

Turbulence, tempest, trepidation, troubled....these are words that can relate to the Second Wave, and yet tenacity, triumph, tolerant have ensured that the Spirit does not wane. With that spirit let us herald this issue.

In every issue, as we begin to write about our alumni, who have scaled the heights of achievements braving the hurdles, it instills in us the "Spirit" of surging ahead come what may!

In the ever enthusiastic Anindita Mehta is such an indefatigable Spirit. She is the Chief General Manager and the Lab Director at the Centre for Consumer Education Research, Ahmedabad. She has been the Coordinator for ENVIS Project, a dedicated project on Environment literacy – Eco labelling and Eco friendly products. She has also been part of innumerable discussions on Consumer related

subjects at various forums including Doordarshan. Her lab has worked extensively on adulteration, and studying permissive levels of constituents in products available in the Indian Market. In a recent study, her lab identified 8 biscuit brands that had high levels of both fat and sugar, and thus brought an awareness to the Consumers especially for those who are diabetic. Ahmedabad Mirror reported their study in an article.

City AhmedabadMirror

Digest this

High sugar, fat content in digestive biscuits: CERC

Study conducted on eight brands by Consumer Education & Research Centre revealed that contrary to ads, the biscuits are unhealthy

Ahmedabad Mirror Bureau
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Do not get carried away by the commercials of digestive biscuits. A Consumer Education and Research Centre study conducted on eight brands of these biscuits revealed that most of these biscuits have inappropriately high fat and sugar content, making them very unhealthy contrary to the general notion.

The survey revealed that of the surveyed eight brands, the average fat content per 100 gm was 19.67 gm and the highest fat content in Unilever Daily Digestive Oatmeal Cookies was a whopping 23.4 gm. "The average sugar content per 100 gm was 14.79 gm while the highest sugar content in one brand (in Sunfeast FamLite 5 grain Digestive High fibre) was as much as 20.1 gm," according to a release issued by CERC.

Anindita Mehta, Chief General Manager and Laboratory Head CERC said, "From a health point of view, these are dangerously high levels. If you lead a sedentary lifestyle and consume 100 gm digestive biscuits with 23.4 gm fat content, you have already exceeded your recommended daily intake of 20 gm fat. If you are a man with a moderate activity lifestyle you would have consumed almost 80% of your recommended daily fat intake and if you are a woman with moderate activity lifestyle you would have consumed over



The centre has lodged a complaint against the advertisement to ASCI, which advised the advertiser to withdraw or modify ad

90% of your daily intake of fat."

"Similarly, the sugar levels in these biscuits are very high too. Thus, contrary to popular belief and how they are promoted, digestive biscuits are unhealthy," she added.

For the diabetics, those are "shockingly" high proportions of sugar and fat. Worse, 7 out of 8 brands did not mention the salt/sodium per serve information in the Nutritional Information table on label (total salt content) even though salt was mentioned in their ingredients list.

Thus, one doesn't know what is the salt content in these biscuits except in one brand, said the CERC release.

The centre has lodged a complaint against the advertisement to Advertising Standards Council of India (ASCI). After studying the advertiser's response ASCI felt that "...the advertiser is promoting a product that has sugar and not necessarily wholesome..." Thus, the claim, "When fibre-rich whole wheat rolls into a wholesome treat" is misleading by ambiguity and exaggeration, and is likely to cause grave and widespread disappointment among consumers.

The advertiser was advised to withdraw or modify the advertisement by March 30. But the ad continues to be on the Facebook page of the advertiser, says CERC.

City AhmedabadMirror

Govt, AMC boost for hydroponic farming

Agri dept staff will train residents in using it to encourage them to grow vegetables in homes; method ideal for small spaces

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The state government is planning to give a big push to hydroponic farming in the cities in a bid to encourage households to grow vegetables in their own homes. The agriculture department said plans are afoot to tie up with municipal corporations like AMC to enable it to reach out to more households and residential societies with the hydroponic technique of growing vegetables. Hands-on training will be provided by agri department staff to residents with the help of DIY (do it yourself) videos, a senior official said.

Hydroponic farming can be done in a small space also like balcony, terrace, backyard, garden and even vertically. The technique consists of growing plants without soil, by using mineral nutrient solutions in a water solvent with the roots exposed to the nutritious liquid and supported by stones or gravel.

This technique of farming is catching on in cities like Ahmedabad and others in the state owing to the benefits it brings like low costs and the small space that it requires to flourish in homes. The state agriculture department is planning to take the technique to the public with the launch of a new programme.

