

Presentation on proposed RESEARCH CENTRE

**In interdisciplinary science of
Mugberia Gangadhar Mahavidyalaya**



Affiliated to

VIDYASAGAR UNIVERSITY

On the Thrust Area

**Mathematical and Computational
Approaches for Community Based
Sustainable Research**

VISION & MISSION OF THE INSTITUTE

VISION

Mugberia Gangadhar Mahavidyalaya is committed

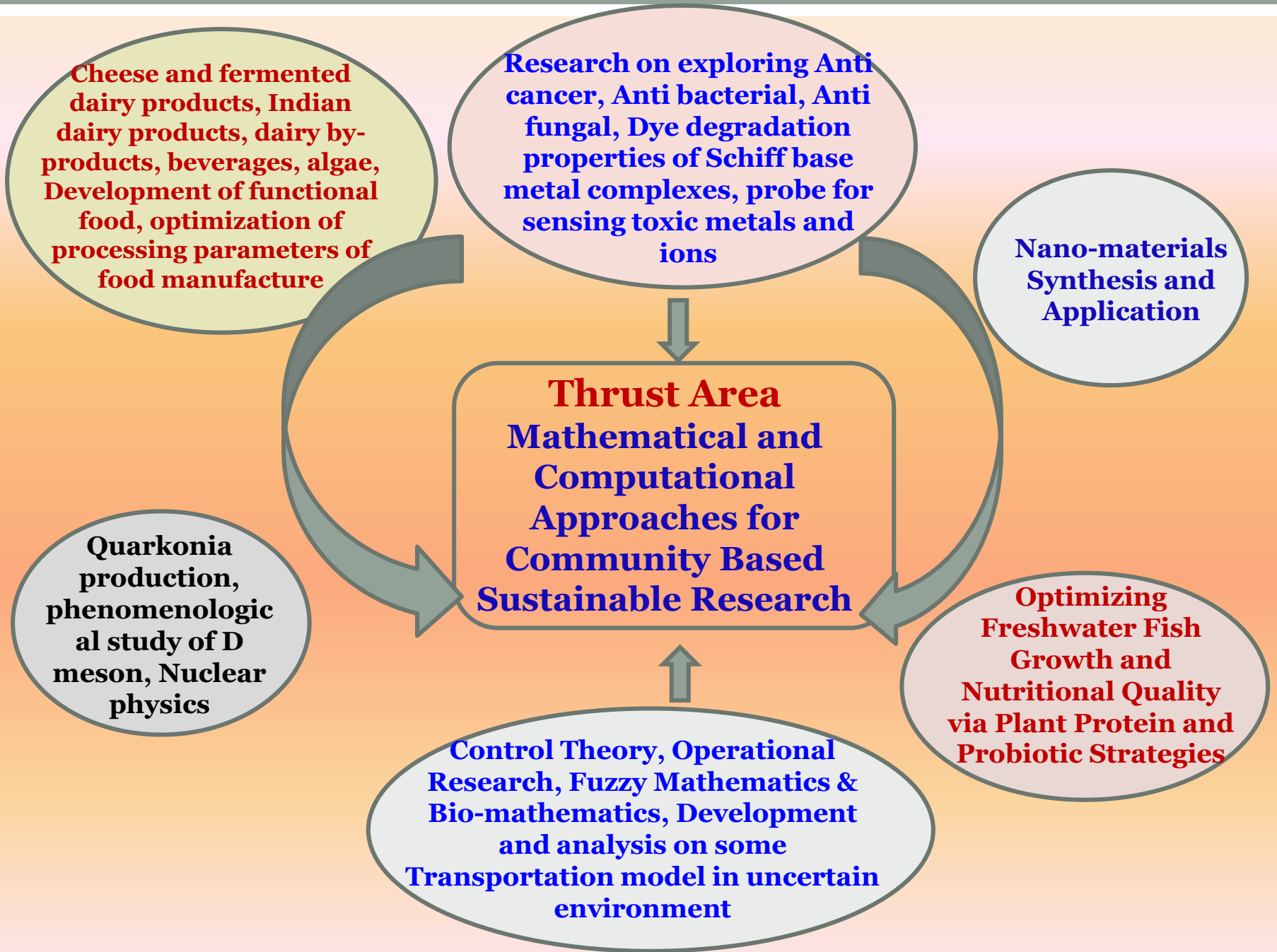
- To provide quality education, research and proper infrastructure for a better transfer of knowledge to the students using ancient ideologies and modern techniques to acquire an in-depth knowledge of the fundamental principles of the subject.**
- To make them capable enough to find a meaningful path of survival with dignity, confidence, sense of innovation and responsibility towards the society and environment.**

