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## Contents

Editorial	2
Toppers In The University Examinations 2015-16	2
Campus Buzz	3
Department Activities	6
Green Chemistry: New Methods For Organic Synthesis And Applications	7
International conference at Dublin and Bengaluru	8
Student Council Inauguration and Fresher's Day Celebrations	8

## VISION

To build a humane society through excellence in education and health care.

## MISSION

To develop Nitte University as a centre of excellence, imparting quality education, generating competent, skilled manpower to face the scientific and social challenges with a high degree of credibility, integrity, ethical standards and social concern.

*'For Private Circulation Only'*



# The NGSMIPS Herald

The Official news letter of the Nitte Gulabi Shetty Memorial  
Institute of Pharmaceutical Sciences, Mangalore



Ranked #18  
by NIRF



UG course  
accredited by NBA



## NGSM Institute of Pharmaceutical Sciences

(A constituent Institution of Nitte University)

Placed under Category "A" by MHRD, Govt. of India

Accredited with Grade "A" by NAAC

UG program accredited by NBA

## *From the Editor's desk*



I would like to take this opportunity to express my heartfelt thanks to the Principal and Editor-in-Chief, NGSMIPS Herald, Dr. C.S. Shastry for trusting me with this new role as Executive Editor. I must thank my senior colleagues for proper guidance and help in publishing this newsletter. I express my sincere thanks to NGSMIPS Herald team for their support and cooperation.

One of the intimated rules in research nowadays is that a successful career in Pharmaceutical science, especially in academia, is only possible with impact factor papers. This belief creates a lot of peer pressure among young scientists and researchers and perhaps this maybe one of the causes of the scientific fraud case. But is it true? To answer this question it is necessary to get a very clear idea. If you want to work and succeed in academia or in the industry where high impact papers are necessary one must have high impact factor papers. Interestingly, Ph.D students and young researchers are not much aware in which contexts impact factors play a role. There is confusion here, whether impact factor papers define a scientific quality of research. However, some of the socio-

economic advantage of having good impact factor papers in academia as it builds the reputation of the researcher amongst the scientific community. High impact factors are the key to fame and eminence because they lead to invitations to deliver invited talks or to become session chairman during scientific meetings or to become reviewer/ editor of important scientific journals. Similarly, a department with high impact factor publications often attracts more excellent and ambitious candidates of P.G and Ph.D. There is no doubt that high impact factor papers will increase the chances to get funding from funding agencies. Apart from this impact factor enhances the better job opportunity in academia. Impact factors are significant to evaluate the research output of an academic institution and thus it may also substantially influence the position of universities in rankings.

To sum up, choose wisely and consciously and decide whether high impact factor publications are important for your successful career in academia and research.

