

32ND EDITION

APRIL 2023



Abhyudaya
Reliving the Legacy



FOOD OMICS

AN ANALYTICAL APPROACH TOWARDS FOOD INNOVATION

Words from the Editor's desk...

This
Issue



"One ship drives east and another drives west
With the self-same winds that blow;
'Tis the set of the sails
And not the gales
That tells them the way to go
Like the winds of the sea are the winds of fate
As we voyage along through life"



To all distinguished readers,

Hereby humbly presenting you the 32nd edition of Abhyuday, brought to you by the 57th batch of M.Sc. Food Technology 'CORNquerrors'.

There is no better way to gain knowledge and insight than from those who have walked the path before us. Listen to Bonita Araniha (2013-2015) from batch Special 26 for her valuable lessons in "EXPERIENCE TALK"

Keep yourself updated with the buzz going on within the industry in "INDUSTRY BUZZ"

Come on a ride with us by joining in a spectacular journey from welcoming our freshers' batch and many more in "KAMPLUS KHABAR"

Keeping sustainability at its core, have a glimpse at the success story of The Alt Co's plant-based milk products in "FOOD INCORPORATED"

Read about our alumni, Mr. Tirupati Pawar from batch Kung Food Pandas, as he talks about his joyous nostalgia of cherished moments in the "ALUMNI COLUMN"

"CAREER CORNER" to equip yourself in the period of automatization in industry 4.0!

Let's take a moment to appreciate the artistry of our hostel inmates in the "KALAKRITI"

Step into a world of brain-bending fun with our puzzle line-up in the "GAMES" section

Embrace the beauty of Spring portrayed in the PHOTOGRAPHY section.!!!

Regards
Co-Editors-in-Chief

BASI PRIYANSHI A & MAHENDRA B

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About Abhyuday.....

Emerging as a pioneer in food research in 1950 and continuing to provide an impetus to the food and allied sectors, CFTRI is the backbone of food-based scientific as well as industrial developments in India. The genesis of Abhyuday owes itself to the heritage that was created by the great minds that have been a part of this institution ever since the beginning and emerged from here as successful individuals spreading the glory of this place far and wide.

Abhyuday is a Sanskrit word which means beginning or awakening...

Awakening for re-inventing the vigour and strength by breaking away from the shackles of mediocrity and sombreness...Awakening for being the change and leading the way...

The e-newsletter, it is expected, would try and achieve its goal of promoting dissemination of the right and benign knowledge and act like an umbilical cord that would keep us connected to our mother institution.

Industry Buzz will include the past months developments in food industry viz. M&A, new product launches, new market entrants, market reviews, inventions and innovations etc. The Cover-Story will track one most important development of the month in the food industry with a detailed analysis from all the quarters. What The Food! will shed light on the interesting and lesser known facts about food. Kampus Khabar will attempt to track the campus news, developments, conference and seminars, tech-talks by our alumni. Career Corner would be the space where articles related to interpersonal and communication skill development, interview etiquette, CV writing skills etc. would be stressed.

The most exclusive of all the sections would be the Alumn Column which will feature technical articles, literary and artistic works, tweets and blogposts, creative and memorable contributions by our distinguished alumni. Also, we shall run a feature on one prominent CFTRIian in any field in each edition.

Besides, updates regarding upcoming seminars and events, congratulatory messages on birthdays and anniversaries, placements and promotions of alumni will also be featured. Advertisements from industries and entrepreneurs will also be featured for free. With a view to ensure the involvement of the readers and make the experience worthwhile, some games like crosswords, food quiz, jigsaw puzzles, riddles etc. would also be incorporated.

FOOD OMICS

ANALYTICAL APPROACH TOWARDS THE FOOD INNOVATION

Food science has evolved over the years to incorporate technological advancements to better understand the various properties of food that influence its quality, safety, and nutritional value. Omics-based technologies, which include genomics, transcriptomics, proteomics, and metabolomics, have revolutionized food science by providing a more comprehensive understanding of food at a molecular level. This essay will explore the various applications of omics-based technologies in food science, including their role in food safety, quality, and nutrition.

Genomics in Food Science:

Genomics is the study of the genetic information contained in an organism's DNA. In food science, genomics is used to identify and characterize the genetic makeup of food products. This information can be used to improve the safety and quality of food, as well as to develop new food products with desirable traits.

One of the major applications of genomics in food science is the identification of foodborne pathogens. Genomic analysis can identify the genetic markers that distinguish harmful pathogens from non-harmful bacteria. This information can be used to develop more accurate and rapid methods of pathogen detection, which is crucial for food safety.

Another application of genomics in food science is the development of new crop varieties and genetically modified organisms (GMOs). Genomic information can be used to identify the genes responsible for desirable traits such as disease resistance, drought resistance, nutritional content, flavour, and increases yield. This information can be used to develop new crop varieties that are more nutritious, flavourful, and resistant to pests and diseases.

Transcriptomics in Food Science:

Transcriptomics is the study of the complete set of RNA transcripts produced by an organism. In food science, transcriptomics is used to study gene expression patterns in crops, animals, and microorganisms. This information can be used to better understand the biochemical pathways involved in food production, as well as

to identify potential targets for genetic modification. And to determine the effects of different conditions such as temperature, light, and nutrients on gene expression. One application of transcriptomics in food science is the study of food allergens. Transcriptomic analysis can identify the genes responsible to produce allergenic proteins in foods. This information can be used to develop new methods of food processing that reduce or eliminate the presence of allergenic proteins. Transcriptomics has also been used to identify genes responsible for desirable traits such as flavor, aroma, and nutritional value.



