2020-2021 Volume 1



SUNANDAN DIVATIA SCHOOL OF SCIENCE





# BIIIUMBLES

The Annual E-Magazine

The Department of Biological Sciences

In the words of the American
Astronomer Carl Sagan, "Science is a way of thinking much more than it is a body of knowledge". The inaugural edition of Sci-Chronicles, the Departmental magazine for the Department of Biological Sciences, SDSOS, SVKM's NMIMS Deemed to be University, attempts to highlight this very philosophy. The inculcation of the scientific thought process in the students and its translation into research has been the key mission of the department.

Sci-Chronicles, our annual E-magazine introduces the reader to the members and workings of the department of biological sciences. It chronicles the various achievements and activities, both academic as well as research based, undertaken by the students and faculty members. The readers are taken on a journey through the department's activities thoughout the previous academic year, and of the valuable moments captured along the way.

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## **DEAN'S MESSAGE**

The SVKM's NMIMS Sunandan Divatia School of Science, was born out of the foresight of the University with a view to providing undergraduate and post-graduate students an opportunity to venture into the fascinating world of Sciences. The school aspires to be a Centre of Excellence by creating a conducive student-centric environment that supports high quality teaching and research in niche areas of Science & Technology.

The 5-Year Integrated M.Sc. The Biomedical Science program and the Master's program in Biological Sciences is designed to develop a student's scientific, experimental and analytical skills. Further, the research-intensive and laboratory-based curriculum covers contemporary subjects and is intended to meet the needs of the ever-evolving Biotechnology & Pharmaceutical Industry, Medical Diagnostics Industry, Clinical Research Organizations and Research Institutions. Our students have been trained by excellent faculty who have a strong academic research background. Besides, the students are exposed to state-of-the-art infrastructure and equipment to enhance their hands-on skills. Moreover, the compulsory research project as part of the curriculum, develops their technical skills and makes them ready to face the industry. To ensure a holistic development of the student, besides academics, students are a part of various committees/cells to hone their creative, social, cultural and interpersonal skills.

I am extremely delighted and congratulate the entire Sci-Chronicle team for their hard work and efforts to put forth a highly versatile first issue of the annual

magazine which not just highlights but also provides insights of all the year-round activities carried out at the Department of Biological Sciences, NMIMS SDSOS. I am sure this issue will serve as an inspiration for many upcoming editions in the future.

DR. NEETIN DESAI

Dean

Sunandan Divatia School of Science, NMIMS

## HOD'S MESSAGE

DR. PURVI BHATT

**Associate Professor & Head of** 

**Department, Department of Biological** 

**Sciences** 

Sunandan Divatia School of Science, NMIMS

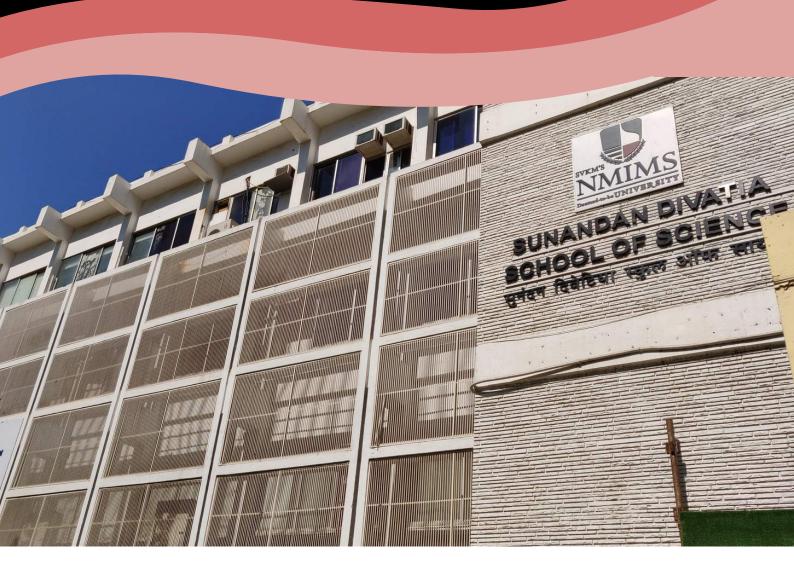


The department of Biological Sciences has expanded over the years since 2007 and currently offers four programs namely Ph.D. Biological Sciences, Integrated M.Sc.-Ph.D. Biological Sciences, M.Sc. Biological Sciences and 5-Year Integrated M.Sc. in Biomedical Science.

All year round, students are not only involved in regular coursework activities consisting of lectures and practicals but also in various co-curricular and extracurricular activities that help in their overall development.

I am very pleased to see Sci-Chronicle, first annual e-magazine of the Department of Biological Sciences shape up so well that it aptly highlights all the year-round activities of students and faculty. It was a vision that was conveyed to our highly motivated and talented team of students from Master's and UG program and their dedication, hard work and creativity has shaped this magazine much beyond my expectations. I thank all my young, creative and energetic Sci-Chronicle teammates for working together and congratulate them for creating this versatile informative piece of magazine that provides all a birds' eye view of activities in the academic year 2020-2021. I am sure this issue will now inspire more students to contribute to future volumes of this magazine. I wish all of them success for all their future endeavors.

## ABOUT SDSOS



Sunandan Divatia School of Science (SDSOS) was established by SVKM's NMIMS Deemed to be University in 2007, with the purpose of developing highly skilled undergraduate and postgraduate students, fit for the industries as well as research. Progression of science demands up-to-date knowledge of concepts, equipment and techniques. This has all been possible for students at SDSOS, owing to the constantly upgrading curriculums, teaching systems and facilities. The department of Biological Sciences, currently headed by Dr. Purvi Bhatt, is well equipped to train students in every aspect of biological and biomedical sciences by enhancing the students' knowledge through interdisciplinary coursework and activities.

## INFRASTRUCTURE

SDSOS, NMIMS offers a state of the art infrastructure furnished with the latest resources for the convenience and growth of students. The school aspires to provide the students with opportunities to satiate their curiosity and boost innovative minds, shaping them into individuals fit for jobs in the research as well as industry sectors.























The library facility is constantly updated with latest information and is easily accessible via an electronic mode to students.



SDSOS, NMIMS also offers a Bioinformatics Lab/IT centre facility with high-end computers and a stable internet connectivity.



The labs at SDSOS, NMIMS provide a modernized infrastructure and latest equipment to carry out research in cutting edge areas like nanosciences, stem cell research and cancer research.



The instruments and other equipment undergo routine maintenance checks to ensure their efficiency and sensitivity.



The animal tissue culture lab and the wet labs at the department of Biological Sciences offer cutting edge technology to mould students into scientists.

## COURSES OFFERED

DEPARTMENT OF BIOLOGICAL SCIENCES

Ph.D. in Biological Sciences

Integrated M.Sc.-Ph.D. in Biological Sciences

M.Sc. in Biological Sciences

5-Year Integrated M.Sc. in Biomedical Science

## OUR CURRICULUM



**Biological Sciences** 

The curriculum for Biological Sciences provides deep, comprehensive, and contemporary insights into the fundamentals and applications of biology. The course is designed to fulfil the requirements needed to keep pace with the current developments in IPR &

scientific research and Industry.

Recent

Advances in

Biology

**Biostatistics** 

Bioinformatics

Patenting

Cell

Immunology

Biology

Research.

Methodology

Human

Evolutionary

Genetics

Recombinant

DNA

chnology **Omics** 

Ph.D. in Biological Sciences

min. 4 years

Integrated M.Sc.- Ph.D. in **Biological Sciences** 

2 years M.Sc.+ min. 3 years Ph.D.

M.Sc. in Biological Sciences

2 years

Molecular Molecular Oncology Biology Python

R

Analytical

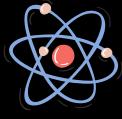
Techniques

Excel Subjects

While the research student will have ample opportunity to acquire hands-on training on modern, sophisticated instruments/equipment wherever necessary, he/she will also be able to benefit from the expertise of one or more supervisors, wherever needed.



## OUR CURRICULUM



**Biomedical Science** 

#### 5-Year Integrated M.Sc. in Biomedical Science

The M.Sc. in Biomedical Sciences curriculum provides an understanding of the basic concepts with a holistic view to offer a broad, thorough and intellectually challenging approach in the field of Science. It enables students to understand the basics of biology and the clinical and medical aspects of biology. The course is reviewed regularly in consultation with our Board of Studies, which comprises experts from academia, research institutions and industry from all over India. Thus, the course is tailor-made to fulfil the requirements needed to keep pace with the current developments in scientific research.

Along with the permanent faculties, the regular lectures are also conducted by visiting faculties who are experts in their respective fields. Apart from the course work, the Faculty also conducts Guest lectures by eminent academicians and scientists and paper presentations (Journal Club) to ensure a learner-centric environment. In addition, methods like quizzes, discussions, tutorials, Industry visits etc. are also used by the faculty to benefit the students.



Subjects

## **OUR FACULTY**

#### DR. NEETIN DESAI

**Dean**Biotechnology



#### DR. EKTA KHATTAR

Associate Professor Telomere Biology and Cancer



#### DR. BRIJESH SUKUMARAN

Assistant Professor (Program Chairperson: 5-Year Intg. M.Sc. in Biomedical Science) Microbiology, Pharmacology and Cell Biology



#### DR. SIMRAN ARORA

Assistant Professor
Epigenetics, Incorporating
Unnatural Amino Acid and
Protein Engineering



#### DR. PURVI BHATT

Associate Professor (HOD) Molecular Biology and Cancer Biology



#### DR. HARINDER SINGH

Assistant Professor
(Program Chairperson:
M.Sc./Intg. M.Sc.-Ph.D./
Ph.D. Biological Sciences)
Molecular Biology,
Biochemistry and Microbiology



## DR. SONAL MANOHAR

Assistant Professor
Cancer Biology and Cell
Signaling

Please click on the faculty names to visit their pages

## PATENTS FILED

**Title of patent**: Development of nanoparticle-coated, self-sterilizing battery operated mask with enhanced microbial protection.

Authors: Neetin Desai, Vrushali S. Joshi, Jeevan R. Pradhan

**Title of patent**: Development of economically viable, reusable battery-operated, self-sterilizing respirator using copper foil.

Authors: Neetin Desai, Vrushali S. Joshi, Jeevan R. Pradhan





## SEED GRANTS

#### **July 2020 to June 2021**

Dr. Purvi Bhatt received seed grant of ₹ 1,03,962/- for a project entitled "Exploring the Senotherapeutic potential of various bioactive compounds on breast cancer lines"

Dr. Brijesh S. received seed grant of ₹1,00,000/- for a project entitled "In vivo investigation to determine toxicity and efficacy of a combination of anti-rheumatic drugs"

Dr. Harinder Singh received seed grant of ₹1,00,000/for a project entitled "Improving Phytase by rational enzyme engineering approach"

## **PUBLICATIONS**

#### **July 2020 to June 2021**

Fernandes SG, Shah P, Khattar E (2021). Recent Advances in Therapeutic Application of DNA Damage Response Inhibitors against Cancer. Anti-Cancer Agents in Medicinal Chemistry. (IF: 2.5)

Alekar AN (2021). The outcomes of fetal cell microchimerism in the mother. Biomedical Research Journal 8: 1–6.