**Dr. Akhilesh Dubey**  
Executive Editor

## TOPPERS IN THE UNIVERSITY EXAMINATIONS 2015-16



**Ms. Reenal Shwetha Alva**  
I B.PHARM



**Ms. Deeksha S**  
II B.PHARM



**Ms. Chaithra R. Shetty**  
III B.PHARM



**Ms. Sreelaxmi Shenoy K**  
IV B.PHARM



**Ms. Dhanushree**  
I PHARM. D



**Ms. Shebin P. Kurian**  
II PHARM. D



**Mr. Joel B. James**  
III PHARM. D



**Ms. Gayathri Baburaj**  
IV PHARM. D



**Mr. Fritto David**  
I M. Pharm (Drug Reg. Affairs)



**Mr. Ajmal Roshan Ali**  
I M.Pharm (Pharm. Chemistry)



**Mr. Nandakumar U P**  
I M.Pharm (Pharmacy Practice)



**Ms. Deeksha U Suvarna**  
I M.Pharm (Pharmaceutics)



**Ms. Shilpa K.**  
I M.Pharm (Pharmacology)



**Ms. Vineetha K.**  
II M.Pharm (Pharmaceutics)



**Ms. Anisty Maria Joy**  
II M.Pharm (Pharmacy Practice)



**Ms. Beebi Shama C**  
II M.Pharm (Pharmacology)

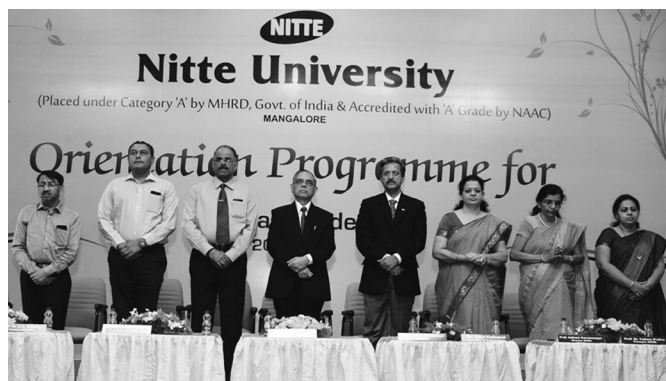


## CAMPUS BUZZ

### Orientation Program for B.Pharm and Pharm D. freshers

An orientation program for new admissions to B. Pharm and Pharm. D for the year 2016-17 was organised at the KSHEMA, Auditorium on 1<sup>st</sup> August 2016. The program started with a prayer invoking blessings of the almighty followed by a lighting of the lamp as a symbolic beginning to the noble process of igniting the light of knowledge for a successful and fulfilling career of the new aspirants. Dr. M. Rajshekar, Director-Curriculum Development, Nitte University introduced the authorities of the University and the College to the gathering. Dr. M. S. Moodithaya-Registrar, Nitte University introduced the University to the new entrants. Inaugurating the program, Dr. M. Shantaram Shetty, The Pro-Chancellor, Nitte University in his presidential address thanked the parents for their wise decision to admit their wards to the Nitte group of Institutions and assured that all efforts are being taken to provide excellent research oriented academic ambience and a focused learning experience that is safe, secure and rewarding. He said that while it was the responsibility of the college and the teachers to help the students realise their career goals, it was equally important for the parents to keep a tab on the performance of their wards and also encourage and motivate them rather than reprimand and admonish for failures and mistakes.

Dr. C.S. Shastry- Principal, NGSMIPS, delivered the vote of thanks. Dr. Indrani Karunasagar-Director, NUCSER, Dr. Alka Kulkarni-Controller of Examinations, Dr. Fathima D'Silva-Principal of the Nursing College, Colonel Surene Subbaiah-Assistant Director, Student Welfare were the other dignitaries on the dais.



*Orientation Programme at KSHEMA Auditorium*

### Alumni Meet 2016

The Alumni meet 2016 of NGSM Institute of Pharmaceutical Sciences was held on 16<sup>th</sup> July 2016 in the college amidst great enthusiasm and excitement. The meet saw the participation of over 35 alumni and their families. Dr. M. S. Moodithaya, Registrar,

Nitte University was the chief guest. Addressing the gathering he said that reunion like this offers a wonderful opportunity to strengthen the bond between the institution-student-teacher. Dr. C. S. Shastry, Principal, NGSMIPS welcomed the alumni and expressed that events like these provide an opportunity for both the institution and the alumni to cherish old relationship and forge new ones. Responding to the welcome accorded, the alumni expressed their hearty willingness to contribute and partake in the progress and growth of their alma mater. Dr. Jennifer Fernandes, Professor, Department of Pharmaceutical Chemistry coordinated the proceedings.



*Dr. M.S. Moodithaya, speaks at the alumni meet*

### Student's Council Inauguration and Fresher's Day Celebrations

Student's council inauguration and Fresher's day celebration of NGSMIPS was held on 27<sup>th</sup> August 2016 at the KSHEMA, Auditorium. The day began with a prayer and lighting of the lamp to invoke divine blessings of the almighty. Dr. R. Narayana Charyulu, Vice Principal delivered the welcome address and introduced the chief guest.

Mr. Umesh Baikunje, Director, Baikunje Consultancy, Bengaluru and an alumnus of the college inaugurated the student council of the year 2016-17. He recalled the nostalgic moments of his college days and gratefully recognised the contribution of his teachers in his career. He called upon the students to stop thinking as employees but start aspiring to be employers. Be Job creators and not job seekers. He said our country needs entrepreneurs and there is a lot of opportunity in the pharma domain.

