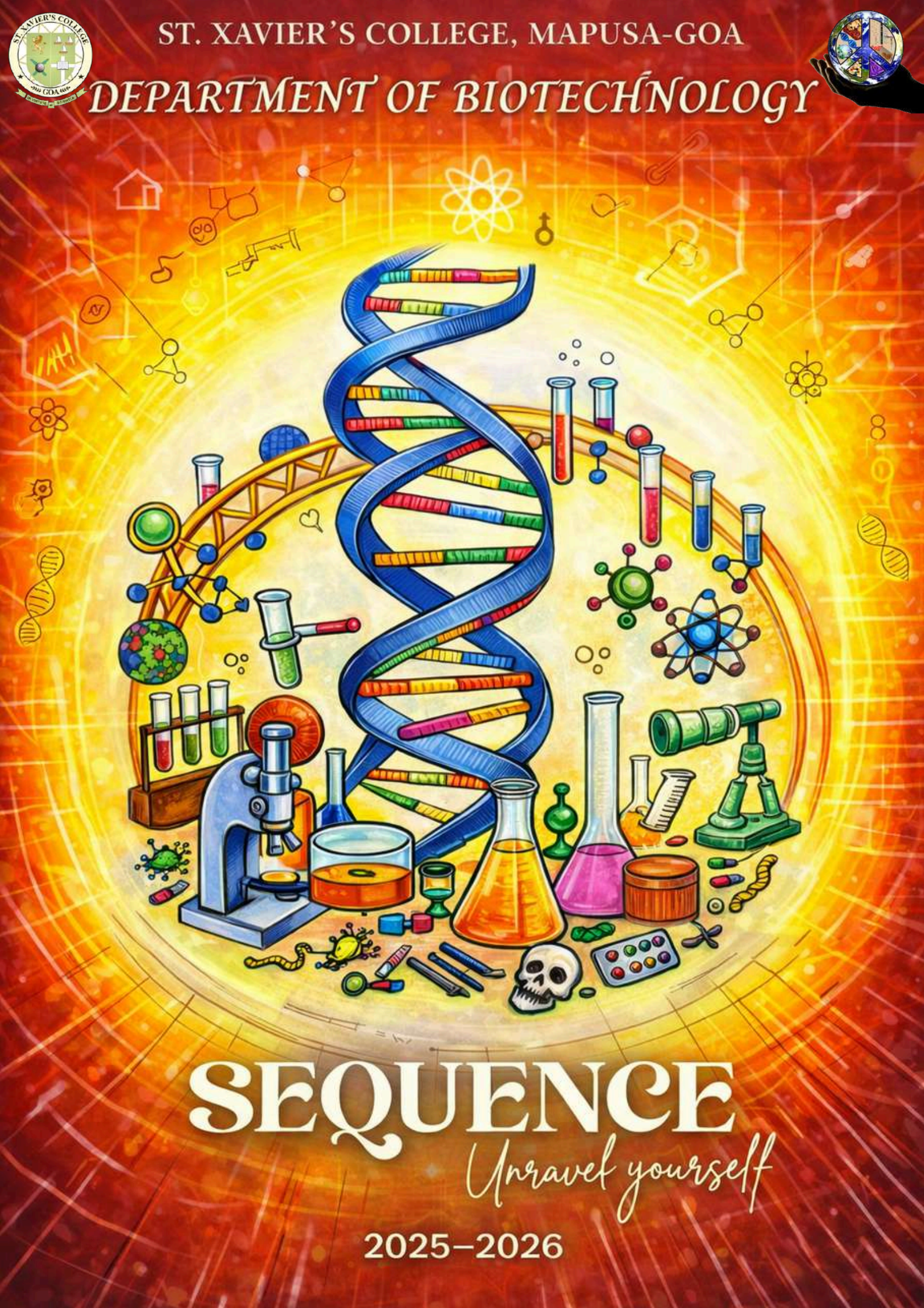
ST. XAVIER'S COLLEGE, MAPUSA-GOA

DEPARTMENT OF BIOTECHNOLOGY



SEQUENCE

Unravel yourself

2025–2026

Our Vision

Availability of Biotechnological studies and research to improve the living conditions of mankind and the environment

Our Mission

Education and training opportunities for students such that they gain mastery in biotechnological skills.

Follow us on...

@biotechmoments

Biotech moments

Principal's note

It is my pleasure to pen these few lines on the release of "Sequence", the newsletter of the Department of Biotechnology, that brings together remarkable happenings of the past year.

At the very outset I'd like to congratulate the department on securing cent percent results at the University examination. Alongside academics, students are engaged in various activities that nurture curiosity, foster innovation, and help to inculcate scientific integrity. I commend the faculty members for their relentless mentorship and applaud every student for giving their best.

Congratulations to the Editor Dr Larissa Menezes and the entire editorial team for bringing out this issue of Sequence!

Advances in Biotechnology continues to shape the future in terms of health, sustainability, and societal well-being. As budding biotechnologists, dream big, work diligently, share resources and maintain a collaborative spirit.

Wishing the department another fruitful year ahead!

-Ms. Ursula Barreto
Officiating Principal

Administrator's message

The Biotechnology Department every year organises this beautiful programme entitled "Biowizards". Though in yester years bio-wizards were described as some fictitious characters having the ability to magically control life-sciences, today's scientific world produces bio-wizards who are women and men of real flesh and blood. They have brought about and continue to bring about changes in the scientific world, especially in the field of genetics and life sciences. With their hard work and commitment, these modern bio-wizards have been able to edit the DNA, create new vaccines and medicines, grow tissues in labs, and contribute towards a friendly environment by developing eco-friendly solutions with the help of microbes and plants.

The possibilities are immense, and success is guaranteed to those who dare, but it also demands that those engaged in biotechnical innovations act responsibly and work with the good of the human being in mind. The power of knowledge should be used for a better tomorrow. The fictitious Brave New World of Aldous Huxley has metamorphosed itself into a reality and we all look to the biotechnologists to use their scientific wizardry for the emancipation and good of humankind.

I wish the Biotechnology Department success in all its academic and scientific ventures and congratulate the faculty and the students. I bid Godspeed to all the students, especially of the T.Y., in their quest for a better tomorrow.

-Rev. Canon Antonio Salema
Administrator

Co-ordinator's address

I am incredibly proud to share the latest edition of our departmental newsletter. This newsletter is more than just an update; it is a testament to the dedication of our educators and the curiosity of our students. This publication serves as a vibrant record of our collective journey, capturing the spirit of innovation and the rigorous pursuit of knowledge that defines our biotech family here at St. Xavier's.

I extend a heartfelt thank you to our editor, Dr. Larissa Menezes, whose dedication and sharp eye for detail have turned a collection of updates into a cohesive and inspiring narrative of our collective progress.

I invite you to explore these pages and share in the successes of our department. I hope these pages remind you of the impact we're making together.
Happy reading!

-Ms. Jocelyn Fernandes
Course Coordinator
Department of Biotechnology

Editorial

Welcome to a brand new edition of "Sequence: Unravel Yourself", the official e-newsletter of the Department of Biotechnology. This year's theme was "Biofrontiers: Innovating tomorrow", a vital area to be addressed, especially with the tool of artificial intelligence, available at our fingertips.

At the outset, I extend my heartfelt gratitude to all student contributors and faculty, who have supported this initiative. Your enthusiasm, creativity, and dedication have played a vital role in making this edition a success. I would like to express my sincere gratitude to our Course Co-ordinator Ms. Jocelyn Fernandes and faculty members for their invaluable support in bringing "Sequence: Unravel Yourself" to life. Your encouragement has played a pivotal role in shaping this edition. I extend my deepest gratitude to our esteemed Officiating Principal, Ms. Ursula Barreto, Administrator, Rev. Canon Antonio Salema and Vice Principals, Ms. Sandra Fernandes and Prof. Filipe Rodrigues e Melo for their leadership and continuous encouragement.

"Chance favours the prepared mind", a famous quote by Louis Pasteur, reminds us that in order to become innovators, we, students and faculty alike, have to strengthen our foundation and use interdisciplinary techniques to be innovators at our level. No innovator is too small or too simple to be one. The right bent of mind, sound concepts and awareness of unsolved global issues and demands for solutions, would be key characteristics of a successful innovator. Through this publication, I attempt to urge each reader to think of a problem you struggle with in everyday life, and how a workable solution at your level could be innovated using government support and innovation schemes available to us. Various incubation centres are available to convert ideas into models and prototypes- these facilities are available across Goa.

As we celebrate another edition of the newsletter, we reflect on our journey with pride and look forward to shaping the future of biotechnology hand-in-hand with artificial intelligence, as we move forward to innovate sustainable solutions for our own future.

Wishing each reader deep inspiration to innovate in any small way. Happy reading!

Dr. Larissa Danielle Menezes
Editor


Writer's Corner
Articles

The Edge of Discovery: New Biofrontiers of Applied Biotechnology

"New discoveries in science will continue to create a thousand new frontiers for those who still would adventure."