Shetty S (2021). Is three-parent IVF the answer to preventing mitochondrial defects? Biomedical Research Journal 8: 9–13.

Kulkarni P (2021). Bacopa monnieri (Brahmi): A potential treatment course for neurological disorders: Review. International Journal of Herbal Medicine 9: 10–18.

Balakrishnan A, Walimbe K, Awasthi S, Athreya S, Saini V (2021). Analeptic Properties of Rosuvastatin and CQ10 Combination. International Journal of Medical and Biomedical Studies 5: 84–111.

Mirchandani Y, Patravale V, Brijesh S (2021). Solid lipid nanoparticles for hydrophilic drugs. Journal of Controlled Release 335: 457–464. (IF: 9.7)

Moramkar N, Bhatt P (2021). Insight into chitosan derived nanotherapeutics for anticancer drug delivery and imaging. European Polymer Journal 154: 110540. (IF: 4.598)

Desai D, Pethe P (2021). ChIP-qPCR for Polycomb Group Proteins During Neuronal Differentiation of Human Pluripotent Stem Cells. Methods in Molecular Biology. Puri A (2021). Detection Potential of Recently Discovered Techniques for Recovering Latent Fingerprints: A Review. Journal of Forensic Science and Criminology 9: 105–112.

Gala K, Khattar E (2021). Long non-coding RNAs at work on telomeres: Functions and implications in cancer therapy. Cancer Letters 502: 120–132. (IF: 7.36)

Fernandes SG, Dsouza R, Khattar E (2021). External environmental agents influence telomere length and telomerase activity by modulating internal cellular processes: Implications in human aging. Environmental Toxicology and Pharmacology 85: 103633. (IF: 3.292)

Sawant S, Dugad J, Parikh D, Singh H (2021). Absolute quantitation of oral bacteria involved in oral cancer by realtime PCR. Medicine in Microecology 7: 100034.

Nagar A, Kamble A, Singh H (2021). Preliminary screening, isolation and identification of microbial phytase producers from soil. Environmental and Experimental Biology 19: 11–22. Dumasia NP, Khanna AP, Pethe PS (2021). Sonic hedgehog signals hinder the transcriptional network necessary for pancreatic endoderm formation from human embryonic stem cells. Genes to Cells 26: 282–297. (IF: 1.655)

Manohar SM, Shah P, Nair A (2021). Flow cytometry: principles, applications and recent advances. Bioanalysis 13: 185–203. (IF: 2.371)

Khandare RV, Watharkar AD, Pawar PK, Jagtap AA, Desai NS (2021). Hydrophytic plants Canna indica, Epipremnum aureum, Cyperus alternifolius and Cyperus rotundus for phytoremediation of fluoride from water. Environmental Technology & Innovation 21: 101234.

Chikhaliwala P, Schlegel W, Lang H, Chandra S (2021). Inkjet printed patterns of polyamidoamine dendrimer functionalized magnetic nanostructures for future biosensing device application. Journal of Materials Science 56: 5802– 5816. (IF: 3.559)

Pethe PS, Dumasia NP, Bhartiya D (2021). Effect of Sonic hedgehog pathway inhibition on PDX1 expression during pancreatic differentiation of human embryonic stem cells. Molecular Biology Reports 48: 1615–1623. (IF: 1.402)

Krishnan A (2020). Emotion Regulation in Adolescence: Different Strategies and Associated Functional Connectivity of Brain Regions. Biomedical Research Journal 7: 34.

Gala K, Khattar E (2020). An overview on the application of nanodiagnostics in cancer. Biomedical research journal 7: 40– 44. Shetty A, Chandra S (2020). Inorganic hybrid nanoparticles in cancer theranostics: understanding their combinations for better clinical translation. Materials Today Chemistry 18: 100381. (IF: 3.68)

Dumasia N, Pethe P (2020). Pancreas development and the Polycomb group protein complexes. Mechanisms of Development 164: 103647. (IF: 2.216)

Shelat R, Kumar Bhatt L, Paunipagar B, Kurian T, Khanna A, Chandra S (2020). Regeneration of hyaline cartilage in osteochondral lesion model using L-lysine magnetic nanoparticles labeled mesenchymal stem cells and their in vivo imaging. Journal of Tissue Engineering and Regenerative Medicine 14: 1604–1617. (IF: 3.078)

Virdi JK, Pethe P (2020). Biomaterials Regulate Mechanosensors YAP/TAZ in Stem Cell Growth and Differentiation. Tissue Engineering and Regenerative Medicine 18: 199–215. (IF: 2.374)

Desai D, Khanna A, Pethe P (2020). PRC1 catalytic unit RING1B regulates early neural differentiation of human pluripotent stem cells. Experimental Cell Research 396: 112294. (IF: 3.383)

Yete S, Saranath D (2020). MicroRNAs in oral cancer: Biomarkers with clinical potential. Oral Oncology 110: 105002. (IF: 3.979)

Manohar S (2020). Insights into the Molecular Drivers of Prostate Cancer. In: Watanabe HS (ed) Horizons in Cancer Research 75. Nova Science Publishers, New York, USA.

Shah HD, Saranath D, Murthy V (2020). A molecular dynamics and docking study to screen anti-cancer compounds targeting mutated p53. Journal of Biomolecular Structure and Dynamics. (IF: 3.31)

Sahoo S, Kharkar PS, Sahu NU, Brijesh S (2020). Anxiolytic activity of Psidium guajava in mice subjected to chronic restraint stress and effect on neurotransmitters in brain. Phytotherapy Research 35: 1399–1415. (IF: 4.087)

Khattar E, Tergaonkar V (2020). Role of Rap1 in DNA damage response: implications in stem cell homeostasis and cancer. Experimental Hematology 90: 12–17. (IF: 2.82)

Fernandes SG, Dsouza R, Pandya G, Kirtonia A, Tergaonkar V, Lee SY, Garg M, Khattar E (2020). Role of Telomeres and Telomeric Proteins in Human Malignancies and Their Therapeutic Potential. Cancers 12: 1901. (IF: 6.126)

Chikhaliwala P, Chandra S (2020). Polyamidoamine dendrimers@Fe3O4 based electrochemiluminescent nanomaterials for biosensing of liver cancer biomarkers. Electroanalysis 32: 2404-2414. (IF: 2.544)



Being a scientist: contributions during the global pandemic

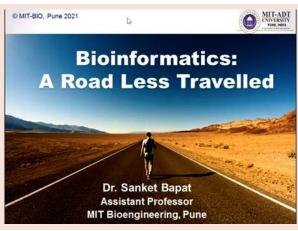
NMIMS, Sunandan Divatia School of Science 7<sup>th</sup> October 2020



Swati Patankar
Professor, Dept of Biosciences & Bioengineering
Indian Institute of Technology Bombay

Guest Talk on October 7, 2020 "Being a Scientist- Contributions
during the global pandemic" by Prof.
Dr. Swati Patankar, Professor,
Department of Bioscience and
Bioengineering, IIT Bombay.





Guest Talk on
"Bioinformatics:
The Road Less
Travelled" by Dr.
Sanket Bapat,
Professor at MIT
School of
Bioengineering
Sciences and
Research, Pune on
the occasion of
National Science
Day 2021
(February 28,
2021).



Guest Talk by Mr. Aditya Gupta, an entrepreneur, who has the distinction of being one of those few who have scaled Mount Everest. He mentioned his experiences and challenges during his feat of scaling the summit. (27th September 2020)



Ph.D. student Shrey Madeka presented her work on "Ayurvedic Treatment of Acute Ischemic Stroke". (12th February 2021)

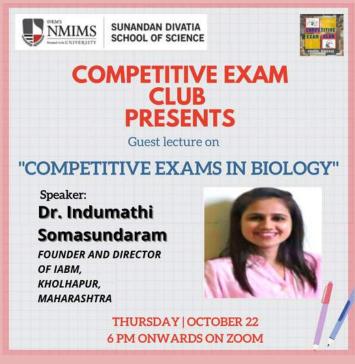
Members of the club discussed about the SARS-CoV-2 Variants and its research conducted by INSACOG. (7th May 2021) Ayurvedic Treatment of Acute Ischemic Stroke: A Prospective Observational Study

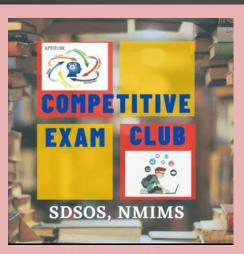
J Aarthi Harini, <u>Avineet Luthra</u>, Shrey <u>Madeka</u>, <u>Prasan</u> Shankar, <u>Pitchaiah</u> Mandava, Ravishankar <u>Pervaje</u>, <u>Sanjith</u> Aaron, and <u>Archana Purushotham</u>

Global Advances in Health and Medicine Volume 8: 1-8, 2019



## **COMPETITIVE EXAM CLUB**





Guest lecture on "Competitive Exams in Biology" by Dr. Indumathi Somasundaram, Founder and Director of Indu's Academy of Biology and Medicine (IABM) at Kolhapur, Maharashtra. (22nd October 2020)



#### THE SOSSY TAPES

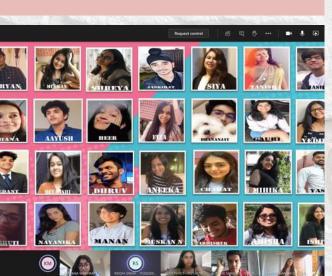
A special podcast series on different topics from currently trending topics in the world to life on the SDSOS campus.

Date: Since 22nd August, 2020

#### **MEMEOIR**

A contest that allowed the participants to showcase their humour and creativity in making the memes and had everyone scrambling to get the best laugh out of the audience.

Date: 26th to 29th August, 2020



When you thought college life was going to be easier than grade 12 but life went from conjuring to conjuring 2



#### **SOSBOOK**

A peer-tutoring network wherein the freshers registered for the event were paired with seniors from the institute to help them smoothly transition into life at SDSOS.

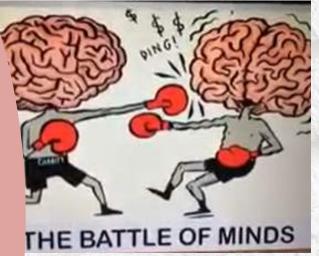
Date: Since 30th August, 2020

#### **IPL AUCTION**

The participating teams had to build their Dream 10 team for the IPL under a set budget after qualifying the first round.

Date: 3rd to 4th September, 2020





## TEACHERS' DAY CELEBRATION

The Student Council organized a virtual celebration to show our gratitude towards our teachers. Some students performed and spoke on how teachers help in shaping the future of students.

Date: 5th September, 2020

#### THE BATTLE OF MINDS

Just as the name suggests it was a debate that allowed the participants to battle it out with their logic and oratory skills on the topic of "Covid-19- a blessing in disguise for students?".

Date: 5th September, 2020



# Student Council Presents Fantasy Premiere League 2020

## FANTASY PREMIERE LEAGUE

The participants could form their dream teams for the game in the app and play to win.