Mr. Vinod Aranha, Director, Nitte Institute of Architecture was the guest of honour. Citing the example of the chief guest Mr. Baikunje, he said that the college has produced great alumni and called upon the students to follow the example set by their predecessors

Presiding over the function, The Principal Dr. C. S. Shastry

commended the conduct and active participation of the outgoing student council and said that the new team has a task cut out and has to live up to and perform to the standards set by the predecessors. The outgoing student council president Mr. Balasubramanya shared his experience and along with the council members handed over charge to the newly elected student council president Mr. Marlon Miranda and his new team. This was followed by a variety of entertainment programs jointly put up the seniors and the freshers. Mr. Akshay Abraham and Ms. Shanty Mary Jose were entitled Mr and Ms Fresher 2016 respectively. Ms. Daniel Anila Roy, General Secretary students council proposed the vote of thanks. Mr. Bharath Raj K.C, Assistant Professor, Department of Pharmacy Practice managed the proceedings.



*Mr. Baikunje and Mr. Vinod Aranha lights the inaugural lamp*

## Onam and Teacher's day Celebrations at NGSMIPS

Onam and Teacher's day was celebrated by the students and staff of NGSM Institute of Pharmaceutical Sciences, Paneer Campus, Deralakatte amidst great enthusiasm and fun on 16<sup>th</sup> September 2016. Students welcomed the guests from the university with the traditional "Onam Nrityam". Speaking on the occasion, Dr. R. Narayana Charyulu, Vice Principal said such festivities are the perfect platform to bring together the youth from different parts of the country and help them understand the rich Indian cultural heritage. Several cultural and sports competitions were organized. Students showcased artistic designs out of flower petals as part of "Pukulum competition". The classrooms were turned into a colourful carpet of flowers. The traditional dinner – "Onam Sadhya" with a rich variety of



*Lighting a ceremonious lamp during Teacher's day and Onam celebration*

vegetarian delicacies of Kerala was hosted by the students. Prizes were given away to winners of various competitions. Dr. S. Ramanand Shetty, Vice-Chancellor, Nitte University was the chief guest. Dr. M.S. Moodithaya, Registrar, Dr. Indrani Karunasagar, Director, NUCSER, Dr. Alka Kulkarni, Controller of Examinations, Dr. Prasad Shetty, Mr. Subodh, Dr. Anirban Chakraborty, were the other dignitaries present.

## "Azaadi70" celebrations at NGSMIPS

As a solemn gesture to express solidarity with the nation on the occasion of "Azaadi70" celebrations, an essay competition was held on the theme "My Country, My Responsibility". The principal addressed the staff and the students. He reminded the gathering of the pain, and hardships faced by the millions of freedom fighters and the selfless sacrifices they made. He said that it is our bounden duty and responsibility to uphold the spirit of freedom and nationalism and embrace the philosophy of "country before self". This is the only way we could pay tribute to the martyrs and preserve the integrity, diversity and culture of our great nation. The program was concluded with the singing of the national anthem exactly at the stroke of 11 am to be in synchrony with the entire nation.



*Dr. C.S Shastri Speaks at "Azaadi70" celebrations*

## Guest Lectures

Guest Lecture and interactive session were organised for the post graduate and Ph.D research scholars on "Bio-medical Hazard and its management". Major (Dr.) Shivakumar Hiremath discussed various guidelines involved in biohazards. He also emphasised the role and importance of institutional biosafety committee in planning and monitoring of biohazard development. Additionally, Dr. Prathiba Bhat highlighted the procedures to be followed during handling of biohazard materials. The only colour coded plastic bags should be used for segregation of the biohazard materials. Proper segregation of biohazard material plays a vital role in minimising the risk during its management.

Dr. B.C Revanasiddappa, Assistant Professor, Department of Pharmaceutical chemistry, NGSMIPS delivered a guest lecture on "Nutraceuticals- It's Impact on today's generation" organised by Deen Dhyal Upadhaya Kaushal Kendra at St. Aloysius

College, Mangalore on 21<sup>st</sup> September 2016.

### World Pharmacist's Day 2016 and Blood donation camp

The 6<sup>th</sup> World pharmacist's day was organised at the campus on 24<sup>th</sup> September 2016. The event was inaugurated by Dr. Shivakumar Hiremath, Medical Superintendent, KSHEMA. Speaking on the occasion, Dr. Hiremath said that the theme was chosen this year by International Pharmaceutical Federation (FIP)- "Pharmacists: Caring for you" emphasises the historic shift of the role of pharmacists from mere 'pill-vendors' to that of an integral member of the health care delivery system. Dr. C.S. Shastry, the principal in his presidential remark highlighted the emotional connection of pharmacists has with their patients. He highlighted the vital role pharmacist's play in the outcome of pharmacological therapies to improve patient's quality of life. As a part of the event, a blood donation camp was held. The coordinator of NSS of Nitte University, Dr. Murali Mohan Choontaru appreciated the student volunteers in coming forward to donate blood and said that this noble gesture exemplifies their dedication and service to mankind and their desire to promote great health for all. Quiz and Essay Competitions were held.