- Herbert Hoover

Biotechnology as a field, is no longer bound within the walls of a laboratory. It is applied in everyday life and is transforming healthcare by curing inherited blood disorders, innovating HIV prevention methods and modernizing Alzheimer's treatment from the comfort of one's home, as well as discovering chronic and menopause pain management strategies.

It is also catching up to the exponential rise of Artificial Intelligence driven discovery engines, advanced cell and gene therapies, smart diagnostics and eco-conscious agricultural technology, thus reshaping our approach to medicine, nutrition, and environmental sustainability.

Throughout the years we have witnessed a consistent progression of therapeutic milestones. Some of the many recent breakthroughs involve landmark treatments like Casgevy and Lyfgenia, that have received FDA approval for curing sickle cell disease by modifying a patient's own blood stem cells. On the other hand, the treatment of early-stage Alzheimer's has become significantly more accessible with the 2025 approval of a subcutaneous autoinjector called Lecanemab. Patients can now self-administer this anti-amyloid therapy at home via a weekly injection, replacing the need for frequent hospital-based IV infusions.

Artificial intelligence is an evolving landscape and is already expanding the boundaries of programmable biology. Introduced by DeepMind in 2024, AlphaFold 3 which allows researchers to model entire protein complexes and even predict conformational changes upon ligand binding. It also enables drug designers to identify binding pockets and protein-protein interfaces in silico before any lab work.

Within environmental biotechnology, Precision fermentation and metabolic engineering have emerged as promising strategies to accelerate the development of bioenergy, expanding microbial bioconversion beyond advanced alcohols to include syngas-derived fuels and biohydrogen as strategic energy carriers.

The year 2025 marked a significant turning point for global food security with the rise of seaweed as a premier sustainable protein source. Recognized as a major GreenTech breakthrough, the large-scale cultivation of macroalgae such as kelp is addressing the dual challenges of nutrition and climate change by providing a high-protein alternative with a remarkably low environmental footprint. Several sustainable biopesticides have been developed to combat the rise of resistant "super pests". Cellulose-Based Immune Boosters - developed using modified cellulose particles that trigger the plant's innate immunity, making crops naturally resistant to insects and pathogens rather than killing the pests, Gene-Silencing RNA Sprays - specifically target and silence essential genes in pests, causing them to stop feeding or reproducing without affecting beneficial insects or the plant itself, Microbial Colonizers – engineered beneficial bacteria and fungi that live within plant roots and act as bio-shields surpassing harmful organisms for resources while producing natural compounds that ward off soil-borne pests, Precision Pheromone Traps - pheromone-based systems using advanced delivery to confuse insect mating cycles more effectively thus reducing populations without broad-spectrum chemical application.

In regenerative medicine, Xenotransplantation has achieved a milestone through successful transplantation of a pig kidney into a patient with end-stage renal disease. The donor organ was designed with 69 specific genetic modifications to bypass the human immune system. The graft not only functioned well but allowed the patient to cease dialysis and recovered.

The integration of all these advancements demonstrates the transition from observing existing biological systems to actively modifying them to meet our demands by shifting from working with tangible material within laboratories to virtually designing proteins and genetic material through AI integrated systems. It is vital that we operate within ethical boundaries and ensure that safety and rigorous oversight remain our utmost priority, as we consistently transcend the frontiers; for we are no longer just reading the book of life but rewriting the chapters.

–Ms. Alethea Fernandes
T.Y.BSc (2025–2026)

Lab-Grown Meat –The Future of Sustainable Food

Increasing world population has led to higher demands for food which continues to increase at a swift pace. Traditional livestock farming needs extensive land and water resources because it emits large quantities of greenhouse gases. Scientists have introduced “lab-grown meat”, which is also commonly called “cultured meat”, as their solution to such environmental problems related to food.

Scientists create lab-grown meat by using a small animal cell sample which they grow in special laboratory conditions. The cells receive nutrients and oxygen together with optimal conditions for growth which enables them to develop muscle tissue in the same way as actual animals do. The process results in meat which achieves identical taste and texture and appearance to traditional meat products without causing harm to animals.

The main benefit of lab-grown meat production creates positive effects on the environment. The method utilises much less land and water compared to traditional farming methods, while it generates lower greenhouse gas emissions. The method presents a sustainable solution, which becomes essential due to ongoing climate changes and depletion of resources. The method creates better living conditions for animals as its main advantage. Lab-grown meat becomes more humane because it eliminates the need to breed and kill animals for food. People who want to eat meat but care about animal rights can choose this product because it represents an ethical solution.

Lab-grown meat provides health advantages. Researchers can modify the product through fat reduction and nutrient enhancement. The manufacturing process takes place in a sterile area which prevents bacteria like *Salmonella* or *E.coli* from contaminating the product. The production process still contains several obstacles that require solutions. The current manufacturing expenses for lab-grown meat products continue to be excessively high rendering a high cost for such meats in the market.

–Mr Siddesh Naik
S.Y.B.Sc (2025–2026)

When Machines Learn Medicine: AI in Everyday Healthcares

The field of biotechnology is no longer limited to microscopes and petridishes in laboratories. Today, artificial intelligence is quietly shaping how healthcare is delivered in everyday settings. The most important changes are not dramatic futuristic breakthroughs, but small, practical improvements that make diagnosis and treatment more accurate and efficient.

One of the most noticeable changes is in medical diagnostics. Diagnosing diseases like cancer has traditionally depended on human observation, which can sometimes miss subtle patterns. AI systems trained on large datasets of medical images can assist doctors by identifying these patterns more precisely. This improves accuracy and reduces the chances of error, while still keeping the doctor in control of the final decision.

AI is also playing an important role in personalized medicine. Not all patients respond to the same treatment in the same way, especially in complex conditions like cancer or diabetes. By analysing genetic information, lifestyle factors, and medical history, AI can help suggest treatments that are better suited to each individual. This approach increases effectiveness and reduces unwanted side effects, moving healthcare away from a one-size-fits-all model.

Another area where AI is making a difference is in medical equipment. Devices such as smart insulin pumps and wearable heart monitors are now capable of continuously collecting and analysing patient data. For example, a wearable heart monitor can detect irregular rhythms and alert both the patient and doctor at an early stage, allowing timely intervention before the condition worsens.

In hospitals, AI helps manage large volumes of patient data efficiently. It can assist in organizing records, predicting patient admissions, and even speeding up drug discovery by identifying potential compounds. Processes that once relied heavily on trial and error can now be completed faster with computational support.

Despite these advancements, AI is not a replacement for human expertise. Biotechnology still depends on trained professionals to interpret data and make informed decisions. AI functions as a tool that enhances human capability rather than replacing it.

In the future, AI will likely become a routine part of biotechnology and healthcare systems. Instead of being seen as advanced technology, it will be integrated into everyday practice. The real progress lies in using AI to support human judgment and improve overall patient care.

–Sharanya Manerkar
S.Y.BSc.(2025–2026)

Artificial Blood, an intelligent alternative

Science has proved that looking at serene nature, we feel a sense of calm and it is soothing to our eyes. Nature and biology combined is the heart of mother Earth but have you ever wondered if both could play a vital role in helping our Earth? Problems such as bacterial infections have evolved and millions of people succumb to their fate of death. Organ transplants are a blessings but often post-operative problems arise and rejection is experienced. Such pressing matters require a more innovative practical solution. In biotechnology, we see scientists, no longer just studying nature, but partnering up with it. They use biological discoveries to create tools, cures and materials that don't exist yet, making the world cleaner and healthier. Now this got me thinking, I'm sure it helps with infrastructure, machines and even nature but can it help us in the medical field and specifically blood? So much of bloodshed and loss of blood during the Iran and Israel war, profuse bleeding injuries and empty blood banks, leaving people in torment. In order to counter this, I would like to reinforce the use of ARTIFICIAL BLOOD. This sounds extremely perplexing but if you go to see it isn't a red liquid like blood but a specialized oxygen-courier. It is a lab-engineered substitute for real human blood designed to transport oxygen from the lungs to the rest of the body. This isn't meant to stay in our bodies forever but a bridge to keep a person alive until their own body can replenish its blood supply.

You have 2 approaches to this: SYNTHETIC and RECYCLED.For recycled, scientists take the haemoglobin out of the old and expired blood, purify and wrap it in a protective polymer skin, just like taking out the engine of a car and putting it in a brand new performance frame. The synthetic way uses entirely man made material called Perofluorocarbons. They can travel through tiny, swollen areas where real blood gets stuck. Why is this a biofrontier? Artificial blood has no blood type like A, B and O, etc, that can cause rejection or a reaction from a blood transfusion. There is zero risk of contracting viruses like HIV, Hepatitis or any other blood-borne infections. This can be stored at room temperature for upto 3 years or even kept as a dry powder and this is a big boon for the medical industry. This is the universal life packet as I would like to call it. Think of it as a software update for the human body. The UK has recently found that lab grown red blood cells are younger and healthier than donated cells. Patients with Sickle Cell Anaemia needed to visit the hospital only once, every four months, instead of every month. It has also been used in emergency surgeries and saved many a lives. This is a massive leap in quality of life .This isn't a lab dream anymore and soon it will be open to all. Let's make a difference and live life as true humans. This Biofrontier is teaching us that blood isn't just a vital liquid, it's a legacy. Blood is a language we are finally learning to speak.

