



National Institute of Food Technology Entrepreneurship and Management

Deemed to be University (De-novo Category) under Section 3 of the UGC Act, 1956
An Autonomous Institution under Ministry of Food Processing Industries, Govt of India

About NIFTEM



NIFTEM is a Deemed to be University (De-novo Category) under Section 3 of the UGC Act, 1956 an Autonomous Institution under Ministry of Food Processing Industries, Govt of India. It is catering to the needs of various stakeholders such as entrepreneurs, food processing industries, exporters, policy makers, government and existing institutions. NIFTEM is working actively in sharing knowledge and assisting in setting up of standardized food business incubation. It is an apex institution in the field of food technology management, networking and coordinating in India and abroad.

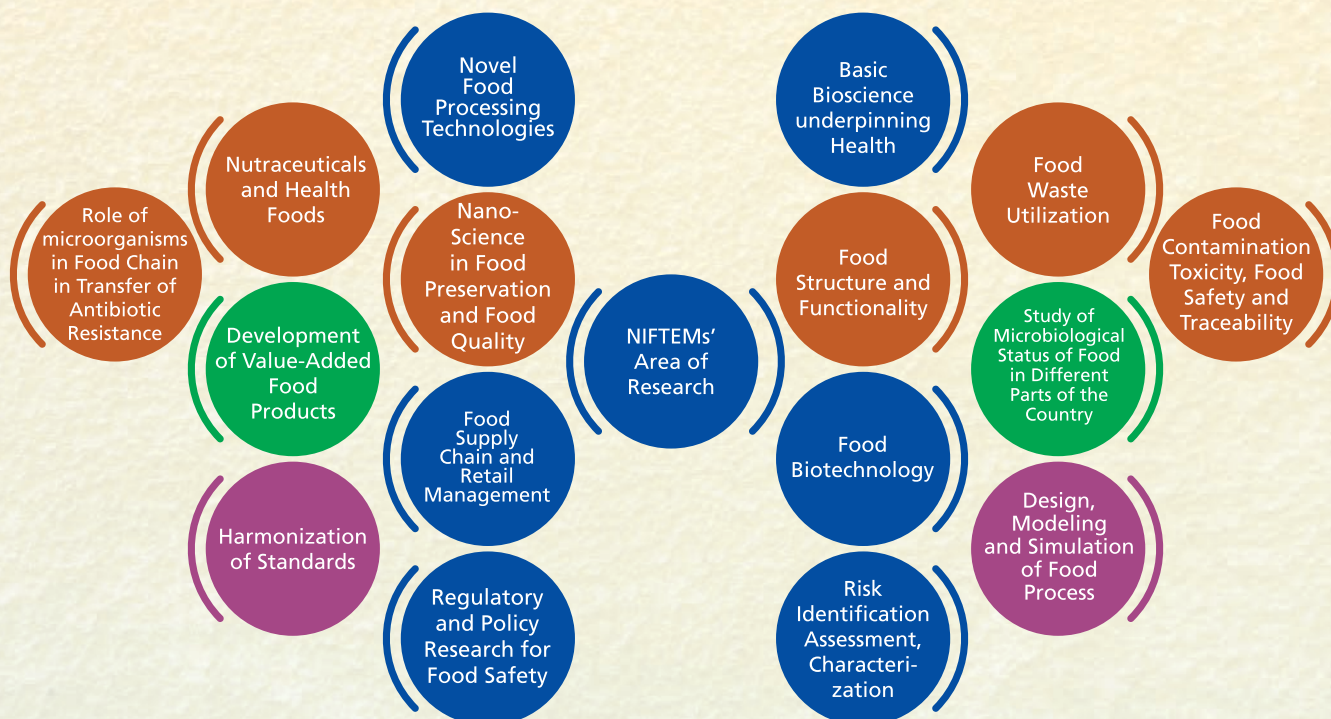
About Research Cell

NIFTEM has established a 'Research Cell' to initiate, participate and strengthen the research activities in areas relevant to Food Technology, Entrepreneurship and Management. The cell nurtures the research culture in students, scholars and faculties of NIFTEM by encouraging research in emerging and challenging areas of the food processing sector. In the process, the cell aims to empower and motivate every person associated with research activities to meet the vision and mission of the institute.