*Dr. C.S Shastry Speaks on the occasion of World Pharmacist Day and Blood donation Camp and (L-R) Mr. Bharat Raj, Dr. Murali Mohan Choontaru, Dr. R.Narayana Charyulu, Mr.Rajaram Shetty and Dr. Santanu Saha monitoring student at blood donation camp.*

### Conferences attended

- Confederation of Indian Industry (CII) along with Department of Industrial Policy & Promotion (DIPP) was organised road show on 9<sup>th</sup> July 2016 at Mangalore. The main objective of the road show was to spread awareness on Patents, Trademarks and Designs with other forms of IPRs among the Industry and Academia and also to talk and sensitise about the New IPR policy 2016. Dr. C.S. Shastry, Dr. R. Narayana Charyulu, Dr. B.C. Revanasiddapa, Dr. Akhilesh Dubey, Dr. Uday Venkat Mateti, Mr. Srinivas Hebbar and Mr. Vijay Kumar represented Nitte University at the conference.
- Justice K. S. Hegde Institute of Management conducted three-day management development programme for

medical professionals on 14<sup>th</sup>, 21<sup>st</sup> and 28<sup>th</sup> August 2016 held at Nitte Education International, Mangalore. Dr. Himanshu Joshi, Dr. Santanu Saha, Dr. Akhilesh Dubey, Dr. Pankaj Kumar, Dr. Abhishek Kumar and Dr. Jobin Joseph had attended and actively participated in a three-week long programme.

- Dr. Murali Badanthadka, Department of Pharmacology, attended an Orientation Programme for college faculty which was organised by Ramakrishna Math: Prajna'16 on 2<sup>nd</sup> September 2016 at Mangalore.
- Mrs. Sneh Priya attended four days AICTE sponsored quality improvement program on "Formulation and Management of Quality Medicines" on 12<sup>th</sup> to 15<sup>th</sup> September 2016, organised by Manipal College of Pharmaceutical Sciences, Manipal.
- Drug Discovery India 2016, 4<sup>th</sup> International conference was conducted by SELECTBIO on 29<sup>th</sup> and 30<sup>th</sup> September 2016 held at Le Meridien Hotel, Bengaluru. SELECTBIO is the UK-based multinational company focuses on research within the spectrum of Drug Discovery, Pharmaceuticals, Biotechnology etc. Dr. C.S. Shastry, Principal has chaired a scientific session during two-day International conference. Mr. Shanon, Mr. Ravi, Mr. Vijay, Mr. Hemanth and Ms. Susmita research scholar's of NGSMIPS had attended the conference as delegates.
- Dr. Uday Venkat Mateti, Assistant Professor, Department of Pharmacy Practice, was awarded International Society for Pharmacoepidemiology (ISPE) International Travel Scholarship 2016 to participate and present the paper at 32<sup>th</sup> International Conference on Pharmacoepidemiology & Therapeutic Risk Management (ICPE) in Dublin, Ireland from August 25-28, 2016.
- Dr. Uday Venkat Mateti, Assistant Professor, Department of Pharmacy Practice, attended CME on Pulmonary Medicine Meet-2016 conducted by Department of Pulmonary Medicine, held at KMC, Mangalore on 18<sup>th</sup> September 2016.

### Faculty Training Programme

- One day seminar on "Teacher as a facilitator" was organized at Dental College Vimshanthi Bhavan, Nitte University on 24<sup>th</sup> August 2016. Fr. Dionysis Vaz was the resource person who addressed the gathering and covered various aspects of effective communication and learning approaches to teaching. Mrs. Zeena Fernandes, Mr. Srinivas Hebbar, Mr. Rajesh K and Dr. Rovin, teaching faculty NGSMIPS attended and actively participated in the learning programme.