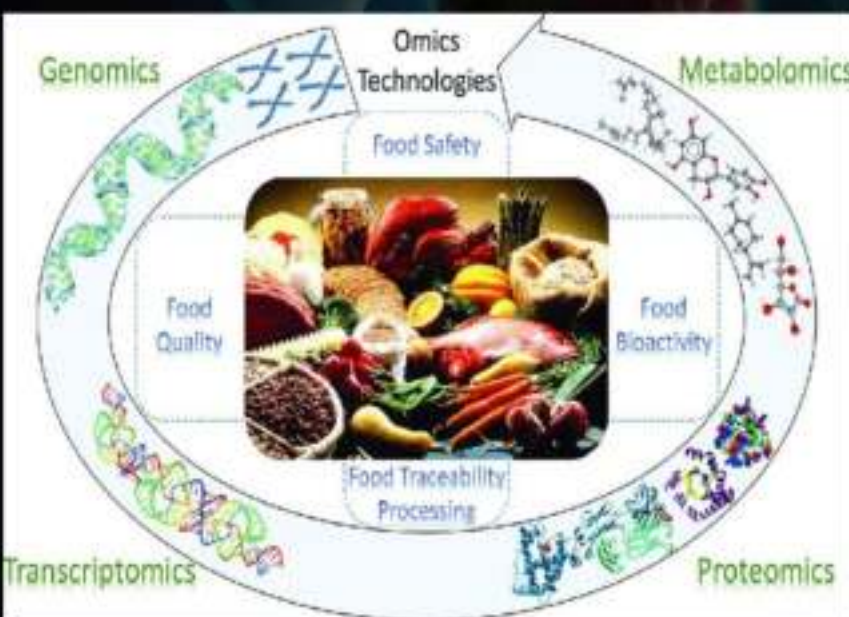
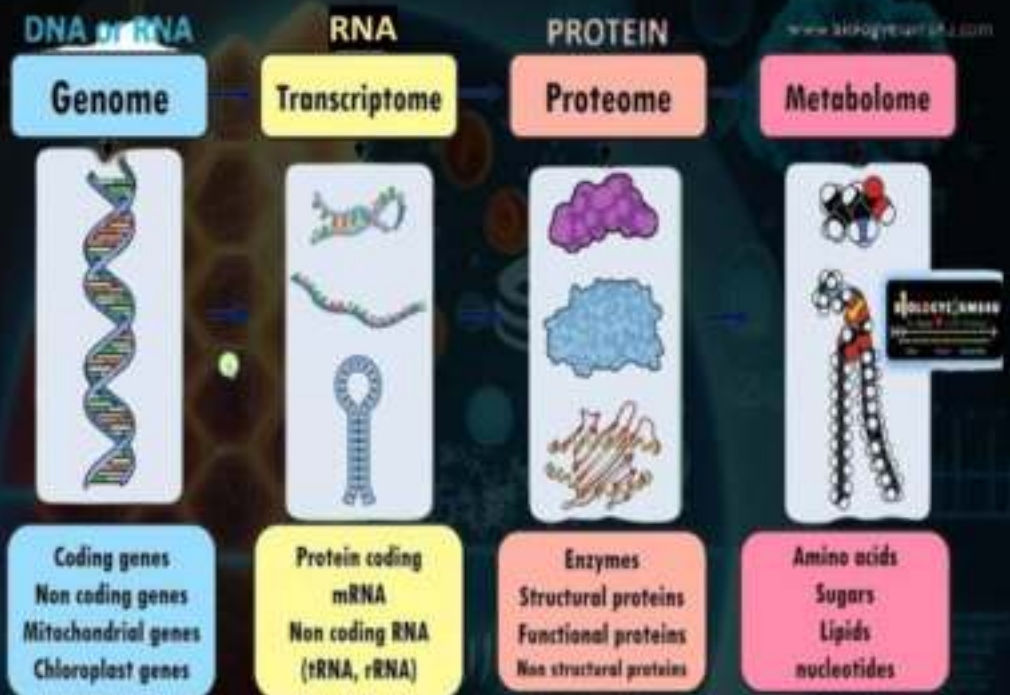
Proteomics in Food Science

Proteomics is the study of the complete set of proteins produced by an organism. In food science, proteomics is used to identify and characterize the proteins present in food products. This information can be used to improve the quality, safety, and nutritional value of food and to develop new varieties of crops that are hypoallergenic.

One application of proteomics in food science is the identification of food contaminants. Proteomic analysis can identify the proteins present in food products, including those that may be harmful or allergenic. This information can be used to develop new methods of food processing that reduce the presence of contaminants.

Metabolomics in Food Science

Metabolomics is the study of the complete set of small molecules, or metabolites, produced by an organism. In food science, metabolomics is used to study the chemical composition of food products. This information can be used to better understand the biochemical pathways involved in food production, as well as to identify potential targets for genetic modification.



One application of metabolomics in food science is the study of food flavour and aroma. Metabolomic analysis can identify the small molecules responsible for the flavour and aroma of food products. This information can be used to develop new food products with desirable flavour and aroma profiles. Metabolomics has also been used to identify metabolites that are produced by microorganisms in food. Metabolomics can be used to assess the quality of food products, such as meat, fish, fruits and vegetables.

By analyzing the metabolite profiles of these foods, it is possible to identify changes in their Composition, freshness and nutritional value.