Mission & Goals

NIFTEMs' research strives upon delivering innovation and technologies towards sustainable, healthy, safe and affordable food. Some of the identified priority research areas are given below.



TYPES OF PROJECTS

NIFTEM Funded Seed Money Projects for Faculty

In order to facilitate research activities and motivate the faculty of NIFTEM, internal funding for research projects are provided for in-house faculty members. In pursuance of this, proposals are invited every year from in-house faculty members. Based on above criteria the projects are being short-listed and shared with outside experts for making the research projects more meaningful.



Innovation Fund Schemes for Students



The NIFTEM Innovation Fund Scheme (NIFS) (Internal Funding by NIFTEM) aims to encourage the innovative research and development ideas of NIFTEM students (B.Tech/M.Tech/MBA) in the food processing and allied areas. The work results in proof-of-concepts, design of equipment, etc. with high societal and commercial impact, thereby helping the growth of food processing industry. Some of the best and successful NIFS project gets support for IPR as per rules. The project funding (food processing and allied areas only) is up to Rs. 15 Lakhs (or) as per the approval of the competent authority. The project is valid upto 2 years (maximum).

Externally Funded Projects

Faculties are encouraged to undertake the research projects funded by external agencies such as Government of India (MOFPI, DST, DBT, CSIR, DRDO, DAE etc.), State Governments, Private Organisations, Industries or Trusts and International funding agencies.

Criteria of Undertaking Research Projects at NIFTEM



**Demand
Driven
Innovations**



**Solving
Current
Problems**



**Socially
Responsible**

ABOUT CONTRACT RESEARCH ORGANIZATION (CRO)

CRO established at NIFTEM aims to foster an ecosystem of sustainable collaborative research with industries (including large and small industries, start-ups and non-profit organizations) and renowned academic and research institutes (nationally and internationally) that will promote “open innovation” research perspective for entrepreneurial development activities and technology related areas. CRO will be working at length, to fulfill the finance management and administrative support, offer IPR protection for technologies developed and transferred, know-how and organize collaborative workshops to open gateways for future sustainable Research and Development (R&D) initiatives.

PERSPECTIVE

Research projects with industries are different from projects funded by government agencies or departments. NIFTEMs' research policies and processes at centre will manage research contracts and grants within a framework of extensive and well-defined regulations. By contrast, industry sponsored research will be more flexible, and these contracts may need negotiations to balance the parties' interests.

Mission

Our mission is to act as an effective interface for translating the academic research and innovation to industry while promoting and sustaining commercialization of science and technology in the Institute for mutual benefits.

Objectives of the Industrial Collaborations

1. Complementing competences, knowledge and technologies to advance research and development.
2. Obtaining access to resources that are available only from specific partners (NIFTEM will provide laboratories and pilot plant facilities while industries will provide machinery or necessary arrangements).
3. Broadening the scope of the innovation process.
4. Exploiting existing intellectual property (IP) through inclusion of specific competences.
5. Attaining critical mass to address complex projects.

The project proposals undertaken by the faculty members from the industrial partners or collaborators will be subjected to CRO guidelines.

About various committees

NIFTEM has framed research committees that will provide insights and advice to the Research Cell while evaluating and analyzing the whole project scheme before sanctioning of any project.

NIFTEM Research Advisory Committee

The committee advises in setting up and proposing suitable modifications in the guidelines of NIFTEM's research policies. Details of the prevalent members of the committee are as follows:

Chairperson

Dr. Chindi Vasudevappa
Vice Chancellor, NIFTEM

Member Secretary

Prof. P. K. Nema
Dean Research, NIFTEM

Members (External Experts)

- Director, CIPHET • Director, CFTRI • Director, IIFPT
- Director, DFRL • Director, CSIR-IITR • Director, IARI

NIFTEM Internal Research Committee

This committee looks after the implementation of laid down policies by NIFTEM research advisory committee and prescribed general guidelines.

Departmental Research Committees

This committee looks after the implementation of policies and the general guidelines related to the research.