Date: 13th September, 2020

#### MINUTE TO WIN IT

This event included taking pictures with objects in the house and even singing or dancing to the clues given about different songs, where-in the contestants battled each other and completed multiple tasks within a 60 seconds time-frame.

Date: 9th October, 2020





#### WAR AND PIECE

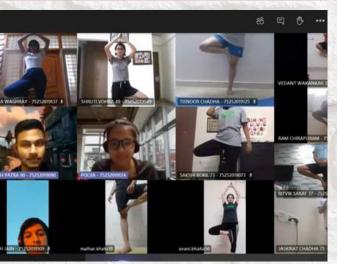
The chess tournament organized by the Council was a platform to show-off their Checkmate skills.

Date: 10th October, 2020

## STORY WRITING COMPETITION

Little did we know that SDSOS students would write such amazing stories that it would give the judges a run for their money.

Date: 16th & 18th October, 2020



### THE FITNESS CHALLENGE

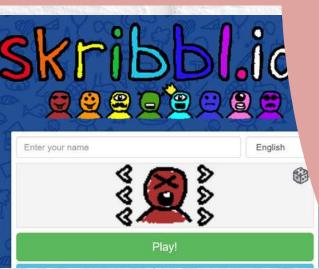
This challenge allowed our students to take their workouts up a notch and provided some much-needed motivation. This along with the competition between batches proved to be a success with overwhelming participation.

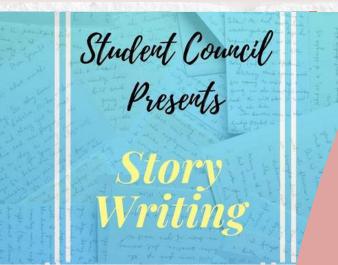
Date: 17th October, 2020

#### **SKRIBBL**

Artists and non-artists of SDSOS alike got to try their hand at drawing to win points in an online rendition of Pictionary.

Date: 20th October, 2020







#### **HACKED**

The participants had to hack and retrieve passwords by answering logical and mathematical questions to advance to the next round.

Date: 24th & 25th October, 2020

#### **EXCALIBUR**

Our annual cultural festival was conducted with the theme 'Binge It On'. Since everything has been virtual, the theme was based on what we enjoy doing the most virtually, binging!

Date: 20th February, 2021









PARTICIPANT 6 MUSKAAN KOTHARI Vear - B.Sc. Applied Statistics and Analytics







## COMPLETED Ph.D. PROJECTS

#### **July 2020 to June 2021**

#### **SUPRIYA BHARTE**

Mentor: Dr. Krutika Desai

**Project:** Enhancement of biofuel production from microalgae

Viva-Voce Date: 4th July 2020

#### **RUCHITA SHELAT**

Mentor: Dr. Sudeshna Chandra

**Project:** Development of functionalized iron oxide nanoparticles for stem cell labelling and in vivo imaging

Viva-Voce Date: 13th January 2021

#### **PRIYAL CHIKHALIWALA**

Mentor: Dr. Sudeshna Chandra

**Project:** Development of dendrimermagnetic nanoparticle based electrochemical biosensors

Viva-Voce Date: 4th March 2021

#### **SWATI SAHOO**

Mentor: Dr. Brijesh S.

**Project:** Anxiolytic activity of Medicinal Plants and Associated Changes in Brain

Viva-Voce Date: 17th March 2021

#### **DIVYA DESAI**

Mentor: Dr. Prasad Pethe

**Project:** Role of polycomb repressive complexes in neuronal lineage differentiation from human pluripotent stem cells

Viva-Voce Date: 8th April 2021

#### **JEANETTE MARTINS**

Mentor: Dr. Brijesh S.

**Project:** Anti-depressant Activities of Medicinal Plants as Adjuncts for Selective Serotonin Reuptake Inhibitors

Viva-Voce Date: 22nd April 2021

#### **HETAL DAMANI**

Mentor: Dr. Dhananjaya Saranath

**Project:** Genomic Variants and Computational Modelling in Oral Cancer

Viva-Voce Date: 27th April 2021

## M.SC. DISSERTATION PROJECTS

#### M.Sc. & Integrated M.Sc.-Ph.D. Biological Sciences

(December 2020-April 2021)

Name: Pooja Ajay Gilitwala

Institute: Kokilaben Dhirubhai Ambani Hospital and

Medical Research Institute

Supervisor: Dr. Sunita Polampalli

**Project:** Validation Of Fluorescence *In-Situ* 

Hybridization (FISH) Assay for Multiple Myeloma Panel

in CD138+ Purified Plasma Cells



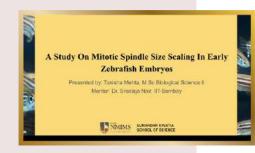
Name: Tanisha Mehta

**Institute:** Indian Institute of Technology-Bombay

Supervisor: Dr. Sreelaja Nair

**Project:** A Study on Miotic Spindle Size Scaling in Early

Zebrafish Embryos



Name: Kaveri Sudhir Gadgil

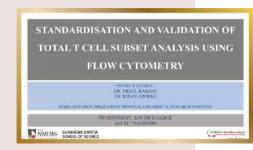
Institute: Kokilaben Dhirubhai Ambani Hospital and

Medical Research Institute

Supervisor: Dr. Kiran Ghodke & Dr. Nikhil Rabade

Project: Standardization and Validation of Total T Cell

Subset Analysis Using Flow Cytometry



Name: Aravind V

Institute: DY Patil School of Bioinformatics and

Biotechnology

Supervisor: Dr. Pramodkumar Gupta

Project: In-Silico Based Modelling and Analysis of Protein

Kinase MEK2 and Screening of Its Known Inhibitors



Name: Saurabh V Oswal

Institute: Rivaara Labs Pvt Ltd

Supervisor: Dr. Madhavi Pusalkar

**Project:** An Evaluation of Liquid Based Cytology in

Combination with HPV DNA RT PCR Detection Technique

for Cervical Cancer Screening in the General Population



Name: Ria Mainkar

Institute: Kokilaben Dhirubhai Ambani Hospital and

Medical Research Institute

Supervisor: Dr. Sunita Polampalli

**Project:** Standardization and Validation of *PIK3CA* Somatic Mutations in Solid Malignancies by Sanger

Sequencing



Name: Swarali Keni

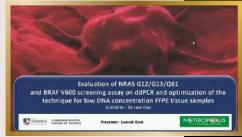
**Institute:** Metropolis Healthcare LTD

Supervisor: Dr. Jaya Vyas & Mr. Milind Chanekar

**Project:** Evaluation Of NRAS G12/G13/Q61 And BRAF V600 Screening Assay on ddPCR and Optimization of the

Technique for Low DNA Concentration FFPE Tissue

Samples



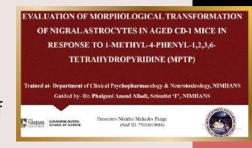
Name: Nishtha Pange

Institute: National Institute of Mental Health &

Neurosciences (NIMHANS)

Supervisor: Dr. Phalguni Anand Alladi

**Project:** Evaluation of Morphological Transformation of Nigral Astrocytes in Aged CD-1 Mice in Response To 1-Methyl-4-Phenyl-1,2,3,6-Tetrahydropyridine (MPTP)



Name: Prathmesh Vala

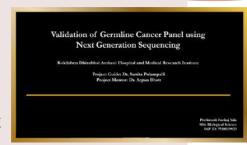
Institute: Kokilaben Dhirubhai Ambani Hospital and

Medical Research Institute

Supervisor: Dr. Sunita Polampalli

**Project:** Validation of Germline Cancer Panel using Next

**Generation Sequencing** 



**Name: Namrata Britto** 

**Institute:** Bhaktivedanta Hospital and Research

Institute

Supervisor: Dr. Vijaykumar Gawali

**Project:** Conduct of Oncology Phase 4 Clinical Trial at a

Tertiary Care Centre in Covid-19 Era



Name: Khyati Ved

Institute: Advanced Cancer Treatment, Research and

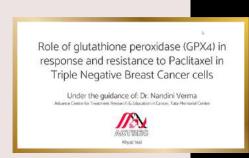
Education (ACTREC)

Supervisor: Dr. Nandini Verma

Project: Role of glutathione peroxidase (GPX4) in

response and resistance to Paclitaxel in Triple Negative

**Breast Cancer cells** 



Name: Sakshi Sinha

Institute: Mazumdar Shaw Medical Foundation,

Bangalore

Supervisor: Dr. Manjula Das

Project: Epidemiological Analysis of Covid-19 Disease in

Bangalore East Zone: A Population-Level Observational

Study



Name: Kartiki Jadhav

Institute: Metropolis Healthcare LTD

Supervisor: Dr. Shaikhali Barodawala

**Project:** Comparative Analysis of Cell Solution and Thinprep Liquid Based Cervical Cytology with HPV

Testing: A Study Of 412 Cases



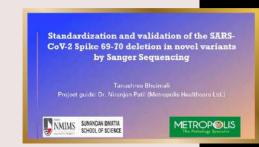
Name: Tanushree Bhuimali

**Institute:** Metropolis Healthcare LTD

Supervisor: Dr. Niranjan Patil

**Project:** Standardization and validation of the SARS CoV-2 Spike 69-70 deletion in novel variants by Sanger

sequencing



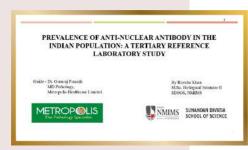
Name: Rimsha Khan

**Institute:** Metropolis Healthcare LTD

Supervisor: Dr.Gururaj Puranik & Ms Flavia Almeida

**Project:** Prevalence of Antinuclear Antibody in the Indian Population: A Tertiary Reference Laboratory

Study



Name: Anjali Vaidya

**Institute:** PadCare Labs

Supervisor: Ms. Aasawari Kane

**Project:** Development and Optimization of Smokeless Green Technology for the Disposal and Recycling of

Absorbent Hygiene Products



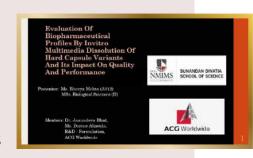
Name: Bhavya Mehta

**Institute:** ACG Associated Capsules Pvt Ltd

Supervisor: Dr. Jnanadeva Bhat & Ms Dorene Almeida

**Project:** Evaluation of Biopharmaceutical Profiles by Invitro Multimedia Dissolution of Hard Capsule Variants

and its Impact on Quality and Performance



Name: Naimi Sirjohn

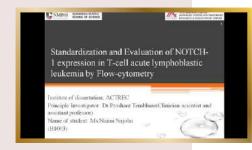
**Institute:** Advanced Cancer Treatment, Research and

Education (ACTREC)