–Ms. Katya D'souza
F.Y. B.Sc (2025–26)

When AI Meets Mini-Organs: A New Frontier in Medicine

In modern biology, one of the most exciting developments is the rise of organoids, tiny, three-dimensional, self-organizing structures grown from stem cells that reproduce important features of real human tissues. These are not full organs, but they are far more realistic than conventional two-dimensional cell cultures. Organoids have emerged as powerful models for studying development, disease, drug response, and personalized medicine.

What makes this field especially exciting today is its convergence with artificial intelligence (AI). Organoid experiments generate large and complex datasets, including brightfield and fluorescence images, time-lapse growth patterns, and multi-omics profiles. Recent reviews emphasize that AI is increasingly being used to improve organoid construction, image analysis, data integration, and predictive modelling, thereby accelerating discovery and reducing manual subjectivity.

At the same time, the field faces serious practical challenges. Organoids can vary from batch to batch, their growth can be difficult to standardize, and their production is often labour-intensive. A recent review in npj Biomedical Innovations argues that the next stage of the field is to move from simple organoid culture toward manufacturing reproducible and scalable organoid systems. This shift is important because reproducibility and scalability are essential if organoids are to become reliable platforms for translational research and drug development.

A particularly striking example of this transition comes from liver organoid research. In a 2025 study in Communications Biology, researchers developed DILI-Tracer (drug induced liver injury-Tracer), an AI-based model that uses brightfield images of human liver organoids to predict drug-induced liver injury. The model linked organoid morphology with hepatotoxicity and achieved an overall accuracy of 82.34%. This study illustrates how AI can transform organoids from descriptive biological models into predictive biomedical tools.

The importance of this frontier is now being recognized beyond academia. In April 2025, the U.S. FDA announced plans to reduce or replace some animal-testing requirements for monoclonal antibodies and other drugs by encouraging the use of AI-based computational models, organoid toxicity testing, and other human-relevant methods. This is a notable sign that organoids are increasingly being viewed not merely as research curiosities, but as serious components of future biomedical evaluation.

For students, this field is fascinating because it lies at the intersection of biology, engineering, medicine, and computation. It also raises major scientific and ethical questions: Can a patient's own cells be used to test therapies before treatment begins? Can AI identify disease signatures in lab-grown tissues more reliably than humans? Can organoids reduce dependence on animal experiments while improving prediction of human outcomes? These questions make AI-powered organoids one of the clearest examples of a true biofrontier—a field where scientific imagination is rapidly becoming practical reality.

–Ms. Sonali Kajoli
Assistant Professor,
Depatrment of Biotechnlogyy

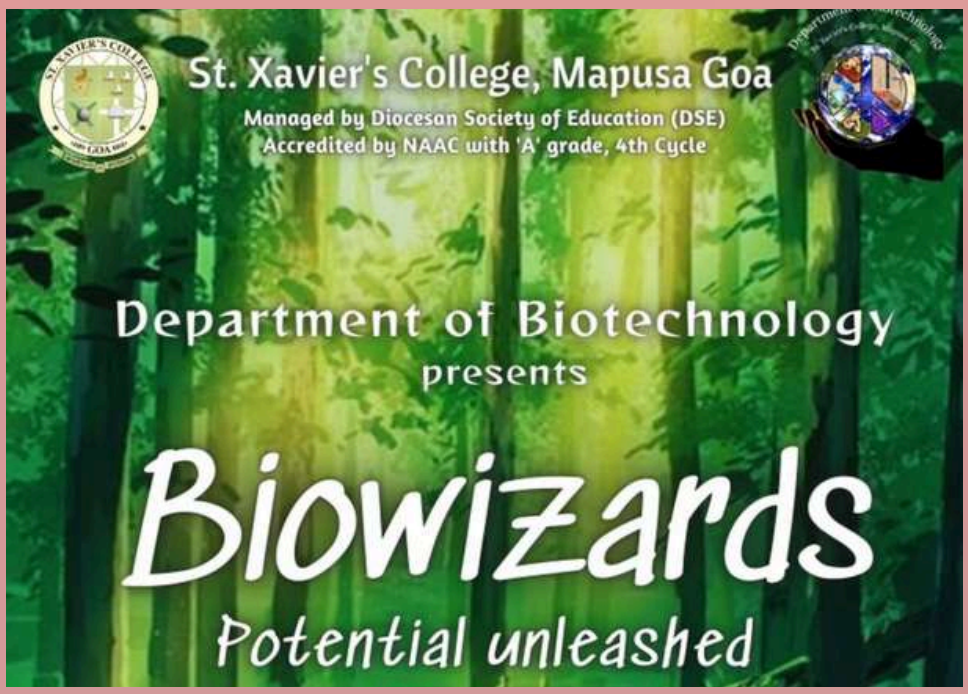
Activities

Biowizards 8.0: Potential Unleashed

The Department of Biotechnology at St. Xavier's College, Mapusa, Goa, successfully hosted the 8th annual Inter-Higher Secondary School Event - **BIOWIZARDS 2025 - "Potential unleashed"** on 6th February 2025. The chief guest for the inaugural session was Mr. Sean D'Silva, an esteemed alumnus of our department and an Embedded Engineer in IoT & Automation at City Greens. As a symbolic gesture, the Chief guest, along with the event coordinator, Ms Swaroopa Naik and editors, Ms Emma Fernandes and Ms Sonali Kajoli released the departmental annual e-newsletter **"Sequence: Unravel yourself"** during the inaugural ceremony of the event.

This prestigious inter-school event brought together talented young minds from **8 higher secondary institutions** to compete in a series of intellectually stimulating and creative challenges. After intense deliberation by the judges, *the first place was bagged by Harmal Panchakroshi Higher Secondary School & Institute of Vocational Studies - Harmal, second place by St. Andrew's Higher Secondary School, Vadem*, and *third place by St. Xavier's Higher Secondary School, Mapusa.*

The course coordinator, Ms. Jocelyn Fernandes expressed gratitude to all participating Higher Secondary School, sponsors and volunteers for their invaluable contribution to the success of the event. Biowizards 2025 not only provided a platform for students to showcase their scientific prowess but also encouraged collaboration, critical thinking, and innovation in biotechnology. The hard work and passion of the participants truly embodied the spirit of Biowizards!



Glimpses from Biowizards 2025

Glimpses from Biowizards 2025

Winners of Biowizards 2025

Winner: Harmal Panchakroshi Higher Secondary School & Institute of Vocational Studies, Harmal

1st Runner-up: St. Andrew's Higher Secondary School, Vasco

2nd Runner-up: St. Xavier's Higher Secondary School, Mapusa

Vidnyan Dhara 2025

Ms. Jenica Rangel contributed to spreading awareness of Science through **Vidnyan Dhara 2025**, a Mega Science Series organized by the Directorate of Higher Education (DHE) and the Goa State Higher Education Council (GSHEC). She conducted two sessions on **"Photosynthesis – A Biological Marvel"** on 12th February 2025 at St. Michael's Convent High School, Vagator, Goa, and on 14th February 2025 at Shri Dayanand Arya High School, Neura, Dongrim, Goa. Her session combined an interactive talk with a scientific demonstration, providing an engaging exploration of photosynthesis—one of nature's most fascinating biological processes.

The enthusiastic participation and inquisitive questions from students made the experience enriching. Events like Vidnyan Dhara 2025 play a crucial role in shaping young minds, fostering a deeper appreciation for science, and inspiring future innovators.

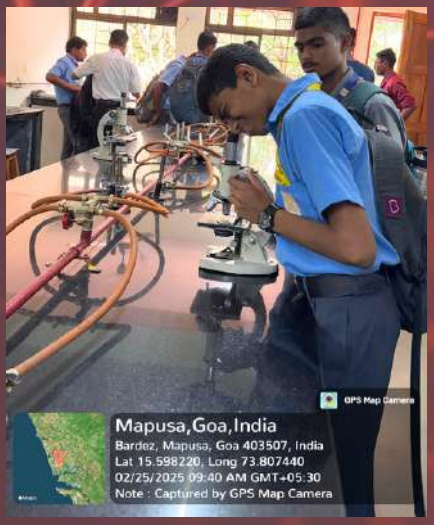
Open Lab Day in celebration of National Science Day

St. Xavier's College, Mapusa, in celebration of National Science Day, successfully organized an Open Lab Day on **25th February 2025 with the theme "Building Public Trust in Science."** The event aimed to inspire students to pursue higher education in the field of science by providing them with an opportunity to explore the college's state-of-the-art laboratories.