NIFTEM Faculty members and their research portfolios/expertise areas (in which contract research may be taken)

Department of Food Science and Technology

Name	Email	Areas of Expertise
Dr. Komal Chauhan	drkomal.niftem@gmail.com	Nutraceuticals, functional foods, Product development
Dr. Ashutosh Upadhyay	ashutosh.niftem@gmail.com	Food and Science Technology
Dr. Anurag Singh	anurag.niftem@gmail.com	Fruits and Vegetable Processing, Bakery and Confectionery, Ready To Eat Products
Dr. Rakhi Singh	rakhi117@gmail.com	Food and Science Technology
Dr. Ankur Ojha	aojha.niftem@gmail.com	Food and Science Technology
Dr. Prarabdh C. Badgujar	prarabdh.badgujar@niftem.ac.in	Efficacy, Nutritional claims and Toxicological/Safety studies: food/beverages/nutraceuticals/food ingredients/additives. Meat, Poultry and Fish Processing and Technology: New product development and Quality evaluation
Dr. Murlidhar Meghwal	murli.murthi@gmail.com	Cryogenic Grinding of Spices, Food Powder & Particle Engineering, Food Bioactives & Functionality, Oil Stability, Food Flavors
Er. P. K. Prabhakar	pramodkp@niftem.ac.in	Drying, Heat and Mass Transfer, Food Functionalization
Dr. Tanya Luva Swer	tanya.niftem@gmail.com	Fruits & Vegetable Processing esp underutilized indigenous crops in India, Nutraceuticals, Industrial and domestic plant food waste as potential bioresource for value addition and extraction of bioactive compounds.
Dr. Mansha	mansharafiq@gmail.com	Dairy (Cheese and cheese based products), Whey based products, Fermented Dairy products, Functional foods, Indigenous dairy Products, New product development
Dr. Shumaila Jan	shumaila@niftem.ac.in	Food Powders, Surface Functionalization, Food Fortification

Department of Food Engineering

Name	Email	Areas of Expertise
Dr. Anupama Singh	asingh3niftem@gmail.com	Product development, Bio-waste utilization, Shelf life enhancement
Dr. P. K. Nema	pknema@yahoo.co.in	Fruits and Vegetable Processing, Drying technology
Er. S. Thangalakshmi	thangalakshmi.niftem@gmail.com	3D Food Printing, Ohmic heating and Pulsed Electric Field applications
Dr. Vinkel Kumar Arora	vinkelarora17@gmail.com	Food Engineering
Er. Vijay Singh Sharanagat	vijaysinghs42@gmail.com	Food Process Engineering, Cereal processing, Heat processing (Drying and Roasting), Germination, Modification of Starch
Er. Nitin Kumar	nitinkumar.iit@gmail.com	DPR preparation, new product development, setting up food/dairy manufacturing plant
Dr. Barjinder Pal Kaur	barjinderpalkaur@gmail.com	Food Engineering
Er. Anand Kishore	anand.niftem23@gmail.com	Product development in bakery and reformulation and bakery setup
Er. Arun Sharma	arunsharma1712@gmail.com	Design and development of sensors for food industry
Dr. Rahul S. Mor	dr.rahulmor@gmail.com	Food Engineering

Department of Food Business Management and Entrepreneurship Development

Name	Email	Areas of Expertise
Dr. Sanjay Bhayana	sanjaybhayana75@gmail.com	Food Business Management and Entrepreneurship Development
Dr. Vikas Saxena	saxenavikas@hotmail.com	Food Business Management and Entrepreneurship Development
Dr. Vimal Pant	vimal.niftem@gmail.com	Food Business Management and Entrepreneurship Development
Dr. Anupama Panghal	anupamaniftem@gmail.com, anupama@niftem.ac.in	Agri-Food Value Chain Development and Management, Agri-Food entrepreneurship
Dr. Sapna	drsapna.niftem@gmail.com	SMEs Innovation, Impact investment, Entrepreneurial Finance, Finance
Dr. Prasanth Kumar	profrpk@gmail.com	Food economics, Trade finance, Environmental finance, Business plan, Supply chain finance, Value chain finance
Dr. Sarika Yadav	sarika.yadav@niftem.ac.in	Entrepreneurship specially study related to SMEs, Micro finance
Dr. Nagendra Singh Nehra	nagendranehra@gmail.com	Organizational effectiveness, Behavior science, marketing research, Emotional maturity
Dr. Aman Dua	om.amandua@gmail.com	Food Business Management and Entrepreneurship Development