Supervisor: Dr. Prashant Thembare

**Project:** Standardization and Evalution of NOTCH-1 expression in T-cell acute lymphoblastic leukemia by

Flow-cytometry



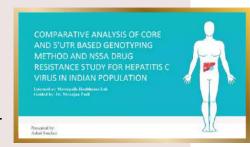
Name: Ashni Sundani

**Institute:** Metropolis Healthcare LTD

Supervisor: Dr. Niranjan Patil

**Project:** Comparative Analysis of Core and 5'UTR Based Genotyping Method and NS5A Drug Resistance Study for

Hepatitis C Virus in Indian Population



Name: Shrutika Sawant

Institute: Metropolis Healthcare LTD

Supervisor: Dr. Jaya Vyas & Mr. Milind Chanekar

**Project:** Standardisation and Validation of SALSA MLPA probemix P060-B2 Kit to detect copy number variation in *SMN* gene for molecular diagnosis of SMA

using MLPA technique



Name: Tanvi V. Kanade

**Institute:** National Facility for Biopharmaceuticals

Supervisor: Mr. Vikas Jha

**Project:** Identification of a Putative Drug Target/ Inhibitor and Potential Vaccine Candidates for *Mycobacterium tuberculosis* by Metabolic Pathway

Analysis: An *In-Silico* Approach



Name: Pooja Doshi

Institute: Metropolis Healthcare LTD

Supervisor: Dr. Niranjan Patil

**Project:** Comparison Of Direct Immunofluorescence Staining Technique and Real Time PCR for the Detection

of Pneumocystis jirovecii Pneumonia



Name: Rachel Correia

Institute: Metropolis Healthcare LTD

Supervisor: Dr. Niranjan Patil

**Project:** Genotyping detection of mutations in XDR-TB

cases for Betaquiline and Its cross resistance with

Clofazimine



#### 5-Year Integrated M.Sc. in Biomedical Science

(December 2020-April 2021)

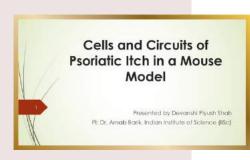
Name: Devanshi Piyush Shah

**Institute:** Indian Institute of Science (IISc)

**Supervisor:** Dr. Arnab Barik

**Project:** Cells and Circuits of Psoriatic Itch in a Mouse

Model



Name: Samruddhi Jadhav

Institute: Kokilaben Dhirubai Ambani Hospital and

Medical Research Institute

Supervisor: Dr. Barnali Das

**Project:** Autoimmune markers: Immunofluorescence

microscopy and its interpretation with case studies



Name: Upasna Basak

Institute: Advanced Cancer Treatment, Research and

Education (ACTREC)

Supervisor: Dr. Rohan Khadilkar

**Project:** Understanding The Role of Ubiquitin Ligase, Bendless in Regulation Haematopoiesis and Immune

Response in *Drosophila melanogaster* 



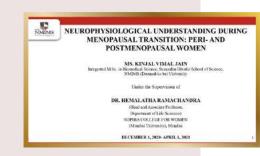
Name: Kinjal Jain

**Institute:** Sophia College For Women

Supervisor: Dr. Hemalatha Ramchandra

**Project:** Neurophysiological understanding during menopausal transition: peri-, and postmenopausal

women



**Name: Drishya Antony** 

Institute: Advanced Cancer Treatment, Research and

Education (ACTREC)

Supervisor: Dr. Arvind Ingle

**Project:** Maximizing Modern Diagnostic Approaches to Crosscheck Genetic Contamination in Small Laboratory

Animals



Name: Kshiti Vaishnav

Institute: Kokilaben Dhirubai Ambani Hospital and

Medical Research Institute

Supervisor: Dr. Pallavi Priyadarshini

**Project:** A Comparative Analysis of Different Indicators

of Ovarian Reserve: Anti-Müllerian Hormone, Antral

Follicle Count and Oocytes Retrieved

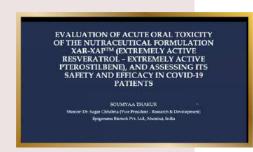


Name: Soumyaa Thakur

**Institute:** Epigeners Biotech Private Limited

Supervisor: Dr. Sagar Chabbria

**Project:** Evaluation Of Acute Oral Toxicity of the Nutraceutical Formulation XAR-XAP™ (Extremely Active Resveratrol – Extremely Active Pterostilbene), and Assessing its Safety and Efficacy in Covid-19 Patients



Name: Sanghita Rajkumari

Institute: North-East Cancer Hospital and Research

Institute

Supervisor: Dr. Gazi Naseem Ahmed

**Project:** A Correlative Study of p16 Positive Squamous Cell Carcinoma with Histomorphological Grading of Head and Neck Tumor in a Tertiary Cancer Hospital of North-East India

A CORRELATIVE STUDY OF P16 POSITIVE SQUAMOUS
CELL. CARCINOMA WITH HISTOPATHOLOGICAL
GRADING OF HEAD AND NECK TUMOR IN A TERTLARY
CANCER HOSPITAL OF NORTH-EAST INDIA

By. Sanghita Rajhumari
(5- Year Integrated M.Sc in Biomedical Science)

Name: Prachi Storewala

**Institute:** Vedic Lifesciences

Supervisor: Dr. Sonal Raote

Project: A randomized, placebo-controlled, multi-blind

study to assess the effect of Terminalia arjuna in

Overweight and Obese Individuals

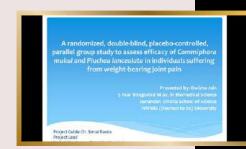


Name: Dwisha Jain

**Institute:** Vedic Lifesciences

Supervisor: Dr. Sonal Raote

**Project:** A randomized, double-blind, placebo-controlled, parallel group study to assess efficacy of *Commiphora mukul* and *Pluchea lanceolata* in individuals suffering from Weight-bearing Joint Pain



Name: Urja Parekh

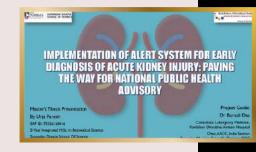
Institute: Kokilaben Dhirubai Ambani Hospital and

Medical Research Institute

Supervisor: Dr. Barnali Das

**Project:** Implementation of Alert System for Early Diagnosis of Acute Kidney Injury: Paving the Way for

National Public Health Advisory



Name: Richa Thakur

**Institute:** Institute of Nanosciences and

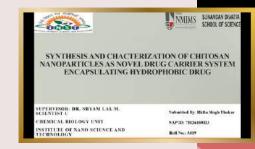
Nanotechnology (INST), Mohali

Supervisor: Dr. Shyam Lal

**Project:** Synthesis and characterization of chitosan

nanoparticles as novel drug carrier system

encapsulating hydrophobic drug



## T.Y.B.SC. PROJECTS BIOMEDICAL SCIENCE

#### PROJECT GUIDE: DR. BRIJESH SUKUMARAN



STUDENT	PROJECT	PROJECT TYPE
Ateeb Ansari	Nosophobia and Cyberchondria in the Age of	
Lipika Bhat	Covid-19 Pandemic	
Anushka Alekar	The Big Five Personality Traits: Response and Preparedness to Covid-19 Induced Stress	Survey
Athulya Krishnan	Effects of Neuroticism Trait on Covid-19 Online News Consumption and its Association with Covid-19 Anxiety	

#### **PROJECT GUIDE: DR. PURVI BHATT**



STUDENT	PROJECT	PROJECT TYPE
Mitali Kulkarni	Correlation Between Anxiety And Sleep Disorders In General Population Due To The Covid-19 Pandemic	Survey
Hrishti Bhatt	Online Learning – A Contributor To Stress And Anxiety In Students During The Covid-19 Pandemic	Sa.vey
Pushti Gandhi	Mucormycosis: How Is A Rare And Fatal Fungal Infection Linked To Coronavirus	
Poulami Dutta	Insight into possible drug targets of COVID-19: From genomics to therapeutics	Review

#### PROJECT GUIDE: DR. EKTA KHATTAR



STUDENT	PROJECT	PROJECT TYPE
Saachi Modi	Telomerase activation in cancer	Review
Sahil Nair Ikshika Mittal		
Hetsi Modi		
PROJECT GUID	E: DR. HARINDER SINGH	

STUDENT	PROJECT	PROJECT TYPE
Ushma Pandia		
Nimisha Parashar	In-silico characterization and modification of histidine acid phytases using computational	Bioinformatics
Samiya Parkar	tools	
Sudiksha Patil		

#### PROJECT GUIDE: DR. SONAL MANOHAR



STUDENT	PROJECT	PROJECT TYPE
Sayalee Samant	Functional analysis of EGFR signaling network using Gene Ontology	Bioinformatics
Saloni Ramani	Updation of EGFR network map and the implications of the EGFR Network in Cancer	
Janhavi Rastogi	Topological analysis and modularization of EGFR signaling network using Gephi	
Siddharth Shah	Comprehensive EGFR signaling network: A gateway to holistic view at the cellular level	



#### PROJECT GUIDE: DR. SIMRAN ARORA

STUDENT	PROJECT	PROJECT TYPE
Samriddhi Shekhar	Role of Ser83 Phosphorylation of CBX3 in Cancer	
Ishaa Wagh	Allele Specific Chemical Genetic approach to propose LSD1 phosphorylation by CDK2 as possible contributor to Cancer Pathways	
Muskan Srivastava	Increasing the efficiency of CRISPR-Cas9 by inhibition of NHEJ using deferoxamine	
Anika Vidyarthi	hsa_circ_0005075 a novel biomarker: The upregulation of CircRNA (hsa_circ_0005075) could regulate the activity of CDK2 by sponging with miRNA in hepatocellular carcinoma	Review and Project proposal
Anushree Toraskar	CRISPR/Cas9 mediated gene editing in isolated mice mesenchymal stem cells as a potential treatment for craniofacial defects in Apert syndrome	
Shloka Shetty	Restoration or Reactivation of C/EBPa function by modulating eIF4E levels using CZ415 to control and regulate p42/p30 protein isoform ratio ~ A potential treatment for Acute Myeloid Leukemia (AML)	

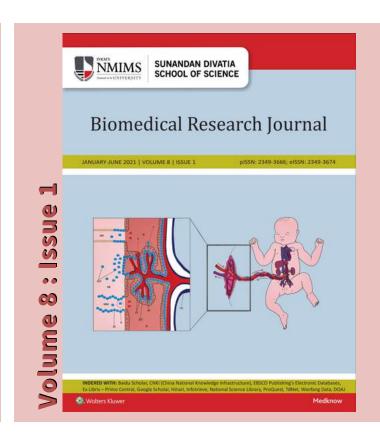
# BIOMEDICAL RESEARCH JOURNAL

**July 2020 to June 2021** 



"Biomedical Research Journal (BRJ)" is a premier peer reviewed open access journal, published by Sunandan Divatia School of Science, NMIMS (Deemed-to-be) University, Mumbai, for promoting interdisciplinary contemporary areas of Basic and Applied Biomedical Science. The goal is to share new discoveries and translational knowledge with scientists, academicians, clinicians and students in the field of Biomedical and Biological/Chemical/ Biotechnology/Stem Cell Biology/Cancer Biology in the realm of basic and applied aspects in the different areas. The journal is published biannually online as well as its print copies are available.







Eureka, a monthly science newsletter, is presented by the students from both the Department of Biological Sciences and Department of Chemistry.

It was introduced in October 2019.

Eureka not only brings the latest news from the scientific world but also serves as a platform for Science enthusiasts to share and discuss topics that they are passionate about. Apart from discussing current topics in Science, Eureka provides information on internships and career prospects in Biology and Chemistry. It provides readers with a unique opportunity to interact with students and faculty that share similar interests.