The event welcomed *70 students from three schools: St. Francis Xavier's High School, St. Britto's High School, and Holy Cross High School.* These students had the chance to visit and explore various science laboratories on the campus, including those of Biotechnology, Botany, Chemistry (UG and PG), Computer Science, Electronics, Mathematics, Microbiology, and Physics.

The Department of Biotechnology played a crucial role in the event by exhibiting various experiments. Ms Emma Fernandes was the teacher in-charge, and in addition to live demonstrations, organised the display of numerous preserved samples and provided students with a brief yet informative description of different laboratory instruments. This exposure helped students understand the importance of biotechnology and its applications in the real world.

During their visit, students showed immense enthusiasm and curiosity as they toured all the science departments and laboratories. They actively engaged with the exhibits and models, listening attentively to explanations and posing insightful questions to faculty members and demonstrators. Their participation highlighted a genuine interest in scientific learning and discovery.



Guest Lecture by Alumnus

The Biotechnology Department of St. Xavier's College, Mapusa, hosted a guest lecture by **Donovan Rodrigues, an alumnus and founder of MyOwnBrews on 4th March 2025.** The session provided an inspiring insight into Bio-entrepreneurship, where Donovan shared his journey of blending science with innovation to create a successful business in fermented beverages.

He reminisced about his college days and how his passion for fermentation technology led him to explore natural, locally inspired drinks. His startup, MyOwnBrews, specializes in producing baggies for winemaking and other artisanal fermented products. He emphasized how Biotechnology played a key role in developing these scientifically crafted beverages.

Donovan also discussed the challenges he faced, including funding, market demand, and business regulations. He highlighted the importance of persistence, creativity, and adaptability in overcoming these hurdles. He encouraged students to think beyond conventional career paths and explore opportunities in Biotechnology-based entrepreneurship.

He stressed the role of research, experimentation, and consumer awareness in building a successful business. The session was both engaging and educational, leaving students with a broader perspective on applying Biotechnology beyond laboratories.

A total of 51 First and Second-Year Biotechnology students benefited from the session, gaining valuable insights into turning scientific expertise into innovative ventures.

Best Exhibit Award at KALPAK 2025

The TY project work titled: **"Sustainable Packaging Paper from *Citrus maxima* (Pomelo) and *Citrus limetta* (Sweet lime) fruit rinds"**, carried out by students, Amit Vernekar, Rochelle Rocha, Vrunda Naik, Shawna Castelino and Siya Raut, under the mentorship of Ms. Jocelyn Fernandes, was selected to be exhibited at the Science Exhibit Showcase KALPAK, as part of Vidnyan Dhara 2025, organized by the Goa State Higher Education (GSHEC) & Directorate of Higher Education (DHE Goa, India), on the 05th to the 07th of March 2025 at the Directorate of Art & Culture, Panaji, Goa. The objective of the exhibition was to provide a platform for students and faculty to present innovative science projects addressing real-world challenges. The exhibit presented bagged the 'Best Exhibit' award.

NATIONAL CONFERENCE ON "BIOENTREPRENEURSHIP IN MICROBIOLOGY"

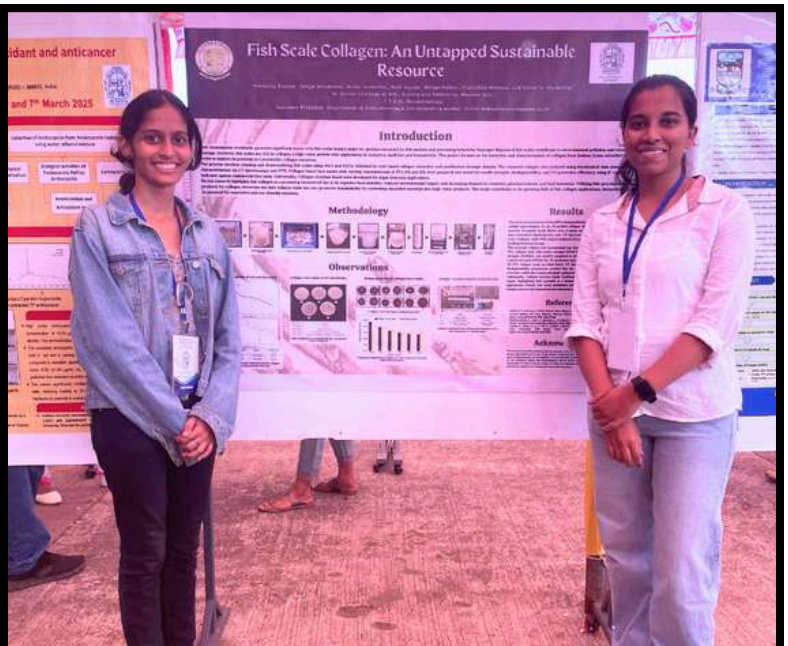
The 2-day National Conference on "Bioentrepreneurship in Microbiology", organized by the Microbiology Programme at the School of Biological Sciences & Biotechnology (SBSB), Goa University on 6th and 7th March 2025, was an insightful and engaging event that brought together academicians, researchers, and entrepreneurs to discuss the intersection of microbiology and entrepreneurship. The event commenced with an inaugural session featuring esteemed dignitaries, including Prof. Harilal B. Menon, Hon'ble Vice-Chancellor of Goa University, and Prof. S. Krishnan, Dean of SBSB.

The first keynote address by Dr. Sangam Kurade on fungi-based entrepreneurship highlighted the growing potential of fungal biotechnology in various industries. The following sessions focused on the applications of microbiology in food and agriculture, with experts such as Dr. Raman Ramesh and Shri. B.B. Pendkar sharing their pioneering work in bio-formulations and microbial biofertilizers. These discussions emphasized sustainable agricultural practices and their role in mitigating environmental challenges. An interactive session with industry representatives further enriched the discourse by providing insights into the practical aspects of bio-entrepreneurship.

The second day of the conference delved into the startup ecosystem, intellectual property rights, and technological advancements. Dr. Srikanth Mutnuri shed light on wastewater treatment through microbial interventions, while Shri. D. S. Prashant provided valuable perspectives on the startup landscape in Goa. Mr. Sumit Choudhary's session on intellectual property rights underscored the importance of legal frameworks in scientific innovation. Notably, Dr. Vanita Prasad's talk on microbial health in biogas digestors showcased how microbiological research can drive environmental sustainability.

The concluding sessions focused on technological advancements in microbiology, including biosensors, marine microbial products, and wastewater treatment solutions. A visit to the Goa University Research Park Unit offered participants a firsthand look at ongoing innovations. The valedictory session featured reflections from key speakers, the release of the abstract book, and the declaration of winners for various presentations. The conference successfully fostered collaboration between academia and industry, highlighting the transformative potential of microbiology in entrepreneurship. It served as an invaluable platform for knowledge exchange, inspiring participants to explore new avenues in bioentrepreneurship.


NATIONAL CONFERENCE ON
BIOENTREPRENEURSHIP IN MICROBIOLOGY
6th & 7th March, 2025
NRF
National Research Foundation
Bioentrepreneurship in Microbiology


Fish Scale Collagen: An Untapped Sustainable Resource
Introduction
Methodology
Results
Observations


Fish Scale Collagen: An Untapped Sustainable Resource
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Field Trip to Agarwada

The Department of Biotechnology organized a field visit on 8th March, as part of curriculum, at Chopdem- Agarwada Village Panchayat. Ms. Emma Fernandes and Ms. Jenica Rangel, Assistant Professors in Biotechnology, guided 21 students from the S.Y.B.Sc. Biotechnology. The primary objective of this field visit was to provide students with hands-on exposure to aquaculture and salt farming practices. The visit aimed to spark interest in small business startups, particularly in the fields of aquaculture and salt farming, by offering practical insights into these industries, which are key to bioentrepreneurship.

Mr. Anthony Fernandes and Mr. Sachin Raut provided a detailed explanation of the salt farming process, which was both informative and engaging. The students had the opportunity to observe the traditional methods of salt harvesting and learned how the process is environmentally sustainable and economically viable for local farmers.

A session on prawn farming was conducted by local experts, where students gained insights into the prawn culture process. They learned about pond management, feeding practices, use of modern technologies and the challenges faced by farmers in this industry. The session was interactive, with students actively participating and asking questions to better understand the practical aspects of aquaculture.

Field Trip to Latambarcem Brewers Pvt. Ltd.

The Department of Biotechnology organized a field visit as part of **BIC: 108 Bioprocess Technology course at Latambarcem Brewers Pvt. Ltd., Nanoda on 19th March 2025. Mr. Kamlesh Korgaonkar, Assistant Professor** in Biotechnology, guided 11 students from the T.Y.B.Sc. Biotechnology. The primary aim of the field visit to Maka Di Brewery was to provide TYBSc Biotechnology students of St. Xavier's College with firsthand experience in the brewing industry. The visit focused on understanding beer production, quality control measures, and packaging techniques while emphasizing the role of microbiology and biotechnology in fermentation processes.