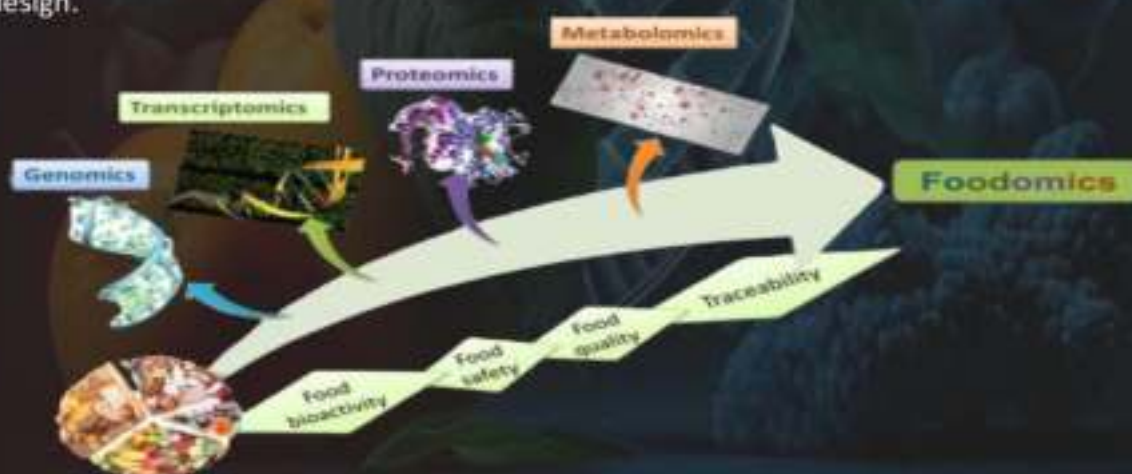
Limitations

1. **Sample preparation:** Sample preparation is crucial for omics analysis, and it can be challenging for food samples due to their heterogeneous nature. Standardized protocols for sample preparation are needed to ensure the reproducibility of results.
2. **Data analysis:** Omics data analysis can be complex and requires specialized knowledge and expertise. Statistical tools and bioinformatics pipelines are needed for data pre-processing, normalization, and interpretation.
3. **Data interpretation:** The interpretation of omics data can be challenging, particularly in food science where there is a lack of understanding of the biological relevance of many food components. It is crucial to integrate omics data with other analytical methods and to establish a link between the omics data and the biological significance of food components.
4. **Cost:** Omics technology can be expensive, particularly for large-scale studies. The cost of sample preparation, data acquisition, and data analysis can limit the use of omics technology in food science.
5. **Availability of reference data:** Reference data, such as genome sequences or metabolite databases, are essential for omics analysis. However, for many food species, reference data are limited or non-existent, which can hinder the analysis of omics data.

Overall, while omics technology has great potential in food science, its limitations need to be carefully considered and addressed to ensure the reliability and reproducibility of data, and its usefulness for food safety, quality and nutrition.

Conclusion

Omics-based technologies have revolutionized food science by providing a more comprehensive understanding of food at a molecular level. These technologies have numerous applications in food safety, quality, and nutrition. Genomics is used to identify and characterize the genetic makeup of food products, transcriptomics is used to study gene expression in food products, proteomics is used to identify and characterize the proteins present in food products, and metabolomics is used to study the chemical composition of food products. Incorporating omics-based technologies in food science and research will promote the design of customized nutritional products and pave way for a more scientific-based approach to food design.



Reference

Omics Technologies in Food Science. Edited by Yelko Rodriguez-Carrasco and Bojan Šarkanj, MDPI, 1 July 2022, www.mdpi.com/books/book/5756.



EXPERIENCE TALK

Bonita Aranha

2013-2015 (Special 26)

Founder & Director

Beacon Global Food Consultancy

❖ **How has the CFTRI assisted you in developing a successful professional career?**

CFTRI has been an invaluable resource in my career development. It formed a strong foundation of education and helped me to develop my skills and know-how in the field of Food Technology, which has been a huge advantage for me in the professional world.

❖ **What obstacles you encountered to get to this position and how did you overcome them?**

I had to encounter several obstacles while starting my own food consultancy firm. As a first-generation entrepreneur, one of the biggest challenges was: a lack of mentorship & guidance. I could overcome this by constant learning and unlearning process. Another biggest obstacle was my age: I started my business at a relatively young age. Gaining client's trust at this age was difficult. However, I could overcome this by demonstrating my expertise & knowledge in my domain. I made sure to stay up-to-date on the latest food trends, regulations & showcase my skills through my work. Over a period of time, I was able to build a reputation for myself as a trusted & reliable food consultant.

❖ **What are the biggest challenges the food technology faces in today's industry and suggest how to work and stay ahead of those challenges?**

One of the biggest challenges faced in the food industry is the rising cost of raw materials due to rising inflation. This results in compromised finished products and lowered profitability. To tackle this companies can use cost optimization strategies to ensure that they are able to maintain their margins. Another challenge faced is sustainability and reducing carbon footprint. Companies can address this by mindful sourcing, reducing waste and improving efficiency in their supply chains.

❖ **What motivated you to move abroad and work for a firm and what were some of the biggest differences you notice in the food industry and culture?**

I never considered relocating abroad because I've been passionate about promoting Indian Food Business. This could be because of my firmly ingrained cultural loyalty.

❖ **What is your under-graduation background and what motivated you to switch to food technology?**

I did my bachelor's in biological science in order to pursue my career in forensic studies. The "One State One Seat" concept of CFTRI caught my attention. This motivated me to take it as a challenge to crack CFTRI entrance test.