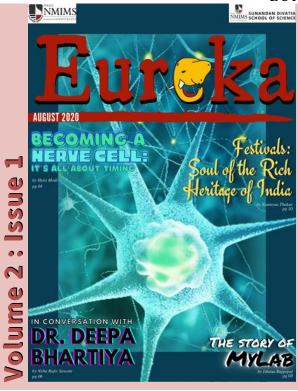




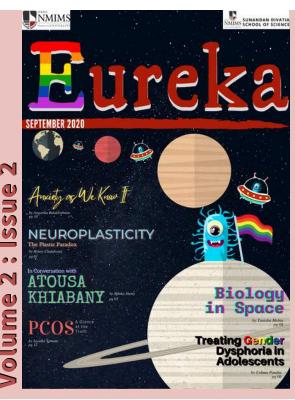




- Soumyaa Thakur explores the field of STEM during her conversation with Dr. Sreelaja Nair
- Hetsi Modi commemorates the remarkable contributions of unrecognised women in STEM
- Saloni Hombalkar delves into who really is 'The True Heir'
- Jasmeet Kaur Sahni discusses ways to increase productivity while we're all working remotely



- Honey Chandwani, the Editor, addresses the readers and introduces the new team
- · Hetsi Modi highlights the role of timing in the making of a nerve cell
- Dr. Deepa Bhartiya gives us an insight into her work in Stem Cell Biology and Regenerative Medicine with Neha Sawant
- Ishana Rajgopal commends the team of scientists at MyLab for their contribution during the onset of the Covid-19 Pandemic



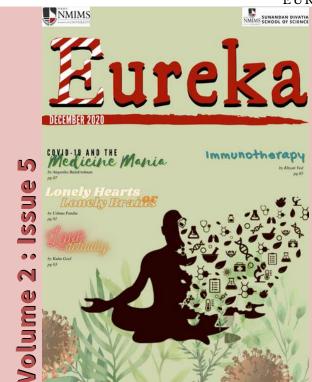
- · Honey Chandwani unravels the mysteries of Neuroplasticity
- Shloka Shetty explores the field of graduate medicine with Atousa Khiabany
- · Ushma Pandia destigmatizes Gender Dysphoria in adolescents
- Tanisha Mehta provides an insight into 'Biology in Space'
- · Angarika Balakrishnan delves into the neuroscience of anxiety
- · Sayalee Samant busts the myths around PCOS



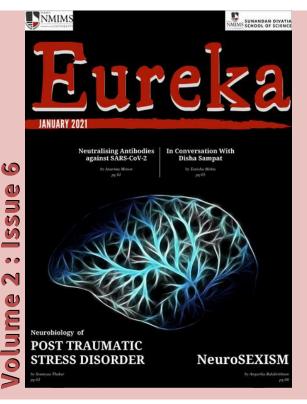
- Sayalee Samant and Tanisha Mehta revel the Nobel Prize winners of 2020
- Anagha Oke delves into Breast Cancer research with Dr. Nandini Verma
- · Swarali Keni unravels the science behind 'living robots'
- · Angarika Balakrishnan sheds light on Dyslexia
- · Saijal Vats explores the psychological impact of cancer
- · Nehul Tanna traverses the 'Science behind Arts'



- Angarika Balakrishnan delves into the neuropsychology of 'impulsivity during menses'
- Tanisha Mehta explores the field of science journalism with Mr. Samanth Subramaniam
- · Ushma Pandia traverses through epilepsy and spirituality
- Ria Vaishampayan highlights the prospects of Synthetic Biology
- · Anurima Menon provides an insight into neoantigen vaccines
- · Soumyaa Thakur reveals the science behind certain superstitions



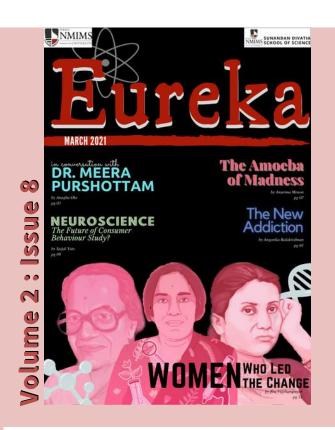
- · Kuhu Goel delves into the endocrinology of love
- · Khyati Ved highlights the benefits of immunotherapy against cancer
- Angarika Balakrishnan expounds upon the four systems of medicine to treat Covid-19
- · Ushma Pandia looks into the neuropsychology of loneliness



- Anurima Menon presents a glimpse of the neutralising antibodies against SARS-CoV-2
- Soumyaa Thakur draws attention to the neurobiology of post-traumatic stress disorder (PTSD)
- Tanisha Mehta shines light upon dance and movement therapy with Disha Sampat, a mental health professional
- · Angarika Balakrishnan introduces the concept of Neurosexism



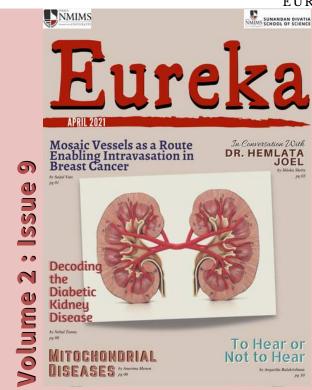
- Swarali Keni introduces the concept of NETosis
- · Hetsi Modi answers how "Walking Molecules" help create neurons
- Ushma Pandia draws attention to an approach towards ending Ableism: Neurodiversity
- · Angarika Balakrishnan shines light upon dreams and delusions
- · Ria Vaishampayan elucidates the concept of epigenetics



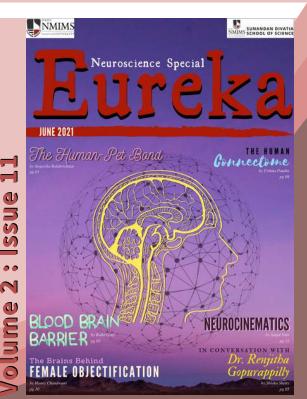
- · Ria Vaishampayan pays an ode to Indian women in STEM
- · Angarika Balakrishnan talks about 'the new addiction' to vaping
- Anagha Oke delves into Neuropsychiatric Diseases with Dr. Meera Purushottam
- · Anurima Menon explores neuroparasitology
- · Saijal Vats probes into Neuromarketing



- · Saijal Vats gives us an insight into menstrual stem cells
- Honey Chandwani delves into the applications of optogenetics beyond the laboratory
- Tanisha Mehta explores what pursuing research beyond a PhD entails with Dr. Paulomi Sanghavi
- Hetsi Modi unravels the mystery behind transposons and their role in evolution
- · Angarika Balakrishnan discusses the neuroscience of spirituality



- Saijal Vats delves into the mechanism of mosaic vessel formation in breast cancer
- Shloka Shetty explores the prospects of Homeopathy as a system of medicine with Dr. Hemlata Joel
- Anurima Menon discusses the severity of Mitochondrial Diseases and their implications



- Angarika Balakrishnan discusses the intricacies of the intimate humananimal bond
- · Kuhu Goel delves into the functions of the Blood-Brain Barrier
- Shloka Shetty explores research in neural stem cells with Dr. Renjitha Gopurappilly
- Ushma Pandia traverses the potential of the Human Connectome Project
- Honey Chandwani unravels the neuroscience behind the objectification of women
- Saijal Vats deliberates the scope of neurology in cinema

# PLACEMENT GUEST TALKS





## Dr. Khokan Debnath

HEAD OF REGULATORY AFFAIRS, CLINICAL OPERATIONS AND PHARMACOVIGILANCE (INDIA AND EMERGING MARKET) AT WOCKHARDT LTD.

- A glimpse of the Clinical Research industry, the required Regulatory affairs involved along with insights on pharmacovigilance.
- 1st August 2020



## Ms. Sudha Raj

DIRECTOR OF CLINICAL OPERATIONS AND BUSINESS DEVELOPMENT AT CLINISYD RESEARCH GLOBAL SOLUTIONS PVT. LTD.

- The responsibilities/functioning of the clinical operations department along with business development and where each of them fit in the organization.
- 5th September 2020



## Dr. Pallavi Karnik

ASSISTANT GENERAL MANAGER, INTAS PHARMACEUTICALS (BIOPHARMA DIVISION)

- A gist of Biotherapeutics in Pharmaceuticals and Biosimilars.
- 12th September 2020



## **Dr. Emilio Munoz**

MEDICAL MONITOR, THERAVANCE BIOPHARMA US. INC.

- The functioning of the various departments of a pharma organization, opportunities for biomedical students overseas, along with insights on some of the projects he had undertaken.
- 10th October 2020



## Dr. Anupama Harshal

CONSULTANT (SCIENCE COMMUNICATION AND PUBLIC ENGAGEMENT) MANAV - THE HUMAN ATLAS INITIATIVE, IISER, PUNE

- The art of scientific writing, the skills required and contemporary regulations. A brief introduction to The Human Atlas Initiative.
- 17th October 2020



## **Dr. Ankit Gupta**

LEAD RESEARCHER IN TECHNOLOGIES FOR PRECISION MEDICINE GROUP AT SIEMENS HEALTHINEERS

- The significance of bioinformatics in the industry, along with a concise flow of how it has aided in the projects he has been a part of.
- 6th February 2021



## Dr. Prashant Kharkar

PROF. OF MEDICINAL CHEMISTRY, INSTITUTE OF CHEMICAL TECHNOLOGY

- Machine learning tools in BioMedical Science.
- 27th February 2021



The interdisciplinary nature of the courses offered, and the research as well as industry-oriented training provided, makes the students highly eligible for a number of job opportunities in a variety of fields.

Regular interaction with experts from various industries, and guest lectures arranged by dedicated placement cell give students an insight into the ongoing work in the respective fields as well as various fields and job profiles that they can apply to.

The constant guidance, support and cooperation of the faculty helps students enhance both technical as well as interpersonal skills, enabling them to work efficiently in professional settings.

The skill sets acquired during their time at the department provides them with opportunities in a multitude of fields, ranging from scientific writing to clinical research, and from the health services to manufacturing.