MISSION

- 1. To develop students' theoretical background of the subjects taught and innovative thinking ability.**
- 2. To develop their skill in practical knowledge by hands on experiments.**
- 3. To involve the students in field work, intra and inter disciplinary minor projects to enhance their research skills and confidence level.**
- 4. To guide them for competitive exams like JAM, GATE, NET, SET, SSC etc.**
- 5. To encourage the students towards entrepreneurship as career opportunity.**

Rationale behind the setting up of Research Centre

- ✓ **For effective interaction between faculty, scholars, students and industry and to enhance research opportunities, academic excellence, real-world problem solving, and knowledge creation and dissemination**
- ✓ **Advancing scholarly activity primarily through collaborative research, research training, research dissemination, or creative endeavors**
- ✓ **To provide unique enquiry-based learning opportunities for students and to be actively engaged in relevant academic forums and community outreach**
- ✓ **To involve activities beyond the scope of single disciplines and to promote interdisciplinary work**



Faculty profile -adequacy and competency

Name of Faculty	Qualification	Designation	Field of Research or interest	Experience	Research Guidance	Paper Publication	Citation, h-index, i10-index
Dr. Kalipada Maity	M. Sc, PhD	Associate Professor	Control Theory, Operational Research, Fuzzy Mathematics & Bio-mathematics	17 years	Awarded: 4 Ongoing: 1	70	Citation: 1370 h-index: 20 i10-index: 35
Dr. Bidhan C Samanta	M. Sc, PhD	Associate Professor	Exploring bio-properties of Schiff base metal complexes, probe for sensing toxic metals and ions, Polymer composite	17 years	Awarded: 1 Ongoing: 9	60	Citation: 503 h-index: 12 i10-index: 14
Dr. Apurba Giri	M. Sc, PhD	Assistant Professor	Dairy and Food Technology	10 years	Awarded: 0 Ongoing: 2	25	Citation: 438 h-index: 11 i10-index: 13
Dr. Narottam Sutradhar	M. Sc, PhD	Assistant Professor	Nano-materials Synthesis and Application	6 years	-	16	Citation: 693 h-index: 11 i10-index: 11
Dr Manoranjan De	M. Sc, PhD	Assistant Professor	Inventory Control, Transportation, Fuzzy set theory & Genetic Algorithm	6 years	Awarded: 0 Ongoing: 1	11	Citation: 186 h-index: 7 i10-index: 6

Name of Faculty	Qualification	Designation	Field of Research or interest	Experience	Research Guidance	Paper Publication	Citation, h-index, i10-index
Dr Wadut Shaikh	M. Sc, PhD	Assistant Professor	Quarkonia production, phenomenological study, Nuclear physics	6 years	Awarded: 0 Ongoing: 1	324	Citation: 12833 h-index: 70 i10-index: 184
Dr. Susmita Das	M. Sc, PhD	Assistant Professor	Optimizing Freshwater Fish Growth and Nutritional Quality via Plant Protein and Probiotic Strategies	3 years	Awarded: 0 Ongoing: 0	3	Citation: 0 h-index: 0 i10-index: 0

PILLARS TO REACH THE GOAL

**Expertise
Faculty
Members**

**Research
Instruments and
Infrastructural
Facilities**

**Research
Grants**

**24 × 7 Power
supply, Wi-Fi
and CCTV
surveillance
system**

**Research
collaboration
and linkages to
Academia and
Industries**

**Central library
with sufficient
number of text
and reference
books and
INFLIBNET
facility**

Research Instruments

- 1. FT-IR Spectrophotometer**
- 2. UV-Vis Spectrophotometer**
- 3. Spectro fluorophotometer**
- 4. Digital Balance upto 4 decimal**
- 5. Rotatory evaporator with Chiller**
- 6. Electric Oven, Hot air oven**
- 7. Heating Mantle**
- 8. Magnetic Stirrer**
- 9. Desiccator**
- 10. Vacuum pump**
- 11. N₂ cylinder**
- 12. Centrifuge**
- 13. UV Chamber**
- 14. Sonicator**

15. Tensiometer

16. Digital Viscometer

17. Flame photometer

18. Thermostat

19. Electrophoresis chamber

20. Refrigerator

21. De-mineralization plant by ion-exchange method.

22. PCR machine, ELISA, Agarose Gel Electrophoresis

Apparatus

23. Western Blot, Laminar Air Flow

24. Trinocular Microscope with camera

25. Incubator

26. Colorimeter

27. Computer lab equipped with Matlab software

28. Microtome

29. PM10 & PM2.5 Indoor air pollution measurement instrument

30. Cold Centrifuge

31. -20 refrigerator

32. Cellfrost refrigerator

33. BOD & COD

34. Bacteriological Incubator

Infrastructure for research works



Financial Grant Received by the participating departments and college for research and infrastructure

