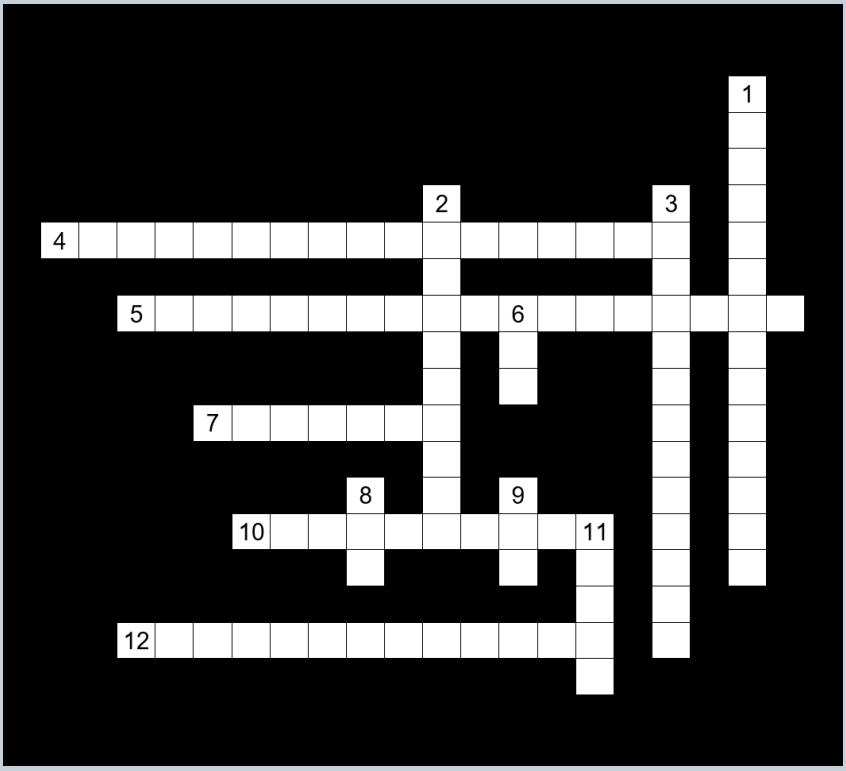
Join this dedicated digital platform for Biocon Academy alumni to connect and engage with fellow alumni and students.

Why Join the Alumni Portal?

Job Postings | Knowledge Hub | Upskilling

CLICK HERE

Check your Biotech vocabulary!



Can you crack this one? It's easy, interesting, and tricky.

Pull your thoughts together, go through the clues given below and solve the crossword, and get featured!

CLICK HERE TO SUBMIT YOUR ANSWERS

ACROSS

4. Enzyme that cuts DNA at a specific sequence of nucleotides

5. Procedure used to spread and analyze DNA fragments by placing a mixture of DNA fragments at one end of a porous gel and applying an electrical voltage from different sources

7. Small circular piece of DNA

10. Term used to refer an organism that contains genes from other organisms

12. Breeding technique that involves crossing dissimilar individuals to bring together the best traits of both organisms

DOWN

1. DNA produced by combining DNA from different sources

2. Continued breeding of the individuals with similar characteristics of a line of organisms

3. Gene that makes it possible to distinguish bacteria that carry a plasmid with foreign DNA from those that don't

6. Technique that allows molecular biologists to make many copies of a particular gene

8. Stands for deoxyribonucleic acid

9. Stands for ribonucleic acid

11. Member of a population of genetically identical cells

KEEP UP WITH BIOCON ACADEMY

For suggestions and feedback, please write to us at **educonnect@bioconacademy.com**
Know more about us: **www.bioconacademy.com**

Biocon Academy
Adding Value, Enhancing Skills