- ❖ In your opinion what are some of the most important skills or qualities that a successful food technologist possesses?

Learning is a continuous process even if you are successful or not. In the quest of success and perfection, we fail to learn and improvise ourselves. Therefore, it is necessary to have a learning mindset which will help us to strengthen our skills and abilities.

- ❖ Could you tell us about any exciting projects you have worked on or working on and what you hoped to achieve from them?

We have several exciting projects coming up in our pipeline and we cannot choose one as we consider all our projects like our baby. However, we are working on trending categories such as vegan food, millet-based products, healthy snacks, plant-based beverages, clean-label products, etc.

- ❖ How to balance innovation, and creativity with practical considerations like cost, scalability, and regulatory compliance when developing new products or processes?

As a food consultancy company, we believe in taking an integrated approach to product development. It enables us to create products and processes that are both innovative and sustainable. This is one of the reasons we focus on creating holistic solutions that incorporate all aspects of development.

- ❖ What are some future trends and development which you are most excited about in the food industry?

I think that the future of food is going to be very exciting. I foresee veganism, sustainability and clean-label foods as top trends. Veganism trend is growing big with every passing year. It has paved way for sustainability. Post-pandemic, consumers are gravitating towards health. They are making a conscious choice of being aware about the ingredients used.

- ❖ What advice you would give to someone who aspires to be a foodpreneur (entrepreneur in the food business) and what are the most important things to keep in my mind when starting out?

Believe in your idea. Have a vision. Strategize your plan and be ready to take big risks when required. Not to forget- "Patience is a Virtue" in any business for that matter.



INDUSTRY BUZZ

1. Marico Limited launches Saffola Munchiez: "A Range of Healthy and Tasty Options Made from Indian Super Grains."

Marico Limited, through its Saffola Munchiez – the brand that aims at "snacking better for you", has been continuously developing new, healthier food options that also meet the changing tastes and expectations of contemporary Indian consumers. The brand is driven by rising demand for healthier snacking options in packaged snack segment. As a part of it, the brand has recently introduced Saffola Munchiez Ragi Chips and Saffola Munchiez Roasted Makhana, in a range of flavors. These ready-to-eat snacks are made with wholesome, nutritious



ingredients like ragi and makhana, two super grains native to India. Ragi chips have 50% less saturated fat than chips fried in palm oil. Currently launched in two mouth-watering flavours – Masala Twist and Takatak Tomato. Makhana is introduced in two sumptuous flavours – Cheezy Onion and masala twist. To add a healthier note it is roasted rather than fried which gives less saturated fat content.

2. Sunpure forays into the spices market with powders of red chili, turmeric & coriander.

South India's largest edible oil brand, Sunpure has forayed into the Rs 25,000 crore branded spices market with the launch of red chili powder, turmeric powder, and coriander powder. Soon, the company will be unveiling its blended spice mixes as well as new product categories like grains, pulses, and dry fruits. Sunpure spices are made from pure spices handpicked from farms that adopt sustainable farming practices. They do not have any artificial colours, artificial flavours, or added preservatives, thereby bringing out the natural colour, flavour, and aroma of the spices. The spices are also processed carefully to retain the bioactive component like capsaicin in chili, curcumin in turmeric, and essential oil in coriander. They are carefully graded, scientifically processed, and hygienically packed, in accordance with the quality parameters of the Food Safety and Standards Authority of India, Good Manufacturing Practice (GMP) and Good Hygiene Practice (GHP), ensuring food quality and safety throughout the food supply chain. That apart, the manufacturing process is eco-friendly. The company uses 100% green electricity generated by windmills, producing eight times more power than it consumes.



3. APEDA launches gluten-free & RTE millet products for all age groups at affordable prices.

In a move aimed at providing a global platform for millet products, the Agricultural & Processed Food Products Export Development Authority (APEDA) launched a variety of millet products for all age groups at affordable prices ranging from Rs 5 to Rs 15 at the AAHAR food fair, which is Asia's biggest B2B international food and hospitality fair. According to the press note, all the millet products launched by APEDA are gluten-free, 100% natural, and patented. The launched products are cream biscuits, salt biscuits, milk biscuits, ragi peanut butter, jowar peanut butter, jowar upma, Pongal, khichadi, and millet malts (jowar, ragi, bajra).

APEDA also launched a variety of "Millet in Minutes" products under the category of Ready-to-Eat (RTE) such as Upma, Pongal, Khichadi, Noodles, Biryani, etc., which is a breakthrough in the food sector as it's the first RTE millet product in the market to cater fast-paced world at their convenience in a healthy way. All the RTE products are vacuum processed without any additives, fillers, or preservatives. Nutrition value is retained as original with a shelf-life of 12 months in ambient temperature. In view of the nutritional value of the millets, the government has notified millets as nutri-cereals in April 2018. Millets are a rich source of protein, fiber, minerals, iron, and calcium and have a low glycemic index. In March 2021, the United Nations General Assembly (UNGA) declared 2023 as the International Year of Millets. Because of initiatives of the government, the production of millets increased from 14.52 million tons in 2015-16 to 17.96 million tons in 2020-21 and the production of bajra has also increased from 8.07 million tons to 10.86 million tons during the same period.