- Nitte University conducted two week long training programme on "Soft skill training" for non-teaching faculty in the month of August and September 2016. Mrs. Usha Kumar M, Mrs. Shamitha, Mr. Ravindra Mrs. Usha Kumari, Mr. Ramesh N. Shetty, Mrs. Krishnaveni, Mr. Shashidhar Rai, and Mrs. Arthika had attended the learning programme.



### OBITUARY

We are deeply saddened by the loss of our dear student

#### Mr. ABDUL KADER FARHAN

of II B.Pharm. May his soul rest in eternal peace.

### Ph.D Awarded



Mr. Jobin Jose, Assistant Professor, Department of Pharmaceutics, NGSM Institute of Pharmaceutical Sciences, Mangalore, Karnataka, was awarded Doctor of Philosophy in Pharmaceutical Sciences for his thesis entitled "Dendrimer-based anti-leishmanial drug delivery system using

ethylenediamine-polyamidoamine (Pamam) and Amphotericin B and Ketoconazole" by the Nitte University, Mangalore, under the guidance of Dr. R. Narayana Charyulu, Vice Principal, NGSM Institute of Pharmaceutical Sciences, Mangalore.

## DEPARTMENT ACTIVITIES

### RESEARCH/REVIEW PUBLICATIONS/PRESENTATIONS/PAPER REVIEWED

#### RESEARCH PUBLICATIONS/PRESENTATIONS

##### DEPARTMENT OF PHARMACEUTICAL CHEMISTRY

- Ishwar Bhat K, Abhishek Kumar. Synthesis and Anti-Inflammatory Activity of Some Novel 1,5 Benzodiazepine Derivatives. Asian J Pharm Clin Res 2016; 9(4): 63-6.
- Dr. Jainey P. James, and Mr. M Vijay Kumar, presented a paper entitled "Synthesis and molecular modeling studies of novel pyrazoline analogs as shikimate kinase inhibitors" and "Pyrazolones as potential anti-diabetic and anti-arthritic agents" respectively in DST sponsored 1st International Conference on Innovations in Pharmaceutical Sciences (ICIPS-2016), held at School of Pharmacy, Guru Nanak Institutions Technical Campus (GNITC), Hyderabad on 29<sup>th</sup> & 30<sup>th</sup> July 2016.

##### DEPARTMENT OF PHARMACEUTICS

- Sandeep D S, Narayana Charyulu R, Prashant Nayak, Aliss Mahajan, Indira Ghalan. Formulation of Antimicrobial Polyherbal Hand Wash. Res J Pharm Technol 2016; 9(7): 1-3.
- Mrs. Sneha Priya, Department of Pharmaceutics, presented a paper entitled "In vitro-in vivo evaluation of solid lipid nanoparticle of ropinirole hydrochloride for brain targeting" in DST sponsored 1st International Conference on Innovations in Pharmaceutical Sciences (ICIPS-2016), held at School of Pharmacy, Guru Nanak

Institutions Technical Campus (GNITC), Hyderabad on 29<sup>th</sup> & 30<sup>th</sup> July 2016.

##### DEPARTMENT OF PHARMACY PRACTICE

- Uday Venkat Mateti, Jasmine Ummer, Subramanyam Kodangala. Impact of clinical pharmacist counseling and education on quality of life in patients with acute coronary syndrome. Indian J Pharma Edu Res 2016; 50(3): 360-7
- Dr. Uday Venkat Mateti, presented a poster entitled "Impact of Pharmaceutical Care on Medication Adherence, Hemoglobin Levels and Interdialytic Weight Gain Among Hemodialysis Patients-A Multicentric Trial" at 32<sup>th</sup> International Conference on Pharmacoepidemiology & Therapeutic Risk Management (ICPE) in Dublin, Ireland from August 25-28, 2016.

##### DEPARTMENT OF PHARMACOGNOSY

- Dr. Divya Jyothi, Department of Pharmacognosy, presented a paper entitled "Development of polymeric nanoparticles loaded with cross and rain fundi bulbiformis extract" in DST sponsored 1<sup>st</sup> International Conference on Innovations in Pharmaceutical Sciences (ICIPS-2016), held at School of Pharmacy, Guru Nanak Institutions Technical Campus (GNITC), Hyderabad on 29<sup>th</sup> & 30<sup>th</sup> July 2016.