Research scientist Anindita Mehta told Mirror, "Hydroponics requires 90% less water than usual farming. One can grow an exotic variety of crops, even off-season. We started experimenting about it a year ago at our farm and the results are encouraging. It gives 30% higher yield and

40% faster growth than the traditional method. We have grown spinach, tomatoes, mint, pepper, brinjal, coriander and basil."

According to industry experts, hydroponics is best suited for homes and terrace gardens, and a boon for places with water scarcity and infertile soil like arid regions.

A few startups in Ahmedabad too are helping out individuals and institutions in hydroponics farming.

Priyam Sameer, founder of Urbankhet, said "We catered to 4,500 customers in 2020. We are also helping about 120 farmers in areas near Ahmedabad." Farmers on an average get a yield of about 1.2 tons a season while those using hydroponics get yields of up to 4 tons a month from one acre, said Sameer.

Anindita Mehta has been growing several plants hydroponically

It is amazing to see how she forays into areas of science that has a direct influence on society. Within a couple of years, she has also developed Hydroponics as a technology to save water and yet get good and higher vegetable yield. This is an area that even the Government has been promoting and she has now entered into agreements with several institutions to train and promote the technology as a consultant.

Other than her passion in research, you will find her actively participating in various cultural and creative pursuits. You may end up swaying to the songs that she sings. Moreover, she is actively contributing to the growth of our department as a member of the Board of Studies.

In this issue, we take the liberty of writing about another Alumnus, Dr. Gunjan Mehta. It was a delight to read about him and his achievement on the morning of 19 February 2019 in the newspaper. His journey is interesting as after his Masters, he worked in the industry and he thought that it was not his calling and took the plunge to move into research again. His sojourn led him to NIH, USA for his post-doctoral studies and now at IIT, Hyderabad, he has been shortlisted for Innovative Young Biotechnologist Award from DBT, India. We wish him the very best in developing Advanced Bio-imaging technique that can enhance studies in genetic disorders.

GUNJAN MEHTA TO DEVELOP ADVANCED BIO-IMAGING

Researcher having roots in city receives ₹70L grant

TIMES NEWS NETWORK



Ahmedabad: Gunjan Mehta, an assistant professor at IIT Hyderabad (IIT-H), has received Innovative Young Biotechnologist Award from the Department of Biotechnology, ministry of science & technology of Government of India. Mehta got his BSc degree from St Xavier's College in Ahmedabad and completed his MSc in microbiology from the MS University of Baroda.

The highly competitive award, which grants Rs 70 lakh for the period of three years, received over 950 applications, out of which 15 entries were selected. The award is granted for innovative ideas at the frontier of biotechnology.

"Before joining IIT-H, I got my PhD from IIT Bombay in biosciences and bio-engineering and later completed my post-doctoral research at the National Cancer Institute, National Institutes of Health, MD, USA," said Mehta. "My work focuses on chromosomal biology and gene regulation using advanced bio-imaging technologies. With the award, I intend to develop sophisticated technologies to understand the role of chromatin remodelers in meiotic chromosome segregation."

The field has applications for developing therapeutics to treat infertility, genetic disorders and cancers, he added.

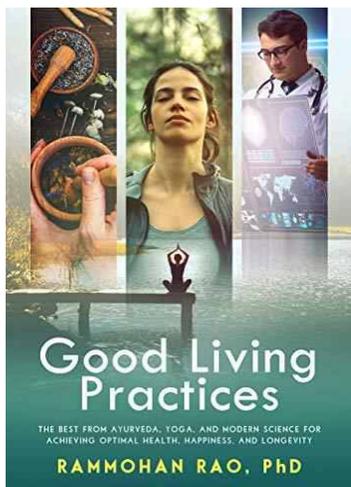
"St Xavier's has played a major role in shaping my interest in biotechnology and inspired me to pursue research and a career in the field. I am also thankful to my family for their inspiration," said Mehta.

The cutting-edge technology can witness the cellular-level protein function. "We also intend to understand aneuploidy (presence of abnormal number of chromosomes in a cell), which is a major cause of cancer," he added.