The visit was guided by Dr. Dhaval Patel, Research Scientist, who provided an overview of the brewery operations. The interactive session with Dr. Dhaval Patel allowed students to ask questions about fermentation kinetics, product innovation, and emerging trends in the brewing industry. Discussions on microbiological testing and regulatory standards deepened their appreciation of quality control in food and beverage manufacturing.

Beyond technical knowledge, students developed an understanding of the business aspects of craft brewing, including branding, market differentiation, and sustainable practices in production.

The visit broadened students' perspectives on the industrial applications of biotechnology, reinforcing key concepts in microbiology, enzymology, and quality control. They left with a deeper appreciation of career paths in brewing, fermentation technology, and food safety, making the visit an enriching academic experience.

Inter-Class Competition on "Crossword Puzzle"

The department organized an **Inter-Class Competition on "Crossword Puzzle" to celebrate National Chemistry Day on 2nd August 2025.**
The event aimed to promote interest in chemistry through an engaging and educational activity. The competition was open to FY, SY, and TY Biotechnology students, encouraging teamwork and critical thinking. **The competition coordinated by faculty member Ms. Sonali Kajoli, took place on 7th August 2025** at 11:45 a.m., providing students an enjoyable platform to test their knowledge and celebrate the spirit of learning through chemistry-based puzzles.

Ms. Geetanjali Narvekar (F.Y. Biotechnology) won the 1st place, followed by Aashvi Nachinolcar (F.Y. Biotechnology) won 2nd place and Mr. Jaden Dias (S.Y. Biotechnology) won 3rd place in this competition.

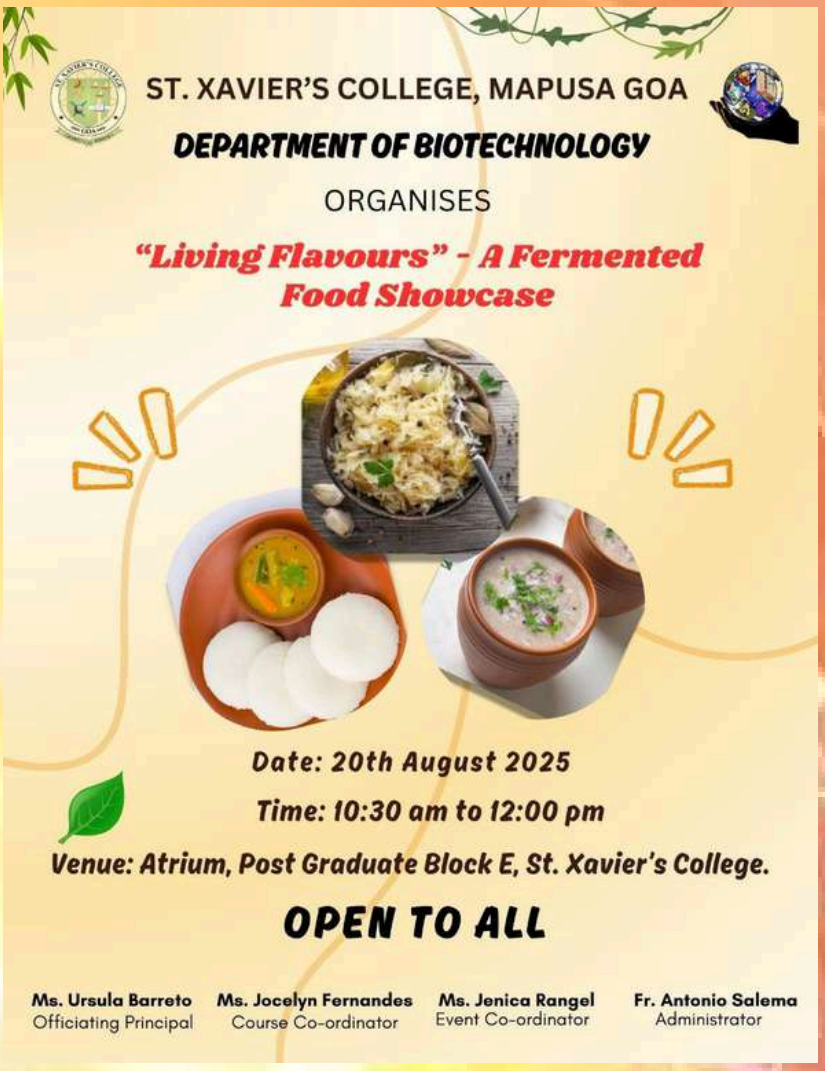
“Living flavours” – A fermented food showcase

The Department of Biotechnology organized **a Fermented Food Showcase on 20th August, titled “Living Flavours” for the FYBSc Biotechnology students as part of the syllabus for the major paper “Biotechnology in Everyday Life.** A total of 30 students participated in the event, forming groups of three. **Each group prepared and displayed a unique fermented food item, including sanna, kombucha, ragi ambali, kimchi, curd, idli, lacto-fermented cucumber, tepache, kanji, and buttermilk.**

The primary objective of the showcase was to help students understand the concept of fermentation, its types, and its applications in daily life. Through this activity, students learned about the importance of fermentation, its health benefits, traditional recipes, and the origins of various dishes. The showcase also encouraged creativity and peer learning as students explored diverse preparations from different groups.

The event was judged by Ms. Jenica Rangel and Ms. Nerissa Lobo, Assistant Professors in Biotechnology. It attracted enthusiastic participation from both students and faculty members across the college, who appreciated the effort and innovation displayed.

The showcase was a fruitful and engaging experience for the participants. The event commenced at 10:30 a.m. and concluded at 12:00 p.m., marking a successful celebration of science through food.




KIMCHI
Korea's Superfood
Cabbage preparation
Cut napa cabbage
Sprinkle with salt
Leave for few hours
Mixing
Mix well
Fermentation

A Showcase of Eco-friendly Planters

The department organized a showcase of Eco-friendly Planters for the S.Y.B.Sc Biotechnology students on 25th August 2025 from 10:45 a.m. to 12:00 p.m. **The event was conducted by Ms. Jenica Rangel and Ms. Emma Fernandes,** Assistant professors in Biotechnology, as part of the syllabus for the paper "Modern Agricultural Practices and Home Gardening."

A total of 30 students participated, wherein they prepared and displayed a planter containing a plant, creatively designed using waste and eco-friendly materials. The exhibit highlighted students' innovation and environmental awareness while promoting the concept of sustainable gardening. The planters were displayed in the Atrium, Block E, on the college campus, and attracted enthusiastic visitors, including students and faculty members from various departments. The event fostered peer learning and appreciation for green practices, making it a successful and inspiring initiative.

“Food connects us” – Reel making competition

In commemoration of **National Nutrition Week, the Department of Biotechnology organized a Reel Making Competition on the theme “Food Connects Us” on 2nd September 2025**, open to all college students. The event aimed to encourage creativity while highlighting the cultural, emotional, and social connections formed through food. Eight participants from various departments showcased innovative reels depicting healthy recipes, cultural traditions, and the unifying power of food. **The event was coordinated by faculty members, Ms Jenica Rangel and Ms Nerisa Lobo.**

The competition was judged by **Ms. Ruella D’Souza (Asst. Professor in Microbiology) and Mr. Lizvan Rodrigues (Asst. Professor in Mass Communication and Journalism)** based on creativity, originality, relevance, message, impact, and technical quality. *Mr. Siddhesh Naik (S.Y.B. Sc Biotechnology) secured the first place, followed by Ms. Neeharika Mandrekar (S.Y.B Com) and Ms. Larissa Clessia Rodrigues (T.Y.BA).*

The event fostered creativity, teamwork, and technical skills, making it a meaningful and enriching experience for all participants.

“Swicy: Sweet & Spicy, Healthy & Tasty”: A cooking competition

The Department of Biotechnology organized a cooking competition on **3rd September 2025 to commemorate National Nutrition Week (1st –7th September).** The event, themed “Swicy: Sweet & Spicy, Healthy & Tasty,” aimed **to promote healthy eating through creative culinary expression**.

Open to all staff and students, participants showcased dishes blending sweet and spicy flavors with nutritional value. Judging criteria included taste and flavor balance, nutritional content, creativity, and presentation. *Ms. Kshitija Pednekar, faculty of Department of Hindi secured the first place, followed by Mr. Lynn Vaz from S.Y. Biotechnology (2nd place) and Ms. Pranita Chodankar from F.Y. Biotechnology (3rd place).*
The event, coordinated by Ms. Emma Fernandes, encouraged innovation and awareness of balanced nutrition, aligning with the UN Sustainable Development Goal 2 – Zero Hunger

“Mastering smart food choices: Making food your first medicine”, as part of Alumni lecture series

The Department of Biotechnology hosted a guest lecture on 19th September 2025 by **Ms Sharwani Walke, an alumnus of the department and a Registered Associate Nutritionist by Association for Nutrition, UK.** The session provided an inspiring insight into choosing the right types of food to eat, how sleep patterns can affect hunger and how proteins delay digestion of complex carbohydrates and prevent sugar spike.