# INTERNSHIPS 2021

M.Sc. & Integrated M.Sc.-Ph.D. Biological Sciences (First Year)

STUDENT	PROJECT TASK AND INSTITUTE	TENURE
Shubham Borse	Assistant for project on 'Chemopreventive actions of black tea polyphenols' at Mahimkar Lab, ACTREC	12th May to 2nd July 2021 (~2 months)
Saijal Vats	Content Creation and Market Research at <b>Dhiti</b>	June 2021 to present
Harshada Naik	Research Assistant for Scientific writing at Conceptive Farmacia (online)	19th April 2021 to present
Madhura Kamat	1) 'Science Communication by 3-D Animation Project' under Dr. Sameer S. (EMMRC, University of Pune) by Mentx Virtual Internship Programme 2) 'Data mining and literature search on Glioblastoma tumour heterogeneity' at Proteomics Lab, BSBE, IIT Bombay under Mr.Saicharan Ghantasala (online)	7th May 2021 to present  3rd July 2021 to present
Amisha Malaviya	1) 'Science Communication by 3-D Animation Project' under Dr. Sameer S. (EMMRC, University of Pune) by Mentx Virtual Internship Programme 2) Research Assistant at Conceptive Farmacia Pvt. Ltd. (online) for the project 'Data curation for product development.'	23rd May 2021 to present  1st March to 31st May 2021 (3 months)
Ria Vijay	Research Associate at Biolim Institute of Science and Technology (online)	5th June to 5th July 2021 (1 month)

S	TUDENT	PROJECT TASK AND INSTITUTE	TENURE
Vish	akha	1) 'Glioblastoma heterogeneity and the role of stem cells and drug repurposing' at <b>Proteomics Lab, BSBE, IIT Bombay</b> under Mr. Saicharan Ghantasala (online)	3rd July 2021 to present
Kurl	awala	2) Research Associate for 'SHED as stem cell therapy candidates for potential treatment of Alzheimer's Disease (AD).' project at Biolim Institute of Science and Technology. (online)	January- February 2021 (2 months)
Aish	warya Patel	Epidemiological studies of ongoing projects at Dept. of Gastroenterology, TNMC and BYL Nair Charitable Hospital	1st May to 30th June 2021 (2 months)
Shre	ya Kumar	'Malaria Project-Hepatocyte Phosphorylation Post Translational Modification' under Ms. Ayushi Verma at <b>Proteomics Lab, BSBE, IIT</b> <b>Bombay</b> (online)	3rd July 2021 to present
		Vicinity is	
	shree alkar	<ol> <li>Research Associate for 'Stem Cells' project at Biolim Institute of Science and Technology (online)</li> <li>'Vaccine Technology Training' at Edufabrica</li> </ol>	11th May to 11th June 2021 (1 month)
Gova		at Biolim Institute of Science and Technology (online) 2) 'Vaccine Technology Training' at	June 2021

SCI-CHRONICLES | VOL 1

## 5-Year Integrated M.Sc. in Biomedical Science (Third Year)

**STUDENT** PROJECT TASK AND INSTITUTE **TENURE** 1st June 2021 to Research Associate at Biolim Institute of Shloka Shetty present **Science and Technology** (online) (1 month) 1) Part of Marketing Micro Internship Cohort 31st May to 12th June at Upkey-learned fundamentals of social 2021 (~1.5 media marketing, content audit report and, week) optimization and creation of Facebook ads campaigns, designed a brand campaign video Sayalee Samant for storytelling project, learned to create marketing portfolio. 2) Part of the Summer VIP at Upkey-learning 5th July to fundamentals along the lines of 15th August communication, entrepreneurship, marketing 2021 (~1.5 month) and tech, attending career panels

# 5-Year Integrated M.Sc. in Biomedical Science (Fourth Year)

7	STUDENT	PROJECT TASK AND INSTITUTE	TENURE
1800	Aradhya Walinjkar	1) Research Associate at <b>Biolim Institute of Science and Technology</b> (online) for learning research aspects of the project 'Novel drug delivery system to target cancer cells'	May 2021 (1 month)
	rem who	2) At International Model United Nations, was the Campus Ambassador, worked in the marketing department and for content development including blogs, etc.	June to July 2021 (~ 5 weeks)
Statement of the later of the l	Arzoo Puri	1) Tasks performed at Rawal Genomics Lab, Delhi: a) Covid-19 drug repository and repositioning & Deep data curation (BLAST for the sequences given) b) Hadoop Software for cancer c) Manual Networking for COVID-19 2) Tasks performed at Hexorp (Cannazo India): a) Studied the Market and performed Analysis b) Working on formulations for products in R&D department c) Content Writing including Blogs, Product Pages, Basic Information and FAQs	16th May to 17th June 2021 (1 month)  23th April to 6th July 2021 (2.5 months)
	Ria Vaishampayan	Research Associate at <b>Biolim Institute of Science and Technology</b> (online) for learning research aspects of project 'Use of induced pluripotent stem cells in tissue engineering'	June to July 2021 (1 month)

			TIVIER NOTHI S 20
-	STUDENT	PROJECT TASK AND INSTITUTE	TENURE
	Ishana Rajgopal	Research Associate at <b>Biolim Institute of Science and Technology</b> (online) for learning research aspects of the project 'RNAi approach to prevent chemoresistance in cancer patients.'	May 2021 (1 month)
	Prachi Kulkarni	1) Tasks performed at Rawal Genomics Lab, Delhi: a) Covid-19 drug repository and repositioning & Deep data curation b) MapReduce Software for cancer (BLAST for given sequences) c) Manual Networking for COVID-19 2) Tasks performed at Hexorp (Cannazo India): a) Working on formulations for products in R&D department b) Content Writing including Blogs, Product Pages, Basic Information and FAQs c) Market Survey and Analysis	16th May to 17th June 2021 (1 month)  23th April to 6th July 2021 (2.5 months)
7	Rajvi Shah	Training in QA, QC, Micro Lab, PD (PRD – Pharmaceutical Research Development, AR & D – Analytical Research and Development) at <b>Zentiva Pharmaceuticals</b>	25th May to 10th July 2021 (~ 6 weeks)
	Freyan Vakharia	Tasks performed at <b>Raptim Research Pvt. Ltd.</b> a) Training in QC: Reviewing the study files which includes Screening files, Subject information, Case Report Form, EC approval document, Trial Master Files, etc. and observing clinical trials (dosing) b) Analytical department: Analysis of plasma samples obtained from BA/BE study subjects c) In-vitro studies: Training in IVPT and IVRT studies	1st June to 30th June 2021 (1 month)

		INTERNSHIPS 20.
STUDENT	PROJECT TASK AND INSTITUTE	TENURE
Kuhu Goel	Training in QC and Molecular Diagnostics at Huwel Life Sciences Pvt. Ltd.	June to July 2021 (1 month)
Saloni Nachane	Tasks performed at <b>Haystack Analytics</b> :  a) Catalogue check for different types of genes and mutations involved in TB drug resistance b) Data curation for antibiotic resistance genes, sequence alignments, primer designing c) Marketing d) SOP development	April to June 2021 (2 months)
Akshita Nagar	Tasks performed at AiRTH Research Pvt Ltd:  a) Know-how of bacterial, fungal and viral infection during COVID-19  b) Efficacy testing of air purifier towards range of microbes and viruses  c) Support team R&D in clinical trials of air purifier  d) Develop reports and writing on microbial/viral testing of air purifier.	June to August 2021 (2.5 months)
A CONTRACTOR OF THE PARTY OF TH	Contraction of the Contraction o	

"The distinction between an 'assistant' and an 'intern' is a simple one: assistants are paid, interns are not.

But interns get paid, in experience."

— Joyce Carol Oates, Author

# STUDENT ACHIEVEMENTS

M.Sc. & Integrated M.Sc.-Ph.D. Biological Sciences (First Year)

**Aryan Yadav** 

**Dhruvil Mehta** 

1<sup>st</sup> prize in 'The Great Escape' at CRISPRalis 3.0 by K.J. Somaiya 27.2.21

Angarika Balakrishnan

Aishwarya Patel

Angarika Balakrishnan

- Secured position of assisstant research mentor at Research Bulb- January 2021
- Publication in British Neuroscience Association
   Bulletin (Spring Issue) titled 'Brain Dance'- May 2021





Got elected as Joint Secretary of NMIMS University
Student Council (2020-21)
July, 2020- December, 2020

Saijal Vats

Anushree Govalkar

2nd Runner up- 'The Wall-Paper' Poster competition at ROTOFEST'20 by RC of NM College- 2. 2. 2021



## Anushree Govalkar

Best general body member-Rotaract club of NMIMS

Vishakha Kurlawala

Saijal Vats

Madhura Kamat & Vishakha Kurlawala

- Participation in following initiatives convened by Prof.
   Dr. Sanjeeva Srivastava, Head of Proteomics Lab, IIT
   Bombay:
- 1. Writer, Editor and Designer for the Omics Bootcamp India Newsletter -February, 2021 to Present
- 2. Member of the Judgement panel for the Biology and Bioengineering Summer Camp May, 2021
- 3. Made two tutorial videos and gave a lecture for the virtual Science Communication workshop- June, 2021



- 3<sup>rd</sup>Prize in Rhymelight (a poetry competition cum fundraiser)- 30<sup>th</sup>April 2021
- Awarded champion of the month at Rotaract Zonal Level- December 2020

Sanchit Sharma

Divya Balakrishnan Winner - MIT COVID-19 CHALLENGE - India Turning the Tide (48h Virtual Hackathon) hosted by Massachusetts Institute of Technology, Cambridge, Massachusetts. Presented with cash award worth US \$ 500-Aug 28' 2020 - Aug 30' 2020



# 5-Year Integrated M.Sc. in Biomedical Science (Third Year)

Sayalee Samant
Third place

Biology and Bioengineering Summer Camp at IIT Bombay, Department of Proteomics 17th-19th July, 2021

Lipika Bhat

Day2-Precision medicine

Ushma Pandia

Fourth Place for PPI
Quiz winner for Day 3- Omics
Technologies, Big Data and ML

## Shloka Shetty & Ushma Pandia

Day 1- Bioengineering for 21st Century

Lipika Bhat

Won the 2nd prize in the Presentation Competition held during the virtual Science Communication workshop organized by Prof. Sanjeeva Srivastava, Proteomics Deptartment, IIT Bombay- June, 2021



5-Year Integrated M.Sc. in Biomedical Science (FourthYear)



Selected as a Mentor at International Youth Neuroscience Association (IYNA) for guiding high school students in the field of Neuroscience to help them fulfill their educational and career goals-July 2020- present

Ishana Rajgopal

# 5-Year Integrated M.Sc. in Biomedical Science (Fifth Year)

- 1. International Student Congress of (bio)Medical Sciences, University Medical Centre Groningen, Netherlands (June 2021)-Best Presentation Award
- 2. Student Research Congress (organized by SVKM's Dr. Bhanuben Nanavati College of Pharmacy). Won first place for oral presentation competition PG/PhD category (September, 2020).

presente

## **Urja Parekh**

Parekh, U.A., Mazumder,
M., Kaur, H., Brodsky, E.,
(2021).In Silico Analysis and
Characterization of Differentially
Expressed Genes to Distinguish
Glioma Stem Cells from Normal
Neural Stem Cells.

bioRxiv 2021.04.05.438487. https://doi.org/10.1101/2021.04.05.43 8487 1. Mitacs Globalink Research Internship (Canada - University of Montreal) 2020

2. IASc-INSA-NASI Summer Research Fellowship 2020

## Ph.D. in Biological Sciences

Yashika Mirchandani ₹50,000

Amruta Parmar ₹35,000 Scholarships received from Women Graduate Union, Colaba, 2021

Shriya Sawant ₹35,000

Vrundali Shinde ₹35,000



AIR 64 in subject of Life Sciences for UGC-CSIR NET (JRF) exam held in November 2020. JRF and Assistant Professorship assigned in February 2021

Sneha Pathak

"Success is not final, failure is not fatal; it is the courage to continue that counts."

— Winston Churchill



# 

"When you can't find the sunshine, be the sunshine."

#### **ANUSHREE GOVALKAR**

M. Sc. Biological Sciences

@anushreegovalkar

in <u>Anushree Govalkar</u>



"Be yourself, but always your better self!"