4. Wow life science crunchy unsweetened peanut butter.

WOW Life Science, a leading FMCG and wellness brand, has launched its new peanut butter range with a twist. It has developed the first peanut butter with superfoods in India after doing significant customer research and seeking advice from experts and has introduced two variants: one with super seeds (chia, pumpkin, watermelon, and sunflower) and the other with Sattu (roasted chana powder). Loaded with these superfoods, WOW Life Science's Peanut Butter is power-packed with protein and nutrients like Omega 3, Vitamin E, and Magnesium. They are 100% natural and have no added sugar, palm oil, preservatives, or emulsifiers. Pure jaggery is also used to sweeten them so they taste good.



FSSAI POLICIES AND REGULATIONS

FSSAI for the first time releases regulatory standards on Basmati Rice.

As per newly introduced standards by FSSAI, Basmati rice (including brown basmati rice, milled Basmati rice, parboiled brown basmati rice, and milled parboiled Basmati rice) shall possess the natural fragrance characteristic of basmati rice and be free from artificial colouring, polishing agent and artificial fragrances. According to the FSSAI, these standards are aimed at establishing fair practices in the trade of basmati rice and protecting consumer interests both domestically and globally. The standard will be implemented from 1st August 2023.



FSSAI imposes mandatory lab testing reports to manufacturers.

On 13th January 2023, FSSAI issued an order regarding the mandatory upload of six-monthly lab testing reports on FoSCoS. As per the order, the food authority has mandated that all manufacturers (including Repacker and Relabeller) shall, through FoSCoS, either upload six monthly lab testing reports of food products or link such lab reports from the InFoLNet (Indian Food Laboratories Network), wherever the samples are analyzed by FSSAI notified labs. The FBOs must upload the reports within one month from the closing date of respective half-yearly periods, i.e., by 31st October for the period of April to September and 30th April for the period of October to March.



FSSAI notifies the import of high-risk food products at specific ports.

On 11th January 2023, FSSAI issued a notice regarding importing high-risk products at specific ports. In order to facilitate a robust import control system and ensure efficient monitoring and traceability of high-risk products. FSSAI has issued a list of designated ports for entry of imported high-risk products, like milk & milk products, meat and meat products, fish and their products, nutraceuticals, health supplements, foods for dietary uses, foods for special medical purposes. The import of these high-risk products shall be permitted only through these designated ports and effective from 1st March 2023.



KAMPUS KHABAR

Chamundi Trip

On 8th October, a batch of CORNquerors took samuRYEs to the famous Chamundi temple, which is located at the top of Chamundi hills as a part of the M.Sc. legacy. After getting blessings for a new beginning as a family, we enjoyed breakfast and sightseeing of Mysore from the hill with lots of photos.



Dussehra



The state festival, Dussehra is celebrated with lots of grace across Mysore and the same went with our CFTRI this year. Dusshera marks the victory of good over evil and hence a pooja was performed on the auspicious occasion in the presence of our alumni Dr. Saikat Datta Mazumdar and his beloved wife. The celebration later took its charm with the dance performances of CORNquerors and samuRYEs. After the pooja, the entire M.Sc. family was fortunate enough to witness the world-famous 'Jumbo Savari' on 5th October 2022.

World Food Day

On the occasion of World Food Day, A food quiz was organized by the IFT Club for the M.Sc. family with the theme 'Leave NO ONE Behind' on 16th October 2020. Students were divided into 10 groups of 5 members each and there were 3 rounds in total. The first round was the screening round with a timebound written quiz. The screened teams further underwent 2 subsequent rounds where teams were eliminated on the basis of the cumulative score. The rounds were 'Identify the Logo' & 'Company Taglines'. From the 2 teams fought in the last round, we have the Winners with the team of Mr. Vasudeva S. N., Ms. Khrietsunuo Mere, Mr. Dhore Dipak, Mr. Rajveer Yadav, and Mr. Sanjay D. A. The event was both fun and knowledge-oriented and witnessed active participation and co-operation of M.Sc. students !!



Onam



Onam is an annual Indian harvest festival celebrated by all inhabitants of Kerala. A major annual event for Keralites, it is the official festival of the state and includes a spectrum of cultural events. As part of our legacy, we celebrated Onam, with full enthusiasm in tradition to share the meaning and joy of this festival with everyone belonging to different parts of India. We made beautiful pooka lams and girls performed Chavittukali, a folk dance of Kerala that is staged during Onam. We had several games, like the lemon spoon race and musical chairs. We ended and marked the memories of the event with a wonderful photoshoot.

Deepavali

The state festival, Dussehra is celebrated with lpts of grace across Mysore and the same went with our CFTRI this year. Dusshera marks the victory of good over evil and hence a pooja was performed on the auspicious occasion in the presence of our alumni Dr. Saikat Datta Mazumdar and his beloved wife. The celebration later took its charm with the dance performances of CORNquerors and samuRYEs. After the pooja, the entire M.Sc. family was fortunate enough to witness the world-famous 'Jumbo Savari' on 5th October 2022.