Ms Sharwani shed light on the proportions of proteins, vegetable, carbohydrate and fats in a healthy plate. She debunked many food myths and stressed on how food can be our first and most important medicine. And how we should inculcate better eating habits without screens, chewing slowly and being mindful of the textures that we eat. She also shed light upon the hormones produced in our body that make us feel hungry or feel full and how their production is hampered with erratic sleep patterns.
The lecture was coordinated by Dr Larissa Menezes, Assistant Professor in Biotechnology. A total of 68 Biotechnology students and 6 faculty members benefited from the session, gaining valuable insights into eating healthier and more mindfully.


Mastering Smart Food Choices
ST. XAVIER'S COLLEGE
GOA
IN VIRTVTE ET SCIENTIA


ST. XAVIER'S COLLEGE
GOA
IN VIRTVTE ET SCIENTIA


ST. XAVIER'S COLLEGE
GOA
IN VIRTVTE ET SCIENTIA


ST. XAVIER'S COLLEGE

Field visit to Mr. Farmer Nursery

The Department of Biotechnology organized Field visits to **Mr. Farmer Nursery, Guirim, Goa, on 22nd and 24th September 2025 for the SYBSc Biotechnology Batch I and II students. The visit was conducted as part of the practical syllabus for the paper "Modern Agricultural Practices and Home Gardening."**

A total of 30 students were guided around the nursery by Mr. Caraciol, a nursery staff member, who provided valuable insights into various plants, including their scientific names, common names, and uses. Students learned to identify different categories of plants such as ornamental, spice, and medicinal plants, along with other facilities, thereby gaining valuable practical exposure to modern nursery management.

The students were accompanied by Ms. Jenica Rangel and Ms Emma Fernandes, Assistant Professors in Biotechnology. During the visit, they were encouraged to record observations on the plants studied. The trip was an informative and enriching experience, allowing students to connect theoretical concepts with practical knowledge.

Field trip to Sewage Treatment Plant

A field trip was organised **on 3rd October 2025 for the First year Biotechnology students, to the Sewage Treatment Plant at Tonca, Panjim as part of their curriculum. Three faculty members, Ms Jenica Rangel, Ms Nerisa Lobo and Dr Larissa Menezes accompanied 24 students to the plant where Mr Saiprasad Parab, the Junior Engineer** explained that the plant was constructed in 2005 with an initial capacity of 12.5 MLD, with a current additional capacity of 15MLD.

He informed the students that domestic sewage of Panjim and Taleigao was brought to this plant through systematic underground sewerage pipelines that were placed in the center under all the roads to differentiate water and other cable pipes laid underground. Mr Parab enlightened us about the SBR technology being used i.e. Sequential Batch Reaction and showed the students the control room where the pumps and blowers were controlled and monitored. Further in the treatment process, aeration was carried out for 90 minutes with the help of blowers. This enables the solids to flocculate and settle. The cleared upper water was then decanted and sent to the Chlorine Contact Tank (CCT), while the solid sludge was pumped into a chamber after which it was desqueezed using a centrifuge to remove water and the sludge was transported using a vehicle to drying beds, later used as manure. The water in the CCT was dosed with chlorine to disinfect it and held in the partitioned chamber for some time after which it is released into the Mandovi river and St. Inez nullah. The field trip ended with a group photograph. Students and faculty alike benefitted from the information shared and the practical aspect of waste water treatment.

Field trip to National Forensic Science University

The department conducted an educational visit for T.Y.BSc biotechnology students to the **National Forensic Science University, on 4th October,** to familiarize students with the various bioanalytical tools and techniques employed in the field of forensic science. The visit aimed to bridge the gap between theoretical learning and its practical application in forensic investigations. During the visit, students were introduced to the functioning of advanced analytical instruments such as Gas chromatography, HPLC, Fingerprint kit, PCR instrument and their role in biological sample analysis, DNA profiling, toxicological studies, and crime scene investigation. The resource personnel at NFSU provided insightful demonstrations and explained how biotechnology plays an integral part in modern forensic methodologies. Students also got an opportunity to visit on site forensic science museum, wherein they seen mapping of some of the high-profile crime cases in India and a mini crime scene model to understand what are the various steps must be followed as crime scene.

The visit proved to be highly informative and enriching, offering students valuable exposure to interdisciplinary applications of biotechnology. It also inspired many to explore career and research opportunities in forensic science and allied fields.


FORENSIC QUESTIONED DOCUMENT & FINGERPRINT LABORATORY
GOA CAMPUS
Types of Examination in Forensic Questioned Documents
GPS Map Camera
Ponda,Goa,India
Hutatma Vinayak Sapte Marg, Electricity Department Staff Residential Colony, Ponda, Goa 403401, India
Lat 15.412551, Long 74.013227
10/04/2025 11:34 AM GMT+05:30
Note : Captured by GPS Map Camera


S24

Transect Walk to Dr. Ram Manohar Lohia Garden

The Department of Biotechnology organized an insightful Transect Walk to Dr. Ram Manohar Lohia Garden, Mapusa, Goa, on 6th and 8th October 2025 for the SYBSc Biotechnology students. The visit was conducted as part of the practical syllabus for the paper "Modern Agricultural Practices and Home Gardening."
The students were accompanied by Ms. Jenica Rangel and Ms Emma Fernandes, Assistant Professors in Biotechnology.
Students explored the community garden ecosystem, observing the diverse plant species and their ecological roles in maintaining balance and supporting biodiversity. It was an enriching experience that deepened students' understanding of the interconnectedness of nature and the importance of preserving green spaces for ecological well-being. The activity provided students with a hands-on understanding of plant diversity and helped reinforce theoretical knowledge through field-based learning.

Fitness Session

As part of the Multidisciplinary Course on Nutrition and Dietetics, students from the Departments of MCJ and BCA participated in a fun and engaging fitness session held on **10th October 2025 at the College Gymkhana from 8:30 to 9:30 a.m. The activity was conducted by Ms. Emma Fernandes, faculty member of the Department,** who guided the students through a series of simple physical exercises that can be easily incorporated into their daily routines. The session emphasized the importance of maintaining an ideal body weight and promoting overall well-being through regular physical activity. It also encouraged students to adopt a healthier and more active lifestyle, highlighting how fitness contributes not only to good health but also to improved concentration and productivity. The event successfully created awareness about the significance of exercise as an integral part of a balanced and healthy lifestyle.

“Christ our Hope”, a vibrant College Christmas Programme

St. Xavier’s College, Mapusa, hosted **“Christ our Hope”, a vibrant Christmas Programme, organised for the college students and faculty, and special guests were invited from Sanjay Centre for Special Education, Porvorim.**

The program began with welcoming our guests, where 25 college students gave each of the 25 children, a handmade sunflower and walked with them from their bus to the lawns, where they were seated. A choir comprising of college faculty sang two carols, followed by singing of carols by the College Students choir, orchestrated by AICUF. A Live Crib was presented and a Nativity Play enacted by AICUF students, which beautifully conveyed the message of Christ's birth, bringing the warmth of Christmas to all around. A college student dressed up as Santa Claus and went around cheering the children and giving them lots of sweets that filled their pockets and hearts. The comperes, Rachel Fernandes and Rachel Nazareth, did a brilliant job by inviting the children, who came to the mic willingly to sing their hearts out. Five face painting artists from FYBBA painted faces and hands of the ever willing and excited children, with beautiful Christmas-themed artwork.

After the performances in the lawns, the children were taken inside the Seminar Hall, decorated by SYBiotech students with handmade décor and games and activities were conducted by the 2nd year and 3rd year Biotechnology students for the children. Volunteers distributed snack packets to all 30 guests and Santa Claus distributed Christmas gifts to the 25 children and 5 faculty. A group photograph of the guests, volunteers and organisers was taken. An SYBiotech student made a gingerbread man photoprop for the programme which was used nicely.

Teachers of the college generously contributed towards the programme and student volunteers came in large numbers to interact with and assist the children during the games and activities.

“Christ our Hope” was a heart-warming and joyous event, embodying the true essence and spirit of Christmas, spreading hope to all, coordinated by Fr. Ramiro Luis, faculty member of Department of Psychology, Ms Arina Frank, faculty member of Department of Microbiology and Dr. Larissa Menezes, faculty member of Department of Biotechnology.