M. Sc. Biological Sciences



@\_itsmeshrejo\_



Shreya Joshi



"Always be a first-rate version of yourself and not a second rate version of someone else."

- Judy Garland.

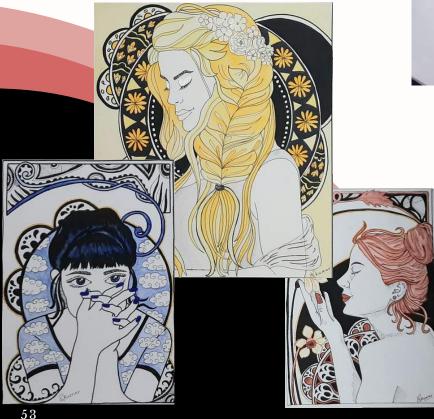
## **SHREYA SUNIL** KUMAR

M. Sc. Biological Sciences



in <u>Shreya Sunil Kumar</u>







FREYAN VAKHARIA

5-Year Integrated M.Sc. in Biomedical Science



@frey\_2219

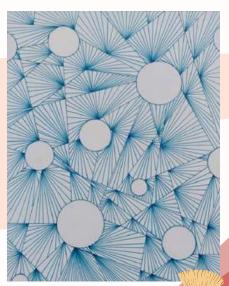


<u>Freyan Vakharia</u>

















## AMISHA MALAVIYA

M. Sc. Biological Sciences



@amishaa\_m



Amisha Malaviya





5-Year Integrated M.Sc. in Biomedical Science



@itsaddyhere



<u>Aradhya Walinjkar</u>



















#### FREYAN VAKHARIA

5-Year Integrated M.Sc. in Biomedical Science (O) @frey\_2219 in Freyan Vakharia



#### **ARZOO PURI**

5-Year Integrated M.Sc. in Biomedical Science

(i) @foodlust\_escape

in <u>Arzoo Puri</u>





# & food photography





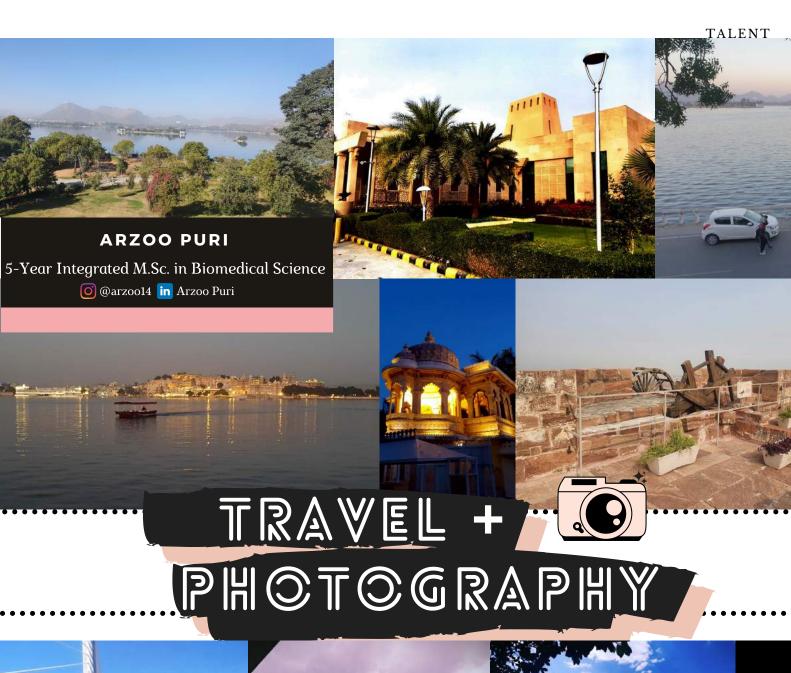


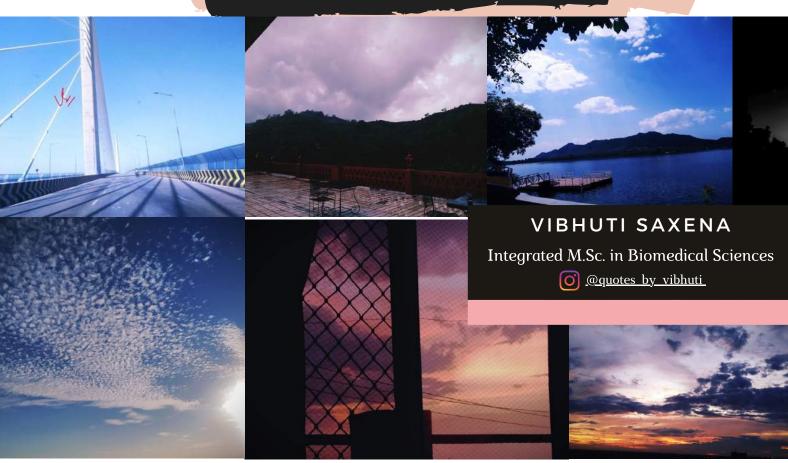
#### PRACHI KULKARNI

5-Year Integrated M.Sc. in Biomedical Science

in Prachi Kulkarni

SCI-CHRONICLES | VOL 1











Strength doesn't come from what you can do, it comes by overcoming the things you once thought you couldn't!

## NIMISHA PARASHAR

T.Y.B.Sc. In Biomedical Sciences (2020-21)

🜀 @nimi\_sippy06 🛭 in Nimisha Parashar

## <u>national lev</u>el 10m air rifle 9H00Ting



"The biggest competition is myself. I am not looking to follow others or pull them down. I'm boundaries."



# & DANCE

Dance to express and not to impress'

ANGARIKA BALAKRISHNAN

2nd Year, M.Sc. Biological Sciences

🔼 @angarikaaa

in <u>Angarika Balakrishnan</u>

Embrace your awesomeness.

**AKSHITA NAGAR** 

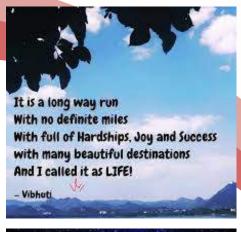
5-Year Integrated M.Sc. in Biomedical Science

@\_akshitanagar\_

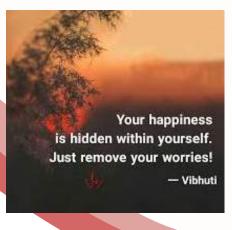
in

Akshita Nagar

TALENT













#### VIBHUTI SAXENA

5-Year Integrated M.Sc. in Biomedical Science @quotes by vibhuti

## मी आणि माझी Nichrome loop

मी आणि माझी Nichrome loop, जिवलग होतो दोघे. तिच्याहुन माझे चालायचेच नाही, न भागायचे माझ्याह्न तिचे.

प्रयोगशाळेतील पकडायचो एक कोपरा, अन सजवायचो मैफल, दोन Burners संवे. एक एकांती असायचा Tripod, Overdispense झाले की वाटायचे, Micropipette हवे.

Streak करतानाही, स्वतःहन तिच्यावरच भरोसा. Isolation गेले वाया, Agarही फाटला, सारा तिच्यावरच त्रागा.

60

कोण होती ती? आणि मी असे कोण? जन्मोजन्मीचे ऋणानुबंध असल्यासारखे. जुळले जीव दोन.

मी आणि माझी Nichrome loop, जिवलग होतो दोघे. शेवटी एका Incineration समयी, प्लेटमधल्या Agarसंवे, आमचेही फाटलेचं

मी म्हटले "मला चीड येतेय!" ती म्हणाली "मला वाटलेच!" Plateवरच्या lidaर. Moistureही दाटलेचं

## OMKAR DHURAT

II year, M.Sc. Biological Science

🕜@kalavatavns ¡ Omkar Dhurat

बॅगेत माझ्या, तिची वाकली मान, पण वाकला नाही कणा. आज अचानक माझ्यासंवे. भांडत होती तना तना.

> खरेच होते तिचे. नव्हते खोटे मुळी. आत असे काही, दडले होते उरी.

आमच्या Loopची गोष्ट न्यारी, तुमची असेल निराळी. प्रत्येक Microbiologistची, हिच असे कहाणी.

मी आणि माझी Nichrome loop, जिवलग आहोत दोघे. रोज नवी कथा. रोज नवे सोहळे.

Tere Utne Pehlun Hain

Tere kitne pehlu hain.. Jo chamakti hui dhoop ki kirnon se paani ki lehron ko zarzara kar de, Tere utne pehlun hain... Vo baarish ki boodon ki kashish, jo tere aanchal mein chupe moti kehkaha karde, Tere utne pehlun hain...

Vo ghar ki mushkilahat mein bhi,

Tera phoolon si muskan bikher kar sabko honsala dena, Tere utne pehlun hai... Vo tera chupke chupke se paison ko iss kadar jodna,

Jaise baahar ki bochar mein sookhe tinko ko sametna, Tere utne pehlun hai... Tere aangan mein kadam rakhne se vo gajre ki mehak ka aana,

Tere rasoyi mein kachi ghani se lage chaunk ka bikhar jana, Tere utne pehlu hain... Kamal ke pankhuriyon ki tarah, Apne laakhon pehluyon ko issi tarah samete rakhna, Yeh rab ka shukrana hai ki Teri phoolon si muskan mèin anginat pehlun hain..

## Dear Maa

Dear Maa. Today, I know so much and sit with pride next to you,

But the fact is, whatever little I know, is because of you...

You always have my back, no matter how crazy I get,

I am wrong so many times and you know that, I bet,

You still are calm and serene like a river that flows.

Your struggles and journey, nobody knows.. Deep down inside, I hear your silence, I wonder how on earth can you not have violence,

If anyone was you, they would erupt with rage and burn everything around,

But, you still gracefully hold your battle ground..

I have never seen anyone with so much compassion and love,

In our family jungle, you are my bird Dove, You have the power to turn a rock into a living & loving being,

Fire, Wind and water are the witness to this, They have seen..

I wish I could be just 1 percent of what you are, You are the Sun, and I wish I could just be a tiny star..

You carry yourself with dignity and poise, Your aura is capable of being your voice.. The understanding you hold, a normal human cannot,

I am sure you are a super angel, sent to us by god..

## Phoolon si Khushi

Tere aangan mein kadam rakhne se vo gajre ki mehak ka aana, Tere rasoyi mein kachi ghani se lage chaunk ka bikhar jana, Vo ghar ki mushkilon mein sabko udaan bharne ka honsla dena, Dil lubha jata hai pareshani mein bhi phoolon si muskaan bikherna..

#### ARZOO PURI

5-Year Integrated M.Sc. in Biomedical Science

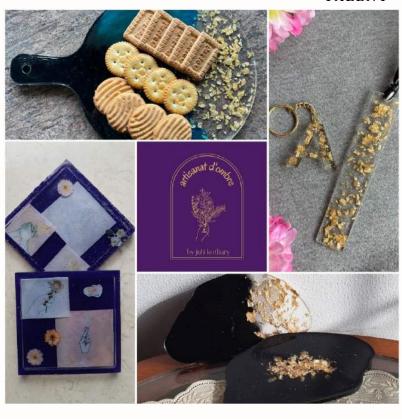
'Creativity is allowing yourself to make mistakes. Art is knowing which ones to keep."