β Helix Colloquia

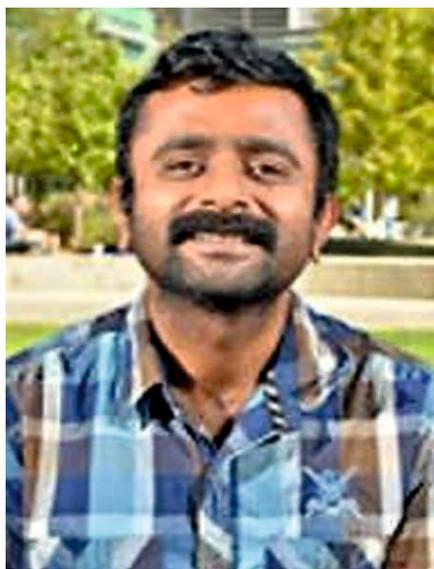


As part of the β-helix colloquia, we were honoured to have a talk by Dr. Ram Mohan on 09 January 2021. Dr Ram, an alumnus of 1983, was in the second batch of Biochemistry. Over the past 20 years, he has made extensive contributions to the understanding of age-associated memory loss and neuronal cell death with special emphasis on Alzheimer's disease (AD). Dr. Ram, currently, Principal Research Scientist-Apollo Health, Faculty-California College of Ayurveda delivered his talk on "Clearing the Fog: Integrative Management of Alzheimer's Disease". An intellectually stimulating event where he spoke on the theories, diagnostic issues, role of Apo E, system based, and personalized cure, he was able to enthrall all the 64 students who were present online for the talk. The talk called for a life style change and the need to keep challenging the brain to increase neuroplasticity or to have greater neuronal branching connections.



Using his experience in **Neuroscience, Yoga and Ayurveda**, he has published a book "Good Living Practices", which is available on Amazon and has attained the Best seller Ribbon. In his own words, "My book **Good Living Practices** will help people take optimal health and wellness in their own hands. The book will also serve as a resource by providing suitable health and wellness tips together with mechanistic explanation".

Dear Alumni,
B helix colloquia is held any number of times in a year, and it is a means of giving an insight to our current students, the progress and diversified areas of biological sciences. It also becomes a means of direct interaction of our alumni with the students and the department. For us, in the department, it is a feeling of immense happiness, when we get to hear from you. Therefore, please feel free to give a talk whenever it is convenient to you. It is a learning process for all of us and more so a connect that cannot be defined. :)



Another very interesting colloquium held on 28 January 2021 was on “Role of Placental Mechanistic Target of Rapamycin Signalling in Regulating Fetal Growth”. It was our honour again to have Dr. Frederick Rosario, Assistant Professor, Department of Obstetrics and Gynaecology, University of Obstetrics and Gynaecology, Colorado, USA, sharing with us his research work and answering the questions that the participants had.

The talk revolved around the fact that a Nation's health is reflected in the health of her women and children. Research elucidating the cellular and molecular mechanisms regulating placental folate transporters, mitochondrial respiration and fetal origins of adult disease was his main investigation. The mechanisms by which mechanistic Target of Rapamycin (mTOR) signaling regulates these transporters and mitochondrial respiration in trophoblast using radioisotopes, indicate that mTOR signalling is a positive regulator of folate transporters and mitochondrial respiration. A novel mouse model of obesity with foetal overgrowth was elaborated in the talk.

Happy Happenings!

We are happy to share that a few of our students have been able to crack competitive exams like JAM, JGEEBILS, TIFR, GATE etc. We congratulate Nisarg Patil, Shreya Thacker, Raksha Bhansali Yuti Vaghela, Harshita Kukhreja for having taken up the challenges and wish them the best for more challenges ahead. Our youngest faculty. Srishti Chhabaria has cracked the GATE and we congratulate her too.

Ms. Nainika Babbar, Sem VI BSc Biochemistry with Vocational Biotechnology, has been selected for one of the prestigious conferences conducted by Harvard University, **HPAIR'21**- Harvard College Project for Asian and International Relations as a delegate.

It was very heartening to see that many of our students participated in an Ideathon Competition “Mindspar 3.0: Adding New Dimensions”, organized by The Biochemical Society of Sri Venkateswara College in collaboration with the Regional Centre for Biotechnology, Faridabad. Having gone through several rounds, Ms. Tukadiya Krupali, Ruchi Lohar, Sanskruti Agravat and Shikha Shah were the Runners –Up. Their ideation was on Weaponizing Algae to Combat Climate Change. They found the competition very challenging, different and interesting.



Ms, Seema Patangiyawala, of the current MSc Biochemistry batch has joined H.K Acharya and Co as a Patent Analyst. Mr. Maharshi Suthar of the same batch has been inducted in the QA department of ZyduS Cadila and recently, Ms. Angela Rajan and Mr. Jim Christian, both from the graduating MSc Biotechnology batch have been selected for positions in O2h Group through a Virtual Campus Recruitment Drive. Ms. Ayushi Pareek of the same batch has been offered the position of an Analyst at the G D Research Centre Pvt Ltd. Happy to see them progress to the next level.