Department of Agriculture and Environmental Sciences

Name	Email	Areas of Expertise
Dr. Sunil Pareek	sunilpareek.niftem@gmail.com	Agriculture and Environmental Sciences
Dr. Prasanna Kumar G.V.	prasanna.niftem@gmail.com	Design of food processing equipment, waste recycling technologies, renewable energy applications
Dr. Neeraj	neeraj.niftem@gmail.com	Postharvest horticulture (packaging and storage of fruits and vegetables) new product development, Supply chain of fresh fruits and vegetables, edible coatings
Dr. Bhim Pratap Singh	bhimpratap@gmail.com	Looking for the management of postharvest diseases using natural agents as a sustainable mean with a focus to fresh produce.
Dr. Tripti Agarwal	tripti.niftem@gmail.com	Food contaminants, Waste utilization, Environmental assessment
Dr. Shekhar Agnihotri	agnish@niftem.ac.in	Nanotechnology, Agro Bioprocessing, Packaging materials

Department of Basic and Applied Sciences

Name	Email	Areas of Expertise
Dr. Neela Emanuel	nemanuel99@hotmail.com	Food Systems and its' impact on Public Health, Food Packaging (grafted/ biodegradable/edible), Extraction of Bioactive Compounds, Development of Innovative Analytical Methods
Dr. Vijendra Mishra	vijendramishra.niftem@gmail.com	Probiotics, Prebiotics, Development of nutraceuticals
Dr. Kalyan Das	kalyandas.niftem@gmail.com	Basic and Applied Sciences
Dr. P. Murali Krishna	mkprayaga.niftem@gmail.com	Nanomaterials applications for food safety and quality sensors, New food processing technologies development
Dr. Bhaswati Bhattacharya	bhaswati.niftem@gmail.com	Biopolymer based Food Packaging, Encapsulation of bioactive compounds, Safety and quality of fats and oils, Enhancement of shelf-life of fats and oils using natural antioxidants
Dr. Chakkaravarthi Saravanan	chakkaravarthi77@gmail.com	Chemical Contaminants of Food – quantification and reduction, Evaluation of prebiotic potential and preservation of the traditional ethnic foods, Quality analysis of Fried Foods, Conversion of traditional food into a processed product
Dr. Vijay Kumar	vijay.niftem@gmail.com	Basic and Applied Sciences
Er. Kumar Rahul	kumar.rahul@niftem.ac.in	Basic and Applied Sciences
Dr. Neetu Kumra Taneja	drneetu.niftem@gmail.com	Food safety, Microbiology of food, shelf life studies, Food biotechnology, Food fermentations

Members of Research Cell



Prof. P. K. Nema
Dean Research
pknema@yahoo.co.in



Dr. Neela Emanuel
Associate Dean Research
nemanuel99@hotmail.com



Dr. Divya Sachdev
Research Executive,
Contract Research Organization
drdivya19sachdev@gmail.com



Dr. Lochan Singh
Research Executive,
Contract Research Organization
lochan.niftem@gmail.com







Sh. Rajiv Johar
LDC, Research Cell
rjohar721@gmail.com

Research Facilities

- Central Instrumentation Lab • Departmental Labs • Pilot Plants
- Centre for Food Research and Analysis (NABL certified)

Track Record

 20 Crores research funding received so far	 400+Scopus listed publications	 30% of publications in top 10% journals	 18 Govt funded projects, 13 Industrial Projects
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Services Provided to Industries

- Government Sectors • Private Food Processing Industries • Startups • Entrepreneurs • MSMEs

Intellectual property

- Number of patents granted: 1 • Number of patents filed: 9
- Number of copyrights: 1 • Number of trademarks: 1

Approved

PATENTS

Year	Title of invention	Contributors	IPR No. (Domestic/ International) Status
2017-18	Co-precipitation synthesis of economical layered silver-iron oxides nanocomposites for rapid killing of bacterial pathogens	Dr.Divya Sachdev and Dr. Neetu Kumra Taneja	201611011082 - Domestic