## ARTISANAT D'OMBRE BY JUHI KOTHARY

5-Year Integrated M.Sc. in Biomedical Science (artisanat\_d.ombre





## **SMALL** BUSINESS **OWNERS**

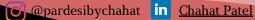
Don't be afraid to go for positions, jobs or take on clients just outside of your knowledge base. It's when you're uncomfortable that you learn and grow the most.

- Barbara Corcoran, Businesswoman



CLOTHING (BRAND) BY CHAHAT PATEL

5-Year Integrated M.Sc. in Biomedical Science







SCI-CHRONICLES | VOL 1

# ALUMINI SPEAK

## **Prathamesh Vala**

## **Editorial Assistant, JOVE**

Pursuing my masters from SDSOS was a boon for me.

The course structure and the teaching modules offered, theoretical as well as practical, delivered by experienced faculties has provided me with immense subject knowledge. SDSOS not only focuses on the curricular aspects but also co-curricular activities like employability workshops and placement sessions which moulds a student who is industry-ready.



## Kartiki Jadhav

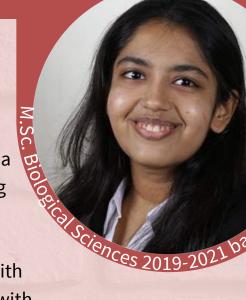
## **Junior Technical Executive, Amvigor Organics**

As a student in the M.Sc. Biological sciences program, I gained the skills and confidence to thoughtfully use a variety of technical approaches in my recent internship. The faculty was very supportive and readily available with their help, I learned how to apply those theories and techniques in various settings. I would highly recommend this program to anyone wanting to expand their theoretical as well as technical knowledge in Science and Technology. This program at SDSOS is fantastic and has changed my career trajectory for the better!!

## Pooja Rohit Doshi

## Scientific officer, Metropolis

My experience at NMIMS SDSOS as a M.Sc. Biological Sciences student was absolutely constructive and worthwhile. The coursework was diverse and designed in a way to prepare us for our succeeding ventures. This, along with the practical sessions, and other co-curricular activities contributed a lot to my development. In spite of the pandemic and lockdown, they managed to carry on with the coursework, exams and other activities online, along with our dissertation project. Lastly, the two years at SDSOS have been really meaningful and a great learning experience for me.



## **Ashni Sundani**

## Scientific officer, Metropolis

The Master's in Biological Sciences, SDSOS NMIMS, programme provided me with a plethora of study opportunities that combine theory and application. The research-oriented program increased my knowledge in designing experiments, writing scientific reports and present scientific research paper. Thanks to co-curricular activities, soft skills training, and practical workshops that were conducted in these two years that helped me gain skills for life that made me ready after college. I am grateful to the faculty members for going above and beyond to help me reach my full potential. Despite the lockdown situation we were given the opportunity to conduct our research at a well known institute. I will always cherish the memories that I made in these two years. Lastly, I would like to thank the school, faculty members and dean sir for an amazing

learning experience that helped me become a better version of myself.

## **Aravind Venkatasubramanian**

My time at SDSOS was an exuberant period of learning and reflection. The teachers, both internal and external, often went out of the way to expose us to the different facets of the field in order to enrich our knowledge. The freedom to explore and think out of the box is impeccable. SOS is a great place to be in if one wants to develop their scientific rigour and achieve mastery in key concepts of Biology.





## Anjali Vaidya

The overall coursework is aligned with the industry requirements. The internship exposure is really helpful for the students. Hands-on experience was given in the practicals and that helped us in our internships. The guest faculties were of top quality. I am thankful to all faculty members and non teaching staff for their constant support and guidance

## **Rachel Correia**

## Scientific officer, Metropolis

Post my bachelors, I was looking for something that gave me a holistic and industry seworthy post graduation degree, and I definitely agree NMIMS-SDSOS was the perfect fit. Its exhaustive syllabi of theory and practicals was certainly top-notch. The internal faculty never failed to support their students in any way, be it academically or emotionally. However this is not it, SOS also gave me an opportunity to showcase my artistic and sporty side. It was really amazing to be in an environment where you are not the only one enjoying, in fact your guides, your teachers enjoy with you and encourage you at every step.





## Nishtha Mahadev Pange

The wide assortment of subjects covered in the M.Sc.
Biological Sciences coursework was what stimulated me
to choose to come to SDSOS and they definitely did
justice to it. The extracurricular activities are fun to be
part of and the various talks that the faculty organised
helped us gain more knowledge with respect to industrial
as well as academic careers. Even during the lockdown
they managed to pull off the entire semester's coursework
over online mode in a hassle free manner. Lastly, SDSOS has
given me memories worth remembering.

## Saurabh Vijay Oswal

The last two years spent at SDSOS have been quite an enriching experience, thanks to the great learning environment, which is complemented by strong faculty with subject matter expertise. The term-end thesis project provided the opportunity to work in a team and develop new traits that will prove to be more than valuable to advance in my research career. Throughout the tenure of the program, I have only experienced a growing interest in the subject.



## Samruddhi Jadhav

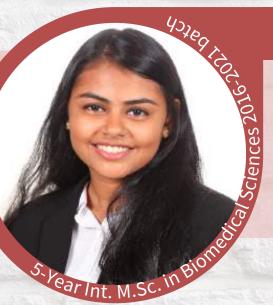
My five years at SDSOS, NMIMS has been full of learning opportunities with personal and academic development. Being an introvert, my growth would not have been possible without such encouraging and supportive professors who are masters in their fields. The curriculum was well designed with access to extracurricular and co-curricular activities. The Master's Dissertation project gave me hands-on experience in a professional working environment.

## **Soumyaa Thakur**

#### **Senior Associate Scientist, Epigeneres Pvt Ltd**

My five years at SDSOS were nothing short of excellent. I received the required support and guidance from the faculty and all my colleagues, and was also encouraged to take up responsibilities and be confident. SDSOS balanced fun and work with extra ordinary extracurricular activities and fun learning.





## **Devanshi Shah**

## Research assistant, Indian Institute of Science Bangalore

My five years at SDSOS have been incredible. I learnt a lot about myself and my passions in life through the guidance offered at the school. It has been five years of growing as a person.

## Urja Parekh

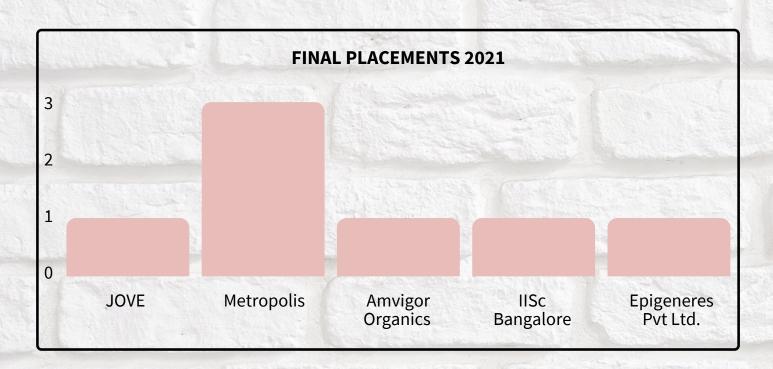
My five years at SDSOS have been nothing short of incredible. Not only was I given the necessary guidance to develop and pursue scientific interests via my course curriculum but was also heavily trained in technical skills to pursue research. Additionally, I have enjoyed my college life, taking part in several extracurriculars and serving as the President of the Student Council and Placement Cell. My overall experience in the college was well-rounded and holistic.





## Kshiti Vaishnav

SDSOS provided me with a holistic experience throughout these five years. A huge credit goes to all the faculty members for their constant guidance and motivation to achieve my career goals. The course curriculum has equipped me with the theoretical and practical training necessary to pursue research. The extracurricular activities and various student council committees to participate made it easy to manage stress.



"I think the success of any school can be measured by the contribution the alumni make to our national life."

— John 7. Kennedy



Aishwarya Patel

1st Year M.Sc. in Biological Sciences (Writing/Editing)



Akshay Paradkar

1st Year M.Sc. in Biological Sciences (Writing)



Akshita Nagar

4th Year Integrated M.Sc. in **Biomedical Sciences** (Creatives/Data Collection)



M.Sc. in Biological Sciences (Creatives/Editing)



Arzoo Puri

4th Year Integrated M.Sc. in Biomedical Sciences (Data Collection/PR)



## Angarika Balakrishnan

M.Sc. in Biological Sciences (Editing)



Ishana Rajgopal

4th Year Integrated M.Sc. in **Biomedical Sciences** (Creatives/Data Collection)



Juhi Kothary

1st Year Integrated M.Sc. in **Biomedical Sciences** (Creatives/Editing)

# MEET OUR TEAM







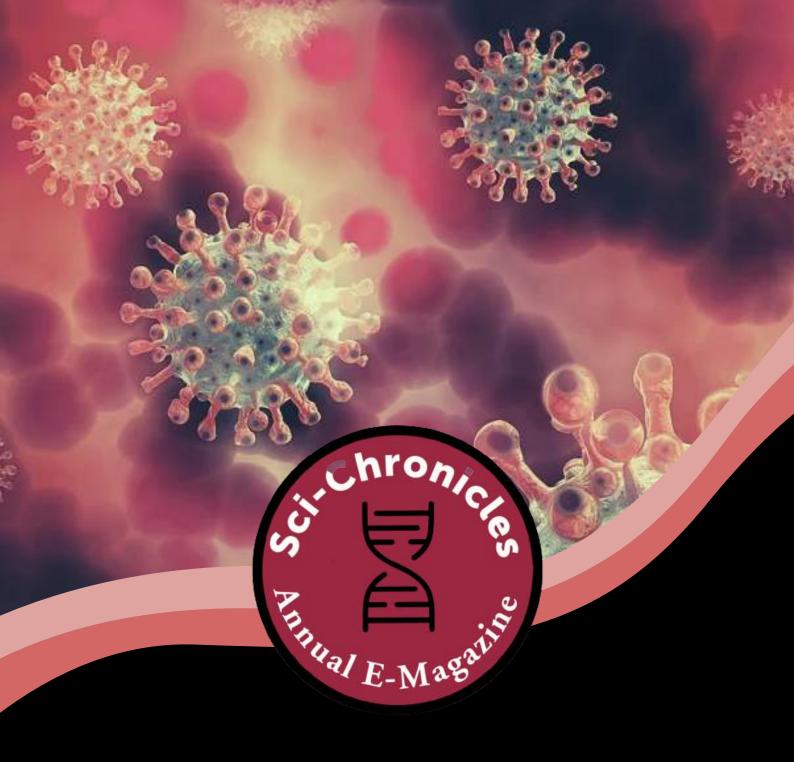


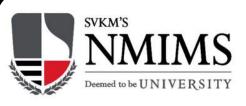












# SUNANDAN DIVATIA SCHOOL OF SCIENCE

## **SVKM's Narsee Monjee Institute of Management Studies**

Deemed to be University (as per UGC Norms)

V. L. Mehta Road, Vile Parle (West), Mumbai – 400 056, India

Tel: 91-22-4235 5555

**Email**: admissions.sos@nmims.edu **Website**: http://science.nmims.edu/