- 1. From UGC: Rs. 17,00,000/- (under Minor Research Project by faculties), 2014-2016 (Completed).**
- 3. From RUSA : 2,00,00,000 (By the college, Fully utilized for Infrastructure and Instruments)**
- 4. From UGC for CPE: 1,10,00,000 (By the college, Fully utilized for Infrastructure)**
- 5. From STAR College Strengthening Scheme, DBT, Govt. of India: 63,00,000/- (By department of Chemistry, Mathematics and Zoology, utilized for Apparatus and Consumables) (Ongoing)**
- 6. From WBDSTBT: Rs. 11,10,000/- (under Minor Research Project by three faculties) in 2019 (Ongoing)**
- 7. From UGC for Vocational courses: 71,00,000 (Ongoing)**

Special strength(s) of the college

- 1. NAAC re-accredited (3rd cycle) B+ level (CGPA 2.71) (2019-2024)**
- 2. At present, there are 123 regular teachers (33 Full time + 70 SACT + 20 contractual) with 21 PhD holders and 29 non teaching staff (14 full time + 15 casual)**
- 3. At present there are 3115 students in total among 630 students are engaged several project works, field visit and scientific community works.**
- 4. 24 × 7 power supply (supported by inverter, Green Generator, partly supported by Solar Panel).**
- 5. INFLIBNET facility in the central library available for both the students and teachers.**
- 6. 24 × 7 Wi-Fi and CCTV surveillance system available in the college campus.**

- 7. College runs some job oriented course like Diploma and B. Voc programme in Tourism and Hotel Management, B.VOC in Food Processing and Tourism and Hotel Management, M. Voc in Food processing, certificate course in Soil management by Vermi composing, Income tax and Business Management, IT in Computer etc. under UGC scheme.**
- 8. Good research capability of the participating faculties with good number of publications in SCI/ Scopus/ Web of Science indexing journals, books in last five years.**
- 9. Sufficient number of laboratory setup along with research equipments and other research facilities to foster inter-departmental/inter-disciplinary research works.**
- 10. Separate departmental room and other infrastructural facilities are available for almost all the departments.**

Proposed Activities through the Research Centre

- **Promote and facilitate collaborative and/or interdisciplinary research and enhancement of research networking capacity and infrastructure**
- **Transfer and mobilize knowledge gained through research for the benefit of society, via a variety of mechanisms as appropriate**
- **Conduct advanced level training programmes, especially for Ph.D. degree in Science**
- **Publish journals and books with a view to promoting the study of research among workers within the educational system as well as among the general public**
- **Conduct conference, refresher courses, lectures, seminars, demonstrations and exhibitions relating to the research done, knowledge generated and results obtained.**
- **Establish links with both international and National research bodies for cooperation and sharing of research information.**

Research Collaboration and Linkages

- 1. IIT Ropar**
- 2. IIT BHU**
- 3. IIT Kharagpur**
- 4. IISER Bhopal**
- 5. University of Kalyani**
- 6. Vidyasagar University**
- 7. Universidade de Aveiro, 3810-193 Aveiro, Portugal**
- 8. NIT, Durgapur**
- 9. RED COW DIARY PVT. LTD**
- 10. SOBISCO**
- 11. Raja Udyog Pvt. Ltd**
- 12. Agricultural and Food Engineering Department,
IIT Kharagpur**
- 13. Gujarat Co-Operative Milk Marketing Federation
Limited**

MEMBERSHIP:

Indian Science Congress Association

Indian Chemical Society

The Society for Polymer Science

Emerald Literati Network

Operation Research Society of India

Shortcomings

- **More Research Funding is needed**
- **Shortage of Full Time Teachers with PhD**
- **Lack of Meritorious Students having research interest**
- **Shortage of Research journals in the central library**
- **No proper mechanism for disposal of lab wastes**

In spite of all these shortcomings, we are struggling with all our existing potential and positive thinking to uplift the college from CPE to CE status and to provide quality education, research and proper infrastructure for a better transfer of knowledge to the students and society.

We are also working very hard for the upcoming NAAC (Cycle 4) visit to uplift the status of our college from B to A Grade.

Our existing infrastructure and potentiality will be strengthened with your estimated support and approval for establishing the proposed research centre.

So we are looking forward for the approval of our proposal.

Thanks for your patience