Fresher's Day

30th October 2022 marked the official welcome of samuRYEs though they were welcomed into our hearts the moment they entered the campus. 'ECSTASY' brought a new ray of hope and a fresh wave of bliss with the fresher's party. The fresh faces of CFTRI were surprised with invitations at their doorsteps and what awaited them later was, of course, a series of surprises set up by the CORNquerors to amaze their dear juniors. The evening took a kick start with the best wishes from Dr. Vivek Babu, Warden, IFTTC, and Dr. Poornima Priyadarshini, Department of Protein Chemistry who graced the occasion. It is then the stage took its charm as the handsome boys and gorgeous girls of samuRYEs walked on the ramp. They participated in various activities put forth by the seniors so as to decide the Mr. and Ms. Fresher of the evening. Ms. Vidyashree M R of the incrEDIBLES batch, Mr. Alaburu Umeha of the French TOAST Mafia batch, Ms. Priya L and Mr. Lokesh G of Soup-a-stars batch, Ms. Bhavyatha G, Ms. Kavitha Bai, Ms. Soumya V Pundi, Ms. Ramya V and Ms. Muktha R of PIETHons batch joined us for the gracious event. Then what followed were energetic performances lined up by the freshers to entertain the audience. Mr. Rajveer Yadav and Ms. Isha Gosh were crowned as Mr. and Ms. Freshers, 2022 respectively. The night later ended with cake cutting and dance moves to the DJ beats embracing the fresh start where the 'RYEs were determined to rise'.



Alumni Meet

December 23, 2022 Alumni meet held at CSIR -CFTRI. Gather of passed-out students of an institution and it is a place where the institution feels proud on seeing its successful alumni on this Occasion, Chief Guest Dr. M. Muralikrishna Former Chairman and MD, of Modern Food Industries India Ltd. Former Head – of Applied Technology, Solae Company, El DuPont India Ltd. Former Director - South Asia (Soy Foods), US Soybean Export Council. Dr. Sridevi Annapurna Singh, Dr. P. S. Negi, Head of Human Resource Development CSIR - CFTRI, Mysore, and other Senior scientists also Graced the Occasion. The medals and awards for M. Sc. Food Technology Student For securing the Highest Mark in academics. Ms. Shreya khalai (batch 2020 -2022) was Awarded as a gold medalist. That was followed by felicitations of Golden Jubilee Alumni members (Batch 1969-71, 1970-72 & 1971-73) and, Felicitations of Silver Jubilee Alumni Members (Batch 1993 -95, 1994 -96 & 1995-97). Dr. Jiwan S Sidhu (Batch 1969-1971) was honored as an outstanding Alumnus. Interaction and views from Alumni. Presentation of memento to the Distinguished Alumni. Address by Dr. Sridevi Annapurna Singh, Director of CSIR-CFTRI.



Christmas

The festival of Christmas celebrates the birth of Jesus Christ and conveys his message of love, tolerance, and brotherhood. Christmas, the festival of joy and love, started a week before in CFTRI with secret Santas giving clues and tasks to their Christ child. On the day of Christmas, CORNquerors and samuRYEs went to church at midnight, and cake cutting near the crib. The celebration included an exchange of gifts by secret Santas to their Christ child with lots of fun and tons of pictures.



New Year



CORNquerors and samuRYEs warmly welcomed 2023 by rocking the dance floor at midnight and cake cutting. On the day of the new year, with the start of games such as Lava Jump, and Balloon train, decoding words to numbers arranged by samuRYEs. The celebration concluded with the distribution of snacks.

FOOD INCORPORATED



ALTERNATIVE CHOICE
-HOME OF PLANT
BASED FOOD

Keeping sustainability at its core, Alt Co. makes easy, affordable, and healthy choices by producing high-quality, plant-based food. They want to help the planet by reducing greenhouse gas emission by 80%, by reducing energy consumption by 60% and by producing 100% vegan product, without compromising on taste.

With a world that's constantly evolving, we tend to switch to alternatives – ones that are healthier and sustainable. It is an alt-dairy brand that's better tasting, better for you and better for the planet. Alt Co. believes in settling for no compromise when it comes to quality.

Alt Co.



Alt Co Oat Milk

Alt Co Oat milk is completely vegan, soya free, lactose free, No added sugar & Preservatives. It is a good source of Protein, Calcium, Vitamin D, B1, B2 & B12. Every serving of 100 ml meets Energy 3.35%, Vitamin B1- 20%, B2- 10.71%, B12- 25%, Calcium- 20% of the Daily RDA requirement. Alt Co. stands for offering alternative lifestyle options, reflecting how we can opt to be more thoughtful about our food choices and substitute our dairy products with guiltless and healthy options. Alt Co. Oat Drink is a plant based, dairy free, nut free and cruelty free alternative to milk. Alt Co. Oat Drink can be consumed just the way you like it, chilled, with your coffee, cereals and smoothies. Alt Co procures first-rate oat grain and packaging which will reach to the consumer, and then back to the earth. It believes in setting and respecting boundaries, especially in food choices.



Alt Co soy Milk

Alt Co Soy Milk is completely Vegan, Lactose Free, No Added Sugar & Preservatives and Gluten free. It is good source of Protein, Calcium, Vitamin D, B1, B2 and B12. Every Serving of 100 ML Meets Energy 2.8%, Vitamin B1 – 15%, B2 – 9%, B12 – 20%, Calcium 20%, Protein 5% of your Daily RDA requirement. Soy milk is made from soybeans and water. It contains high levels of protein, fiber, and omega fatty acids. It also has a creamy texture and a slightly sweet flavor. Some people find that soy milk causes digestive problems, but it's generally well tolerated by most people.



Vegan Dark Chocolate

Alt Co 45% dark chocolate comes with the richness of natural cocoa. It is a perfect blend of cocoa solids, butter, sugar, emulsifiers (322 and 476), and Vanillin. To take complete care of your health ALT CO. brings this nutritious product in an affordable packaging solution. Its 100% plant-based dark chocolate is enriched with organic compounds like polyphenols, flavanols, and catechins. These healthy, naturally active compounds function as antioxidants in your body. Dark chocolate is generally non-dairy and 100% natural at ALT CO. That means it's a good option if you are sensitive to milk products or trying to have a dairy-free diet. It's a beautiful product for vegans who look to satiate their sweet tooth. No tension for milk or gluten allergies, being 100% natural product. ALT CO. 45% Dark Chocolate contains no preservatives or added colours.