# GREEN CHEMISTRY: NEW METHODS FOR ORGANIC SYNTHESIS AND APPLICATIONS

Dr. Abhishek Kumar

Assistant Professor

Department of Pharmaceutical Chemistry

## Organic Synthesis: Innovations and New Technology

Organic chemistry chemicals are some of the important starting materials for a great number of major chemical industries. The production of organic chemicals as raw materials or reagents for other applications is a major sector of manufacturing polymers, pharmaceuticals, pesticides, food additives etc. Organic synthesis on a large scale, compared to the laboratory scale, involves the use of energy, basic chemical ingredients from the petrochemical sector, catalysts and after the end of the reaction, separation, purification, storage, packaging, distribution etc. During these processes, there are many problems of health and safety for workers in addition to the environmental problems caused by their use and disposition as waste.

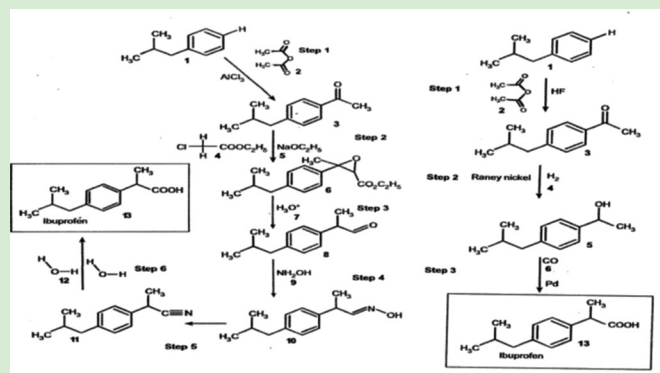
Green Chemistry with its 12 principles would like to see changes in the conventional ways that were used for decades to make synthetic organic chemical substances and the use of less toxic starting materials.

## Old and New Synthesis of Ibuprofen

The chemical industry is focusing from many years on some classic synthetic processes of important starting chemicals or crucial chemicals produced in high volume as intermediates in synthetic industrial reactions. The intention is to reduce the synthetic stages, to lower the energy use, to increase efficiency with higher yields and to minimize waste. Also, renewable starting chemicals away from the traditional petrochemical supplies of raw chemicals are another desired innovation. Every Green Chemistry textbook describes the big successes of the last decades in the field of new synthetic routes for industrial chemicals. The pharmaceutical industry is considered now as the most dynamic sector of the chemical industry. Sales of medicines and other pharmaceutical products have increased fourfold from 1985. The analgesic and anti-inflammatory drugs is a category of medicines which are produced in vast amounts every year. Some of the most important are: Aspirin, Acetaminophen, and Ibuprofen. Ibuprofen belongs to non-steroidal anti-inflammatory drugs with very high sales.

Ibuprofen was synthesized in 1960 by the pharmaceutical company Boot (England) and sold under the commercial name Aspro, Panadol, and Nurofen. The synthesis of Ibuprofen was performed in six steps with the production of secondary by-products and waste. The main problem according to the scientists at the time was that this synthesis had a very "poor atom economy".

In the old synthetic route, each step had a yield of 90 % so that the final product came to be 40 % yield compared to the starting chemical. This resulted in the increased production of by-products as waste. The drug was produced annually (only in Great Britain) in 3.000 tonnes and we understand that substantial amounts of chemicals were lost as waste. Energy also was lost by the low efficiency of the reaction method. In the "greener" method of three steps, the final yield is 77 %, whereas the Raney nickel catalyst (Nickel, Pt/Co) can be recycled and reused. In the old synthetic route, the  $\text{AlCl}_3$  used as a catalyst had to be thrown away as waste. The energy requirements of the second method were much lower than the first. The new synthetic route of Ibuprofen is a classic example of how Green Chemistry ideas can influence the better the industrial synthetic methods, not only from the point of economic efficiency but also from the point of more effective scientific and technological methods.



*The two synthetic routes of Ibuprofen. In the old method, the synthetic route comprised of six steps and in the second was reduced to three steps. The efficiency of the reaction increased substantially.*

## Skills To be gained from Pharmacy Degree

Technical expertise and laboratory skills

Teamwork

General research skills

Self Management

General IT skills

Excellent professional communication, spoken and written

Data analysis

In-depth understanding of human biology and health issues.



## International conference at Dublin and Bengaluru



## Student Council Inauguration and Fresher's Day Celebrations



*Book Post*