Ms. Dikshita Lodha, who was in the 2018 – 2020 batch of MSc Biochemistry, had carried out her dissertation under the guidance of Dr. Subroto Hati, and we are happy that her work has resulted in a publication in Journal of Food Processing and Preservation (May 2021). The paper coauthored by Sujit Das and Dr. Subroto Hati is entitled, “Anti-oxidant activity, total phenolic content and biotransformation of isoflavones during soy lactic – fermentation”.

Devika Kurup, Sebastian V A and Sudeshna Menon. “Immunological changes in *Brassica juncea* after treatment with plant immunizers”. EJCMCM (2020). Vol 7, Issue 11, ISSN 2515 – 8260. This paper too has stemmed out of a dissertation project. Devika is currently doing her higher studies in Norway and would like to specially mention that she conducted a few lectures for the current MSc Biochemistry batch. It is heartening to see her grow in Neurosciences and we wish that she moves ahead to do wonders in the field.

Faculty Corner!

Dr. Avni Divatia and Dr. Kinjal Bhatt have contributed a chapter titled "Bioconversion of fruits and vegetable waste for production of exopolysaccharides" in the book, *Biotechnology and Sustainable Utilization*, a Springer – Nature Publication.

Dr. Shital Doshi successfully completed an online refresher course from Pune University on Systems Biology and an online workshop on video development and editing with a A+ grade. Dr. Sudeshna Menon completed one on Advanced Techniques in Molecular Biology from Ruia College, Mumbai. Dr. Sebastian and Dr. Sudeshna also successfully completed a faculty development programme on "Protein - Receptor Binding Chemistry"

Dr. Sebastian's Doctoral Thesis was published as a book and was acknowledged for being a good research work. He responded to a call by Archers and Elevators Publishing House, who shortlisted his thesis for publication.

Creative Pursuits!

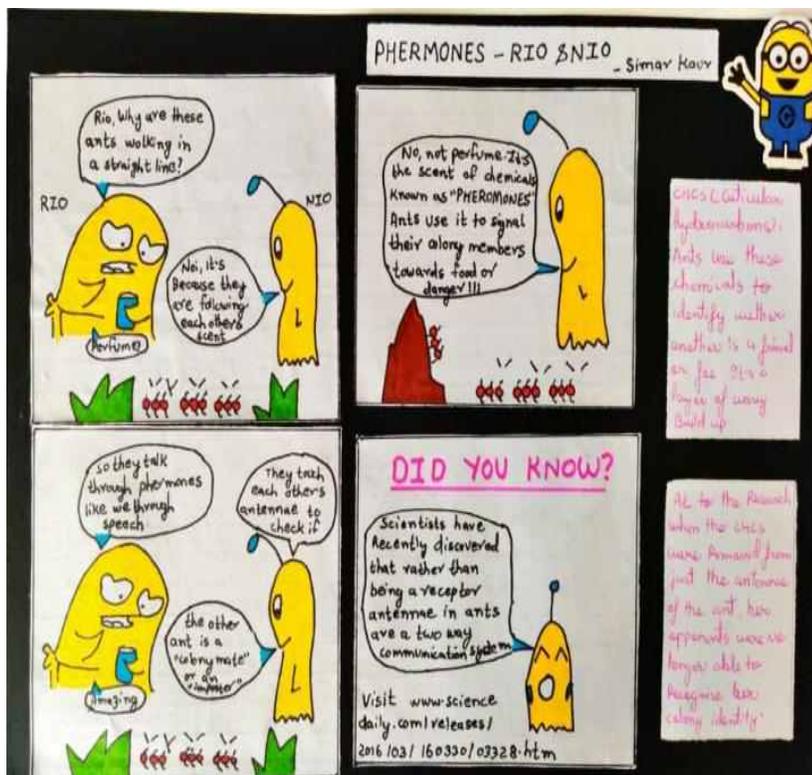


This is a beautiful Mandala Art created by **Vasundhara Dheer** of the first year Biotechnology. A mandala is a spiritual and ritual symbol in Asian cultures that can be understood in two different ways: externally as a visual representation of the universe or internally as a guide for several practices that take place in many Asian traditions, including meditation. In Hinduism and Buddhism, the belief is that by entering the mandala and proceeding towards its center, you are guided through the cosmic process of transforming the universe from one of suffering into one of joy and happiness.



Jim Christian, MSc Biotechnology, has been expressing through paintings. He has made several paintings during this time period of uncertainty giving wings to his creativity.

Simran Kaur Tuteja, BSc Biochemistry – Voc. Biotech made science fun with a scientoon.



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