WHAT THE FOOD

Chaprah

When we think about insects being a part of our diet, the first thing that comes to our mind is Asian cuisine. Countries like Singapore, China, Thailand, Japan, etc., the locals cook and eat insects. Some countries even consider them delicacies. Indians almost barf at the thought of eating insects. But guess what, insects are a part of traditional cooking in certain parts of India. This tribal dish comes from a place called Bastar.



The key to making a good Chaprah is the perfect egg-to-ant ratio. Eggs and ants are ground with tools made of stone. The goop is allowed to dry and is then mixed with tomatoes, coriander, garlic, and salt. After carefully blending all these ingredients, you get a bright orange-colored chutney. Chaprah is sharp in terms of flavors. The spice and tanginess of the chutney are so intense that it almost seems as if ants are biting your tongue gently. The locals seem to enjoy the chutney with a glass of chilled beer.

Apart from being super spicy, the chutney also has a lot of medicinal properties. The eggs contain formic acid, which helps combat bacterial infections in the digestive system. In fact, it is the formic acid that gives the chutney its spicy flavor. The crunchy-crushed ants have a lot of protein, calcium, and zinc.

Chicha Morada

Deep purple in color and made from dried corn, non-alcoholic chicha morada—"purple beverage"—is undisputed as Peru's iconic refreshing drink. Of humble Andean origins and rich in antioxidants. The flavor of this purple corn drink is slightly rustic, mildly sweet, and surprisingly invigorating due to the spices used in its preparation.

The base ingredient of the drink is corn culli or kulli, which is a Peruvian variety of corn known commonly as purple corn which is abundantly grown and harvested along the Andes mountains.



Traditional preparation consists of boiling the purple corn in water along with pineapple peels adding a pinch of cinnamon, and a few cloves. The boiled mixture is strained and allowed to cool, and after it, sugar or chancaca is added, as well as chopped fruit and lemon if desired.

The pre-manufactured product is sold in two ways:

As packets of dry powder manufactured with basis of sugar, acidifiers, and artificial flavors to which the preparer should only add water. Although consumption is massive because of the advantages of low cost and sweet taste, such products do not achieve the characteristic flavor of a chicha prepared in a traditional way, nor do they contain the antioxidants derived from purple corn.

As bags of purple chicha concentrate (syrup) intended for large-scale distribution. This version contains all the extracts of the fruits, retaining flavor and aroma. The preparer should only add water and lemon juice.

Mazamorra morada

A notable Peruvian delicacy can be derived from chicha morada by adding a binder such as chuno or corn starch to the traditional preparation. This porridge-like substance is what Peruvians call "mazamorra morada", to which is added dried or fresh fruits such as prunes and raisins. Its consumption is very widespread in Peru in celebrations together with chicha morada, but it increases during October.



ALUMN COLUMN



Name: Tirupati Pawar
Batch: 2015-2017
Batch Name: Kung Food Pandas.

1. How did you feel after stepping into CFTRI?

Eight years ago in 2015, I stepped into CFTRI college to earn a degree of Master's in Food Technology, enrich my education level, and I must say it was my best decision to choose CFTRI. Here my belief is "First Believe in yourself and Believe in the institution. Dear friends, always welcome difficulties, and challenges in your life. These make us stronger, Better and gives us an opportunity to get the best inside of us. The campus placement held at CFTRI was a stepping stone as I got placed into NESTLE.

2. Can you share any memorable experiences from your time at CFTRI?

There are many to quote all the little joy with friends is at most special memorable feeling, celebrating festivals, the diversity, night walks, watching movies together, and all those fun at the dinner table.

3. How has CFTRI influenced your personal and professional life?

CFTRI taught me all kinds of skills and knowledge, useful to the workplace and even in my daily life. Experienced faculty helped me to take us through the multi-dimensional view of the topics and through practical classes. To be Perfect in whatever you do and to be kind.

4. CFTRI is full of legacies share your favorite legacy.

Discipline, Principles, Respect, and Values are my legacies.

5. What advice would you give to current college students to get the best out of CFTRI?

My Juniors, I advise you to... do justice with your time, when it's time to enjoy college life, live it to the fullest but when it comes to your study and placements, devote your 100%. Work hard with passion, this is the right time for you. Work hard with passion, this is the right time for you. Being a proud CFTRIian, I really hope that coming juniors will take CFTRI to new heights and grow out to be the best version of themselves.

6. Life at CFTRI is full of twists and turns, how would you describe your 2 years here?

As a student, it was one of the most memorable 2years. It gave me new experiences and a beautiful stage of my life. Yes! Yes! CFTRI is like a roller coaster; full of twists and turns, ups and downs, and happiness. "IF TOMORROW ISN't THE DUE DATE, TODAY IS NOT THE DO DATE." We may have graduated, and moved forward but these CFTRI memories will last forever.

7. How was your life after graduating from CFTRI and what have you regretted or realized lately?

Everyone has a different college experience. They are so unique and no two can be compared, but overall it is just awesome. It is a set schedule now, after my graduation from CFTRI - I still miss those unplanned trips/surprises. Now, I realize that one journey must end to begin another Journey.