St. Xavier's College, Mapusa

Department of Biotechnology, in collaboration
AICUF and Cell for Promoting Diversity and Incl

invites you to a Campus Christmas celebration

17th December 2025
10.00 am to 12.00 pm

Our Guests: Sanjay School, Porvorim

Ms. Ursula Barreto
Officiating Principal

Fr. Ramiro Luis
Convenor, AICUF

Ms.
Convenor, Cell
and

Ms. Larissa Menezes
Event Cordinator, Department of Biotechnology

Achievements

Outstanding Performers of Batch 2024-2025

Ms. Ruth Blessica Aguiar
First Ranker

Ms. Rochelle Rocha
Second Ranker

Ms. Anifa Fernandes
Third Ranker

Inter-collegiate event- SYNAPSE

The students of the Departments of Biotechnology and Botany represented our college as team "Gene Forgers" at 'SYNAPSE', organised by the Department of Biotechnology and Environment Impact Assessment of Parvatibai Chowgule College of Arts and Science, Margao.

Our students showcased exceptional talent and secured FIRST PLACE in multple events across on-stage off-stage and online categories. Kudos to the TEAM!!


DEPARTMENT OF BIOTECHNOLOGY &
DEPARTMENT OF ENVIRONMENTAL SCIENCE & IMPACT ASSESSMENT
PRESENTS
2K25- 2K26


DEPARTMENT OF BIOTECHNOLOGY
PRESENTS
2K25- 2K26

Interstate Youth Exchange Program

Our talented TY Biotechnology students, Ms Aloma Saldanha and Ms Sweta Gawas made us proud by participating and winning FIRST PLACE in Group Folk Song and Group Folk Dance, respectively at state-level.

Their incredible performance also earned them the prestigious opportunity to represent Goa at the National Level Youth Exchange Program!


INTER STATE YOUTH
XCHANGE PROGRAM 2025

Our victorious SPORTSWOMEN

Ms. Auxcilia Cardozo (S.Y.B.Sc 2025-26) was an integral part of the St. Xavier's College Women's Basketball Team that emerged RUNNER'S UP Champions at the Inter-Collegiate Basketball Championship 2025-2026, organised by Goa University.

Ms. Pranavi Shetye (F.Y.B.Sc 2025-26) was a key player of the St. Xavier's College Women's Table Tennis Team, which secured the RUNNER UP Trophy at the Inter-Collegiate Table Tennis Championship 2025-2026, organised by Goa University.

Our victorious SPORTSMAN

Mr. Shreyash Gawas (T.Y.B.Sc 2025-26) was an integral part of the St. Xavier's College Hockey, Football and Kabaddi Teams and participated in Body-building competitions through the three years 2023-2026.

Mr Shreyash Gawas was feliciated at the 60th Annual Sports Meet on 13th December 2025 for his outstanding dedication, team spirit and passion for sports, reflecting the true Xavier;s spirit.

Our victorious SPORTSMAN

Our Victorious Nightingale

Applause for our Nightingale, Ms. Sweta Gawas!

Our T.Y.B.Sc student struck the perfect note and bagged the title of "BEST SINGER"at the ALL GOA INTER-COLLEGIATE GHUMAT AARTI COMPETITION, held on 23rd August 2025 at Srinivassa Sinai Dempo College, Cujira-Bambolim.

Her voice truly echoed the spirit of tradition with pride and melody.

Victory at METEORA 2025

Our T.Y. Biotechnology students Ms Ananya Apte, Ms Saloni Naik and Ms. Kushi Yadav, along with our S.Y. Biotechnology student Ms Disha Salgaonkar, participated and excelled as St. Xavier;s College Team st the pretigious Inter-Collegiate event “METEORA” 2025.

A Voice that Inspires!!

Ms. Vedika Marathe, our S.Y. Biotechnology student represented St. Xavier's College and secured 3rd PLACE at the MEAR Orator Competition, on International Women's Day 2025.

The Child and Women Welfare Cell of St. Xavier's College participated in the "Making Equality a Reality 2025" hosted by the D.D.Kosambi School of Social Sciences and Behavioural Studies, Goa University, to commemorate International Women's Day, on 7th March 2025.

Outstation trip for a National Symposium

The students of T.Y. Biotechnology, accompanied by Ms. Jocelyn Fernandes and Mr. Vishal Mardolkar, participated in a two-day National Symposium on Advances in Cancer Research titled "Taming Cancer: Progress and Promises", held in Thrissur, Kerala, organised by Amala Cancer Research Centre on 27th and 28th November 2025. This Symposium provided an incredible platform for learning about cutting-edge research emerging in the field of Cancer Science. The trip also involved exploring the rich culture of Kochi.

Faculty Development Program on AI Tools

The Course Coordinator, Ms. Jocelyn Fernandes, participated in a one week FDP on "AI Tools for Pedagogical Enhancement in Higher Education" organised by DHE, Government of Goa, in collaboration with CTLET and IIITDM, Jabalpur, from 12th to 16th January 2026.

Gallery

Few more glimpses from Living Flavours- A fermented food showcase

Eco-friendly Planters made by our students

SWICY: SWEET & SPICY, HEALTHY & TASTY

Cooking Competition; more glimpses.....

Hands-on Workshop on DNA Barcoding at CSIR-NIO, Goa

In the quest to develop new skills, our SY Biotechnology students attended a two-day hands-on skill training wokshop on DNA Barcoding of Marine Biodiversity, organised by CSIR-NIO, Goa.

More glimpses of the National Forensic Science University, Goa

Contributing to a Greener Planet!

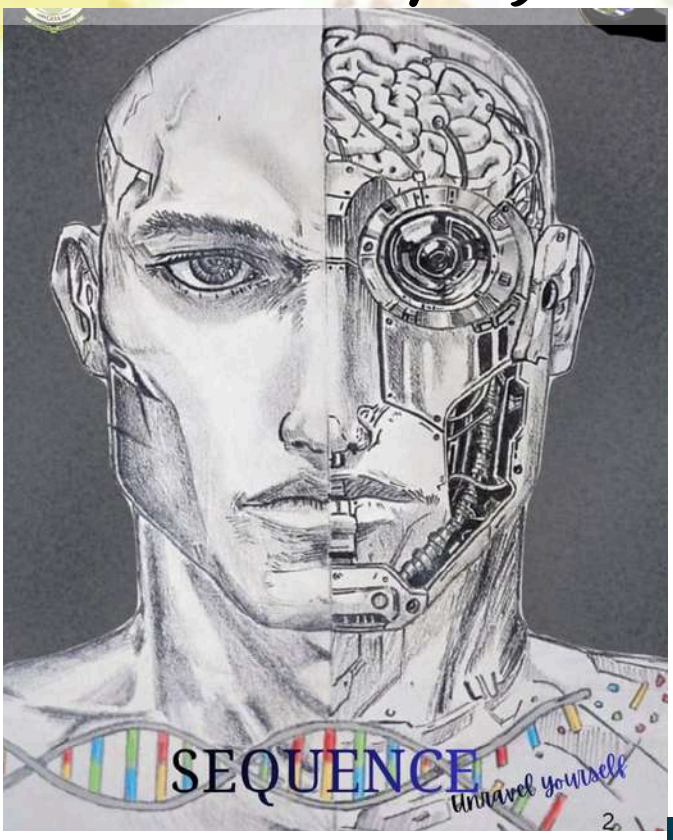
Our FY Biotechnology students proudly participated in SEED BOMB making workshop, organised by the Department of Philosophy and Botany, St. Xavier's College, Mapusa, on 9th August 2025.

Learning Beyond The Classroom

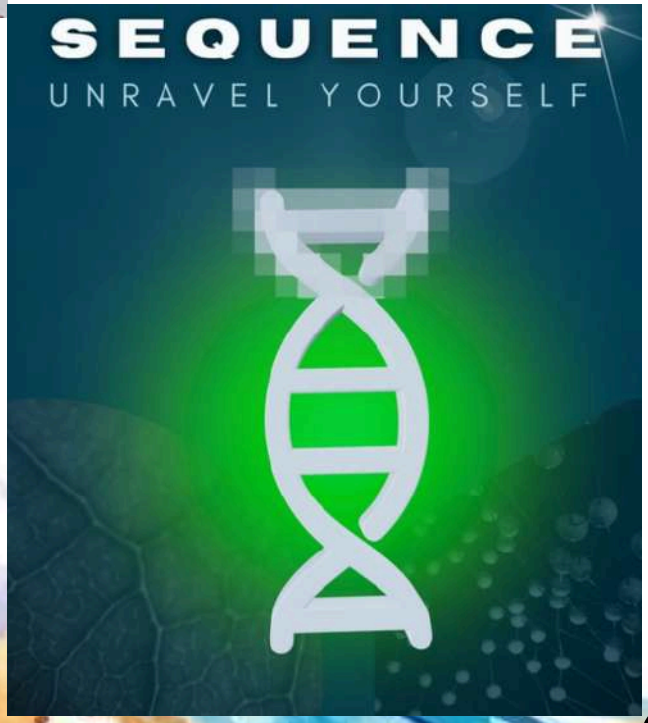
On 18th December 2025, 10 students of S.Y. Biotechnology attended the 7Th Manohar Parrikar Vidnyan Mahotsav at CSIR–NIO, Goa, organised by the Department of Science, Technology and Waste Management, where talks encompassed India's remarkable progress in space science, nuclear energy, and advancements in research and medicine.