Under Process

Year	Title of invention	Contributors	IPR No. (Domestic/ International)
2018-19	Domestic refrigerator Linus	Dr. Vinkel Arora, Sunil Kumar, Vaibhav Garg	IN201711039163 - Domestic
2018-19	Design & fabrication of low-cost meat storage structure for local vendors to ensure quality meat	Dr. Prarabdh C Badgujar, Sanjaup Narzary	IN201711039976 - Domestic
2018-19	New method for preservation of sugar	Dr. Ashutosh Upadhyay, Gautam Kohli, Gaurav Jain, Shardul Dabir, Dr. Anit Kumar, Akshay Bisht	IN201711039096 - Domestic
2018-19	Coconut water extractor	Dr. Vinkel Arora, Ravikant Yadav, Anupam Tiwari, Dr. Pitam Chandra	IN201711039165 - Domestic
2018-19	Apparatus for dispensing and frying semi-solid batter globules	Dr. Vinkel Arora, Jivan Jadhav, Dr. P. K. Nema	IN201711039164 - Domestic
2019-20	Nanoparticles based label-free sensor development for L-Lactate, Lactic Acid and Polylactic acid (PLA) detection	Dr. P. Murali Krishna, Gurdeep Rattu	T.I.(17)/TIFA/2019 - Domestic Applied from TIFAC, DST)
2019-20	Biologically derived fluorescent functional nanoprobe as universal stain for gram negative bacteria and cryoextender for sperm protection	Dr. Divya Sachdev, Akshay Bisht, Dr. Neetu K. Taneja, Dr. Renu Pasricha, Dr J.S.Rana	202011010076 (provisionally) - International (US Patent Applied)
2019-20	Sodium caseinate based edible coating and process thereof for improving Indian traditional dairy sweets quality	Dr Prarabdh Chandrakant Badgujar, Neha Mahto, Harshika Aggarwal	IN202111002369- Domestic
2019-20	Carboxymethyl cellulose based edible coating and process thereof for reducing oil/fat in Indian traditional snacks	Dr Prarabdh Chandrakant Badgujar, Chaitya Jain	IN202111002403 - Domestic





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Year	Title of Invention	Contributor	STATUS: DOMESTIC/INTERNATIONAL (IPR NO.)
2019-20	COCOshreshth	Dr. Vinkel Arora	4432797 - Domestic

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Year	Title of Invention	Contributor	STATUS: DOMESTIC/INTERNATIONAL (IPR NO.)
2019-20	Structural analysis tool version-1	Dr. Vinkel Arora	SW-12873/19 - Domestic

TECHNOLOGIES DEVELOPED AT NIFTEM

- Nutri biscuits and Muffins
- Lactation Cookies
- Multigrain Protein enriched Noodles
- Multigrain Pasta
- Protein rich Granola Bar
- Seaweed tea infusion rich in polyphenols
- Process technology for retaining softness of Indian traditional sweet, khoya burfi or Peda
- Process technology of reducing oil content (fat) in Samosa (a popular Indian traditional fried snack)
- Functional choco muffins fortified with horsegram
- Studies on Drying Techniques of Sweet Potato (*Ipomoea batatas*) and Characterization of its Powder
- Evacuated tube solar dryer
- Boondi dispenser machine
- Vacuum Pre-Cooler
- Savory veggie gluten free cookies
- Multi grain muffins
- Herbal cookies
- Sattu cookies



- Sugar free muffins
- Fortification Of Edible Oil with Natural Encapsulated Antioxidants
- Acrylamide Reduction Methods - Indian snack food
- Aflatoxin B1 and Total aflatoxins sensor for food products: study of rapid, facile and antibody-free colorimetric method using nanoparticle modified clay composite system
- Technological development of instant probiotic fruit juice powder
- Vitamin D Fortified Milk-based beverage (Lassi)
- Shelf life extension and alleviation of chilling injury in mangoes using exogenous application of melatonin
- Shelf life extension and alleviation of chilling injury in guava using exogenous application of methyl jasmonates and nitric oxide
- Biodiesel production from waste cooking oil
- Food industry waste utilization
- Eating Water Up: Water consumption of food
- Toxic chemicals (PAHs) in food and kitchen
- Edible film enriched with pomegranate peel extract