8. How did you get involved in extracurricular activities during your time?

There was no choice given during the intros, so all my batchmates played a planned skit with Mr. Vijaykumar, Mr. Usmad, and Mr. Darshan, I still feel it was the funniest and most memorable moment for me. The acts and skit build long-lasting friendships and connections, and I met students from different states and gain transferable skills, It all improved my confidence.

9. What was the biggest challenge you faced while in CFTRI and how did you overcome it?

Well, a soft answer to this is, the biggest challenge I faced is homesickness, and missing my family. Must overcome because I strongly believed our future depends upon doing well.

10. Any mischievous activities you were involved in?

Hmmm... No matter how fast we grow, we should not let fade away the kid in us. I did Late night Parties, late night movies with CFTRI friends. I use to pull the legs of 2 of my very close friend in CFTRI, we still talk regularly. Those mis-chives in the class, and hostel, we use to have to get together in one of the rooms, over weekends, to watch horror movies, not allowing anybody to switch ON the lights. Creating afraid of the idea of ghosts.

11. Out of your experience which is the one thing you would advise the students that they must do?

Success is always a process, never an event. Set Goals and Learn from your mistakes. Networking with Seniors and keep asking about their experience in their respective organizations. Get a job! The journey to this goal was long, with many obstacles detours but after countless challenges including a global pandemic, it finally came to fruition. Really, I am grateful to so many Teachers of CFTRI, Friends.

12. If given a chance to come back to CFTRI which part of your campus life would you like to live again?

Wow! Thought-provoking question!!! I wish I had followed my interest more in curricular activities. To be honest. According to me, everything in life happens for a good reason. We should always try to attract positivity and accept reality. Accept, embrace & let it go.

CAREER CORNER

HOW TO PREPARE FOR INDUSTRY 4.0!

The Fourth Industrial Revolution, 4IR, or Industry 4.0 conceptualises rapid change to technology, industries, and societal patterns and processes in the 21st century due to increasing interconnectivity and smart automation. The term was popularised in 2015 by Klaus Schwab, the World Economic Forum founder and executive chairman, and has since been used in numerous economic, political, and scientific articles. (WIKIPEDIA)

The World Economic Forum has predicted that by 2025 to 2030, economies and businesses around the world will not escape the impact of the 4th industrial revolution.

Many workers will be left jobless and need reskilling. Many will thrive in new jobs. Many will continue in jobs they are familiar with and that can't be replaced by AI or robots; more than this, unique human capacities will be in even higher demand than ever before. Many will need upskilling in these capacities to remain competitive.

In the 4.0 workplace, skills and competencies can be divided into 3 categories: technical, managerial, and social. Technical skills relate to fields of hardware and software, and these are often referred to as hard skills. The other 2 categories, managerial and social skills, can be described as soft skills and mostly involve more uniquely human capacities.

One academic report lists 8 key skills for Industry 4.0:

1. Creativity – perceiving in new ways, find hidden patterns, make connections
2. Entrepreneurial thinking – identifying market opportunities and find methods and the right time

5. Decision-making – making choices by identifying a situation requiring a decision, gathering information, and evaluating possible alternative decisions

6. Analytical skills – thinking processes that are needed to effectively evaluate information and which involve gathering information, visualizing knowledge, articulating and solving complex problems

7. Research skills – selecting reliable sources of information and offer in depth information and advice on a topic

8. Efficiency orientation – using resources efficiently and a key factor in decisions and action.

CAREER CORNER

HOW TO PREPARE FOR INDUSTRY 4.0!

Many of these skills interrelate and can be collapsed to the 4 Cs in the “21st Century skills” discussion in education and workforce discussions: creativity, critical thinking, collaboration and communication. Creativity obviously relates to creativity, and similar to critical thinking, it also underpins entrepreneurial thinking, problem solving, conflict solving, decision-making, analytic and research skills as well as efficiency orientation. Collaboration is involved with almost all of these key competencies because it is rarely the case that any of these skills is practiced alone. Finally, this list of skills takes for granted the communication skills required to convey the outcomes of these skills; for example, entrepreneurial thinking, problem solving and conflict solving require different sets of communication strategies to effectively and persuasively deliver a message.

Source: <https://nigelpdaly.com/2020/11/09/4-0-skills-for-industry-4-0->



PHOTOGRAPHY



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Sowmya K



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Kalandar M

GAMES

SOLVE THE PUZZLE!

FOOD SAFETY

A	R	G	N	I	N	A	E	L	C	D	M	E	R
C	E	R	O	T	A	T	I	O	N	R	S	T	E
D	C	O	E	V	R	I	S	K	O	N	E	R	V
I	O	R	S	U	N	R	E	F	E	A	I	S	O
N	R	O	B	S	T	C	I	G	S	T	S	E	C
S	D	I	I	A	S	N	R	G	L	O	V	E	S
P	S	E	V	N	U	E	A	S	D	L	U	O	M
E	L	T	I	R	L	L	O	R	T	N	O	C	I
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T	M	P	A	M	B	A	C	T	E	R	I	A	L
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SLIME
ALLERGENS
SUPPLIER
HAZARD
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VIRUS
UNIFORM
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EDITORIAL TEAM

**EDITOR IN CHIEF & COVER STORY- MAHENDRA B
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SHREE BHARATHI S

INDUSTRY BUZZ
RISHI MOHAN SINGH
BHARATH J
KRISHAN KANT
VALCEA PEARL D CUNHA

KAMPUS KHABAR

KUSHI NAVIN
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