Coverpage Competition Winner:
Mr Sai Bhagat (F.Y.B.Sc 2025-26)

Other coverpage entries:

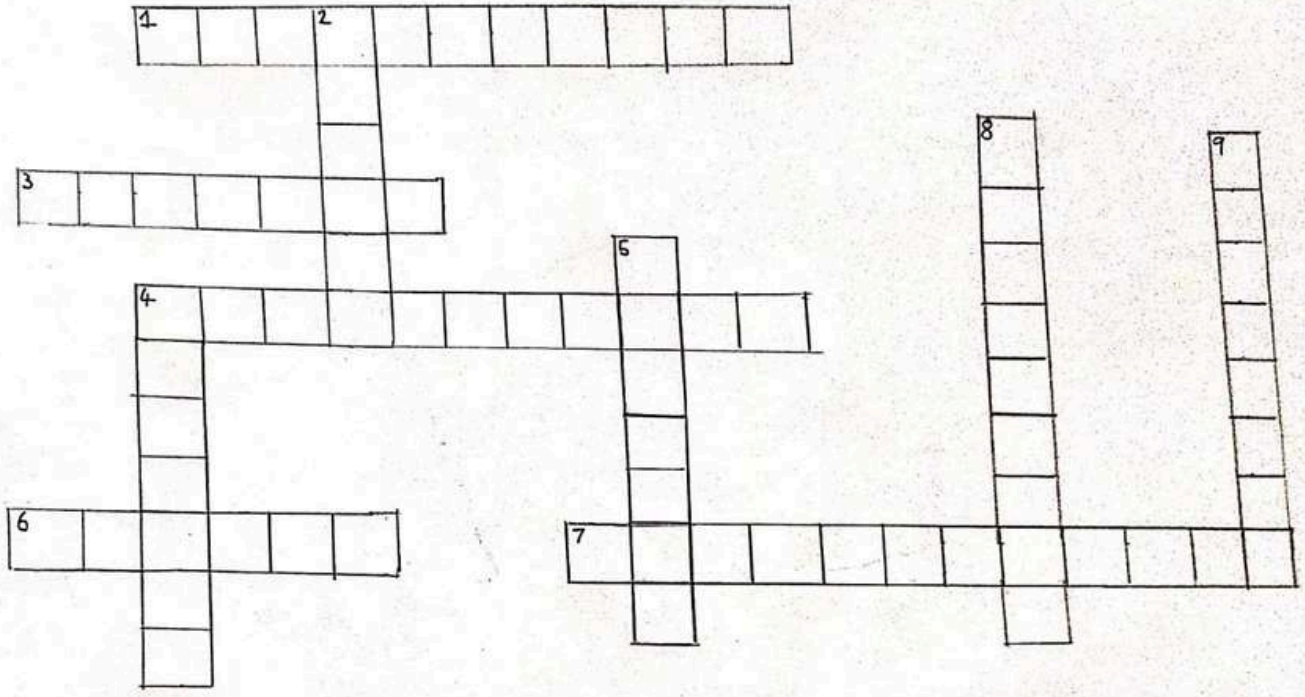


Digital Art by
Mr. Jaden Xavier Dias
(S.Y.B.Sc 2025-26)



Digital Art by
Mr. Siddesh Sadashiv Naik
(S.Y.B.Sc 2025-26)

Test your Biotechnology knowledge



Across

1. The chemical reactions that turn genes on and off
3. "Biotech tool" that trains your immune system to fight viruses
4. "Search and replace" tool for single DNA letters
6. "Molecular Scissors"
7. The study of Metabolites

Down

2. The complete set of genetic instructions for an organism
4. Science of replacing body parts with mechanical versions
5. Energy source made from living things
8. "Device that detects biological substances"
9. "Biological memory bank"

Contributed by
Mr. Lynn Oneill Vaz
(S.Y.B.Sc 2025-26)

WORD SEARCH

S	Y	N	T	H	E	T	I	C	W	B	R	U	B	D	N	A	B
C	W	Q	E	L	B	C	L	Q	Y	P	L	H	K	B	S	R	P
T	W	E	N	Z	Y	M	E	C	S	S	N	Z	V	I	A	U	A
H	C	X	A	F	V	N	R	I	Q	L	F	D	C	O	B	S	T
E	E	F	P	U	P	K	R	D	R	U	P	F	B	M	M	R	H
R	H	M	M	O	B	C	G	Y	D	N	L	C	I	A	T	N	O
A	A	M	I	C	R	O	B	I	O	M	E	B	O	R	B	A	G
P	C	W	A	G	E	N	O	M	E	I	S	F	F	K	O	N	E
Y	E	D	H	H	J	V	A	T	U	H	W	T	U	E	A	O	N
W	L	L	R	Z	Q	X	E	Z	R	X	F	G	E	R	R	T	R
G	L	T	J	U	M	N	P	S	X	R	V	A	L	J	D	E	E
I	W	K	Y	S	I	I	I	M	M	U	N	I	T	Y	U	C	O
B	J	P	A	C	B	I	O	S	E	N	S	O	R	G	Z	H	A
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O	V	A	F	Y	S	E	Q	U	E	N	C	I	N	G	M	U	N
O	H	C	P	R	O	T	E	I	N	W	X	F	N	D	J	M	O
P	Z	O	S	T	E	M	C	E	L	L	A	Q	S	L	T	E	B

Find these words:

GENOME, CRISPR, ENZYME, DNA, RNA, CELL, PROTEIN, BIOSENSOR, MICROBIOME, NANOTECH, VACCINE, BIOFUEL, STEMCELL, SEQUENCING, BIOINFORMATICS, SYNTHETIC, PATHOGEN, IMMUNITY, THERAPY, BIOMARKER

Contributed by
Ms. Snigda Naik
(F.Y.BSc 2025-26)

Incredible Journey of Our Department and its Alumni

Mr. Donovan Rodrigues
Co-founder of MyOwnBrews
Porvorim Goa

Ms. Avril Jacques
Quality Control Officer
Lupin Diagnostic Ltd, Verna Goa

Ms. Vrushali Dessai
Trainee Chemist - Quality Assurance
Esteem Inndustries Pvt Ltd.
Bicholim Goa

Mr. Dirquane Coelho
Clinical Specialist Support
SS Innovations Pvt. Ltd.

Mr. Leebert Maurice Dias de Mello
Quality Team Leader
Colgate Palmolive India Ltd
Kundaim IDC, Kundaim

Mr. Sean D'Silva
Embedded Engineer , designing IoT solutions and Automation system for sustainable agriculture and Renewable energy

Ms. Darcia D'Mello
Healthcare Scientist Practitioner- Research and Development
UK Health Security Agency
United Kingdom

Dr. Bliss Furtado
Assistant professor
Department of Microbiology, Faculty of biology and Veterinary Science
Nicolaus Copernicus University, Poland

Ms. Ziffa Philip
Laboratory Technician at Avantor AstraZeneca Labs
Cambridge, England, United Kingdom

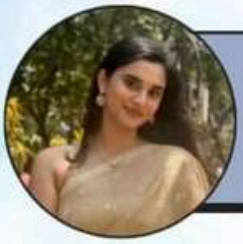
Mr. Richard Noronha
Designated Officer and Licensing Authority
Directorate of Food and Drugs Administration
Bambolim Goa

Ms. Cecilia Menezes
DST-INSPIRE Research Fellow
NIO, Dona Paula Goa.

Mr. Asbern DSilva
JRF Research Fellow
BITS Pilani KK, Goa Campus

Our Alumni in pursuit of Knowledge

Mr. Atharv Kamat
MSc in Human and Molecular Genetics
University of Sheffield, UK



Ms. Esha Shirwaiker
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Pimpri Pune.

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DY Patil International University, Pune

Ms. Saneeya Kalangutkar
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DY Patil School of Biotechnology and Bioinformatics
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Ms. Blanche D'Souza
M.Sc in Marine Science
Goa University

Ms. Edrina Furtado
Masters in Drug design and Biomedical Science
Edinburgh Napier University
Scotland

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Matunga - Mumbai

Mr. Allan Carasco
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Ragiv Gandhi Institute of I.T and Biotechnology, Pune

Ms. Ceana Fernandes
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Goa University-Taleigaon

Ms. Varnavi Naik
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Goa University

Ms. Rania Aidouni
M.Sc in Bioinformatics
The University of Queensland, Australia

Ms. Blanche D'Souza
M.Sc in Marine Science
Goa University

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Scotland

Department of Biotechnology

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Mr. Vishal U. Mardolkar

Ms. Sonali E. Kajoli

Ms. Emma Fernandes

Ms. Jenica T. Rangel

Dr. Larissa Danielle Menezes

Ms. Nerisa Lobo

Laboratory Staff

Ms. Sneha Mangaonkar (Laboratory Assistant)

Mr. Francisco Colaco (Laboratory Attendant)